

FAP RTE	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
116	*	RICHLAND	31	1

D-7 JOINT REPAIRS 2006-3

D-97-013-04

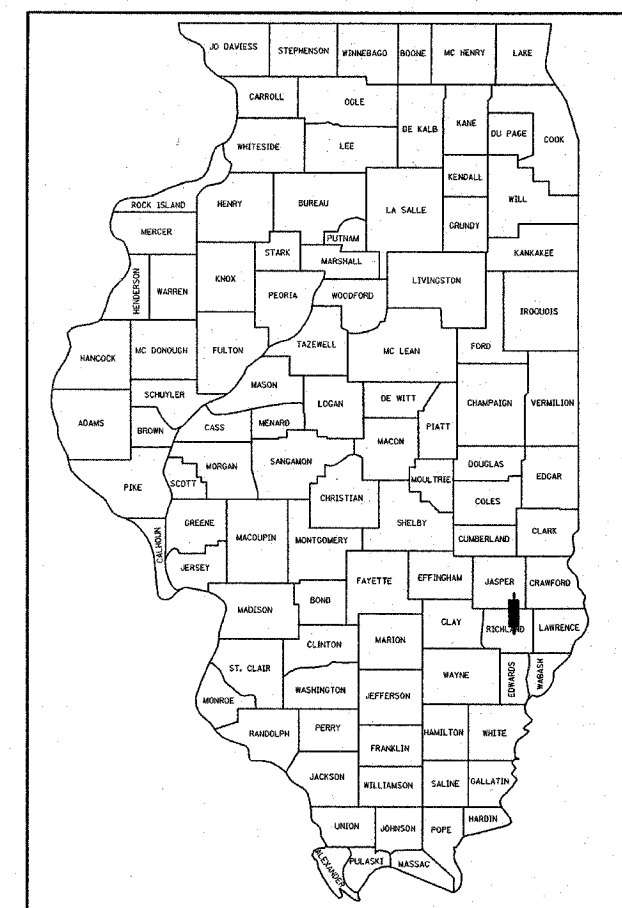
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION
DIVISION OF HIGHWAYS

PROPOSED HIGHWAY PLANS

FAP ROUTE 116 (IL 130)
D-7 JOINT REPAIRS 2006-3
PROJECT
RICHLAND COUNTY

C - 97 - 086 - 05

ILLINOIS ROUTE 130 OVER EAST FORK CREEK AND LONG BRANCH CREEK
EXPANSION JOINT REPLACEMENTS



LOCATION OF SECTION INDICATED THUS: [shaded area]

FUNCTIONAL CLASSIFICATION:	MINOR ARTERIAL (RURAL)
	DESIGN SPEED: 55 mph
	POSTED SPEED: 55 mph
	S.N. 080-0009 5,600 (2005)
	S.N. 080-0021 5,100 (2005)
ADT:	81.2%
PV:	78.4%
SU:	6.9%
MU:	14.7%

DESIGN DESIGNATION
N.A.

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION
DIVISION OF HIGHWAYS

SUBMITTED FEB. 10, 20 06

Christ H. Reed
DEPUTY DIRECTOR OF HIGHWAYS, REGION ENGINEER

March 24, 20 06

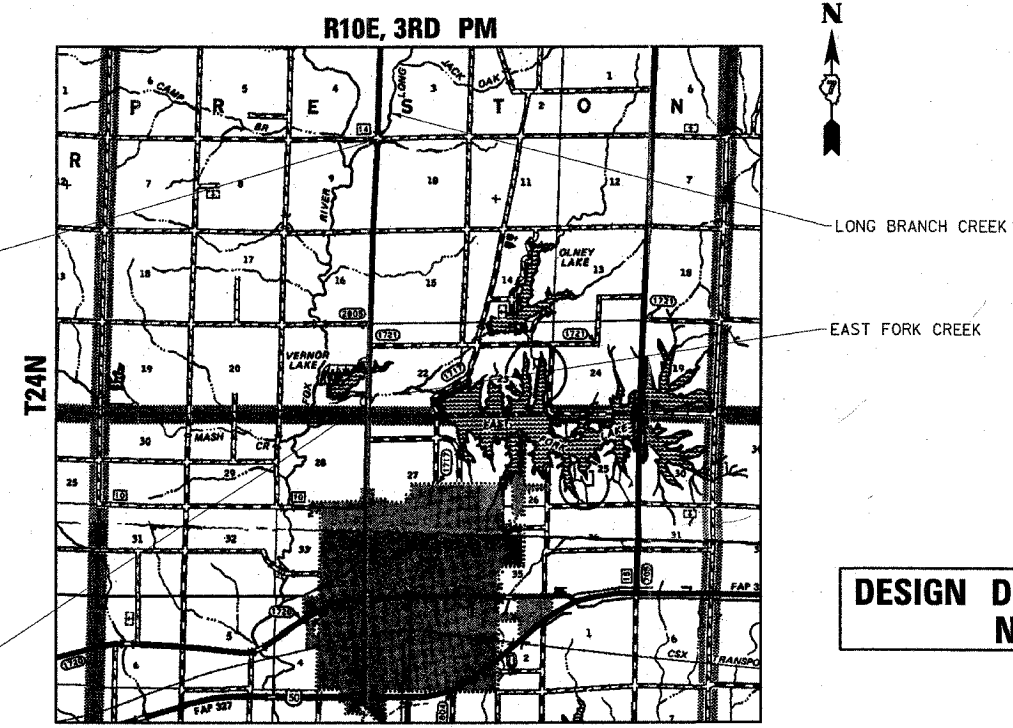
Mike Stone
ENGINEER OF DESIGN AND ENVIRONMENT

March 24, 20 06

Milton R. Suss
DIRECTOR OF HIGHWAYS, CHIEF ENGINEER

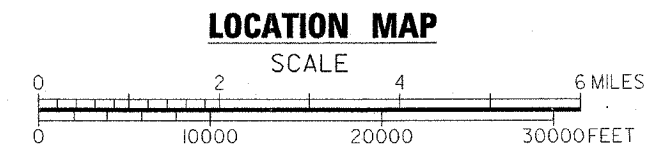
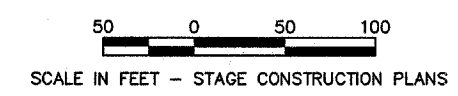
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3.	TYPICAL SECTION AND SCHEDULES OF QUANTITIES
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23.	CONTINUOUS SEAL TYPE NEOPRENE EXPANSION JOINTS
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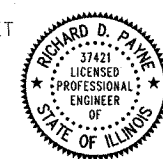


STATION 745+75.00
S.N. 080-0021
THREE SPAN W24 ROLLED
STEEL BEAMS WITH R.C. DECK
145'-10 1/4" BK TO BK ABUTMENTS

STATION 897+00.00
S.N. 080-0009
THREE SPAN W27 ROLLED
STEEL BEAMS WITH R.C. DECK
137'-0" BK TO BK ABUTMENTS



GROSS LENGTH = 15,264 FT. = 2.89 MI.
NET LENGTH = 283 FT. = 0.05 MI.



Richard D. Payne DATE: 02/09/06
ILLINOIS PROFESSIONAL LICENSE NO. 37421
(EXPIRATION DATE: 11-30-07)

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.

MICROFILMED _____
REEL NUMBER _____
AWARDED _____
RESIDENT ENGINEER _____
AS BUILT CHANGES WERE MADE
ON THE FOLLOWING SHEETS _____

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

DISTRICT 7 NO. (217) 342-8316
PROJECT ENGINEER: MARK DAUGHERTY
UNIT CHIEF: BRIAN LEWIS
TOWNSHIP: PRESTON
CONTRACT NO.: 74120



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OF THE STATE OF ILLINOIS**

FAP RTE	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
116		RICHLAND	31	2
STA.		TO STA.		
FED. ROAD DIST. NO.		ILLINOIS FED. AID PROJECT		
		D-7 JOINT REPAIRS 2006-3		

LIST OF ILLINOIS DOT HIGHWAY STANDARDS

STANDARD NO.	DESCRIPTION
000001-04	STANDARD SYMBOLS, ABBREVIATIONS AND PATTERNS
001001	AREAS OF REINFORCEMENT BARS
001006	DECIMAL OF AN INCH AND OF A FOOT
701001-01	OFF-RD OPERATION 2L, 2W, 4.5 m (15') MIN. AWAY FOR SPEEDS ≥ 45 MPH
701006-02	OFF-RD OPERATIONS 2L, 2W 4.5 m (15') TO PAVEMENT EDGE FOR SPEEDS ≥ 45 MPH
701011-01	OFF-RD MOVING OPERATIONS 2L, 2W DAY ONLY FOR SPEEDS ≥ 45 MPH
701201-02	LANE CLOSURE, 2L, 2W, DAY ONLY, FOR SPEEDS ≥ 45 MPH
701301-02	LANE CLOSURE 2L, 2W SHORT TIME OPERATIONS
701311-02	LANE CLOSURE 2L, 2W MOVING OPERATIONS - DAY ONLY
701316-03	LANE CLOSURE 2L, 2W, BRIDGE REPAIR, FOR SPEEDS ≥ 45 MPH
702001-06	TRAFFIC CONTROL DEVICES
720001	SIGN PANEL MOUNTING DETAILS
720006	SIGN PANEL ERECTION DETAILS
720011	METAL POSTS FOR SIGNS, MARKERS & DELINEATORS
729001	APPLICATIONS OF TYPES A & B METAL POSTS (FOR SIGNS & MARKERS)
780001-01	TYPICAL PAVEMENT MARKINGS
781001-02	TYPICAL APPLICATIONS RAISED REFLECTIVE PAVEMENT MARKERS
886001	DETECTOR LOOP INSTALLATIONS
886006	TYPICAL LAYOUT FOR DETECTION LOOPS

GENERAL NOTES

- THIS SECTION SHALL BE CONSTRUCTED IN ACCORDANCE WITH THE PLANS; THE STANDARD SPECIFICATIONS FOR ROAD AND BRIDGE CONSTRUCTION, ADOPTED JANUARY 1, 2002; THE SUPPLEMENTAL SPECIFICATIONS AND RECURRING SPECIAL PROVISIONS, ADOPTED MARCH 1, 2005; AND THE SPECIAL PROVISIONS INCLUDED IN THE PROPOSAL.
- THIS PROJECT IS LOCATED BETWEEN OLNEY AND THE JASPER COUNTY LINE ON IL ROUTE 130 IN RICHLAND COUNTY. THE PROJECT INCLUDES THE FOLLOWING STRUCTURES: STRUCTURE NUMBER 080-0009 OVER EAST BRANCH CREEK AND STRUCTURE NUMBER 080-0021 OVER LONG BRANCH CREEK.
- THE WORK INCLUDED IN THIS PROJECT CONSISTS OF THE REMOVAL AND REPLACEMENT OF THE EXISTING NEOPRENE EXPANSION JOINTS, PAVEMENT STRIPING, AND ALL OTHER WORK NECESSARY TO COMPLETE THIS SECTION.
- THE REFLECTIVE LENS OF ALL RAISED REFLECTIVE MARKERS LOCATED BETWEEN THE STOP BARS AND THE BACK OF ABUTMENTS SHALL BE REMOVED PRIOR TO STAGE I CONSTRUCTION. THIS WORK WILL BE PAID FOR AT THE CONTRACT UNIT PRICE EACH FOR RAISED REFLECTIVE PAVEMENT MARKER, REFLECTOR REMOVAL. REPLACEMENT OF THE BI-DIRECTIONAL AMBER REFLECTORS AT THE COMPLETION OF STAGE II WILL BE PAID FOR AT THE CONTRACT UNIT PRICE EACH FOR REPLACEMENT REFLECTOR.
- ANY REFERENCE TO A STANDARD IN THESE PLANS SHALL BE INTERPRETED TO MEAN THE EDITION AS INDICATED BY THE SUBNUMBER LISTED ON THE INDEX OF SHEETS OR THE COPY OF THE STANDARD INCLUDED IN THESE PLANS.
- THE CONTRACTOR SHALL BE RESPONSIBLE FOR PROTECTING UTILITY PROPERTY FROM CONSTRUCTION OPERATIONS AS OUTLINED IN ARTICLE 107.31 OF THE STANDARD SPECIFICATIONS. THE JULIE NUMBER IS 800-892-0123. A MINIMUM OF 48 HOURS ADVANCE NOTICE IS REQUIRED.
- FOR STABILIZATION, ALL TYPE III BARRICADES SHALL REQUIRE A MINIMUM OF FOUR SANDBAGS PER BARRICADE.
- THE CONTRACTOR SHALL PROVIDE 1/2" MINIMUM THICK STEEL PLATES TO COVER THE OPEN JOINTS DURING ALL TIMES WHEN NO WORK IS BEING PERFORMED AT THE SITE. COST OF THIS WORK TO BE INCLUDED IN TRAFFIC CONTROL AND PROTECTION, STANDARD 701316.

SUMMARY OF QUANTITIES

100% STATE

CODE NO.	ITEM	UNIT	TOTAL	CONSTRUCTION TYPE CODE	
				S.N. 080-0009	S.N. 080-0021
20200500	EARTH EXCAVATION (WIDENING)	CU YD	76	32	44
35650500	BASE COURSE WIDENING 10"	SQ YD	500	210	290
44004250	PAVED SHOULDER REMOVAL	SQ YD	380	160	220
50102400	CONCRETE REMOVAL	CU YD	38.1	20.3	17.8
50200100	STRUCTURE EXCAVATION	CU YD	5	5	
50300150	NEOPRENE EXPANSION JOINT 2"	FOOT	212	106	106
50300255	CONCRETE SUPERSTRUCTURE	CU YD	38.1	20.3	17.8
50300300	PROTECTIVE COAT	SQ YD	105	54	51
50800205	REINFORCEMENT BARS, EPOXY COATED	POUND	5110	2635	2475
67100100	MOBILIZATION	L SUM	1	0.5	0.5
70100100	TRAFFIC CONTROL AND PROTECTION, STANDARD 701316	EACH	2	1	1
70100450	TRAFFIC CONTROL AND PROTECTION, STANDARD 701201	L SUM	1	0.5	0.5
70100500	TRAFFIC CONTROL AND PROTECTION, STANDARD 701326	L SUM	1	0.5	0.5
70103815	TRAFFIC CONTROL SURVEILLANCE	CAL DA	20	10	10
70106500	TEMPORARY BRIDGE TRAFFIC SIGNALS	EACH	2	1	1
70106700	TEMPORARY RUMBLE STRIP	EACH	12	6	6
70300100	SHORT-TERM PAVEMENT MARKING	FOOT	96	40	56
70300220	TEMPORARY PAVEMENT MARKING - LINE 4"	FOOT	2415	915	1500
70301000	WORK ZONE PAVEMENT MARKING REMOVAL	SQ FT	837	318.3	518.7
* 78001110	PAINT PAVEMENT MARKING - LINE 4"	FOOT	2415	915	1500
* 78100300	REPLACEMENT REFLECTOR	EACH	8	2	6
78300100	PAVEMENT MARKING REMOVAL	SQ FT	795	305	490
* X0322050	RAISED REFLECTIVE PAVEMENT MARKER, REFLECTOR REMOVAL	EACH	7	2	5
Z0002600	BAR SPLICERS	EACH	60	30	30

* Speciality Item

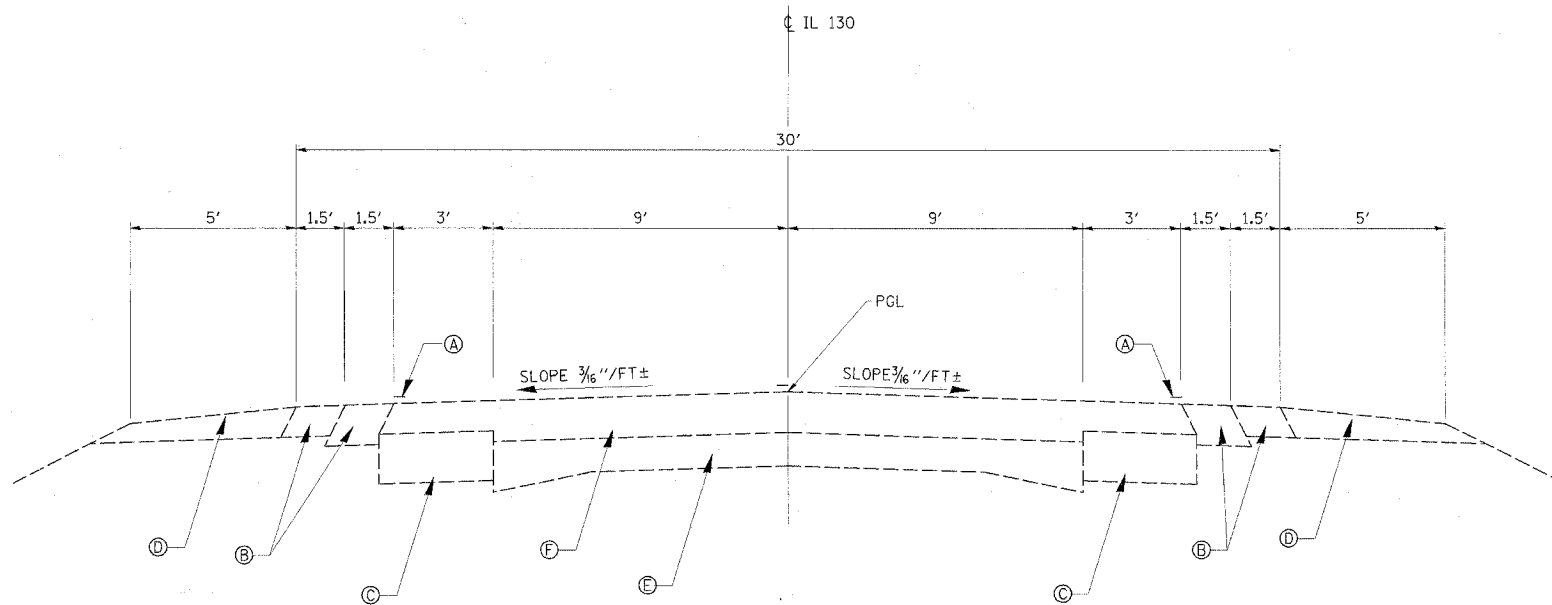
ESCA
CONSULTANTS, INC.

DESIGNED BY:	MTD	11/05
DRAWN BY:	HAG	11/05
CHECKED BY:	MTD	11/05
APPROVED BY:	RDP	1/06

GENERAL NOTES, STANDARDS,
AND SUMMARY OF QUANTITIES
FAP RTE 116 (IL 130)
D-7 JOINT REPAIRS 2006-3
RICHLAND COUNTY

Rev.

FAP RTE	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
116		RICHLAND	31	3
STA. TO STA.				
FED. ROAD DIST. NO. ILLINOIS FED. AID PROJECT				
• D-7 JOINT REPAIRS 2006-3				



EXISTING TYPICAL ROADWAY SECTION

STA. 535+40 TO STA. 958+50

LEGEND

- Ⓐ PAINT PAVEMENT MARKING - LINE 4"
- Ⓑ BITUMINOUS SHOULDERS
- Ⓒ PCC WIDENING (9")
- Ⓓ AGGREGATE SHOULDERS
- Ⓔ PCC PAVEMENT (9"-6"-9")
- Ⓕ BITUMINOUS RESURFACING (6 1/2"-8 1/2")

NOTE: AGGREGATE SHOULDERS EXTEND TO FACE OF GUARDRAIL OR 5' WHICHEVER IS LESS.

	CONCRETE REMOVAL	STRUCTURE EXCAVATION	CONCRETE SUPERSTRUCTURE	REINFORCEMENT BARS, EPOXY COATED	BAR SPLICERS	NEOPRENE EXPANSION JOINT 2"	PROTECTIVE COAT
	CU YD	CU YD	CU YD	POUND	EACH	FOOT	SQ YD
080-0009							
STAGE I	10.3	2.5	10.15	1318	30	53	
STAGE II	10.0	2.5	10.15	1317		53	54
080-0021							
STAGE I	9.1		8.9	1238	30	53	
STAGE II	8.7		8.9	1237		53	51
TOTALS	38.1	5.0	38.1	5110	60	212	105

LOCATION	DESCRIPTION	SHORT-TERM PAVEMENT MARKING	PAINT PAVEMENT MARKING - LINE	TEMPORARY PAVEMENT MARKING - LINE
		(1 APPLICATION)	4"	4"
		FOOT	FOOT	FOOT
080-0009				
STA 895+14 TO STA 898+86	SOLID WHITE EDGE LINES		745	745
STA 894+00 TO STA 896+00	SKIP-DASH YELLOW CENTERLINE	20	50	50
STA 898+00 TO STA 900+00	SKIP-DASH YELLOW CENTERLINE	20	50	50
STA 894+10 TO STA 894+79	SOLID YELLOW NO PASS LINE		70	70
080-0021				
STA 743+14 TO STA 747+86, RT	SOLID WHITE EDGE LINE		387	387
STA 743+14 TO STA 747+86, LT	SOLID WHITE EDGE LINE		426	426
STA 742+00 TO STA 745+02	SKIP-DASH YELLOW CENTERLINE	28	70	70
STA 746+41.5 TO STA 749+00	SKIP-DASH YELLOW CENTERLINE	28	70	70
STA 742+10 TO STA 745+08.5	SOLID YELLOW NO PASS LINE		298.5	298.5
STA 746+41.5 TO STA 748+90	SOLID YELLOW NO PASS LINE		248.5	248.5
TOTALS		96	2415	2415

LOCATION	PAVEMENT MARKING DESCRIPTION	WORK ZONE PAVEMENT MARKING REMOVAL	PAVEMENT MARKING REMOVAL
		SQ FT	SQ FT
080-0009			
SHORT-TERM MARKINGS	SKIP-DASH CENTERLINE	13.3	
TEMPORARY MARKINGS	VARIOUS	305.0	
STA 894+00 TO STA 896+00	SKIP-DASH CENTERLINE		18.5
STA 898+00 TO STA 900+00	SKIP-DASH CENTERLINE		18.5
STA 894+10 TO STA 894+79	SOLID NO PASS LINE		23.0
STA 895+14 TO STA 898+86, RT	SOLID EDGE LINE		124.0
STA 895+14 TO STA 898+86, LT	SOLID EDGE LINE		121.0
080-0021			
SHORT-TERM MARKINGS	SKIP-DASH CENTERLINE	18.7	
TEMPORARY MARKINGS	VARIOUS	500.0	
STA 742+00 TO STA 745+02	SKIP-DASH CENTERLINE		24.0
STA 746+50 TO STA 749+00	SKIP-DASH CENTERLINE		20.0
STA 742+10 TO STA 745+02	SOLID NO PASS LINE		98.0
STA 746+50 TO STA 748+90	SOLID NO PASS LINE		80.0
STA 743+14 TO STA 747+86, RT	SOLID EDGE LINE		129.0
STA 743+14 TO STA 747+86, LT	SOLID EDGE LINE		139.0
TOTALS		837.0	795.0

LOCATION	REPLACEMENT REFLECTOR	RRPM, REFLECTOR REMOVAL
	EACH	EACH
080-0009		
STA 894+80	1	1
STA 895+60	1	1
080-0021		
STA 742+24	1	1
STA 743+04	1	1
STA 745+84	1	1
STA 744+64	1	1
STA 747+15	1	1
STA 748+55	1	1
TOTALS	8	7

LOCATION	EARTH EXCAVATION (WIDENING)	BASE COURSE WIDENING 10"	PAVED SHOULDER REMOVAL
	CU YD	SQ YD	SQ YD
080-0009			
STA 895+14 TO 898+86, LT	16	105	80
STA 895+14 TO 898+86, RT	16	105	80
080-0021			
STA 743+14 TO 747+86, LT	22	145	110
STA 743+14 TO 747+86, RT	22	145	110
TOTALS	76	500	380

*TYPICAL SECTION AND SCHEDULES OF QUANTITIES
FAP RTE 116 (IL 130)
D-7 JOINT REPAIRS 2006-3
RICHLAND COUNTY*

ESCA
CONSULTANTS, INC.

DESIGNED BY:	MTD	11/05
DRAWN BY:	HAG	11/05
CHECKED BY:	MTD	11/05
APPROVED BY:	RDP	01/06

FAP RTE	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
116		RICHLAND	31	4
STA. 891+00		TO STA. 903+00		
FED. ROAD DIST. NO.		ILLINOIS FED. AID PROJECT		
D-7 JOINT REPAIRS 2006-3				




GENERAL NOTES

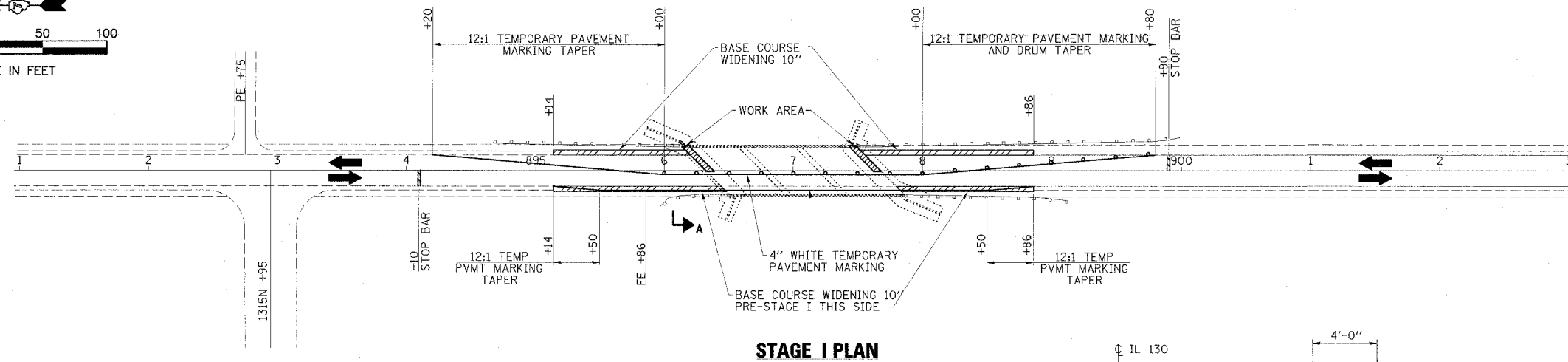
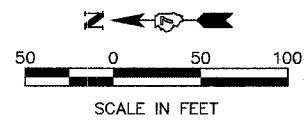
1. TRAFFIC CONTROL SHALL BE ERECTED AS SHOWN AND ACCORDING TO "TRAFFIC CONTROL AND PROTECTION, STANDARD 701316."
2. SEE SPECIAL PROVISIONS FOR ADDITIONAL TRAFFIC CONTROL REQUIREMENTS.
3. CONSTRUCT TEMPORARY RUMBLE STRIPS AT LOCATIONS SHOWN ON STANDARD 701316.

SCHEDULE OF QUANTITIES

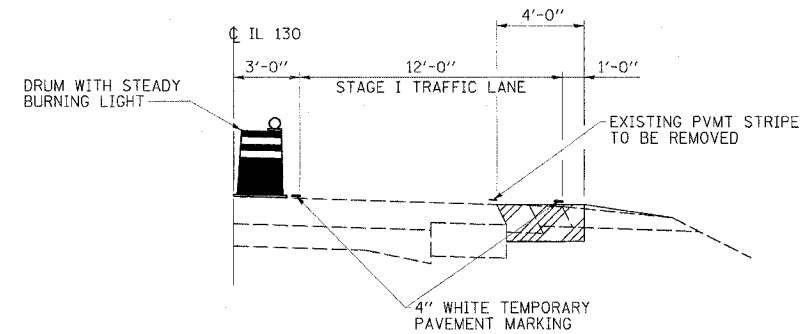
TEMPORARY BRIDGE TRAFFIC SIGNALS	- 1 EACH
TEMPORARY RUMBLE STRIPS	- 6 EACH
TRAFFIC CONTROL AND PROTECTION, STANDARD 701316	- 1 EACH

LEGEND

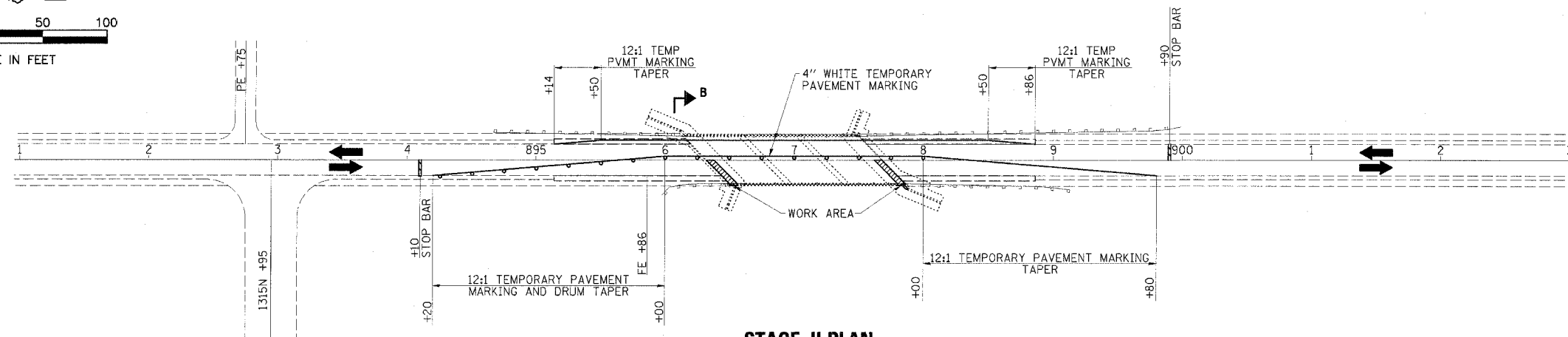
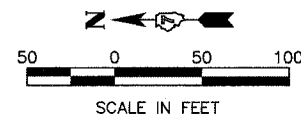
-  WORK AREA
-  DRUM WITH STEADY BURNING LIGHT
-  PAVED SHOULDER REMOVAL AND BASE COURSE WIDENING 10"



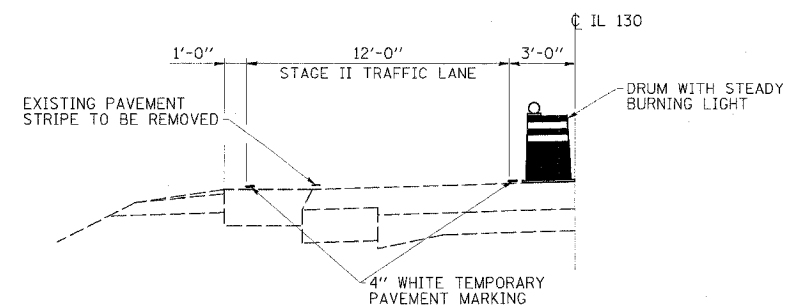
STAGE I PLAN



SECTION A



STAGE II PLAN



SECTION B

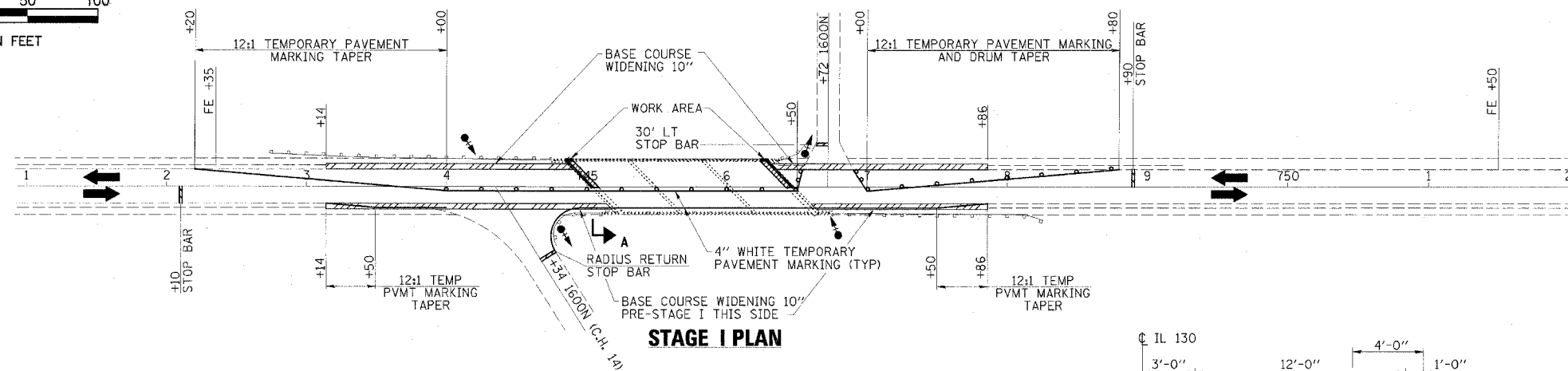
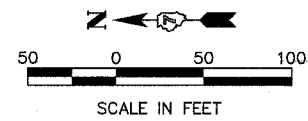
S.N. 080-0009 STAGE CONSTRUCTION PLANS
IL 130 OVER EAST FORK CREEK
FAP RTE 116 (IL 130)
D-7 JOINT REPAIRS 2006-3
RICHLAND COUNTY
STATION 897+00.00

ESCA
CONSULTANTS, INC.

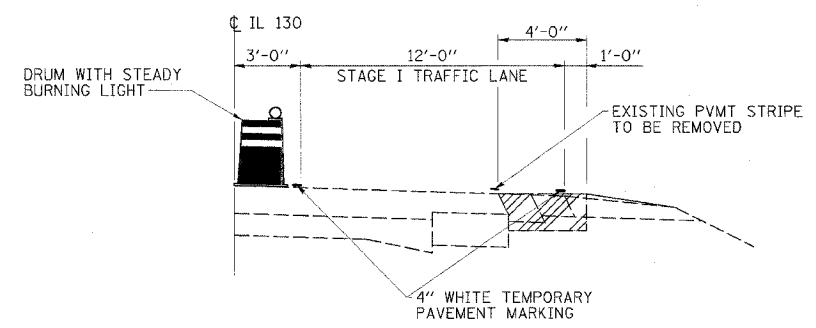
DESIGNED BY:	MTD	11/05
DRAWN BY:	JDK	11/05
CHECKED BY:	MTD	11/05
APPROVED BY:	RDP	1/06

FAP RTE	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
116		RICHLAND	31	5
STA. 741+00		TO STA. 752+00		
FED. ROAD DIST. NO.		ILLINOIS FED. AID PROJECT		

D-7 JOINT REPAIRS 2006-3



STAGE I PLAN



SECTION A

GENERAL NOTES

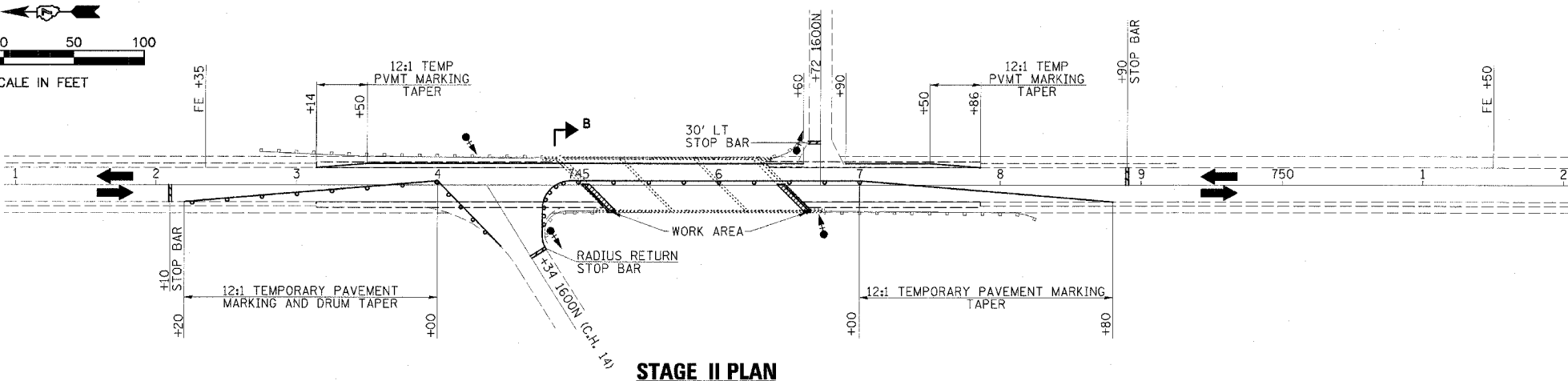
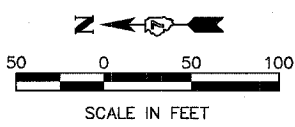
1. TRAFFIC CONTROL SHALL BE ERECTED AS SHOWN AND ACCORDING TO "TRAFFIC CONTROL AND PROTECTION, STANDARD 701316."
2. SEE SPECIAL PROVISIONS FOR ADDITIONAL TRAFFIC CONTROL REQUIREMENTS.
3. MOUNT "NO TURN ON RED" SIGN R10-115-2424 ON EACH SIDE ROAD TRAFFIC SIGNAL SUPPORT.
4. CONSTRUCT TEMPORARY RUMBLE STRIPS AT LOCATIONS SHOWN ON STANDARD 701316.
5. COVER SIDEROAD STOP SIGNS WHEN TEMPORARY SIGNALS ARE IN USE.

SCHEDULE OF QUANTITIES

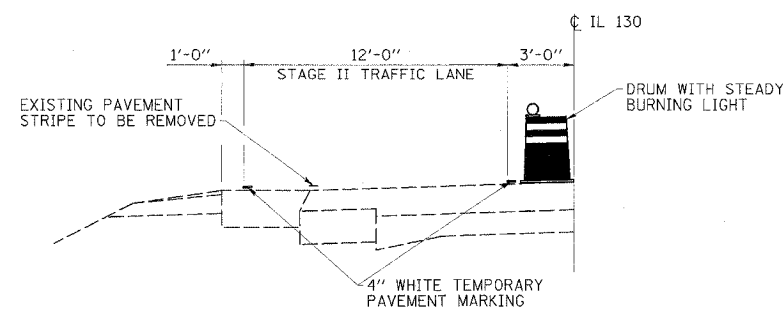
TEMPORARY BRIDGE TRAFFIC SIGNALS	- 1 EACH
TEMPORARY RUMBLE STRIPS	- 6 EACH
TRAFFIC CONTROL AND PROTECTION, STANDARD 701316	- 1 EACH

LEGEND

- WORK AREA
- DRUM WITH STEADY BURNING LIGHT
- TRAFFIC SIGNAL WITH BACKPLATE, SIGNAL DIRECTION INDICATED
- PAVED SHOULDER REMOVAL AND BASE COURSE WIDENING 10"



STAGE II PLAN



SECTION B

S.N. 080-0021 STAGE CONSTRUCTION PLANS
IL 130 OVER LONG BRANCH CREEK
FAP RTE 116 (IL 130)
D-7 JOINT REPAIRS 2006-3
RICHLAND COUNTY
STATION 745+75.00

ESCA
CONSULTANTS, INC.

DESIGNED BY:	MTD	11/05
DRAWN BY:	JDK	11/05
CHECKED BY:	MTD	11/05
APPROVED BY:	RDP	1/06

BENCHMARK: Chiseled "c" on NE Wing of Existing Structure, Station 897+00, Elev. 439.29

EXISTING STRUCTURE: SN 080-0009 was originally built in 1983 as Section 123 BR-3. The superstructure consists of 3 continuous spans of W27 rolled steel beams on closed abutments and solid shaft piers. The back-to-back abutments dimension measures 137'-0" while the out-to-out width measures 39'-2". The existing expansion joints shall be removed and replaced. Traffic to be maintained utilizing stage construction.

No salvage.

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

D-7 JOINT REPAIRS 2006-3

ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
FAP 116		RICHLAND	31	6
STA	TO STA			
FED. ROAD DIST. NO.	ILLINOIS	FED. AID PROJECT-		
DWG. NO. 1 OF 6				

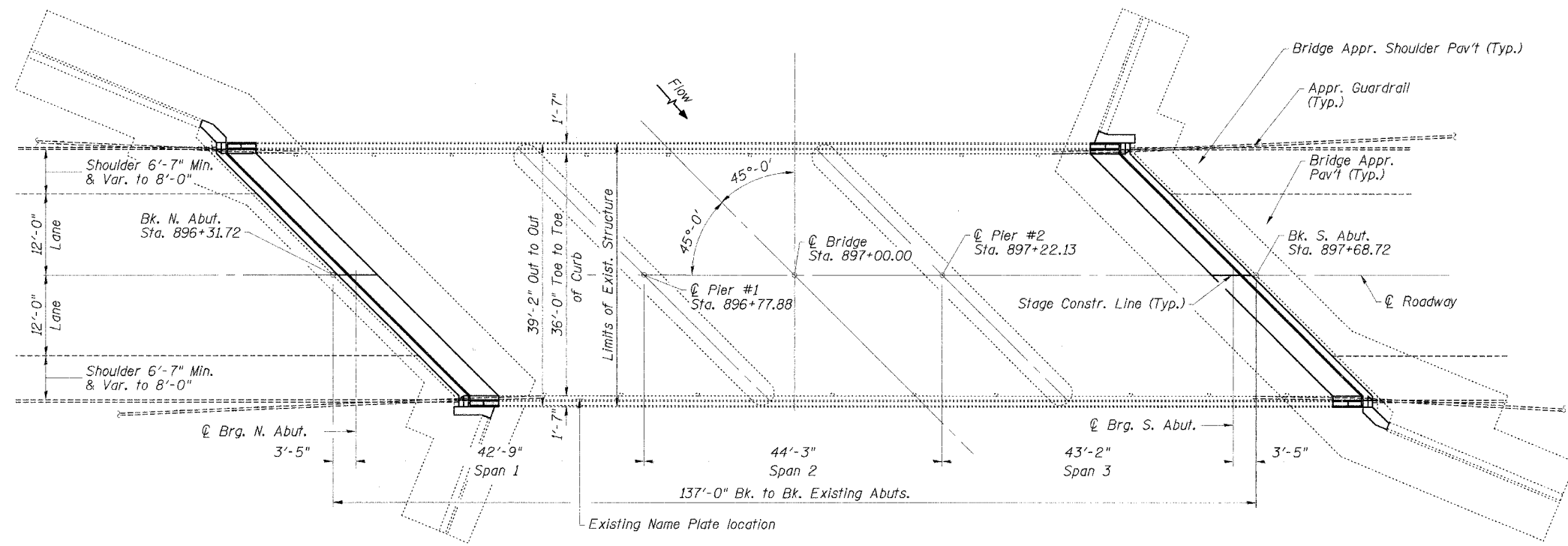
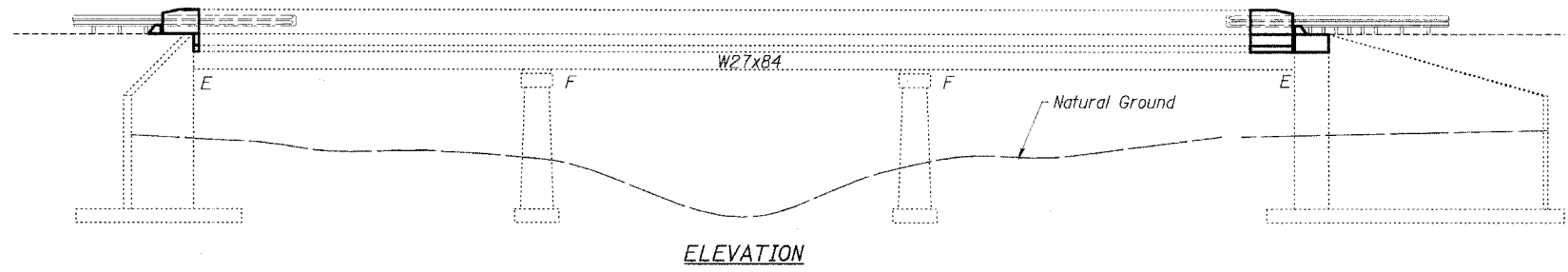
CONTRACT NO. 74120

STRUCTURE INDEX OF SHEETS

General Plan	Dwg. No. 1 of 6
Stage Construction	Dwg. No. 2 of 6
Expansion Joint Replacement Details	Dwg. No. 3 of 6
Expansion Joint Replacement Details	Dwg. No. 4 of 6
Continuous Seal Type Neoprene Expansion Joints	Dwg. No. 5 of 6
Bar Splicer Assembly Details	Dwg. No. 6 of 6

GENERAL NOTES

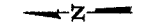
- Field welding of construction accessories will not be permitted to beams or girders.
- Plan dimensions and details relative to existing structure have been taken from existing plans and are subject to nominal construction variations. It shall be the Contractor's responsibility to verify such dimensions and details in the field and make necessary approved adjustments prior to construction or ordering of materials. Such variations shall not be cause for additional compensation for a change in the scope of the work, however, the Contractor will be paid for the quantity actually furnished at the unit price for the work.
- Prior to pouring the new concrete deck, all loose rust, loose mill scale, and other loose potentially detrimental foreign material shall be removed from the surfaces of the beams or girders in contact with concrete. The cost of this work will be included in the pay item covering removal of the existing concrete. All heavy rust and other tightly adhered potentially detrimental foreign matter shall also be removed from the surfaces of the beams or girders in contact with concrete. Tightly adhered paint may remain unless otherwise noted. This removal shall be accomplished by methods that will not damage the steel. The cost of this work will be paid for according to Article 109.04.
- All Construction joints shall be bonded.
- Existing reinforcement bars shall be cleaned, straightened, and incorporated into the new construction as noted. Any reinforcement bars that are damaged during concrete removal operations shall be replaced using an approved bar splicer or anchorage system (cost included in Concrete Removal).
- To facilitate the new construction, removal and installation of guardrail sections attached to the structure will be required. All existing embedded anchors that are within the concrete removal area shall be cleaned and incorporated into the new construction or new approved alternates shall be supplied and installed. Cost of this work shall be included in Concrete Superstructure.
- Areas disturbed by Structure Excavation operations shall be seeded with Class 3 mixture according to Section 250 of the Standard Specifications and as directed by the Engineer. Erosion Control Blanket shall be placed on all seeded areas. Seeding and Erosion Control Blanket will not be measured for payment but shall be considered included in the Structure Excavation pay item.
- The existing structural steel coating contains lead. The Contractor should take appropriate precautions to deal with the presence of lead on this project.



TOTAL BILL OF MATERIAL

ITEM	UNIT	SUPER	SUB	TOTAL
Concrete Removal	Cu. Yd.	12.6	7.7	20.3
Structure Excavation	Cu. Yd.		5	5
Neoprene Expansion Joint 2"	Foot	106		106
Concrete Superstructure	Cu. Yd.	20.3		20.3
Protective Coat	Sq. Yd.	54		54
Reinforcement Bars, Epoxy Coated	Pound	1505	1130	2635
Bar Splicers	Each	20	10	30

PLAN



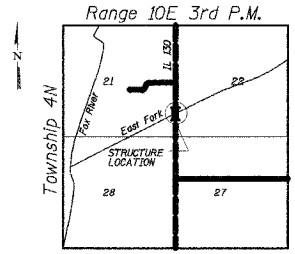
EXPIRES 11-30-07
Richard D. Payne
SIGNATURE
02/09/06
DATE

DESIGN SPECIFICATIONS

2002 AASHTO

DESIGN STRESSES

EXIST. CONSTRUCTION	NEW CONSTRUCTION
$f'_c = 3,500$ psi	$f'_c = 3,500$ psi
$f_y = 60,000$ psi (Reinf.)	$f_y = 60,000$ psi (Reinf.)
$f_y = 50,000$ psi (M 223, Grade 50) (Struct.)	$f_y = 36,000$ psi (M 183) (Struct.)
$f_y = 36,000$ psi (M 183) (Struct.)	$f_y = 50,000$ psi (M 222)



LOCATION SKETCH

GENERAL PLAN
IL 130 OVER EAST FORK CREEK
FAP RTE 116 (IL 130)
D-7 JOINT REPAIRS 2006-3
RICHLAND COUNTY
STATION 897+00.00
STRUCTURE NO. 080-0009

ESCA
CONSULTANTS, INC.

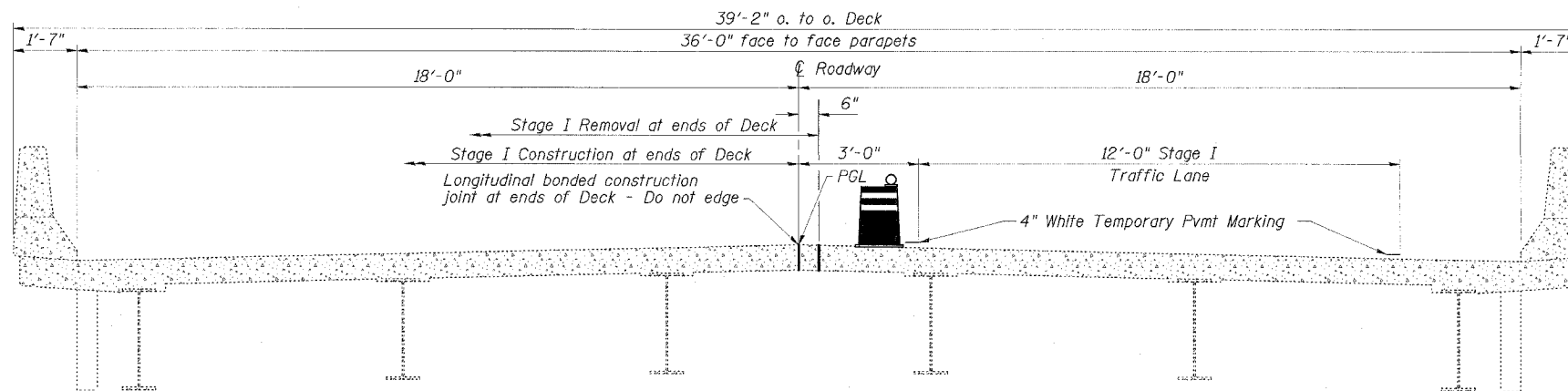
DESIGNED BY:	MTD	11/05
DRAWN BY:	HAG	11/05
CHECKED BY:	MTD	11/05
APPROVED BY:	RDP	1/06

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

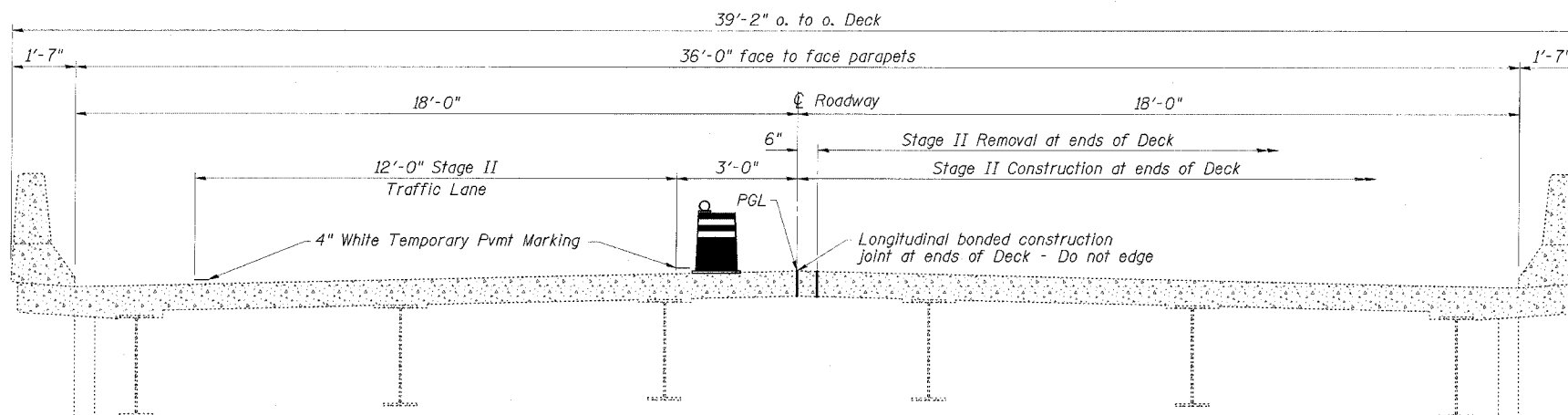
* D-7 JOINT REPAIRS 2006-3

ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
FAP 116	*	RICHLAND	31	7
STA.	TO STA.			
FED. ROAD DIST. NO.	ILLINOIS	FED. AID PROJECT		
DWG. NO. 2 OF 6				

CONTRACT NO. 74120



STAGE I CROSS SECTION
LOOKING SOUTH



STAGE II CROSS SECTION
LOOKING SOUTH

ESCA
CONSULTANTS, INC.

DESIGNED BY:	MTD	11/05
DRAWN BY:	HAG	11/05
CHECKED BY:	MTD	11/05
APPROVED BY:	RDP	1/06

STAGE CONSTRUCTION
IL 130 OVER EAST FORK CREEK
FAP 116 (IL 130)
D-7 JOINT REPAIRS 2006-3
RICHLAND COUNTY
STRUCTURE NO. 080-0009

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

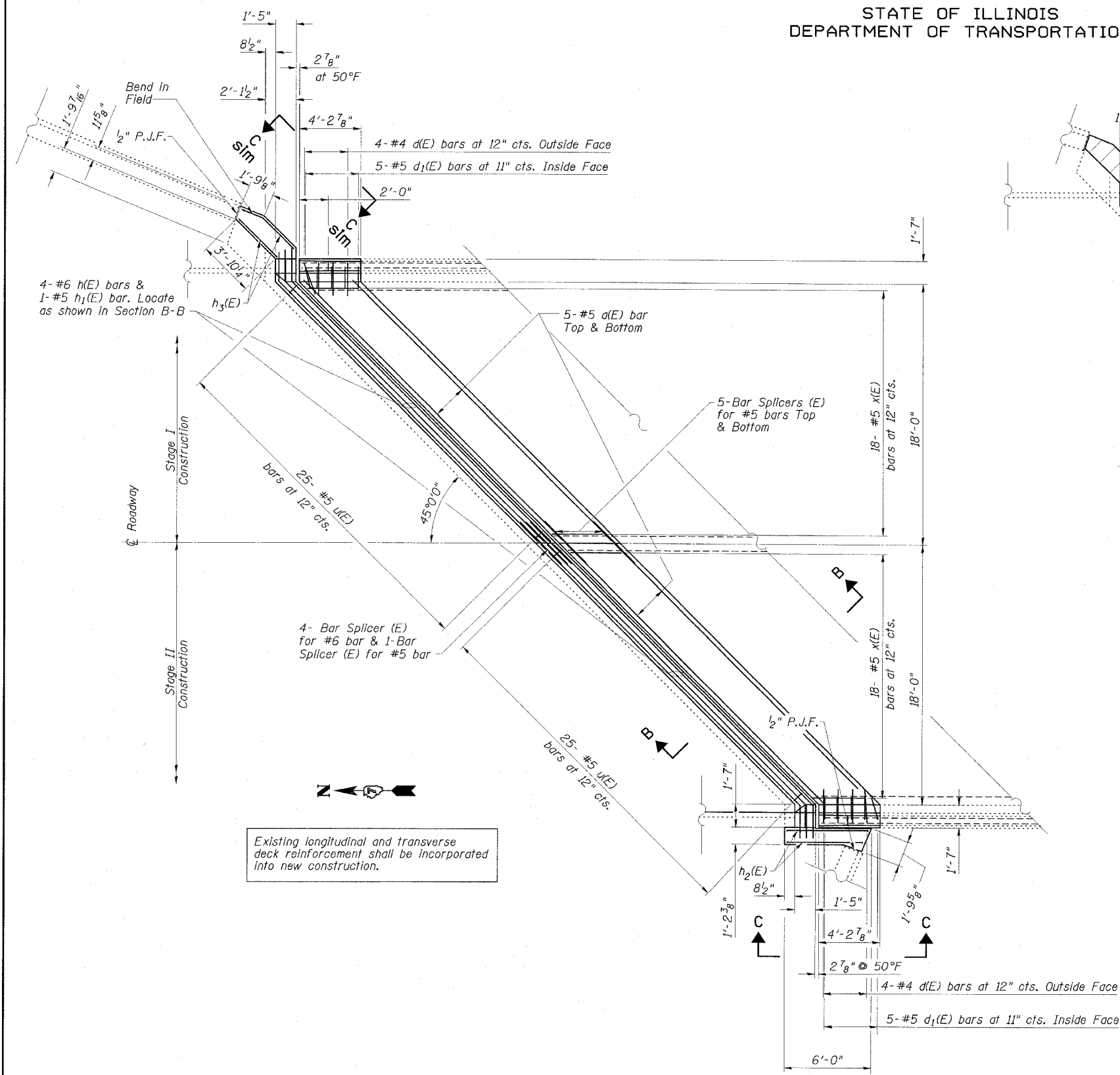
D-7 JOINT REPAIRS 2006-3

ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
FAP 116	*	RICHLAND	31	8
STA		TO STA		
FED. ROAD EST. NO.		ILLINOIS	FED. AID PROJECT	
		DWG. NO. 3	OF 6	

NOTE

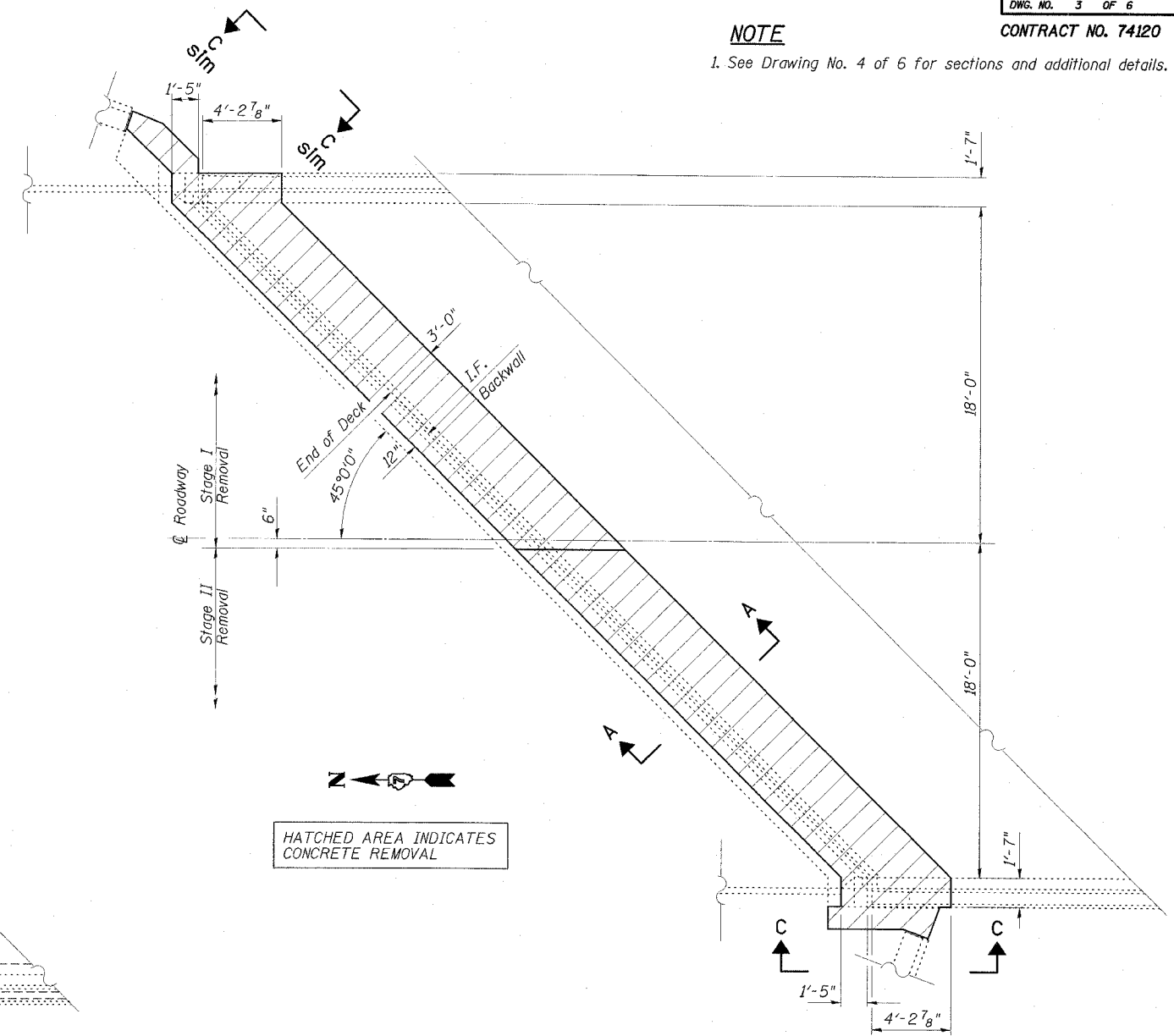
1. See Drawing No. 4 of 6 for sections and additional details.

CONTRACT NO. 74120



PROPOSED PARTIAL PLAN

(North Abutment shown; South Abutment similar)



EXISTING PARTIAL PLAN

(North Abutment shown; South Abutment similar)

EXPANSION JOINT REPLACEMENT DETAILS

IL 130 OVER EAST FORK CREEK

FAP RTE 116 (IL 130)

D-7 JOINT REPAIRS 2006-3

RICHLAND COUNTY

STATION 897+00.00

STRUCTURE NO. 080-0009

ESCA
CONSULTANTS, INC.

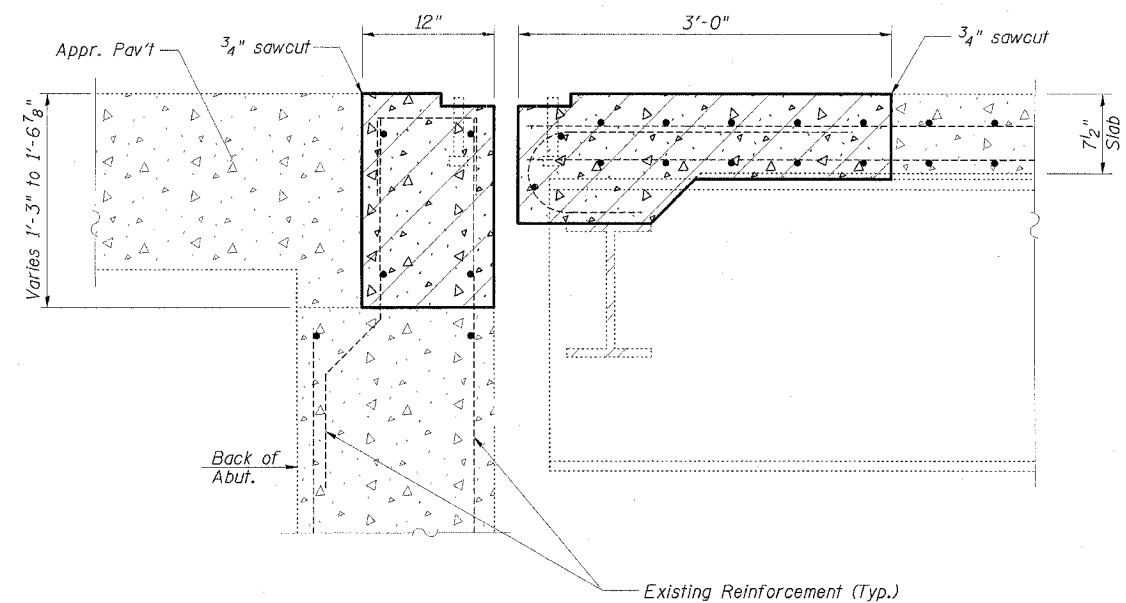
DESIGNED BY:	MTD	11/05
DRAWN BY:	CJG	1/06
CHECKED BY:	MTD	11/05
APPROVED BY:	RDP	1/06

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

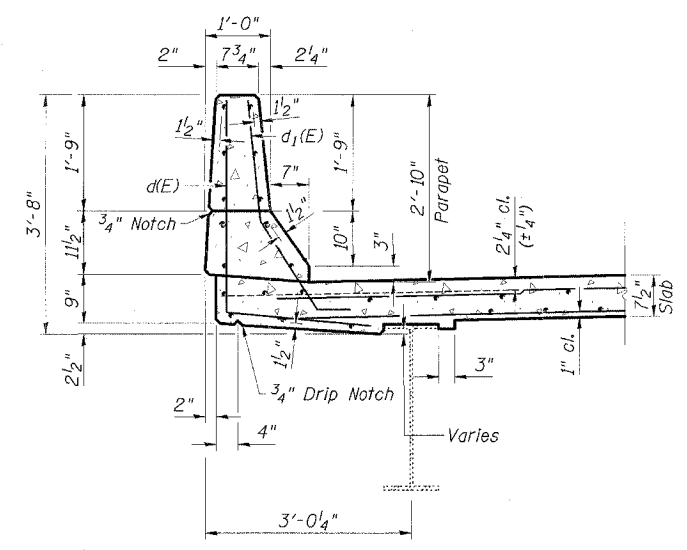
*D-7 JOINT REPAIRS 2006-3

ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
FAP 116	*	RICHLAND	31	9
STA.	TO STA.			
FED. ROAD DIST. NO.	ILLINOIS	FED. AID PROJECT		
DWG. NO. 4 OF 6				

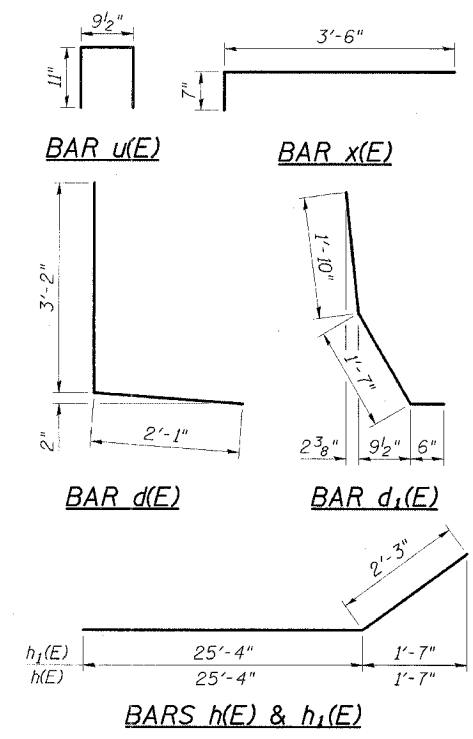
CONTRACT NO. 74120



SECTION A-A



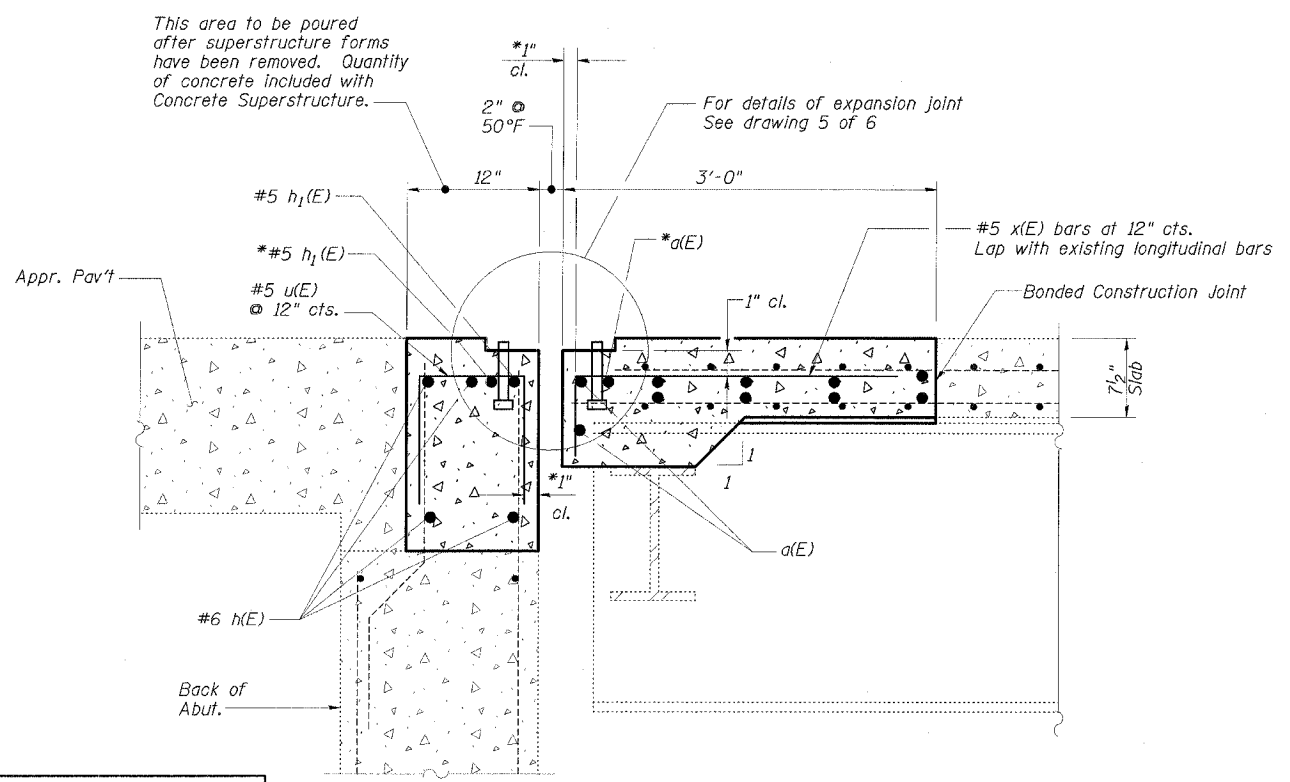
SECTION THRU PARAPET



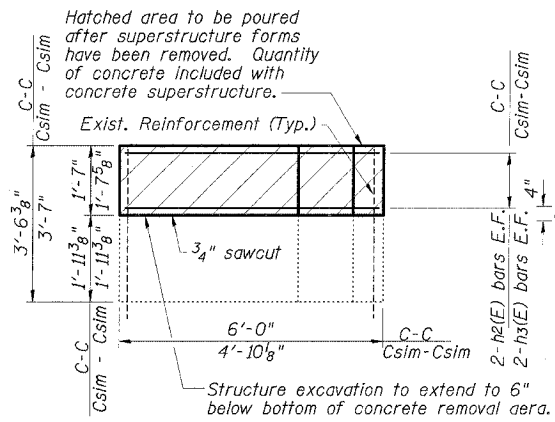
BILL OF MATERIAL

Bar	No.	Size	Length	Shape
a(E)	40	#5	25'-4"	—
d(E)	16	#4	5'-3"	L
d1(E)	20	#5	3'-11"	L
h(E)	16	#6	27'-7"	—
h1(E)	4	#5	27'-7"	—
h2(E)	8	#4	5'-2"	—
h3(E)	8	#4	3'-0"	—
u(E)	100	#5	2'-7 1/2"	U
v(E)	16	#4	3'-0"	—
x(E)	72	#5	4'-1"	L
Structure Excavation		Cu. Yds.	5	
Reinforcement Bars, Epoxy Coated		Pound	2635	
Concrete Superstructure		Cu. Yds.	20.3	

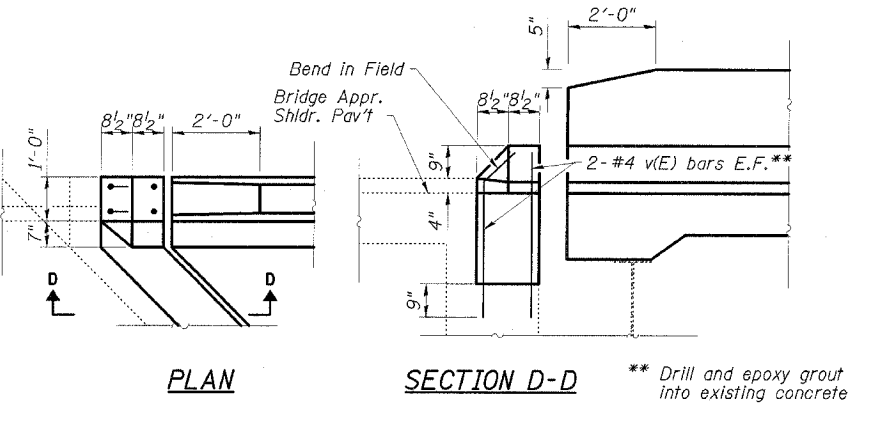
Reinforcement bars designated (E) shall be epoxy coated.



SECTION B-B



VIEW C-C



PLAN
SECTION D-D
CURB/PARAPET END DETAIL

** Drill and epoxy grout into existing concrete

* Place a(E) and h1(E) bars in back of anchor bolt as shown if required to maintain 1" cl. (+0-1/8"). Anchor bolts should be tied to a(E) and h1(E) bars.

ESCA
CONSULTANTS, INC.

DESIGNED BY:	MTD	11/05
DRAWN BY:	CJG	1/06
CHECKED BY:	MTD	11/05
APPROVED BY:	RDP	1/06

EXPANSION JOINT REPLACEMENT DETAILS
IL 130 OVER EAST FORK CREEK
FAP RTE 116 (IL 130)
D-7 JOINT REPAIRS 2006-3
RICHLAND COUNTY
STATION 897+00.00
STRUCTURE NO. 080-0009

CONTRACT NO. 74120

Joint Size	"C" at 50°F	"D" at 50°F
2"	2"	1 1/2" Min.
2 1/2"	2 1/2"	1 3/4" Min.
4"	3"	2 1/2" Min.

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

GENERAL NOTES

Continuous Seal Neoprene Expansion Joint shall consist of molded anchor blocks of elastomer and steel, field assembled over continuous lengths of elastomeric membrane.

The elastomeric membrane shall be premolded with a single or a double upward convolution that will have a "memory" to return to its molded position upon joint closure.

The convolution length shall be such that the extended length will not be greater than the manufactured length when the joint is fully expanded in its design range and will not protrude above the anchor blocks when the joint is fully compressed.

Joint openings shall be adjusted according to Article 503.10(c) of the Standard Specifications when the deck is poured at an ambient temperature other than 50° F.

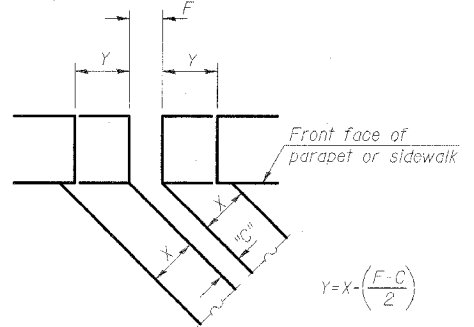
The parapet and roadway membrane shall be made continuous by an approved vulcanizing process. Lapping will not be permitted.

INSTALLATION NOTES

- Install continuous seal in roadway, parapet, curb, and sidewalk.
 - Install anchor blocks as indicated.
- Note A:
Maximum spacing of anchor bolts shall be 12" centers.

SKEW LIMITATIONS

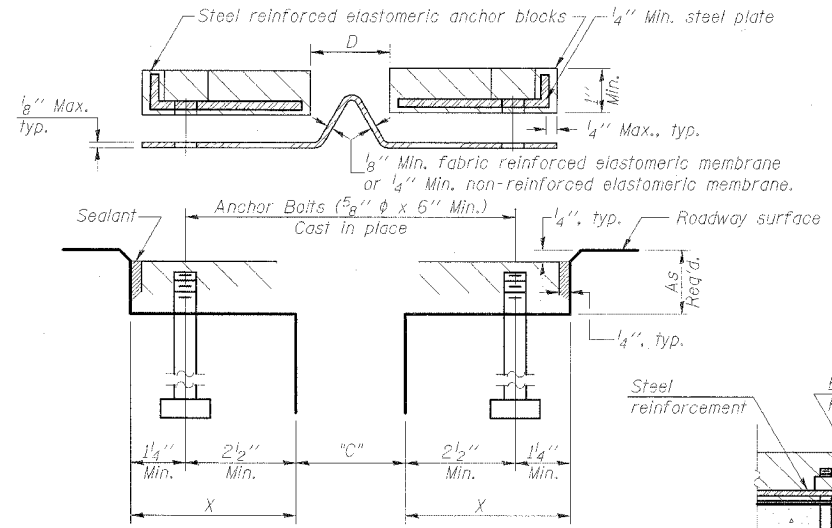
The details of the anchor blocks and the elastomeric membrane in the parapet, as shown, are for up to 50° skews. For skews greater than 50°, the anchor blocks and the elastomeric membrane, installed according to dimension "D", might require modifications to insure a minimum clearance of 1/2" from centerline of anchor studs to edge of parapet opening. The anchor blocks and the elastomeric membrane shall also be installed to the top of the parapet with the anchor studs spaced at ±12" cts.



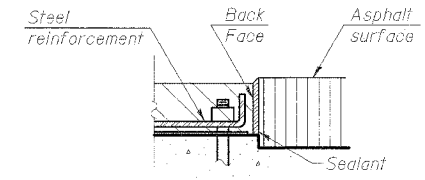
$$Y = X - \left(\frac{F - C}{2} \right)$$

For dimension "F" see drawing #3

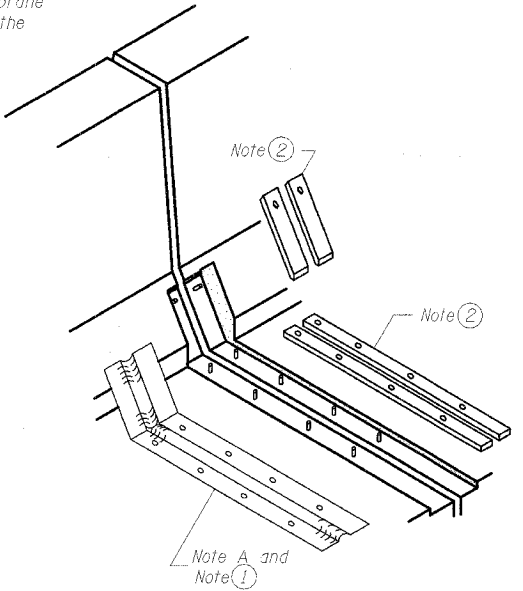
FORMING BLOCKOUT SKETCH



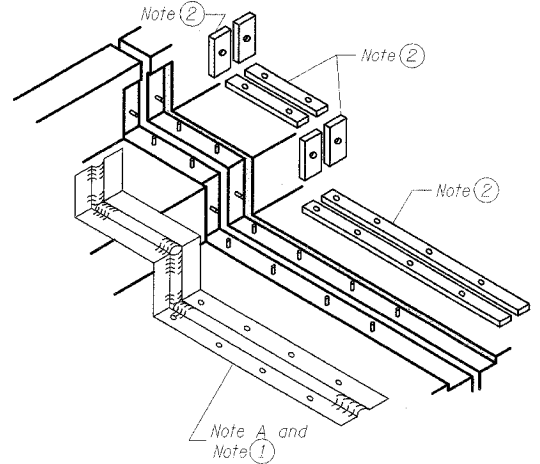
CROSS SECTION



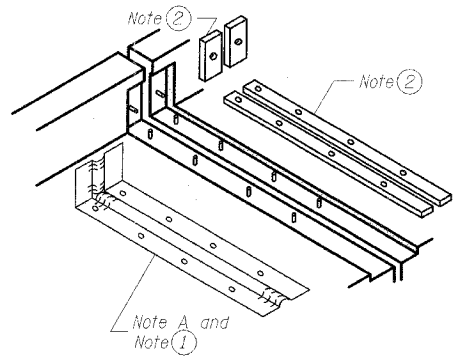
ANCHOR BLOCK WITH ASPHALT SURFACE



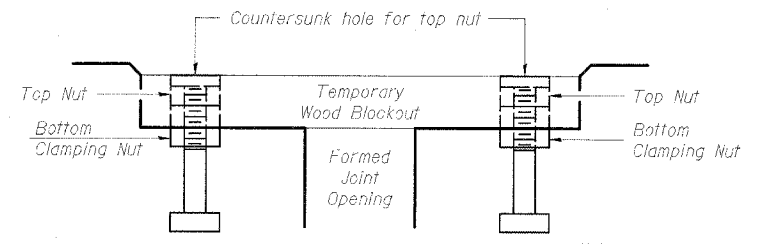
AT PARAPET



AT SIDEWALK OR MEDIAN



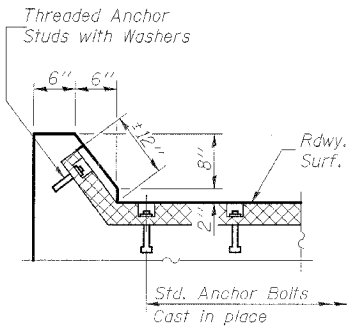
AT WALL



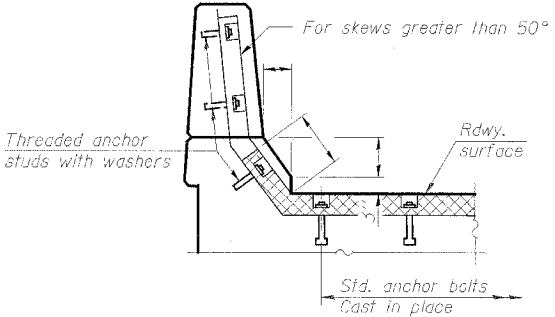
Note:
Stud needs to be threaded lower to allow for use of clamping nut.

Anchor studs should be stainless

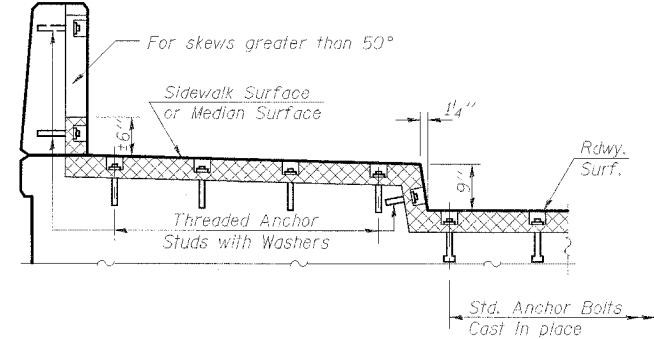
RECOMMENDED BLOCKOUT DETAIL



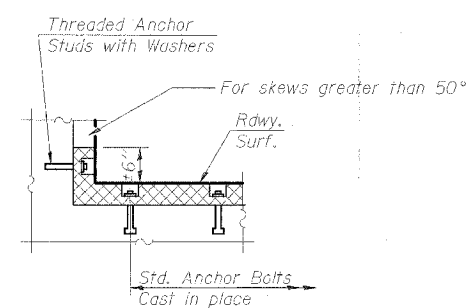
AT CURB



AT PARAPET



AT SIDEWALK OR MEDIAN
TYPICAL END TREATMENTS



AT WALL

CONTINUOUS SEAL TYPE
NEOPRENE EXPANSION JOINTS
IL 130 OVER EAST FORK CREEK
FAP RTE 116 (IL 130)
D-7 JOINT REPAIRS 2006-3
RICHLAND COUNTY
STATION 897+00.00
STRUCTURE NO. 080-0009

ESCA
CONSULTANTS, INC.

DESIGNED BY:	MTD	11/05
DRAWN BY:	HAG	11/05
CHECKED BY:	MTD	11/05
APPROVED BY:	RDP	1/06

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

* D-7 JOINT REPAIRS 2006-3

ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
FAP 116	*	RICHLAND	31	11
STA	TO STA			
FED. ROAD DIST. NO.	ILLINOIS	FED. AID PROJECT		
DWG. NO. 6 OF 6				

CONTRACT NO. 74120

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) = $1.25 \times f_{s_{allow}} \times A_t$

Where f_y = Yield strength of lapped reinforcement bars in ksi.
 $f_{s_{allow}}$ = Allowable tensile stress in lapped reinforcement bars in ksi (Service Load)
 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	5.9
#5	2'-0"	23.0	9.2
#6	2'-7"	33.1	13.3
#7	3'-5"	45.1	18.0
#8	4'-6"	58.9	23.6
#9	5'-9"	75.0	30.0
#10	7'-3"	95.0	38.0
#11	9'-0"	117.4	46.8

Bar splicer assemblies shall be according to Section 508 of the Standard Specifications, except as noted. The furnishing and installation of bar splicer assemblies will be measured and paid for at the contract unit price each for "BAR SPLICERS."

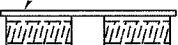
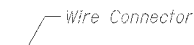
The diameter of this part is the same as the diameter of the bar spliced.

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

ROLLED THREAD DOWEL BAR



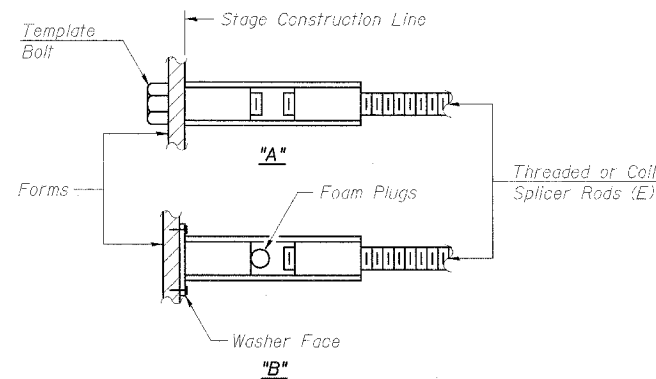
**** ONE PIECE**



WELDED SECTIONS

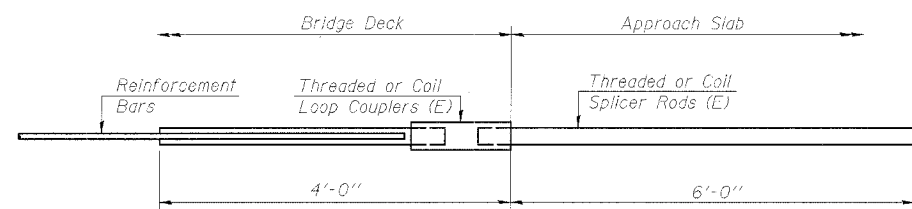
BAR SPLICER ASSEMBLY ALTERNATIVES

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



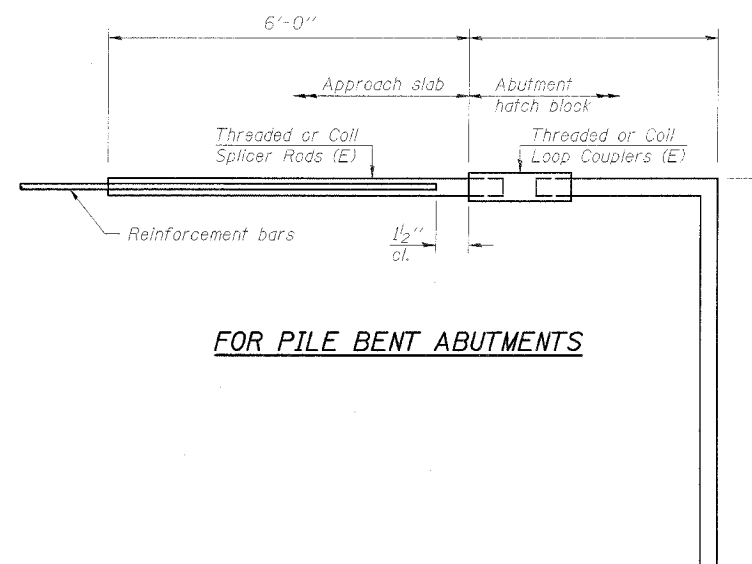
INSTALLATION AND SETTING METHODS

"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.



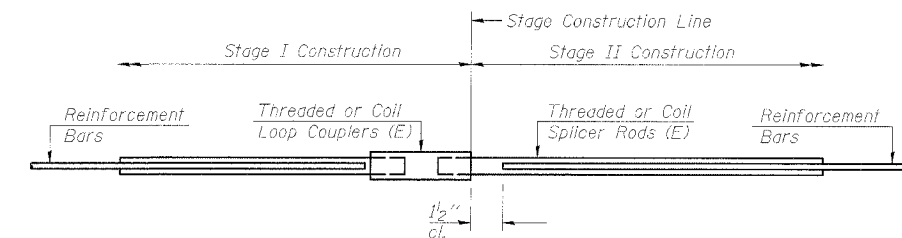
FOR INTEGRAL OR SEMI-INTEGRAL ABUTMENTS

Bar Splicer for #5 bar	
Min. Capacity = 23.0 kips - tension	
Min. Pull-out Strength = 9.2 kips - tension	
No. Required =	



FOR PILE BENT ABUTMENTS

Bar Splicer for #5 bar	
Min. Capacity = 23.0 kips - tension	
Min. Pull-out Strength = 9.2 kips - tension	
No. Required =	



STANDARD

Bar Size	No. Assemblies Required	Location
#5	20	Ends of Deck
#5	2	Abut. Blocks
#6	8	Abut. Blocks

BAR SPLICER ASSEMBLY DETAILS
IL 130 OVER EAST FORK CREEK
FAP RTE 116 (IL 130)
D-7 JOINT REPAIRS 2006-3
RICHLAND COUNTY
STATION 897+00.00
STRUCTURE NO. 080-0009

ESCA
CONSULTANTS, INC.

DESIGNED BY:	MTD	11/05
DRAWN BY:	HAG	11/05
CHECKED BY:	MTD	11/05
APPROVED BY:	RDP	1/06

ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
FAP 116	*	RICHLAND	31	12
STA.	TO STA.			
FED. ROAD DIST. NO.	ILLINOIS	FED. AID PROJECT		

* D-7 Joint Repairs 2006-3

B.M. Chiseled on N.E. wing of existing structure Sta 897+00 Elev. 439.29
 Existing Structure: built in 1929 as S.B.T. Rte. 130, Sec. 123 B widened in 1959
 as Sec. 123 B.Y. 3 span deck girder on solid concrete piers and closed
 abutments - 30'-0" wide and 13'-9" Bk. Bk. of abutments.
 The contractor shall remove existing superstructure utilizing Stage Construction.
 Abutment and piers to be reused.
 Str. No. 080-0009

STATE OF ILLINOIS
 DEPARTMENT OF TRANSPORTATION

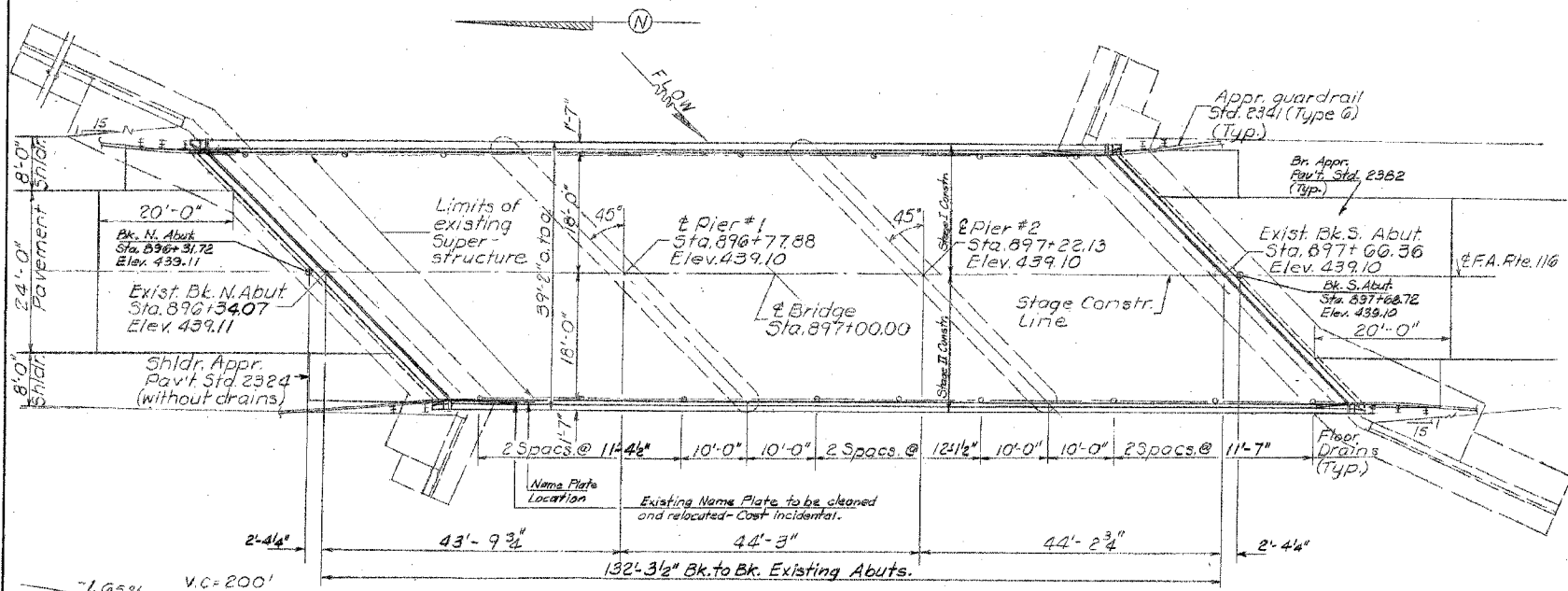
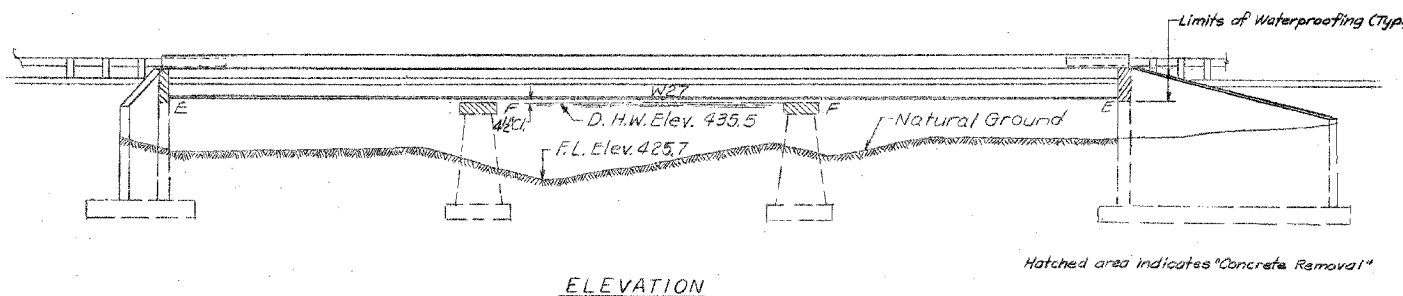
ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
F.A.P. 116	*	RICHLAND	31	12
FED. ROAD DIST. NO.	ILLINOIS	FED. AID PROJECT		

GENERAL NOTES

- The Structural Steel Bearing Plates of the Elastomeric Bearing Assembly shall conform to the requirements of AASHTO M 222.
- Fasteners shall be high strength bolts. Bolts 7/8", open holes 15/16", unless otherwise noted.
- Calculated weight of Structural Steel = 18,860 Lbs. (M-183)
69,900 Lbs. (M-222)
- The basic lead silice chromate paint system shall be used for shop and field painting of Structural Steel.
- Field welding of construction accessories will not be permitted to the bottom flange of beams nor to the top flange for a distance equal to one-fourth the span length each way from the pier supports. Field welding in other areas will be permitted only when approved by the Engineer.
- Anchor bolts shall be set before bolting diaphragms over supports.
- Plan dimensions and details relative to existing structure have been taken from existing plans and are subject to nominal construction variations. It shall be the Contractor's responsibility to verify such dimensions and details in the field and make necessary approved adjustments prior to construction or ordering of materials. Such variations shall not be cause for additional compensation for a change in the scope of the work, however, the Contractor will be paid for the quantity actually furnished at the unit price bid for the work.
- Expansion bolts shall consist of approved expansion anchors, providing minimum certified proof load = 4,000 lbs., and 3/4" x 12" hooked bolts.
- Bearing seat surfaces shall be constructed or adjusted to the designated elevations within a tolerance of 1/8 inch. Adjustment shall be made either by grinding the surface or by shimming the bearing. Two 1/2" adjusting shims, of the dimensions of the bottom bearing plate, shall be provided for each bearing in addition to all other plates or shims. For Type I Elastomeric Bearings, shims of the dimensions of top plate shall be provided and placed as detailed.
- The main load carrying member components subject to tensile stress shall conform to the Supplemental Requirements for Match Toughness Zone 2. These components are the wide flange beams and all splice plate material.
- Reinforcement bars shall conform to the requirements of AASHTO M-31 or M-53 Grade 60.
- The back face of Closed Abutments shall be waterproofed according to Article 503.11 of the Standard Specifications.

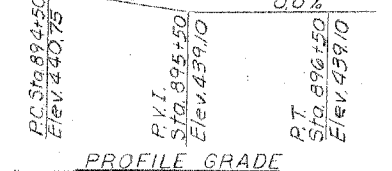
STATION 897+00.00
 REBUILT 198 BY
 STATE OF ILLINOIS
 F.A. RTE. 116 SEC. 123 BR-3
 F.A. PROJ. BR-116(23)
 LOADING HS-20
 STR. NO. 080-0009

NAME PLATE
 See Std. 2113



TOTAL BILL OF MATERIAL

ITEM	UNIT	SUB	TOTAL
Protective Coat	Sq. Yds.	638	638
Removal of Existing Superstructures	Each	1	1
Concrete Removal	Cu. Yds.	43.6	43.6
Expansion Bolts (3/4")	Each	260	260
Structure Excavation	Cu. Yds.	102	102
Floor Drains	Each	18	18
Class X Concrete	Cu. Yds.	164.3	242.9
Structural Steel	L. Sum	L.S.	L.S.
Reinforcement Bars	Lbs.	18,860	23,340
Reinforcement Bars (Epoxy Coated)	Lbs.	22,420	22,420
Name Plates	Each	1	1
Neoprene Expansion Joint (2")	Lin. Ft.	100	100
Elastomeric Bearing Assembly, Type I	Each	12	12
Epoxy Crack Sealing	Lin. Ft.	54	54



Design Specifications: 1977 AASHTO, 1978, 1979, 1980, 1981 and 1982 Interim Specifications.
 LOADING HS20-44 (New Construction)
 Allow 25"/sq. Ft. for future wearing surface.

WATERWAY INFORMATION

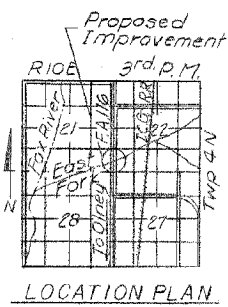
Drainage Area 16.00 Sq. Mi. Low Grade Elev. 438.9' Sta. 898+00

Flood	Frq. Yr.	Opening	Not. C.F.S.	Head - Ft.	Headwater		
Design	50	3360	480	513	435.5		
Base	100	3857	480	522	435.8		
Max. Calc.	500	4996	480	522	436.5		
				1.16	1.05	436.64	436.55
				0.71	1.33	436.51	437.19
				1.40	1.40	437.9	437.9

DESIGN STRESSES

NEW CONSTRUCTION: f'c = 3,500 psi, f_y = 60,000 psi (Reinf), f_y = 50,000 psi (Struct), f_y = 36,000 psi (M 183) (Struct), f_y = 50,000 psi (M 222)

EXIST. CONSTRUCTION: f'c = 1,400 psi, f_s = 20,000 psi (Reinf), f_s = 18,000 psi (Struct)



GENERAL PLAN
 ILL. RTE. 130
 OVER EAST FORK CREEK
 F.A. RTE. 116 SEC. 123 BR-3
 RICHLAND COUNTY
 STA. 897+00.00

DESIGNED: Stanley K. Duvvuri
 CHECKED: David Burdick
 E. V. Taylor
 DRAWN: F.F.
 CHECKED: SKD D.B.

EXAMINED: Thomas R. [Signature]
 PASSED: [Signature]
 APPROVED: [Signature]



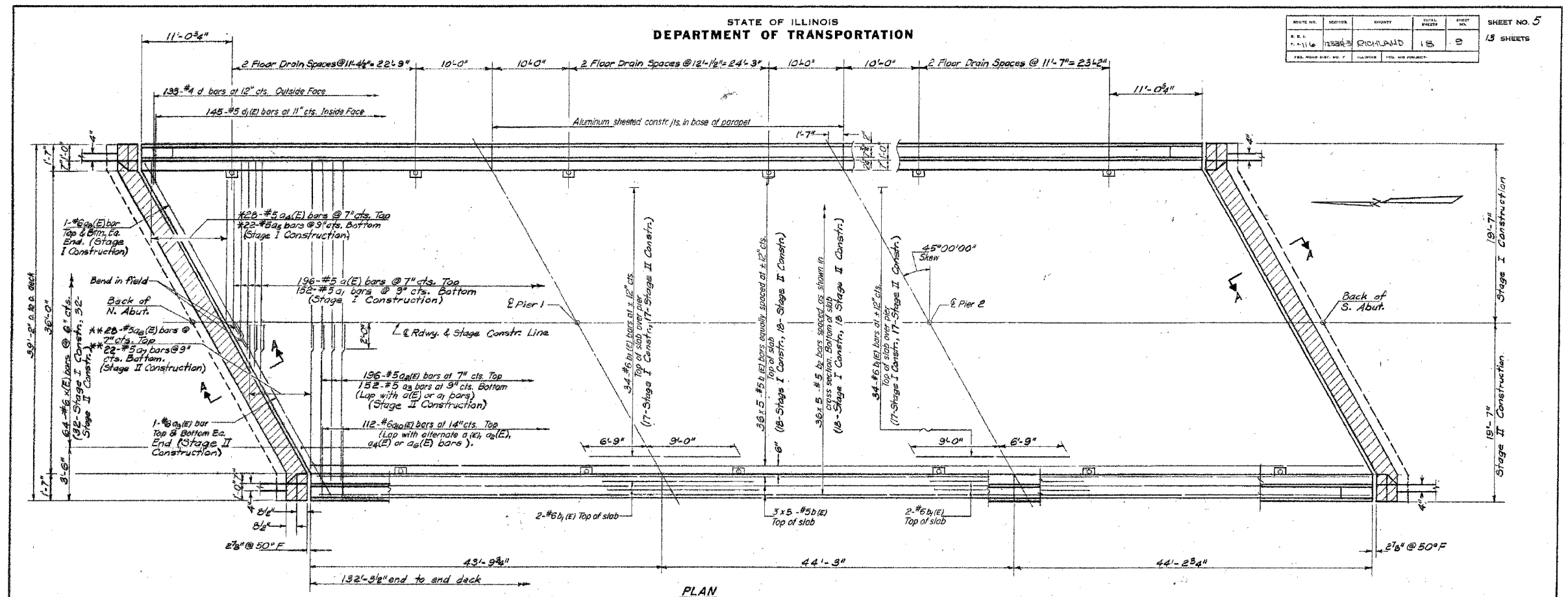
ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
FAP 116		RICHLAND	31	13
STA		TO STA		
FED. ROAD DIST. NO.	ILLINOIS	FED. AID PROJECT		

* D-7 Joint Repairs 2006-3

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
FAP 116		RICHLAND	31	13
STA		TO STA		
FED. ROAD DIST. NO.	ILLINOIS	FED. AID PROJECT		

SHEET NO. 5
13 SHEETS



- * Order $a_1(E)$ & a_2 bars full length. Cut to fit skew and use remainder of bars in opposite end, Stage I Construction.
- ** Order $a_3(E)$ & a_7 bars full length. Cut to fit skew and use remainder of bars in opposite end, Stage II Construction.

MIN. BAR LAPS

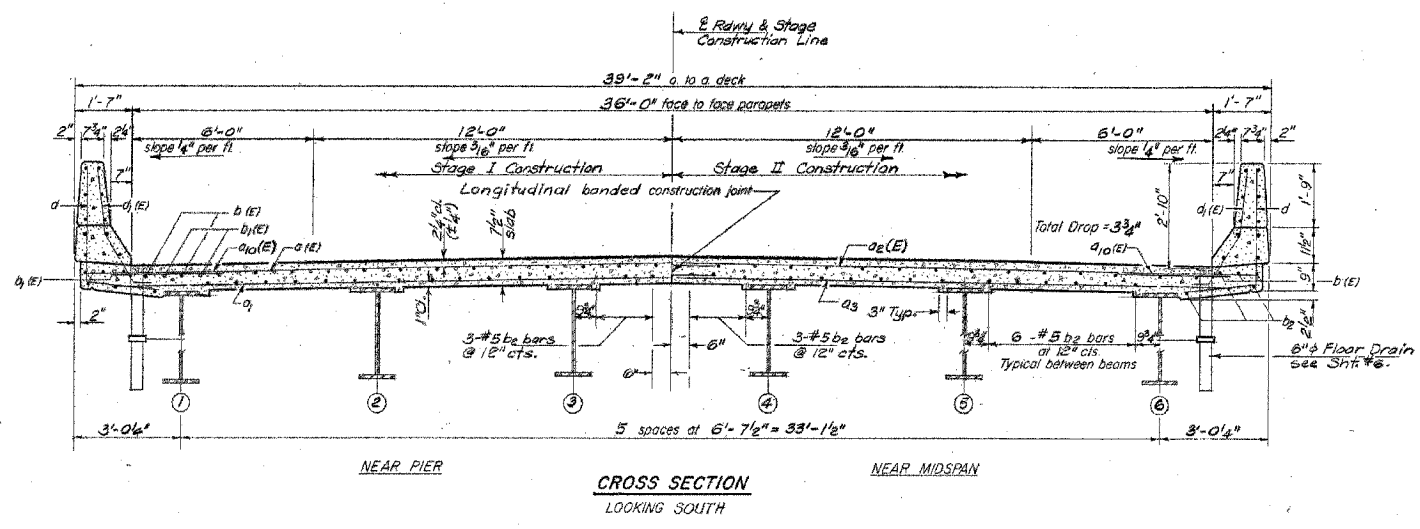
#5 bars	1'-9"
#6 bars	2'-0"

DESIGNED: SILVANO K. DOMAN
CHECKED: David Burdick
DRAWN: E.V. Taylor
CHECKED: SKD D.B.

EXAMINED: James Kayburn
PASSED: [Signature]
APPROVED: [Signature]

January 25, 1983

5-1-R-157 H-30-81

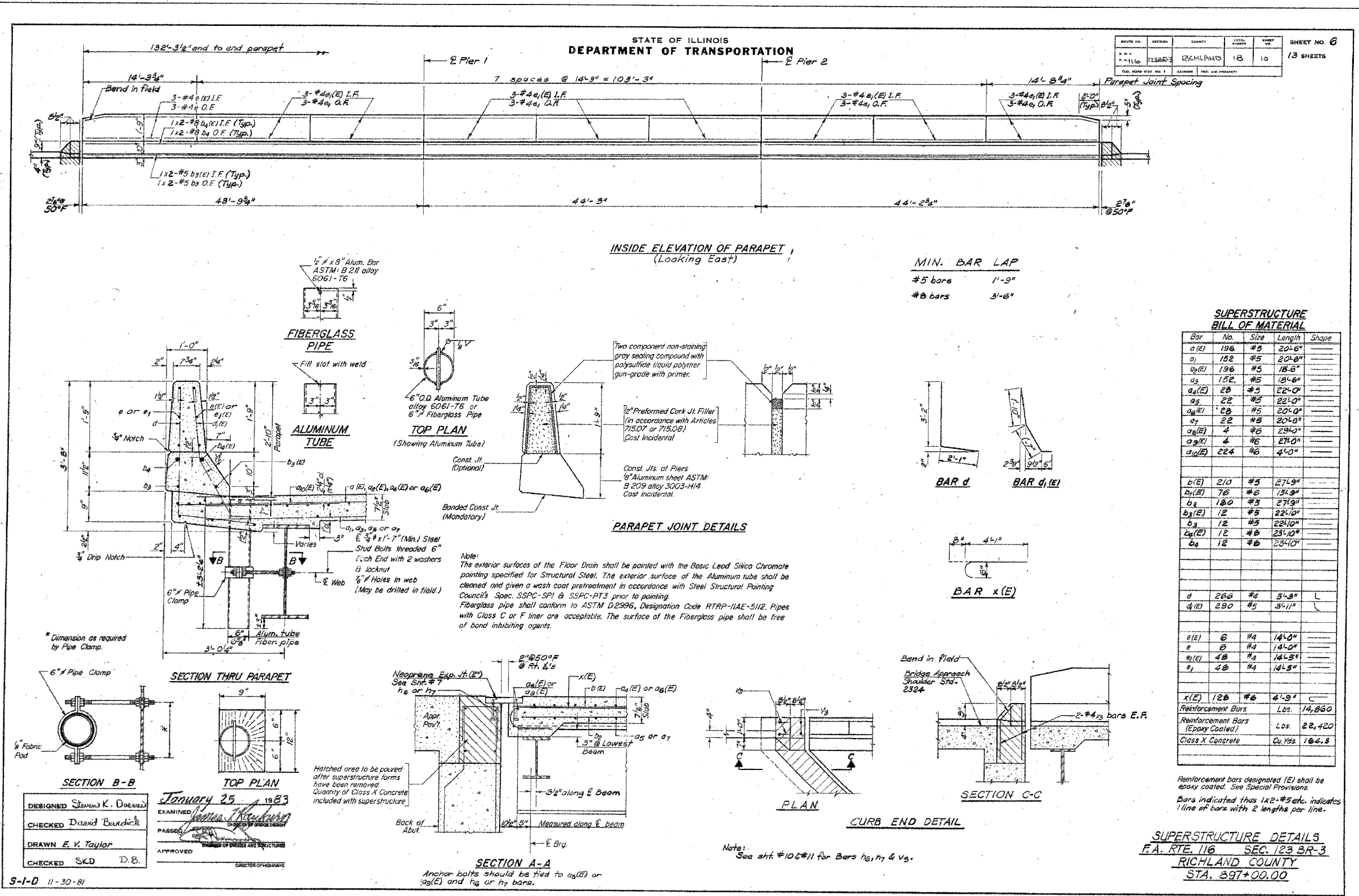


NOTES:
See sheet #6 for superstructure details and Bill of Material.
Reinforcement bars designated (E) shall be epoxy coated. See Special Provisions.
Bars indicated thus 20 x 3-#5 etc. indicates 20 lines of bars with 3 lengths per line.
For Section A-A, see Sht. #6.
Hatched area and Curb End to be poured after superstructure formwork has been removed. Quantity of Class X Concrete filled with superstructure. See Sht. #2 for details of slab treatment at End Diaphragm at Stage Constr. Line.

SUPERSTRUCTURE
F.A. RTE. 116 SEC. 123 BR-3
RICHLAND COUNTY
STA. 897+00.00

ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
FAP 116	*	RICHLAND	31	14
STA.	TO STA.			
FED. ROAD DIST. NO.	ILLINOIS	FED. AID PROJECT		

* D-7 Joint Repairs 2006-3



ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
FAP 116	*	RICHLAND	31	14
STA.	TO STA.			
FED. ROAD DIST. NO.	ILLINOIS	FED. AID PROJECT		

INSIDE ELEVATION OF PARAPET (Looking East)

MIN. BAR LAP

#5 bars	1'-9"
#8 bars	3'-6"

SUPERSTRUCTURE BILL OF MATERIAL

Bar	No.	Size	Length	Shape
a(E)	196	#5	20'-6"	
a1	152	#5	20'-0"	
a2(E)	196	#5	18'-6"	
a3	152	#5	18'-6"	
a4(E)	28	#3	22'-0"	
a5	22	#5	22'-0"	
a6(E)	28	#5	20'-0"	
a7	22	#5	20'-0"	
a8(E)	4	#6	29'-0"	
a9(E)	4	#6	27'-0"	
a10(E)	224	#6	4'-0"	
b(E)	210	#5	27'-9"	
b1(E)	76	#6	15'-3"	
b2	100	#5	27'-9"	
b3(E)	12	#5	22'-10"	
b4	12	#5	22'-10"	
c1(E)	12	#6	23'-10"	
c2	12	#6	23'-10"	
d	266	#4	5'-3"	L
d(E)	290	#5	3'-11"	L
e(E)	6	#4	14'-0"	
e	6	#4	14'-0"	
g1(E)	48	#4	14'-5"	
g1	48	#4	14'-5"	
x(E)	128	#6	4'-9"	C
Reinforcement Bars		Lbs.	14,860	
Reinforcement Bars (Epoxy Coated)		Lbs.	22,420	
Class X Concrete		Cu Yds.	164.8	

PARAPET JOINT DETAILS

Note: The exterior surfaces of the Floor Drain shall be painted with the Basic Lead Silica Chromate painting specified for Structural Steel. The exterior surface of the Aluminum tube shall be cleaned and given a wash coat pretreatment in accordance with Steel Structural Painting Council's Spec. SSPC-SP1 & SSPC-PT3 prior to painting. Fiberglass pipe shall conform to ASTM D2996, Designation Code RTPP-IIAE-51/2. Pipes with Class C or F liner are acceptable. The surface of the Fiberglass pipe shall be free of bond inhibiting agents.

DESIGNED	Shawn K. Dineen
CHECKED	David Bandick
DRAWN	E. V. Taylor
CHECKED	SKD D.B.

January 25, 1983
 EXAMINED
 PASSED
 APPROVED

S-1-D 11-30-81

SUPERSTRUCTURE DETAILS
 F.A. RTE. 116 SEC. 123 BR-3
 RICHLAND COUNTY
 STA. 897+00.00

Reinforcement bars designated (E) shall be epoxy coated. See Special Provisions.
 Bars indicated thus 1x2-#5 etc. indicates 1 line of bars with 2 lengths per line.

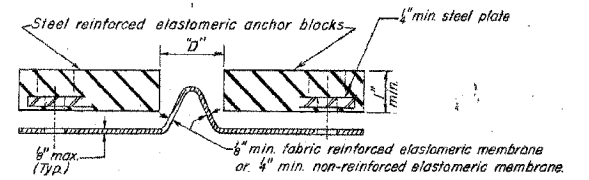
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FAP 116	*	RICHLAND	31	15
STA.	TO STA.			
FED. ROAD DIST. NO.	BILLINGS	FED. AID PROJECT		

* D-7 Joint Repairs 2006-3

ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
FAP 116	*	RICHLAND	31	15
STA.	TO STA.			
FED. ROAD DIST. NO.	BILLINGS	FED. AID PROJECT		

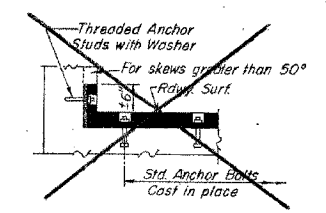
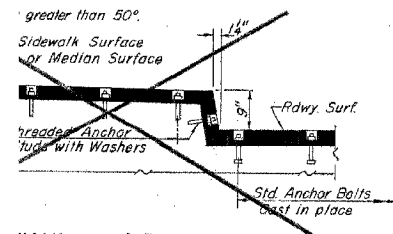
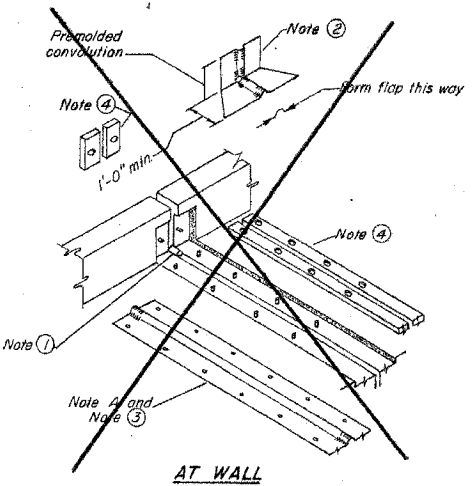
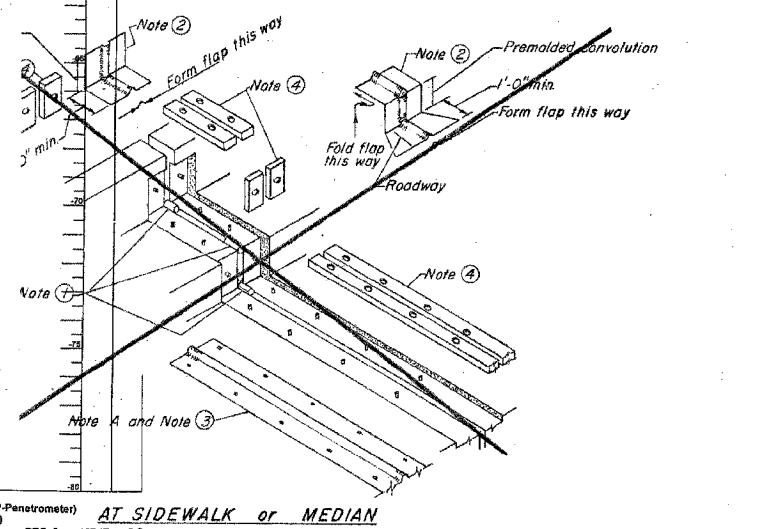
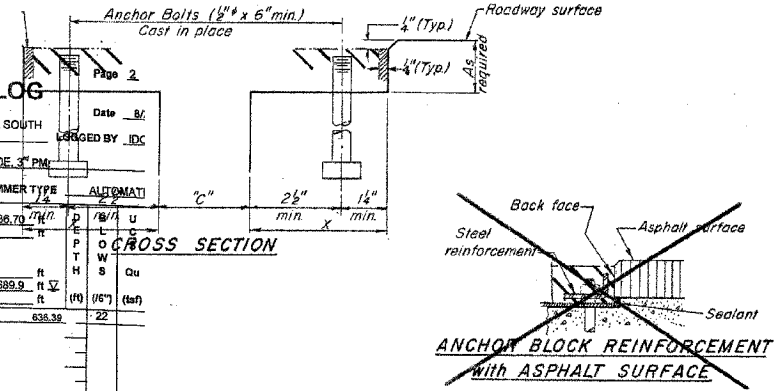
SHEET NO. 7
13 SHEETS

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION



GENERAL NOTES

Continuous Seal Neoprene Expansion Joint shall consist of molded anchor blocks of elastomer and steel, field assembled over continuous lengths of elastomeric membrane. See Special Provisions.
The elastomeric membrane shall be pre-molded with a single or a double upward convolution that will have a "memory" to return to its molded position upon joint closure.
The steel reinforcement must extend up the back face of anchor blocks when asphalt surfaces are used but is optional in concrete blockout.
The convolution length shall be such that the extended length will not be greater than the manufactured length when the joint is fully expanded in its design range and will not protrude above the anchor blocks when the joint is fully compressed.
Joint openings shall be adjusted in accordance with Article 503.07(c) of the Standard Specifications when the deck is poured at an ambient temperature other than 50° F.
The parapet and sidewalk flaps may be furnished factory vulcanized to the roadway membrane provided the centerline of the convolution is maintained and the process and method meet the approval of the Engineer.



AT SIDEWALK or MEDIAN
VD TREATMENTS

AT WALL

CONTINUOUS SEAL TYPE
NEOPRENE EXPANSION JOINTS
For 2", 2 1/2" and 4" Movement
F.A. RTE. 116 SEC. 123 BR-3
RICHLAND COUNTY
STA. 897+00.00

Illinois Department of Transportation
SOIL BORING LOG
Page 1 of 2

ROUTE FA 28(US45) DESCRIPTION US ROUTE 45 OVER SPRING CREEK SOUTH OF BUCKLEY LOCATION SW 1/4, SEC. 3, TWP. 24N, RNG. 10E, 3rd PM
COUNTY IROQUOIS DRILLING METHOD Hollow Stem Auger HAMMER TYPE AUTOMATIC

DEPTH (ft)	SOIL DESCRIPTION	WATER	TEMPERATURE	UNSATURATED WAT. CONTENT (%)	SHRINKAGE (%)	LIQUID LIMIT (%)	PLASTIC LIMIT (%)	PLASTICITY INDEX (%)	UNSATURATED WATER CONTENT (%)	SHRINKAGE (%)	LIQUID LIMIT (%)	PLASTIC LIMIT (%)	PLASTICITY INDEX (%)
0-2	Stiff Gray CLAY TILL (continued)												
2-3	Stiff Brown SANDY CLAY LOAM (FILL)												
3-5	Stiff Brown SANDY CLAY LOAM (FILL)												
5-8	Soft Gray CLAY LOAM												
8-11	Hard Brown SANDY CLAY LOAM TILL												
11-14	Hard Gray CLAY LOAM TILL												
14-17	Stiff Gray CLAY TILL												
17-20	Stiff Gray CLAY TILL												
20-22	Stiff Gray CLAY TILL												

The Unconfined Compressive Strength (UCS) Failure Mode is indicated by (B-Bulge, S-Shear, P-Penetrometer)
The SPT (N value) is the sum of the last two blow values in each sampling zone (AASHTO T206)
BBS, from 137 (Rev. 8-99)

Illinois Department of Transportation
SOIL BORING LOG
Page 2

ROUTE FA 28(US45) DESCRIPTION US ROUTE 45 OVER SPRING CREEK SOUTH OF BUCKLEY LOCATION SW 1/4, SEC. 3, TWP. 24N, RNG. 10E, 3rd PM
COUNTY IROQUOIS DRILLING METHOD Hollow Stem Auger HAMMER TYPE AUTOMATIC

DEPTH (ft)	SOIL DESCRIPTION	WATER	TEMPERATURE	UNSATURATED WAT. CONTENT (%)	SHRINKAGE (%)	LIQUID LIMIT (%)	PLASTIC LIMIT (%)	PLASTICITY INDEX (%)	UNSATURATED WATER CONTENT (%)	SHRINKAGE (%)	LIQUID LIMIT (%)	PLASTIC LIMIT (%)	PLASTICITY INDEX (%)
0-10	Stiff Brown Layers of SILT, CLAY & FINE SAND (continued)												
10-11	Very Stiff Brown CLAY LOAM TILL												
11-13	Dense Brown Fine to Coarse GRAVEL												
13-14	Medium Gray SANDY LOAM TILL												
14-15	Dense Brown Fine SAND to Coarse GRAVEL to COBBLE SIZE												
15-16	Dense Brown Fine SAND to Coarse GRAVEL to COBBLE SIZE												
16-17	Dense Brown Fine SAND to Coarse GRAVEL to COBBLE SIZE												
17-18	Dense Brown Fine SAND to Coarse GRAVEL to COBBLE SIZE												
18-19	Dense Brown Fine SAND to Coarse GRAVEL to COBBLE SIZE												
19-20	Dense Brown Fine SAND to Coarse GRAVEL to COBBLE SIZE												
20-22	Dense Brown Fine SAND to Coarse GRAVEL to COBBLE SIZE												

The Unconfined Compressive Strength (UCS) Failure Mode is indicated by (B-Bulge, S-Shear, P-Penetrometer)
The SPT (N value) is the sum of the last two blow values in each sampling zone (AASHTO T206)
BBS, from 137 (Rev. 8-99)

ESCA
CONSULTANTS, INC.

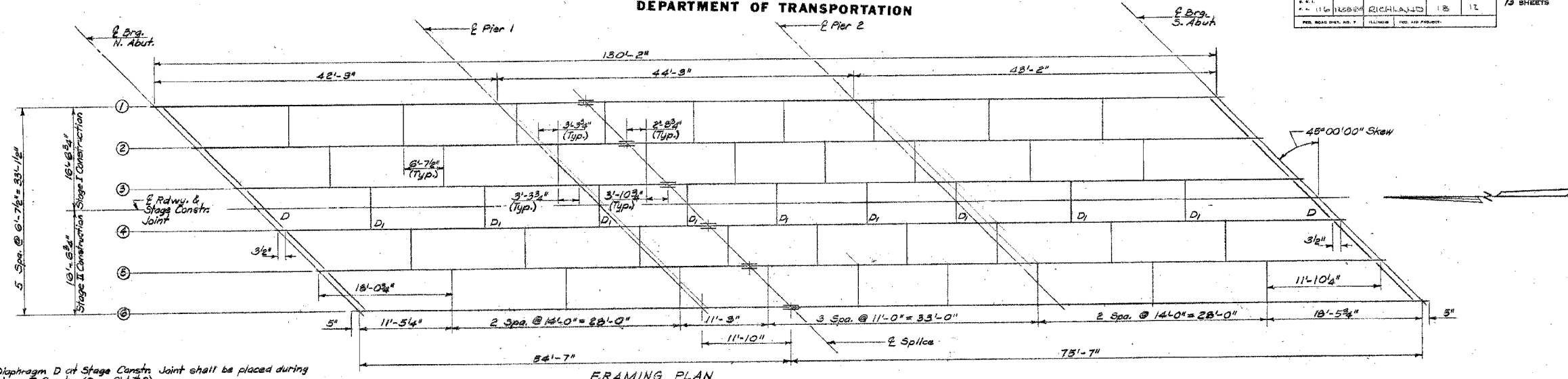
DESIGNED BY: ELH 12/04
DRAWN BY: RJT 01/05
CHECKED BY: ELH 11/05
APPROVED BY: RDP 11/05

ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
FAP 16	*	RICHLAND	31	16
STA.	TO STA.			
FED. ROAD DIST. NO.	ILLINOIS	FED. AID PROJECT		

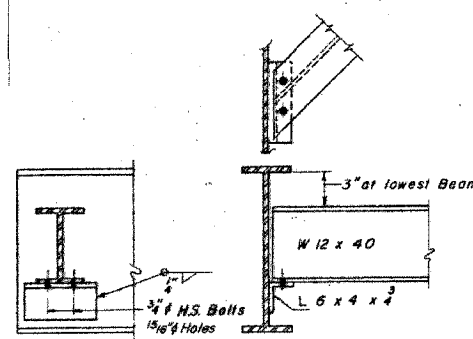
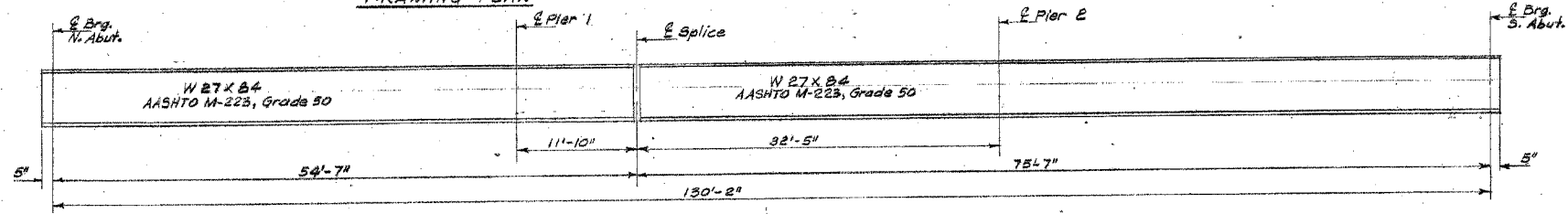
* D-7 Joint Repairs 2006-3

ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
FAP 16	*	RICHLAND	31	16
STA.	TO STA.			
FED. ROAD DIST. NO.	ILLINOIS	FED. AID PROJECT		

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

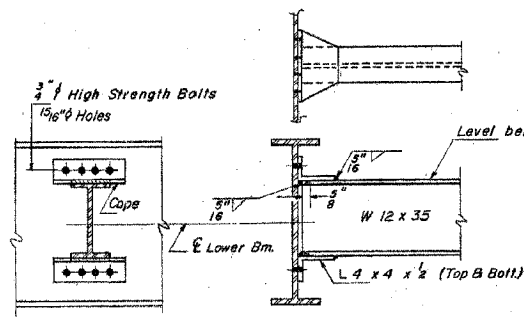


Diaphragm D of Stage Constr. Joint shall be placed during Stage II Constr. (See Sht. # 2)

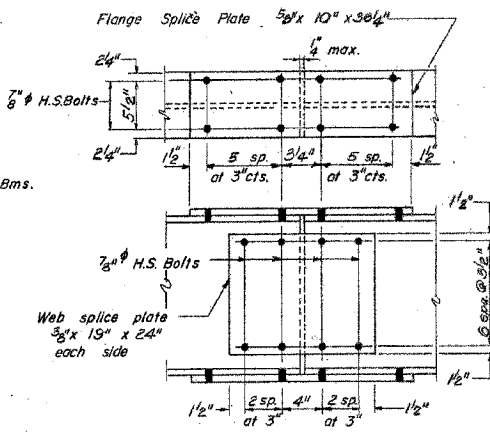


DIAPHRAGM D
10 Required

Note: Two hardened washers shall be required over all 1 5/8" holes. All contact surfaces of joints shall be free of paint or lacquer.



DIAPHRAGM D1
45 Required



SPLICE
A.A.S.H.T.O. M-223, Grade 50

All structural steel shall be AASHTO M-163 except as noted.

* INTERIOR BEAM MOMENT TABLE

	0.4 Span 1	Pier 1	0.5 Span 2	Pier 2	0.6 Span 3
I_s (in ⁴)	2850	2850	2850	2850	2850
S_x (in ³)	213	213	213	213	213
Q (K/ft)	1.045	1.045	1.045	1.045	1.045
MIPMSR (K)	196	258	75	280	200
M _{1/4} (K)	513	562	423	371	519
M _{IMP} (K)	154	111	123	111	156
M _{TOTAL} (K)	863	735	633	742	875
f_s (KSI)	48.6	41.4	35.7	41.8	43.5

** INTERIOR BEAM REACTION TABLE

	N. Abut.	Pier 1	Pier 2	S. Abut.
R _R (K)	17.7	50.0	50.4	17.9
R _L (K)	32.0	40.2	40.3	32.0
Imp. (K)	9.6	12.1	12.1	9.6
R _{TOTAL} (K)	59.3	102.3	102.8	59.5

* - The Load Factor (1.3) [R + Imp] is used in computing moments and stresses.
** - Values given in Table are based upon service loads.

DESIGNED: Steven K. Orlando
CHECKED: David Burdick
DRAWN: E. V. Taylor
CHECKED: SKD D.B.

EXAMINED: *January 25, 2003*
PASSED: *[Signature]*
APPROVED: *[Signature]*
DIRECTOR OF HIGHWAYS

TOP OF FLANGE ELEVATIONS
(FOR FABRICATION ONLY)

	2 Brg. N. Abut.	2 Pier 1	2 Splice	2 Pier 2	2 Brg. S. Abut.
Beam 1	438.10	438.10	438.10	438.10	438.10
Beam 2	438.23	438.23	438.23	438.23	438.23
Beam 3	438.33	438.33	438.33	438.33	438.33
Beam 4	438.33	438.33	438.33	438.33	438.33
Beam 5	438.23	438.23	438.23	438.23	438.23
Beam 6	438.10	438.10	438.10	438.10	438.10

STRUCTURAL STEEL
F.A. RTE. 116 SEC. 123 BR-3
RICHLAND COUNTY
STA. 897+00.00

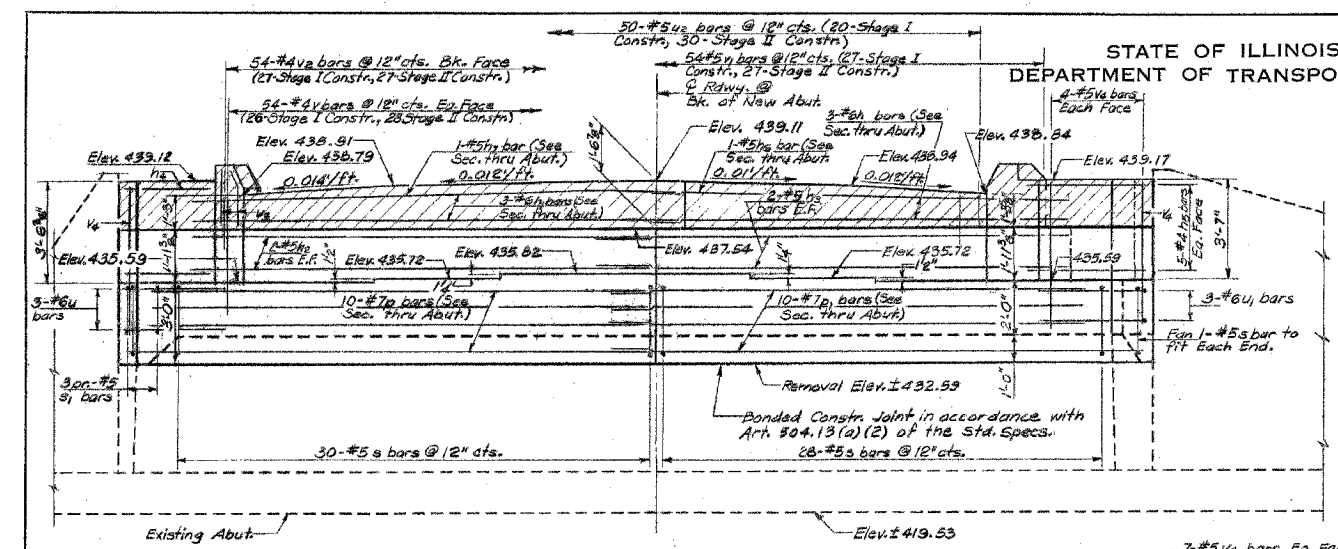
I-2-D 8-30-80

ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
FAP 116	*	RICHLAND	31	17
STA.	TO STA.			
FED. ROAD DIST. NO.	ILLINOIS	FED. AID PROJECT		

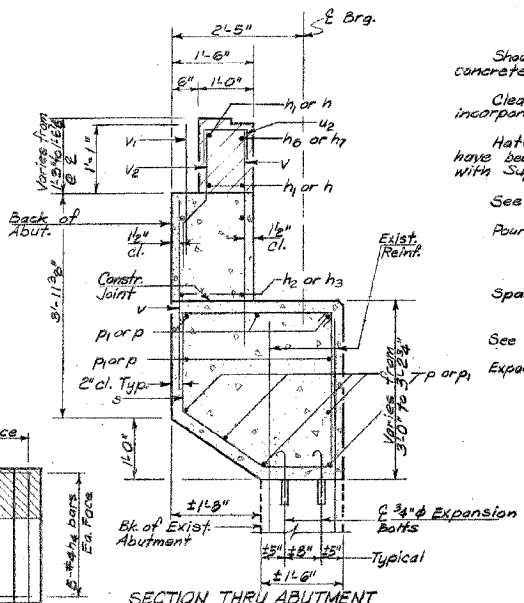
* D-7 Joint Repairs 2006-3

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

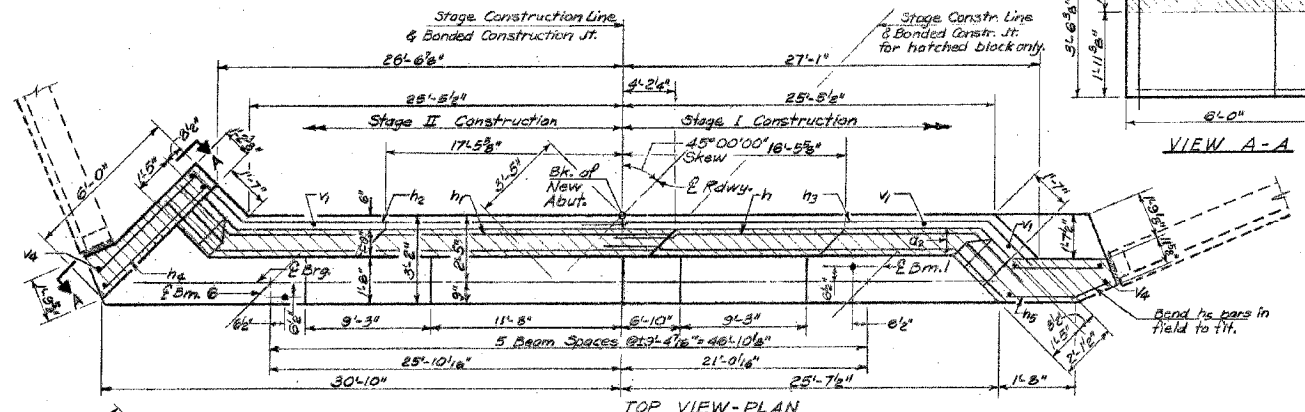
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STA.	TO STA.			
FED. ROAD DIST. NO.	ILLINOIS	FED. AID PROJECT		



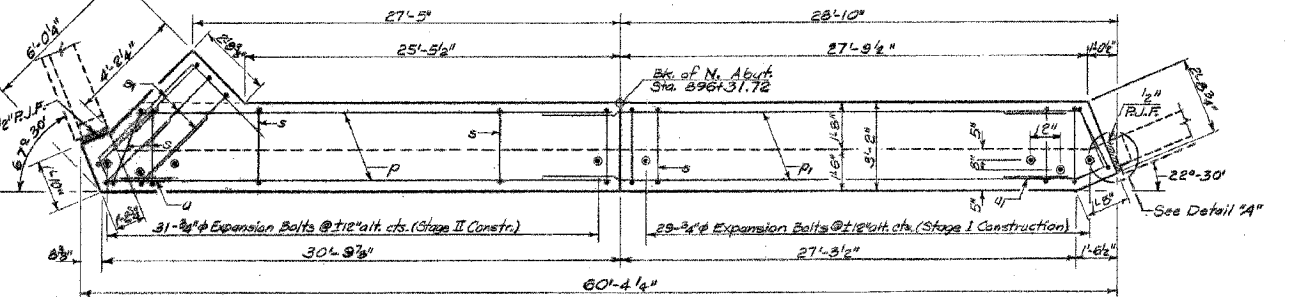
ELEVATION
(Looking North)



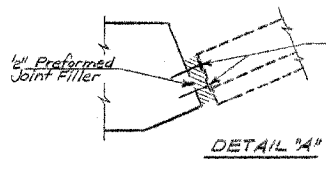
SECTION THRU ABUTMENT



TOP VIEW - PLAN



PLAN - CAP



DETAIL "A"

- Notes:**
- Shoulder transition to wingwall shall be shaped with broken concrete. Cost incidental.
 - Clean existing reinforcement, cut to fit when necessary, and incorporate into new concrete.
 - Hatched area to be poured after superstructure forms have been removed. Quantity of Class X Concrete included with Superstructure.
 - See Sht. #12 for Concrete Removal Details.
 - Pour steps monolithically with cap.
 - Space reinforcement in cap to miss Anchor Bolts.
 - See sht. #6 for Curb End Details.
 - Expansion bolts shall be anchored into sound concrete.
- MIN. BAR LAPS**
- #5 bar 1'-3"
 - #6 bar 2'-0"
 - #7 bar 2'-6"

NORTH ABUTMENT
BILL OF MATERIAL

Bar	No.	Size	Length	Shape
h1	3	#6	25'-0"	
h1	3	#6	32'-3"	
h2	4	#5	27'-9"	
h3	4	#5	29'-6"	
h4	10	#4	3'-2"	
h5	10	#4	3'-0"	
h6	1	#5	22'-6"	
h7	1	#5	30'-0"	
p	10	#7	29'-1"	
p1	10	#7	30'-6"	
s	60	#5	1'-5"	
s1	6	#5	3'-2"	
u	3	#6	14'-2"	
u1	3	#6	9'-3"	
u2	50	#5	1'-11"	
v	108	#4	3'-8"	
v1	54	#5	2'-10"	
v2	54	#4	3'-0"	
v3	8	#4	2'-8"	
v4	22	#5	5'-3"	
Class X Concrete		Cu Yds.	26.5	
Expansion Bolts (3/4" x 6")		Each	60	
Reinforcement Bars		Lbs.	3460	
Concrete Removal		Cu Yds.	11.5	

NORTH ABUTMENT
F.A. RTE. 116 SEC. 123 BR-3
RICHLAND COUNTY
STA. 897+00.00

DESIGNED STEVEN K. DOERMAN
CHECKED David Burdick
DRAWN E. V. Taylor
CHECKED SKD D.B.

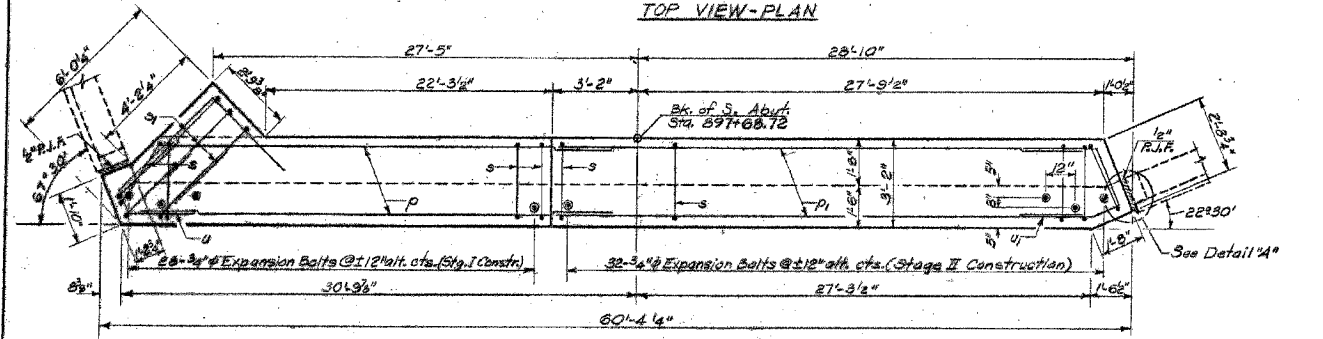
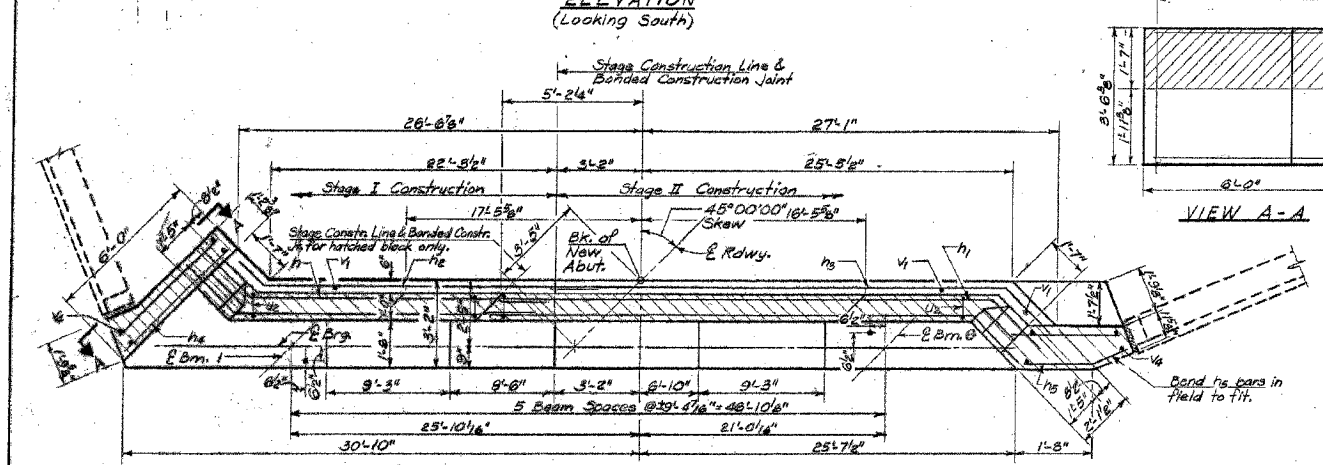
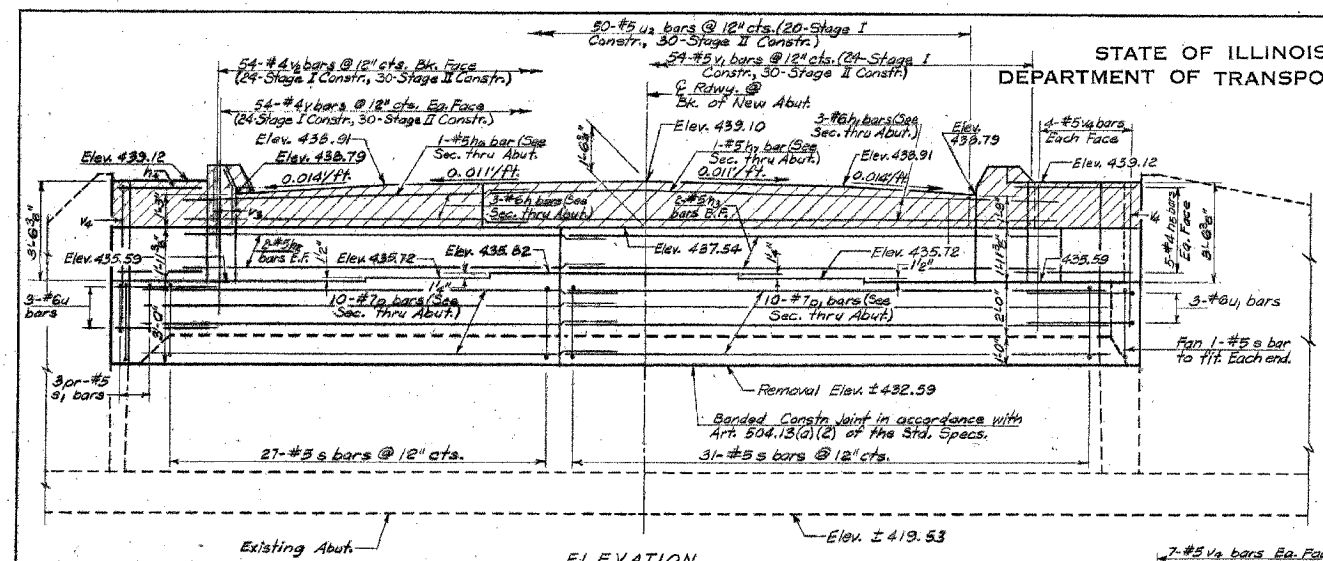
January 25, 1983
EXAMINED
PASSED
APPROVED

ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
FAP 116	*	RICHLAND	31	18
STA.		TO STA.		
FED. ROAD DIST. NO.		FED. PROJ. NO.	FED. AID PROJECT	

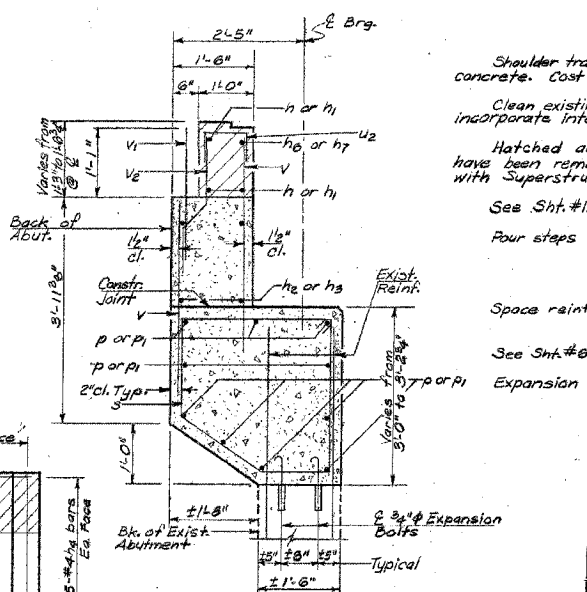
* D-7 Joint Repairs 2006-3

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

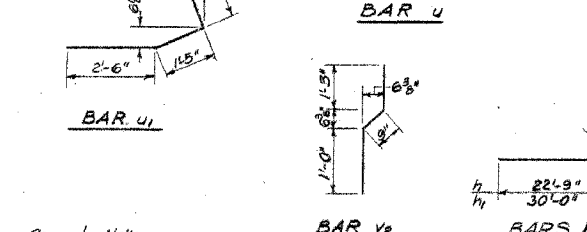
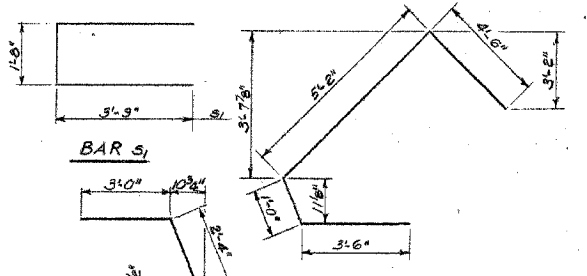
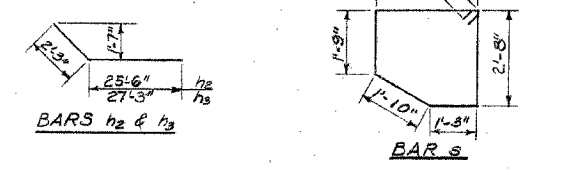
ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
F.A. 116	123BR-3	RICHLAND	18	15
FED. ROAD DIST. NO.		ILLINOIS	FED. AID PROJECT	



DESIGNED <i>Steven K. Dorner</i>	EXAMINED <i>Tammy 25 10/07</i>
CHECKED <i>David Boudick</i>	PASSED
DRAWN <i>E.V. Taylor</i>	APPROVED
CHECKED <i>SKD D.B.</i>	



SECTION THRU ABUTMENT



Notes:
Shoulder transition to wingwall shall be shaped with broken concrete. Cost incidental.
Clean existing reinforcement, cut to fit when necessary, and incorporate into new concrete.
Hatched area to be poured after superstructure forms have been removed. Quantity of Class X Concrete included with Superstructure.
See Sht. #12 for Concrete Removal Details.
Four steps monolithically with cap.
Space reinforcement in cap to miss Anchor Bolts.
See Sht. #6 for Curb End Details.
Expansion bolts shall be anchored into sound concrete.

MIN. BAR LAPS

#5 bar	11'-9"
#6 bar	2'-0"
#7 bar	2'-6"

SOUTH ABUTMENT BILL OF MATERIAL

Bar	No.	Size	Length	Shape
h	3	#6	25'-0"	
h1	3	#6	32'-3"	
h2	4	#5	27'-9"	
h3	4	#5	29'-6"	
h4	10	#4	3'-2"	
h5	10	#4	3'-0"	
h6	1	#5	22'-6"	
h7	1	#5	30'-0"	
p	10	#7	23'-1"	
p1	10	#7	30'-6"	
s	60	#5	11'-3"	
s1	6	#5	3'-2"	
u	3	#6	14'-2"	
u1	3	#6	9'-3"	
u2	50	#5	1'-11"	
v	100	#4	3'-6"	
v1	54	#5	2'-10"	
v2	54	#4	3'-0"	
v3	3	#4	2'-2"	
v4	22	#5	5'-3"	
Class X Concrete		Cu Yds.	26.5	
Expansion Bolts (3/4" #4)		Each	60	
Reinforcement Bars		Lbs.	3460	
Concrete Removal		Cu Yds.	11.5	

SOUTH ABUTMENT
F.A. RTE. 116 SEC. 123BR-3
RICHLAND COUNTY
STA. 897+00.00

BENCHMARK: Chiseled "C" on SE Wingwall of Existing Structure, Station 745+75, Elev. 447.10

EXISTING STRUCTURE: SN 080-0021 was originally built in 1982 as Section 123 BR-2. The superstructure consists of 3 continuous spans of W24 rolled steel beams on pile bent abutments and piers. The back-to-back abutments dimension measures 145'-10 1/4" while the out-to-out width measures 39'-2". The existing expansion joints shall be removed and replaced. Traffic to be maintained utilizing stage construction.

No salvage.

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

* D-7 JOINT REPAIRS 2006-3

ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
FAP 116		RICHLAND	31	19
STA.	TO STA.			
FED. ROAD DIST. NO.	ILLINOIS	FED. AID PROJECT-		
DWG. NO. 1 OF 6				

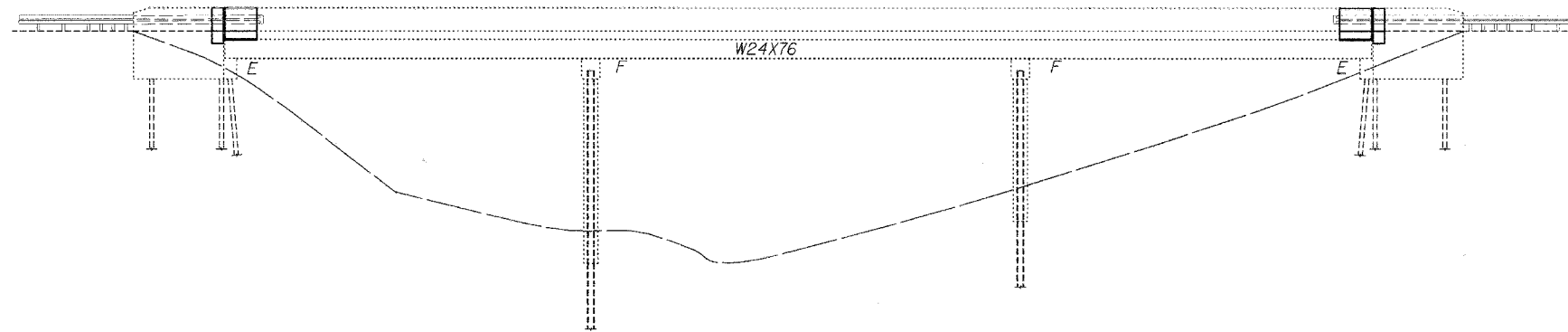
CONTRACT NO. 74120

STRUCTURE INDEX OF SHEETS

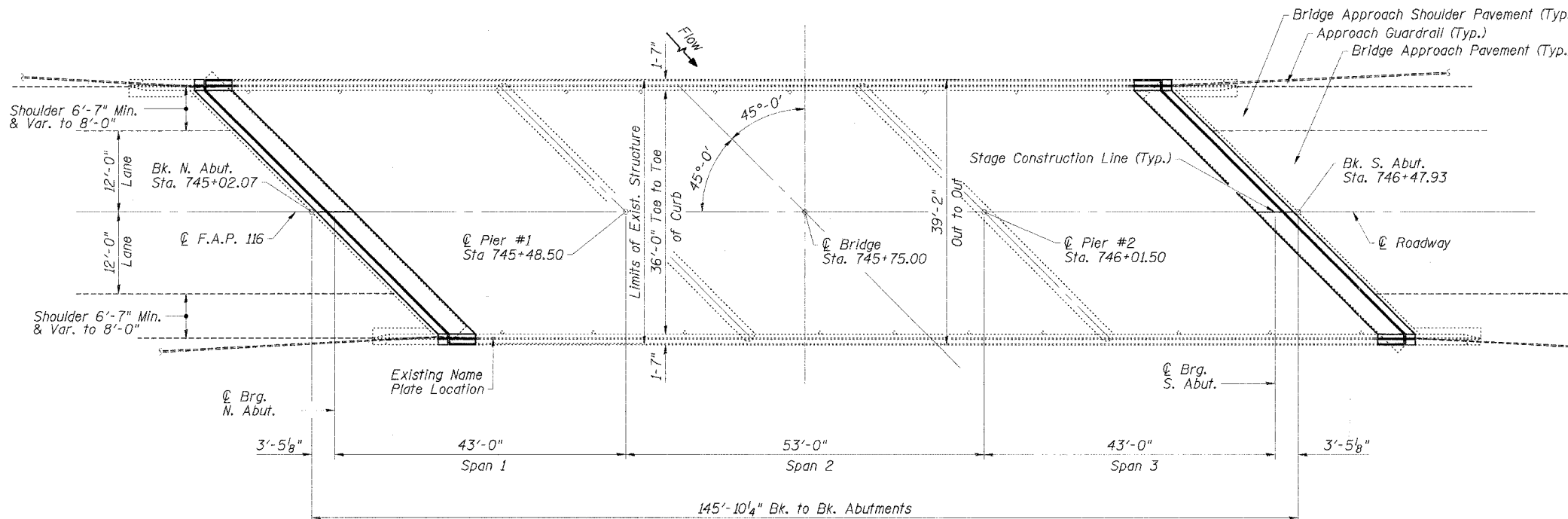
General Plan	Dwg. No. 1 of 6
Stage Construction	Dwg. No. 2 of 6
Expansion Joint Replacement Details	Dwg. No. 3 of 6
Expansion Joint Replacement Details	Dwg. No. 4 of 6
Continuous Seal Type Neoprene Expansion Joints	Dwg. No. 5 of 6
Bar Splicer Assembly Details	Dwg. No. 6 of 6

GENERAL NOTES

- Field welding of construction accessories will not be permitted to beams or girders.
- Plan dimensions and details relative to existing structure have been taken from existing plans and are subject to nominal construction variations. It shall be the Contractor's responsibility to verify such dimensions and details in the field and make necessary approved adjustments prior to construction or ordering of materials. Such variations shall not be cause for additional compensation for a change in the scope of the work, however, the Contractor will be paid for the quantity actually furnished at the unit price for the work.
- Prior to pouring the new concrete deck, all loose rust, loose mill scale, and other loose potentially detrimental foreign material shall be removed from the surfaces of the beams or girders in contact with concrete. The cost of this work will be included in the pay item covering removal of the existing concrete. All heavy rust and other tightly adhered potentially detrimental foreign matter shall also be removed from the surfaces of the beams or girders in contact with concrete. Tightly adhered paint may remain unless otherwise noted. This removal shall be accomplished by methods that will not damage the steel. The cost of this work will be paid for according to Article 109.04.
- All Construction joints shall be bonded.
- Existing reinforcement bars shall be cleaned, straightened, and incorporated into the new construction as noted. Any reinforcement bars that are damaged during concrete removal operations shall be replaced using an approved bar splicer or anchorage system (cost included in Concrete Removal).
- To facilitate the new construction, removal and installation of guardrail sections attached to the structure will be required. All existing embedded anchors that are within the concrete removal area shall be cleaned and incorporated into the new construction or new approved alternates shall be supplied and installed. Cost of this work shall be included in Concrete Superstructure.
- The existing structural steel coating contains lead. The Contractor should take appropriate precautions to deal with the presence of lead on this project.



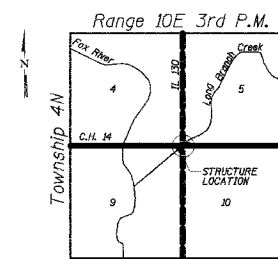
ELEVATION



PLAN

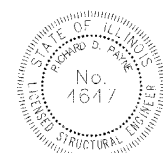
TOTAL BILL OF MATERIAL

ITEM	UNIT	SUPER	SUB	TOTAL
Concrete Removal	Cu. Yd.	11.3	6.5	17.8
Neoprene Expansion Joint 2"	Foot	106		106
Concrete Superstructure	Cu. Yd.	17.8		17.8
Protective Coat	Sq. Yd.	51		51
Reinforcement Bars, Epoxy Coated	Pound	1485	990	2475
Bar Splicers	Each	20	10	30



LOCATION SKETCH

GENERAL PLAN
IL 130 OVER LONG BRANCH CREEK
FAP RTE 116 (IL 130)
D-7 JOINT REPAIRS 2006-3
RICHLAND COUNTY
STATION 745+75.00
STRUCTURE NO. 080-0021



EXPIRES 11-30-07
Richard D. Payne
SIGNATURE
02/09/06
DATE

DESIGN SPECIFICATIONS
2002 AASHTO
DESIGN STRESSES

EXIST. CONSTRUCTION	NEW CONSTRUCTION
$f'_c = 3,500$ psi	$f'_c = 3,500$ psi
$f_y = 60,000$ psi (Reinf.)	$f_y = 60,000$ psi (Reinf.)
$f_y = 50,000$ psi (M 222)	$f_y = 50,000$ psi (M 270 Gr. 50)

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CONSULTANTS, INC.

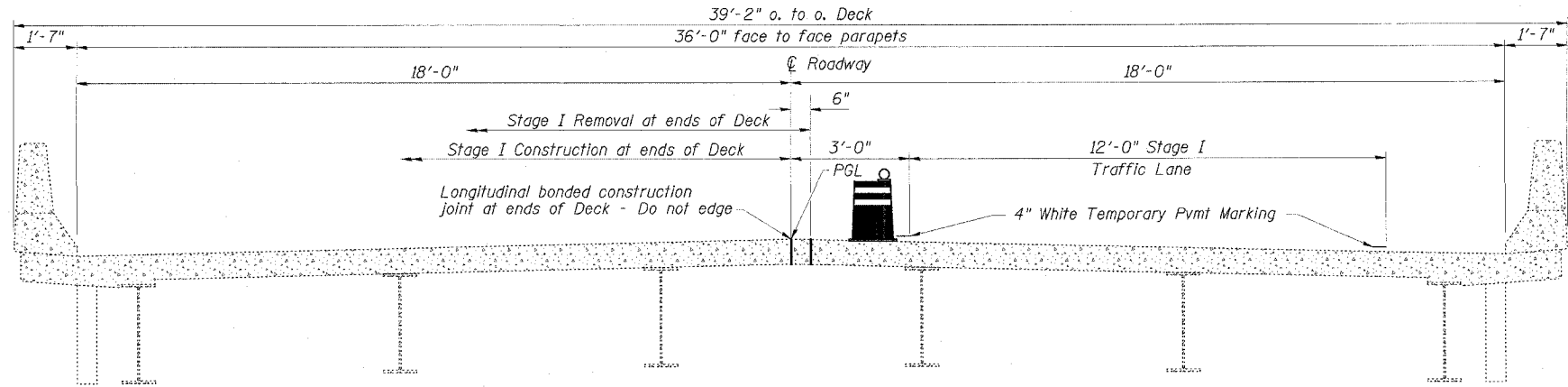
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DRAWN BY:	HAG	11/05
CHECKED BY:	MTD	11/05
APPROVED BY:	RDP	1/06

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

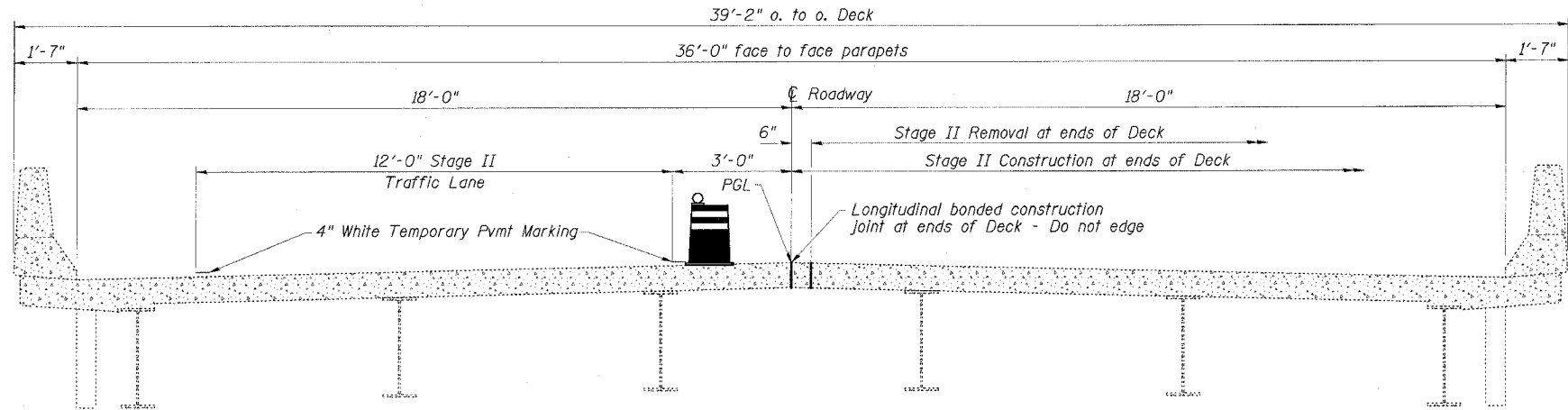
* D-7 JOINT REPAIRS 2006-3

ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
FAP 116	*	RICHLAND	31	20
STA.	TO STA.			
FED. ROAD DIST. NO.	ELLINGER	FED. AID PROJECT-		
DWG. NO. 2 OF 6				

CONTRACT NO. 74120



STAGE I CROSS SECTION
LOOKING SOUTH



STAGE II CROSS SECTION
LOOKING SOUTH

ESCA CONSULTANTS, INC.		
DESIGNED BY:	MTD	11/05
DRAWN BY:	HAG	11/05
CHECKED BY:	MTD	11/05
APPROVED BY:	RDP	1/06

STAGE CONSTRUCTION
IL 130 OVER LONG BRANCH CREEK
FAP 116 (IL 130)
D-7 JOINT REPAIRS 2006-3
RICHLAND COUNTY
STRUCTURE NO. 080-0021

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

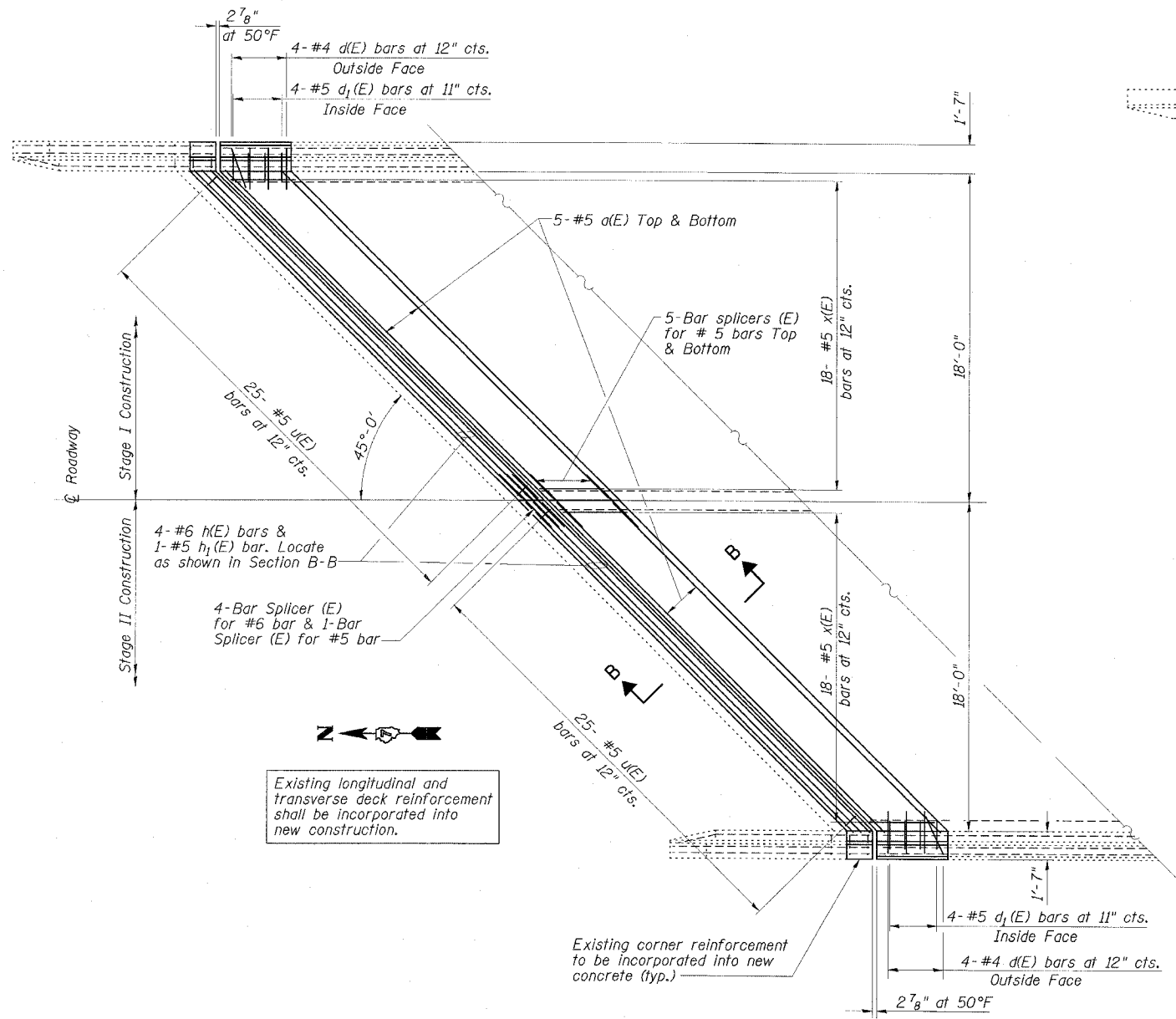
*D-7 JOINT REPAIRS 2006-3

ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
FAP 116	#	RICHLAND	31	21
STA.	TO STA.			
FED. ROAD DIST. NO.	ILLINOIS	FED. AID PROJECT-		
DWS. NO. 3 OF 6				

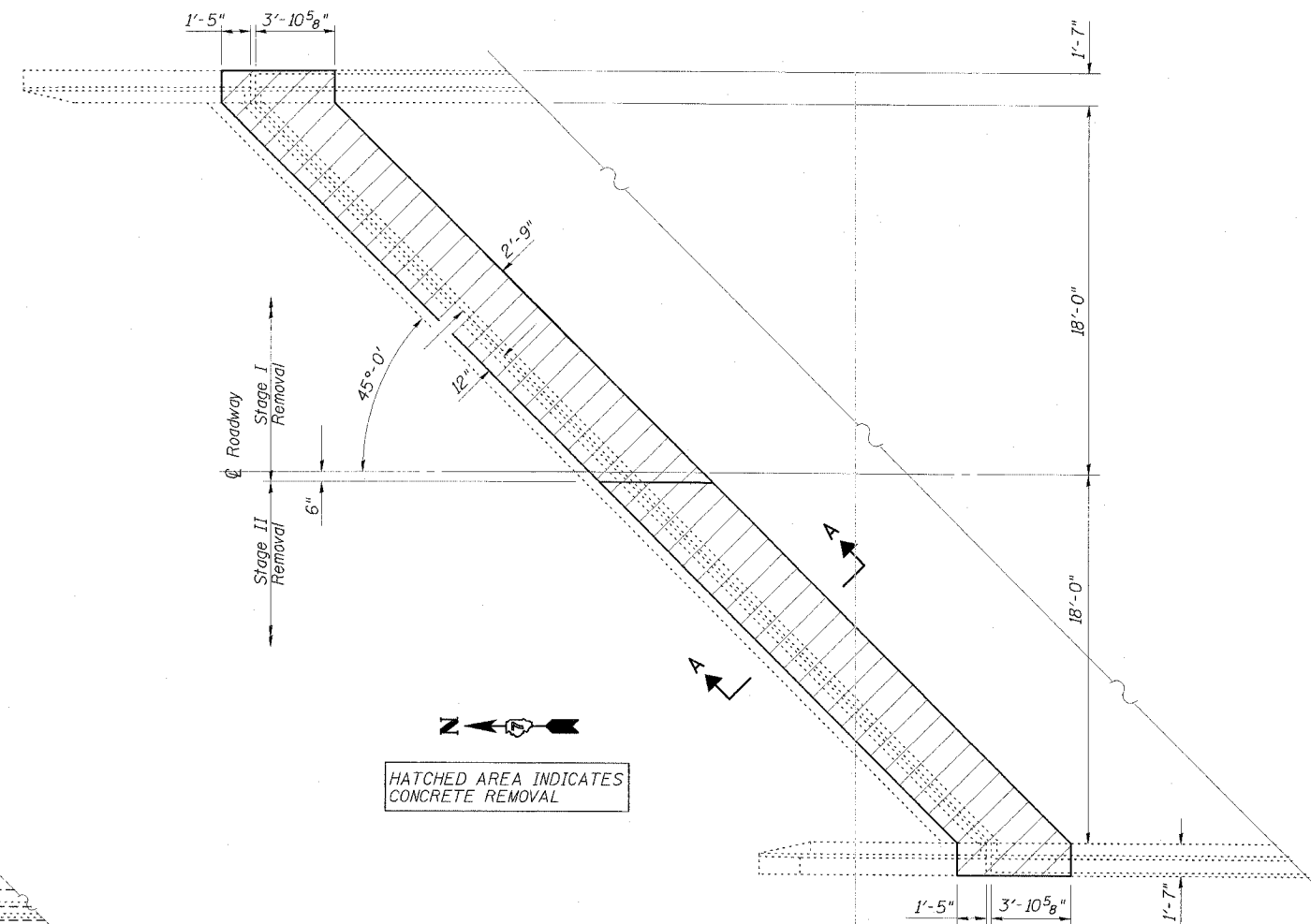
CONTRACT NO. 74120

NOTE

1. See Drawing No. 4 of 6 for Sections and additional Details.



PROPOSED PARTIAL PLAN
(North Abutment shown; South Abutment similar)



EXISTING PARTIAL PLAN
(North Abutment shown; South Abutment similar)

ESCA
CONSULTANTS, INC.

DESIGNED BY:	MTD	11/05
DRAWN BY:	HAG	11/05
CHECKED BY:	MTD	11/05
APPROVED BY:	RDP	1/06

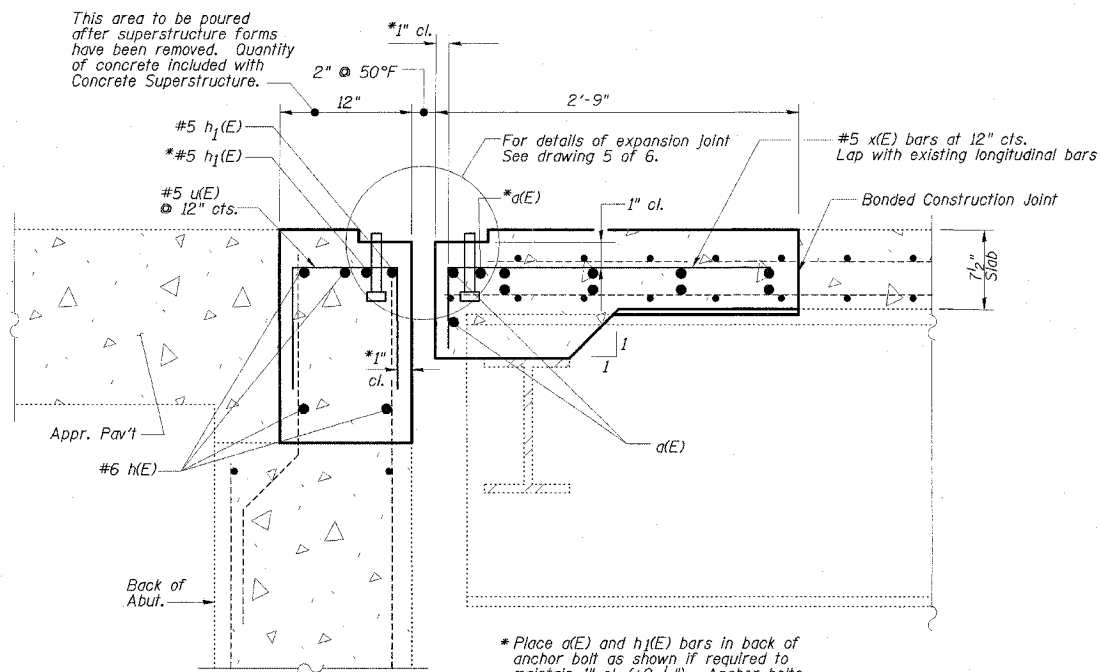
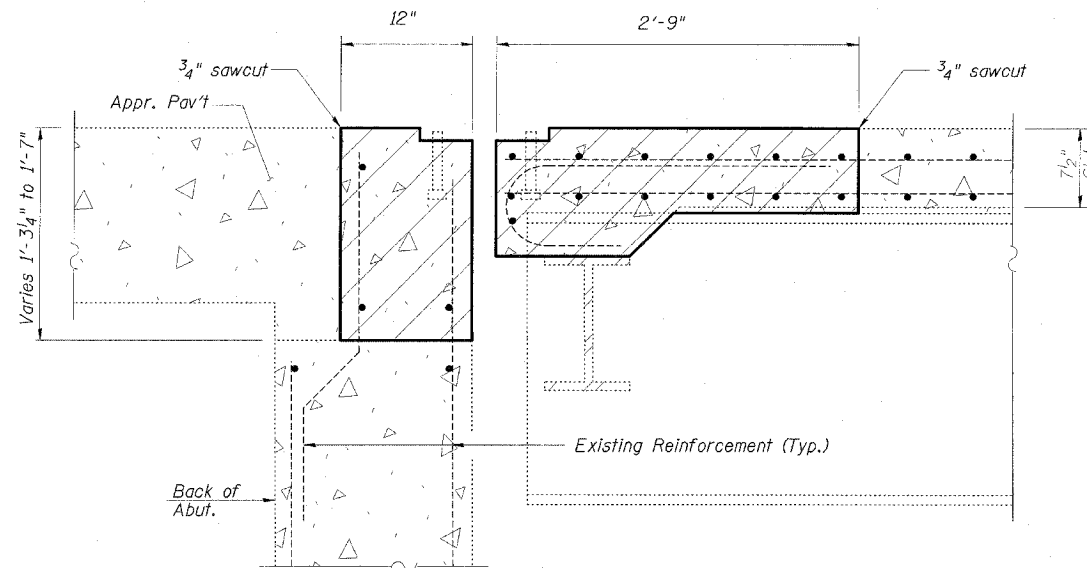
EXPANSION JOINT REPLACEMENT DETAILS
IL 130 OVER LONG BRANCH CREEK
FAP RTE 116 (IL 130)
D-7 JOINT REPAIRS 2006-3
RICHLAND COUNTY
STATION 745+75.00
STRUCTURE NO. 080-0021

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

*D-7 JOINT REPAIRS 2006-3

ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
FAP 116	*	RICHLAND	31	22
STA.	TO STA.			
FED. ROAD DIST. NO.	ILLINOIS	FED. AID PROJECT-		
DWG. NO. 4 OF 6				

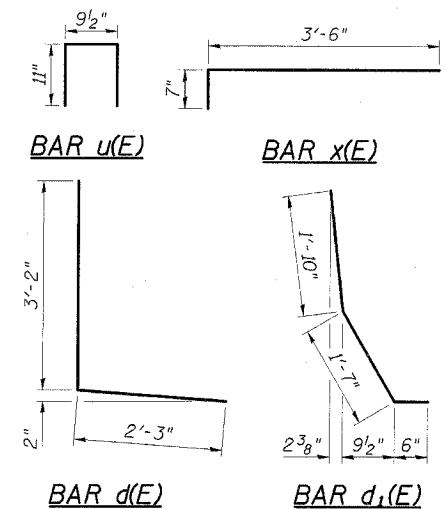
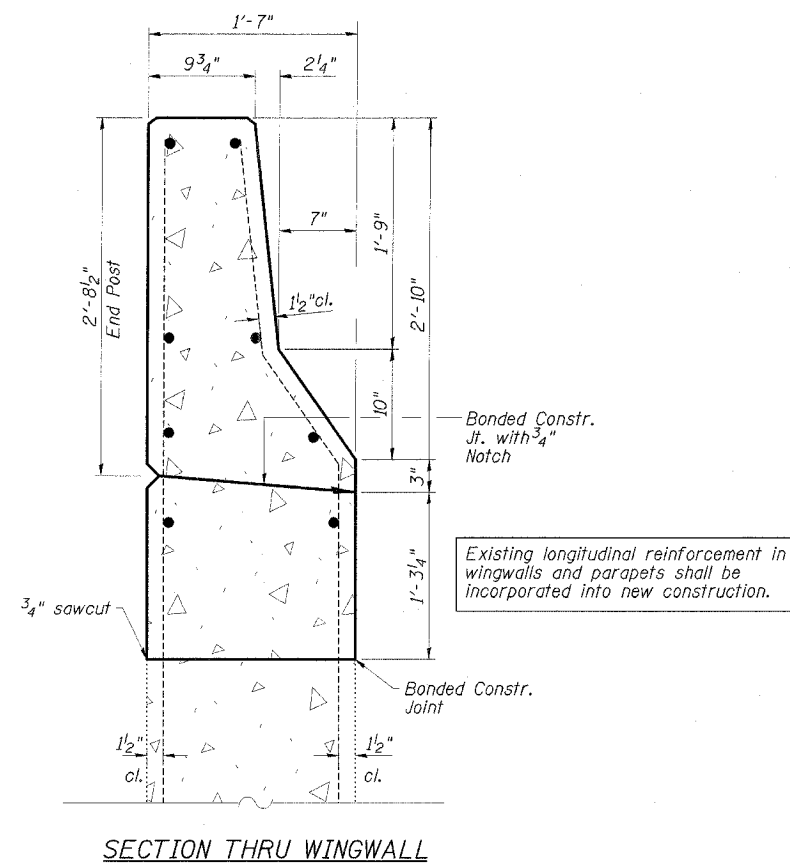
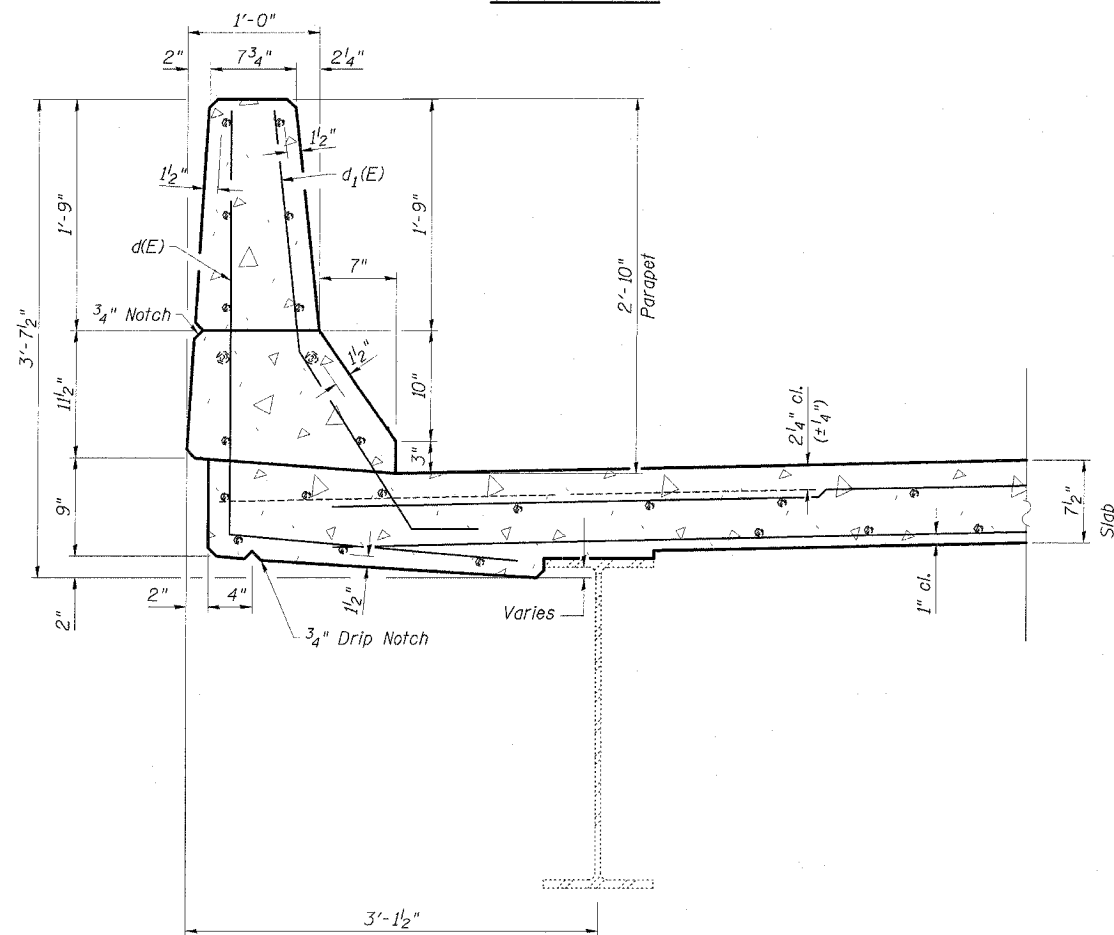
CONTRACT NO. 74120



BILL OF MATERIAL

Bar	No.	Size	Length	Shape
d(E)	40	#5	25'-4"	—
d1(E)	16	#4	5'-5"	L
d1(E)	16	#5	3'-11"	L
h1(E)	16	#6	25'-4"	—
h1(E)	4	#5	25'-4"	—
u(E)	100	#5	2'-7 1/2"	□
x(E)	72	#5	4'-1"	└
Reinforcement Bars, Epoxy Coated			Pound	2475
Concrete Superstructure			Cu. Yds.	17.8

Reinforcement bars designated (E) shall be epoxy coated.



EXPANSION JOINT REPLACEMENT DETAILS
IL 130 OVER LONG BRANCH CREEK
FAP RTE 116 (IL 130)
D-7 JOINT REPAIRS 2006-3
RICHLAND COUNTY
STATION 745+75.00
STRUCTURE NO. 080-0021

ESCA
CONSULTANTS, INC.

DESIGNED BY: MTD 11/05
DRAWN BY: HAG 11/05
CHECKED BY: MTD 11/05
APPROVED BY: RDP 1/06

ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
FAP 116	*	RICHLAND	31	23
STA.	TO STA.			
FED. ROAD DIST. NO.	ILLINOIS	FED. AID PROJECT-		
DWG. NO. 5 OF 6				

CONTRACT NO. 74120

Joint Size	"C" at 50°F	"D" at 50°F
2"	2"	1 1/2" Min.
2 1/2"	2 1/2"	1 3/4" Min.
4"	3"	2 1/2" Min.

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

GENERAL NOTES

Continuous Seal Neoprene Expansion Joint shall consist of molded anchor blocks of elastomer and steel, field assembled over continuous lengths of elastomeric membrane.
The elastomeric membrane shall be premolded with a single or a double upward convolution that will have a "memory" to return to its molded position upon joint closure.
The convolution length shall be such that the extended length will not be greater than the manufactured length when the joint is fully expanded in its design range and will not protrude above the anchor blocks when the joint is fully compressed.
Joint openings shall be adjusted according to Article 503.10(c) of the Standard Specifications when the deck is poured at an ambient temperature other than 50° F.
The parapet and roadway membrane shall be made continuous by an approved vulcanizing process. Lapping will not be permitted.

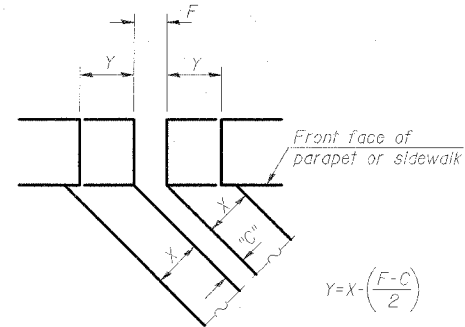
INSTALLATION NOTES

- Install continuous seal in roadway, parapet, curb, and sidewalk.
- Install anchor blocks as indicated.

Note A:
Maximum spacing of anchor bolts shall be 12" centers.

SKEW LIMITATIONS

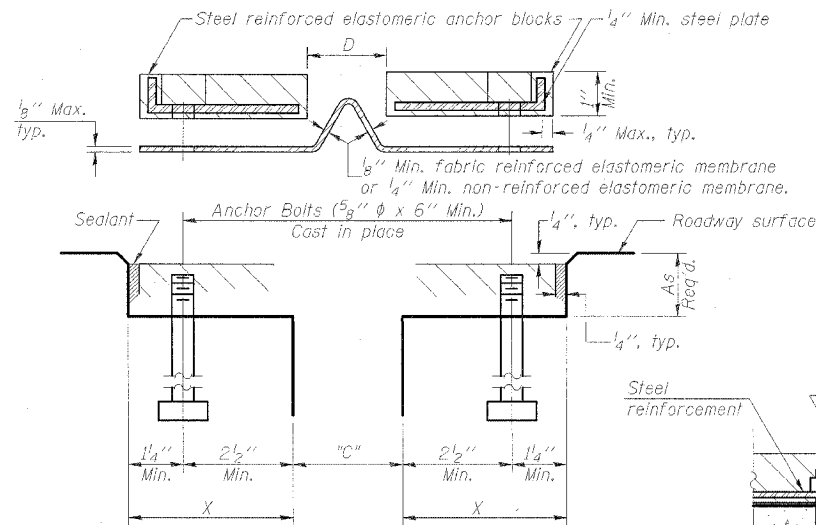
The details of the anchor blocks and the elastomeric membrane in the parapet, as shown, are for up to 50° skews. For skews greater than 50°, the anchor blocks and the elastomeric membrane, installed according to dimension "D", might require modifications to insure a minimum clearance of 1/2" from centerline of anchor studs to edge of parapet opening. The anchor blocks and the elastomeric membrane shall also be installed to the top of the parapet with the anchor studs spaced at ±12" cts.



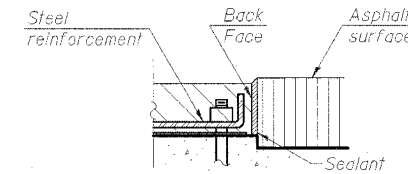
$$Y = X - \left(\frac{F - C}{2} \right)$$

For dimension "F" see drawing #3

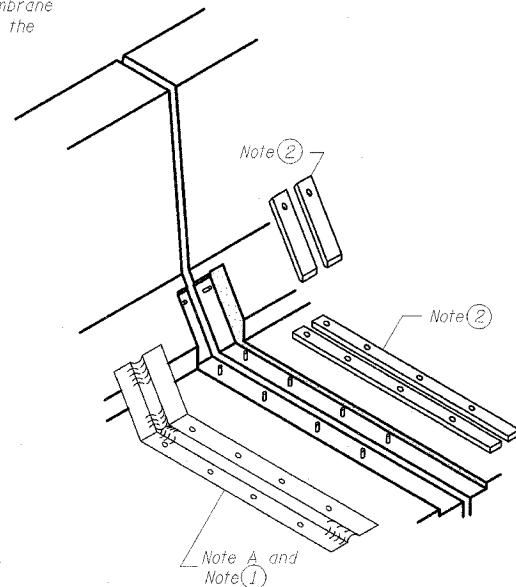
FORMING BLOCKOUT SKETCH



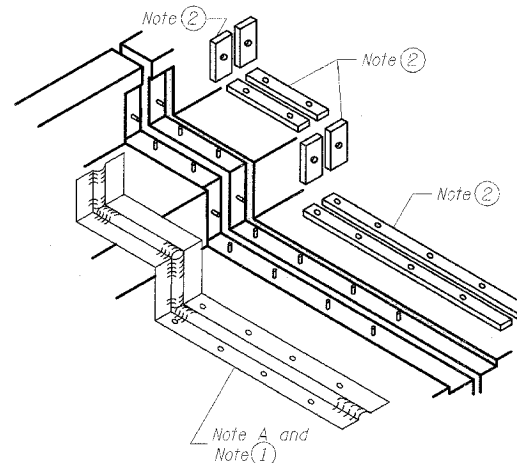
CROSS SECTION



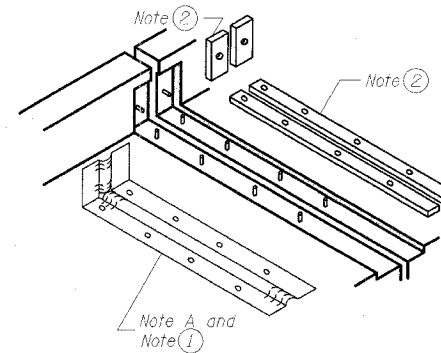
ANCHOR BLOCK WITH ASPHALT SURFACE



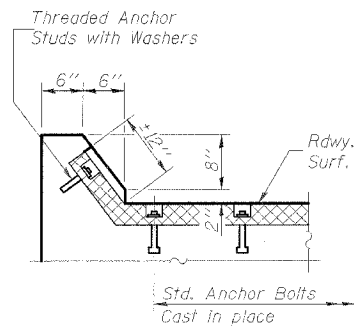
AT PARAPET



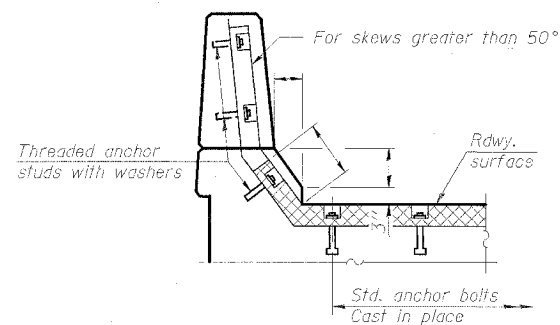
AT SIDEWALK OR MEDIAN



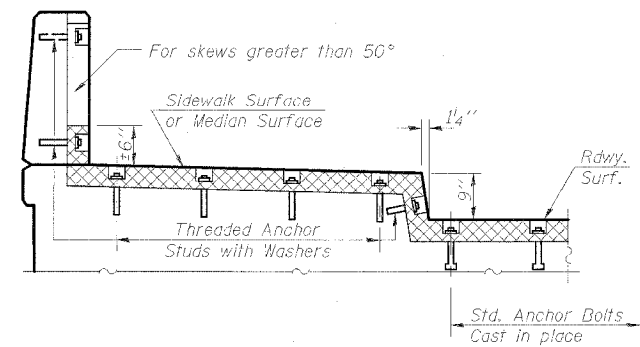
AT WALL



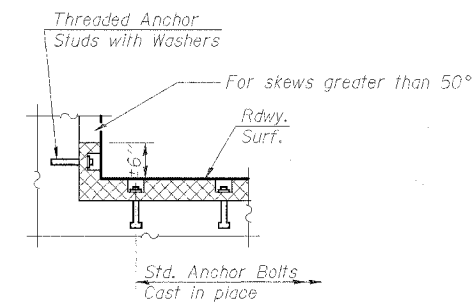
AT CURB



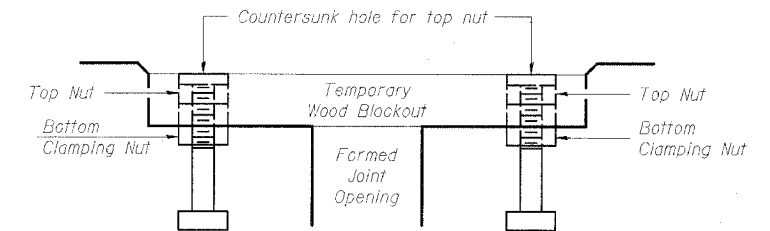
AT PARAPET



AT SIDEWALK OR MEDIAN TYPICAL END TREATMENTS



AT WALL



RECOMMENDED BLOCKOUT DETAIL

Note:
Stud needs to be threaded lower to allow for use of clamping nut.

Anchor studs should be stainless

**CONTINUOUS SEAL TYPE
NEOPRENE EXPANSION JOINTS
IL 130 OVER LONG BRANCH CREEK
FAP RTE 116 (IL 130)
D-7 JOINT REPAIRS 2006-3
RICHLAND COUNTY
STATION 745+75.00
STRUCTURE NO. 080-0021**

ESCA
CONSULTANTS, INC.

DESIGNED BY:	MTD	11/05
DRAWN BY:	HAG	11/05
CHECKED BY:	MTD	11/05
APPROVED BY:	RDP	1/06

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

* D-7 JOINT REPAIRS 2006-3

ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
FAP 116	*	RICHLAND	31	24
STA.	TO STA.		FED. AID PROJECT-	
ILLINOIS		FED. AID PROJECT-		
DWG. NO. 6 OF 6				

CONTRACT NO. 74120

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:

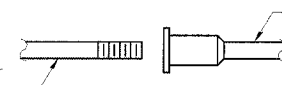
- ① Minimum Capacity (Tension in kips) = $1.25 \times f_y \times A_t$
- ② Minimum *Pull-out Strength (Tension in kips) = $1.25 \times f_{s_{allow}} \times A_t$

Where f_y = Yield strength of lapped reinforcement bars in ksi.
 $f_{s_{allow}}$ = Allowable tensile stress in lapped reinforcement bars in ksi (Service Load)
 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	5.9
#5	2'-0"	23.0	9.2
#6	2'-7"	33.1	13.3
#7	3'-5"	45.1	18.0
#8	4'-6"	58.9	23.6
#9	5'-9"	75.0	30.0
#10	7'-3"	95.0	38.0
#11	9'-0"	117.4	46.8

Bar splicer assemblies shall be according to Section 508 of the Standard Specifications, except as noted. The furnishing and installation of bar splicer assemblies will be measured and paid for at the contract unit price each for "BAR SPLICERS."

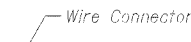
The diameter of this part is the same as the diameter of the bar spliced.



ROLLED THREAD DOWEL BAR



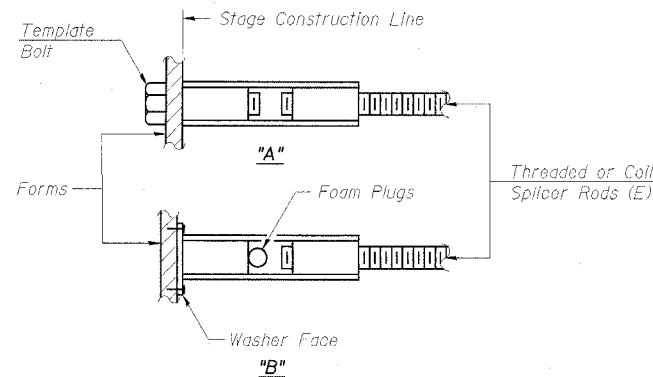
** ONE PIECE



WELDED SECTIONS

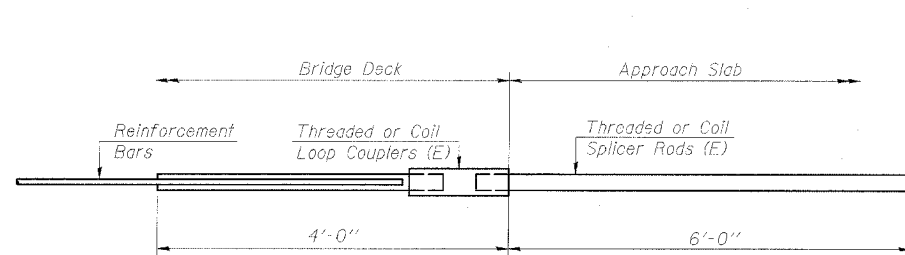
BAR SPLICER ASSEMBLY ALTERNATIVES

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



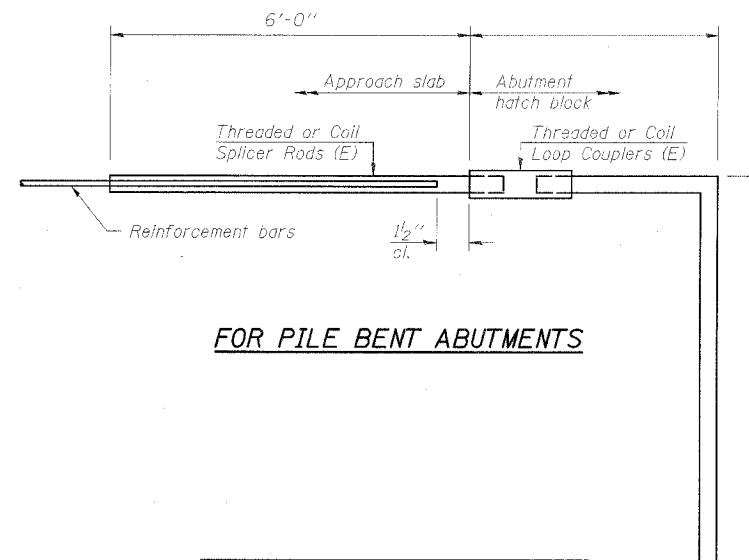
INSTALLATION AND SETTING METHODS

"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.



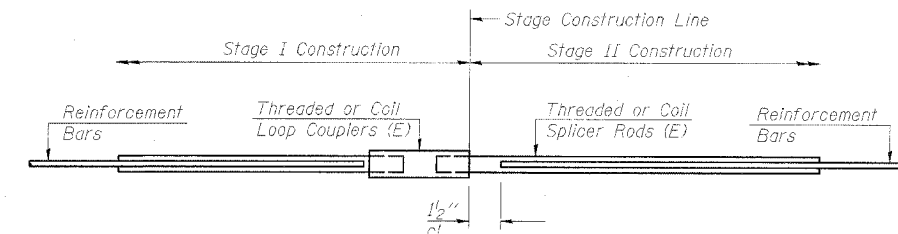
FOR INTEGRAL OR SEMI-INTEGRAL ABUTMENTS

Bar Splicer for #5 bar	
Min. Capacity =	23.0 kips - tension
Min. Pull-out Strength =	9.2 kips - tension
No. Required =	



FOR PILE BENT ABUTMENTS

Bar Splicer for #5 bar	
Min. Capacity =	23.0 kips - tension
Min. Pull-out Strength =	9.2 kips - tension
No. Required =	



STANDARD

Bar Size	No. Assemblies Required	Location
#5	20	Ends of Deck
#5	2	Abut. Blocks
#6	8	Abut. Blocks

BAR SPLICER ASSEMBLY DETAILS
IL 130 OVER LONG BRANCH CREEK
FAP RTE 116 (IL 130)
D-7 JOINT REPAIRS 2006-3
RICHLAND COUNTY
STATION 745+75.00
STRUCTURE NO. 080-0021

ESCA
CONSULTANTS, INC.

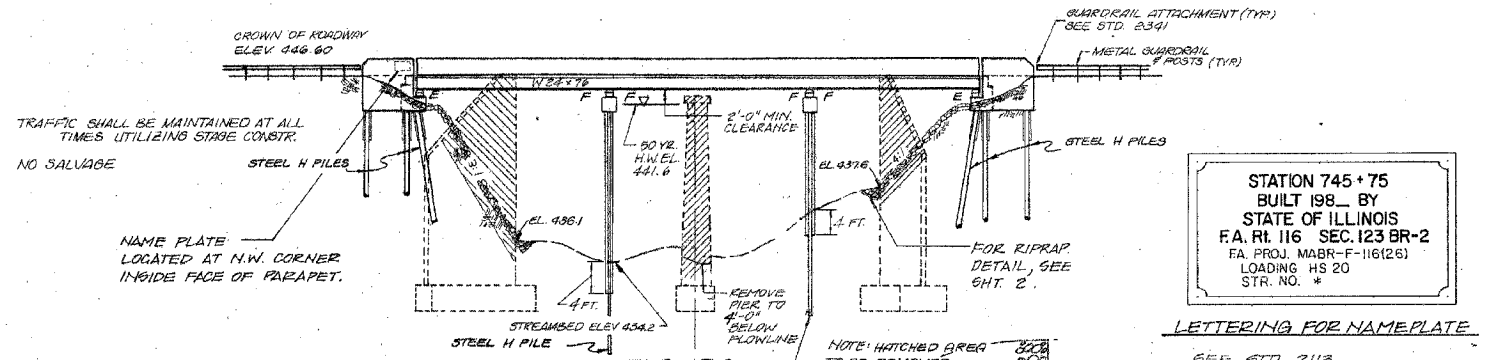
DESIGNED BY:	MTD	11/05
DRAWN BY:	HAG	11/05
CHECKED BY:	MTD	11/05
APPROVED BY:	RDP	1/06

ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
FAP 116	*	RICHLAND	31	25
STA.	TO STA.			
FED. ROAD DIST. NO.	ILLINOIS	FED. AID PROJECT		

* D-7 Joint Repairs 2006-3

ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
116 BR-2		RICHLAND	18	5
FED. ROAD DIST. NO.	ILLINOIS	FED. AID PROJECT		

B.M. CHISLED "X" ON S.E. WINGWALL OF EXISTING BRIDGE @ STA. 745+75. ELEV. 447.10
 EXISTING STRUCTURE #050-0008 BUILT AS S.B.I. RTE. 130, SEC. 123-B IN 1927 @ STA. 745+75. WIDENED IN 1939 AS S.B.I. RTE. 130, SEC. 123-BY.

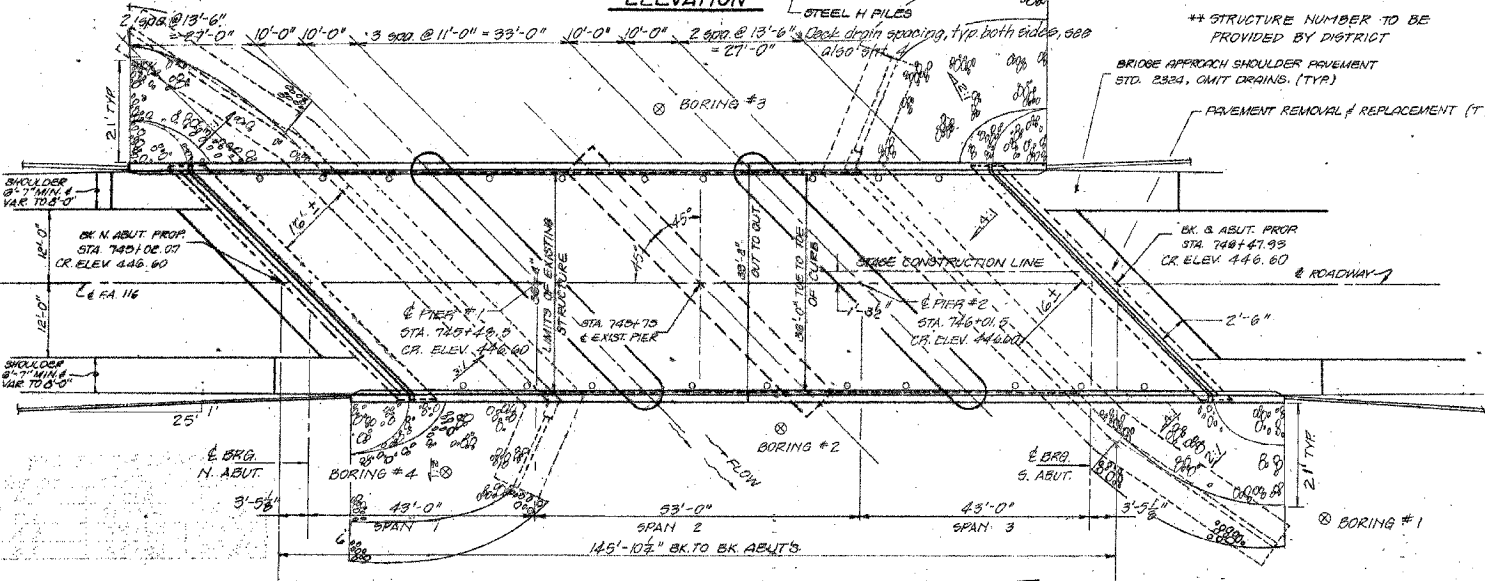


STATION 745+75
 BUILT 198... BY
 STATE OF ILLINOIS
 F.A. RT. 116 SEC. 123 BR-2
 FA PROJ. MABR-F-116(26)
 LOADING HS 20
 STR. NO. *

LETTERING FOR NAMEPLATE
 SEE STD. 2113
 ** STRUCTURE NUMBER TO BE PROVIDED BY DISTRICT

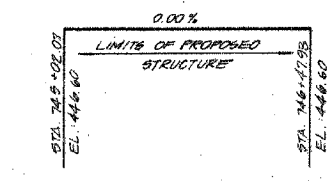
GENERAL NOTES

- PASTENERS SHALL BE HIGH STRENGTH BOLTS (AASHTO M 164, TYPE 3). BOLTS 1/2", OPEN HOLES 1/8", UNLESS OTHERWISE NOTED.
- SEE PROPOSAL FOR BORING DATA.
- THE CONTRACTOR SHALL DRIVE (1) ONE STEEL (HP 10x42) TEST PILE IN A PERMANENT LOCATION AT THE NORTH ABUTMENT AS DIRECTED BY THE ENGINEER BEFORE ORDERING THE REMAINDER OF PILES.
- ALL STRUCTURAL STEEL FOR A DISTANCE OF THREE TIMES THE DEPTH OF THE BEAMS, BUT NOT EXCEEDING 10 FEET, EACH WAY FROM DECK JOINTS SHALL BE CLEANED AND GIVEN ONE COAT OF THE BASIC LEAD SILICO CHROMATE PRIMER AND HARDEN FIELD COAT. BOTH COATS TO BE APPLIED IN THE SHOP WITH SPOT PAINTING ONLY IN THE FIELD.
- FIELD WELDING OF CONSTRUCTION ACCESSORIES WILL NOT BE PERMITTED TO THE BOTTOM FLANGE OF BEAMS, NOR TO THE TOP FLANGE, FOR A DISTANCE EQUAL TO ONE-FOURTH THE SPAN LENGTH EACH WAY FROM THE PIER SUPPORTS. FIELD WELDING IN OTHER AREAS WILL BE PERMITTED ONLY WHEN APPROVED BY THE ENGINEER.
- ANCHOR BOLTS SHALL BE SET BEFORE BOLTING DIAPHRAGMS OVER SUPPORTS.
- ALL STRUCTURAL STEEL SHALL BE AASHTO M222 UNPAINTED TYPE.
- BEARING SEAT SURFACES SHALL BE CONSTRUCTED OR ADJUSTED TO THE DESIGNATED ELEVATIONS WITHIN A TOLERANCE OF 1/8 INCH. ADJUSTMENT SHALL BE MADE EITHER BY GRINDING THE SURFACE OR BY SHIMMING THE BEARING. TWO 3/8" ADJUSTING SHIMS, OF THE DIMENSIONS OF THE BOTTOM BEARING PLATE, SHALL BE PROVIDED FOR EACH BEARING IN ADDITION TO ALL OTHER PLATES OR SHIMS.
- THE MAIN LOAD CARRYING MEMBER COMPONENTS SUBJECT TO TENSILE STRESS SHALL CONFORM TO THE SUPPLEMENTAL REQUIREMENTS FOR NOTCH TOUGHNESS. THESE COMPONENTS ARE THE WIDE FLANGE BEAMS AND ALL SPLICE PLATE MATERIAL OF WIDE FLANGE BEAMS.
- REINFORCEMENT BARS SHALL CONFORM TO THE REQUIREMENTS OF AASHTO M-31 OR M-53 GRADE 60.
- ALL CONTACT SURFACES OF JOINTS FOR THE DIAPHRAGMS SHALL BE FREE OF PAINT OR LAQUER.
- CALCULATED WEIGHT OF STRUCTURAL STEEL = 26,330 LBS.



TOTAL BILL OF MATERIAL

ITEM	UNIT	SUPERSR	SUBSTR	TOTAL
Class X Concrete	Cu Yds	162.9	180.7	343.6
Reinforcement Bars	Lbs	15920	15580	31500
Reinforcement Bars (Epoxy Coated)	Lbs	24540		24540
Stone Riprap	Sq Yds		441	441
Structural Steel	Lbs	1		441
Stud Shear Connectors	Ea	2142		2142
Steel Piles (HP 10x42)	Lin Ft		1365	1365
Test Piles (HP 10x42)	Ea		1	1
Structure Excavation	Cu Yds		350	350
Neoprene Expansion Joint (2")	Lin Ft	106		106
Floor Drains	Ea	20		20
Name Plates	Ea	1		1
Protective Coat	Sq Yds	717		717
Removal of Existing Structures	Ea	1		1
Temporary Bridge Roll	Lin Ft	162		162
Pavement Removal & P.C.C. Replacement 10" Type I	Sq Yds	15		15



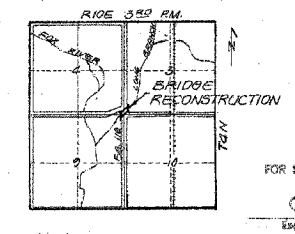
WATERWAY INFORMATION

DRAINAGE AREA = 9.8 SQ MI. LOW GRADE ELEV. = 446.60 @ STA. 745+00

FLOOD FREQ. YR.	Q C.F.S.	OPENING SQ. FT. EXIST. PROP.	NAT. H.W.E.	HEAD - FT. EXIST. PROP.	HEADWATER EL. EXIST. PROP.
DESIGN 50	2310	414	453	1.3	442.0
BASE 100	2848	432	451	1.0	443.5
MAX. CALC. 500	3500	456	512	2.5	444.0

DESIGN STRESSES
FIELD UNITS
 f_c = 3,500 PSI (Concrete)
 f_y = 60,000 PSI (Reinforcement)
 Epoxy Coated Reinforcement shall be used in top layer of deck & inside face of parapets.
 f_y = 50,000 PSI (Structural) M222

LOADING HS 20-44
 DESIGN SPECIFICATIONS: 1977 AASHTO, 1978, 1979, 1980 & 1981 INTERIM SPECIFICATIONS AS APPLICABLE.
 ALLOW 25 LBS/SQ.FT. FOR FUTURE WEARING SURFACE.



PHILIP J. LANE Date 10-23-81
 Illinois Reg. Structural Engineer No. 4084

GENERAL PLAN AND ELEVATION

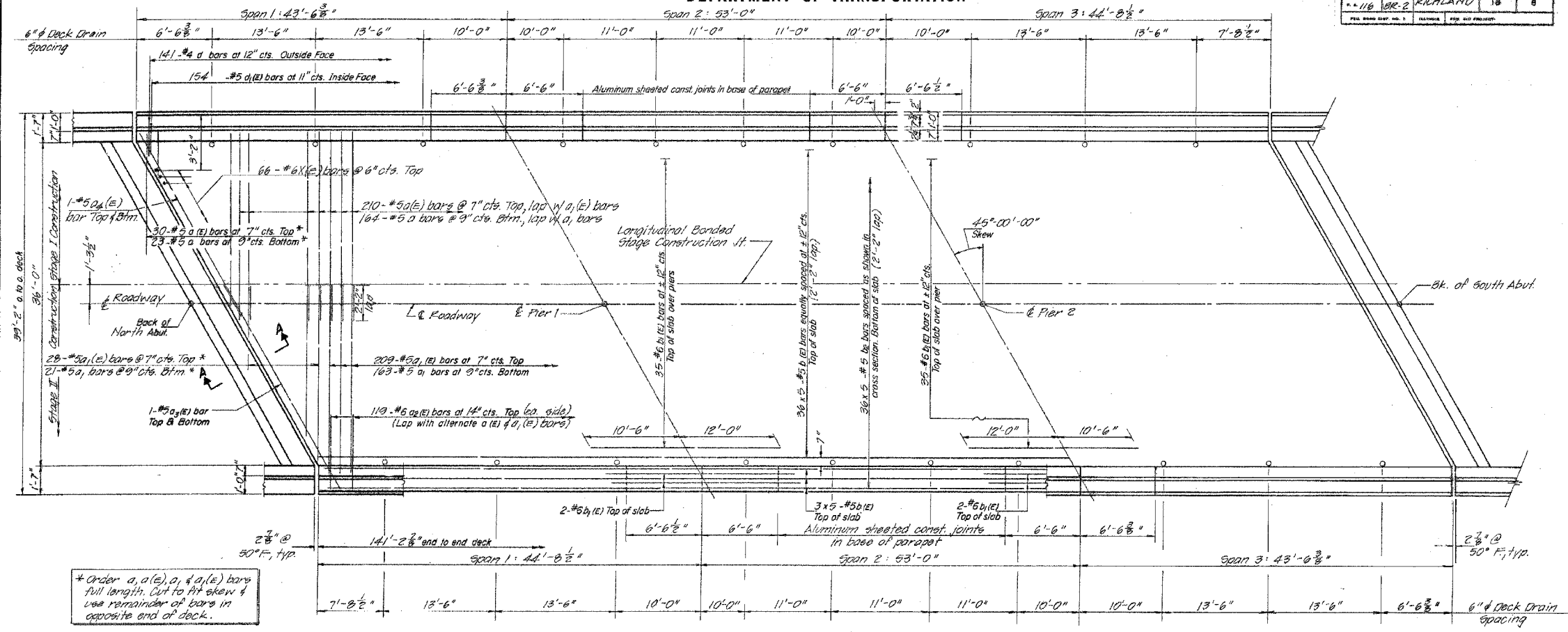
ILLINOIS ROUTE 130 OVER
 LONG BRANCH CREEK
 STATION 745+75
 F.A. ROUTE 116 SECTION 123 BR-2
 RICHLAND COUNTY

ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
FAP 116	*	RICHLAND	31	26
STA.	TO STA.			
FED. ROAD DIST. NO.	ILLINOIS	FED. AID PROJECT		

* D-7 Joint Repairs 2006-3

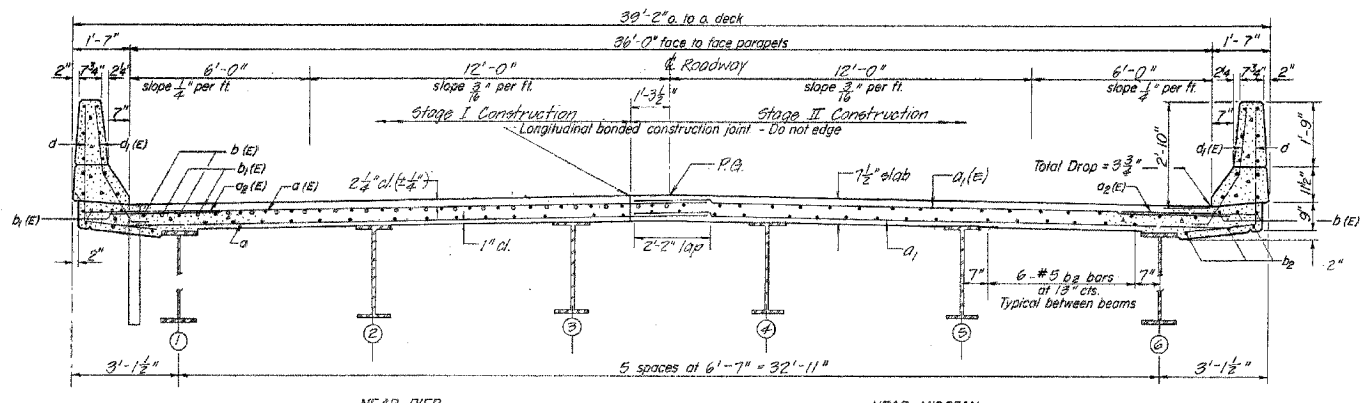
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

PROJECT NO.	DISTRICT	COUNTY	TOTAL SHEETS	SHEET NO.
130-116	123	RICHLAND	18	8
SHEETS 11				



* Order a, a(e), c, & d(e) bars full length. Cut to fit skew & use remainder of bars in opposite end of deck.

PLAN
North



CROSS SECTION
LOOKING SOUTH

NOTES:
See sheet #5 for superstructure details and Bill of Material.
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.

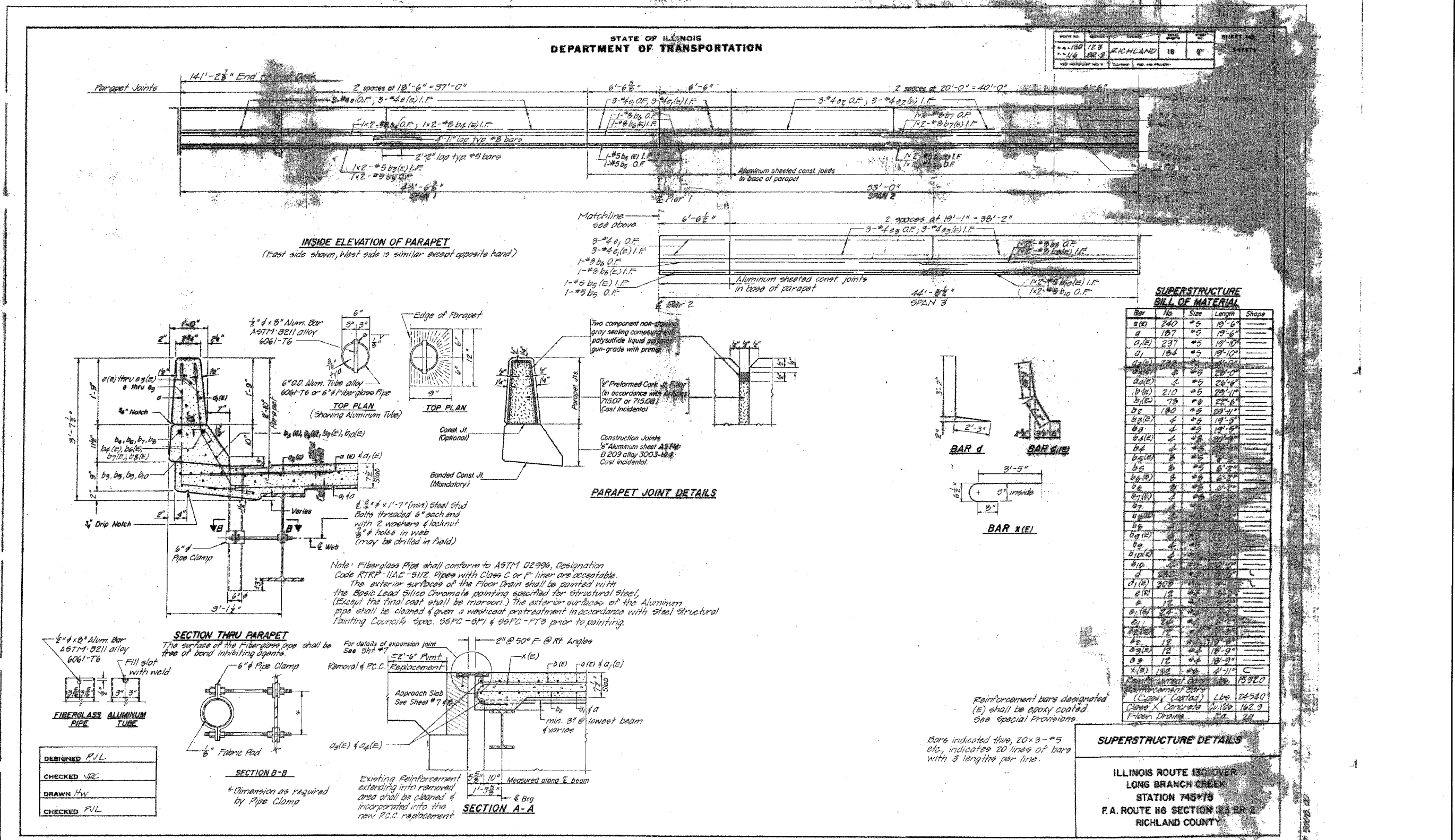
DESIGNED	PJL
CHECKED	EC
DRAWN	HW
CHECKED	PJL

SUPERSTRUCTURE

ILLINOIS ROUTE 130 OVER
LONG BRANCH CREEK
STATION 745+75
F.A. ROUTE 116 SECTION 123 BR-2
RICHLAND COUNTY

ROUTE NO. FAP 116	SECTION •	COUNTY RICHLAND	TOTAL SHEETS 31	SHEET NO. 27
STA. 116+00 TO 116+75		FED. AID PROJECT		

* D-7 Joint Repairs 2006-3



FOR INFORMATION ONLY

EXISTING BRIDGE PLANS

ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
FAP 116	*	RICHLAND	31	28
STA.	TO STA.			
FED. ROAD DIST. NO.	ILLINOIS	FED. AID PROJECT		

* D-7 Joint Repairs 2006-3

Joint Size	"C" at 50°F	"D" at 50°F
2	2"	1 1/2" min.
2 1/2	2 1/2"	1 3/4" min.
4	3"	2 1/4" min.

INSTALLATION NOTES

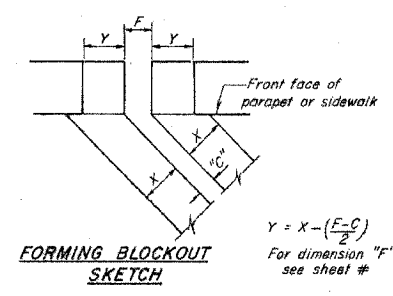
Use anchor blocks and continuous seal as anchor bolt location templates.

- 1 Install sponge mandrels into positions shown to form flap convolution.
- 2 Install parapet or sidewalk piece (trim roadway flap to fit before applying epoxy).
- 3 Install continuous seal in roadway.
- 4 Install anchor blocks as indicated.

NOTE A - Maximum spacing of anchor bolts shall be 12" centers.

SKREW LIMITATIONS

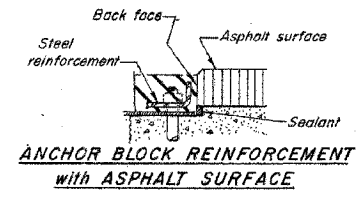
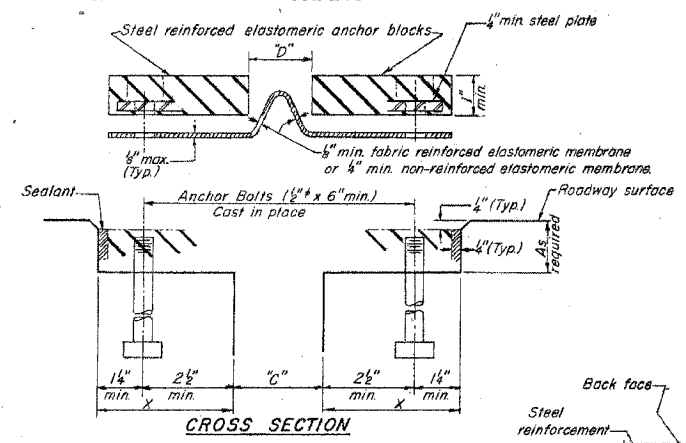
The details of the anchor blocks and the elastomeric membrane in the parapet, as shown, are for up to 50° skews. For skews greater than 50°, the anchor blocks and the elastomeric membrane, installed in accordance with dimension "D", might require modifications to insure a minimum clearance of 1/2" from centerline of anchor studs to edge of parapet opening. The anchor blocks and the elastomeric membrane shall also be installed to the top of the parapet with the anchor studs spaced at 2 1/2" cts.



$$Y = X - \left(\frac{F-C}{2}\right)$$

For dimension "F" see sheet #

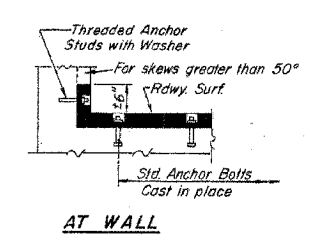
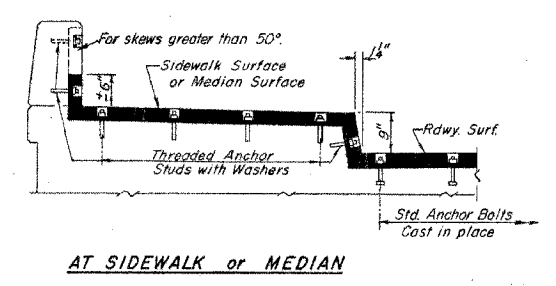
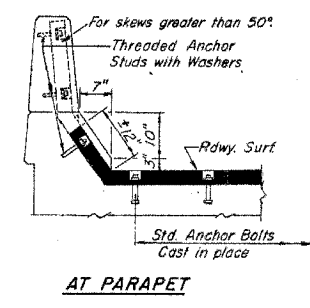
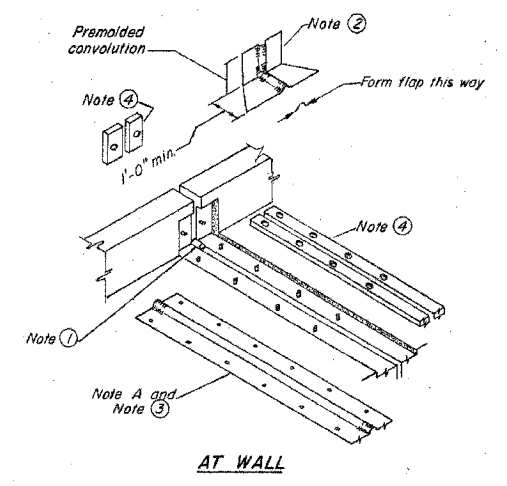
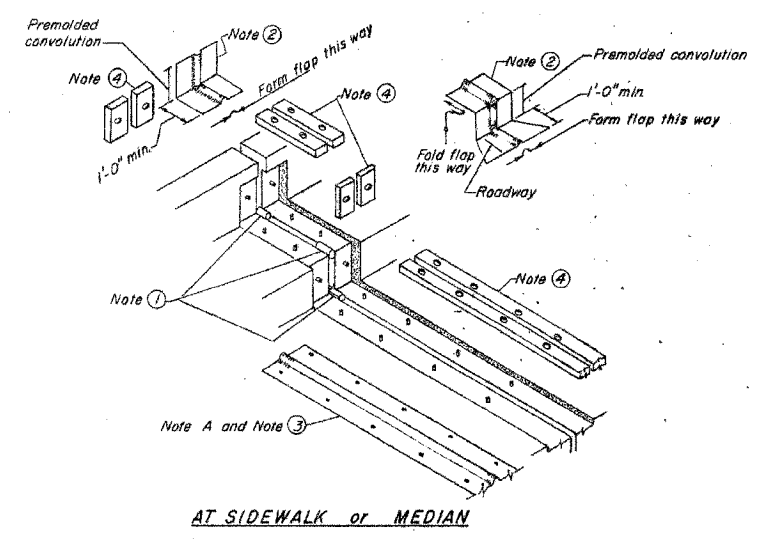
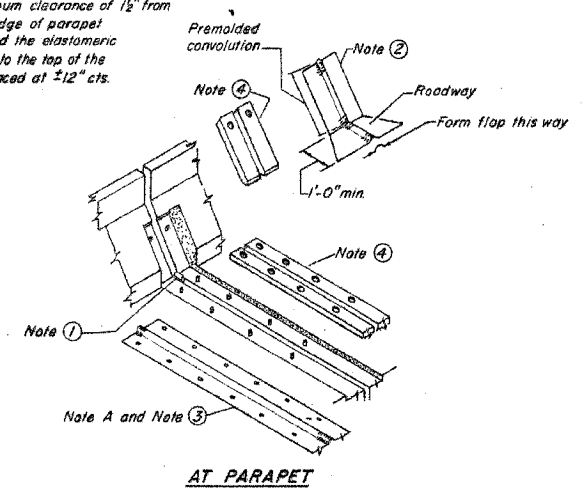
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION



ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
FAP 116	*	RICHLAND	31	28
STA.	TO STA.			
FED. ROAD DIST. NO.	ILLINOIS	FED. AID PROJECT		

GENERAL NOTES

Continuous Seal Neoprene Expansion Joint shall consist of molded anchor blocks of elastomer and steel, field assembled over continuous lengths of elastomeric membrane. See Special Provisions.
The elastomeric membrane shall be premolded with a single or a double upward convolution that will have a "memory" to return to its molded position upon joint closure.
The steel reinforcement must extend up the back face of anchor blocks when asphalt surfaces are used but is optional in concrete blockout.
The convolution length shall be such that the extended length will not be greater than the manufactured length when the joint is fully expanded in its design range and will not protrude above the anchor blocks when the joint is fully compressed.
Joint openings shall be adjusted in accordance with Article 503.07(c) of the Standard Specifications when the deck is poured at an ambient temperature other than 50°F.
The parapet and sidewalk flaps may be furnished factory vulcanized to the roadway membrane provided the centerline of the convolution is maintained and the process and method meet the approval of the Engineer.



TYPICAL END TREATMENTS

DESIGNED
CHECKED
DRAWN
CHECKED

EJ-CS 2-1-83

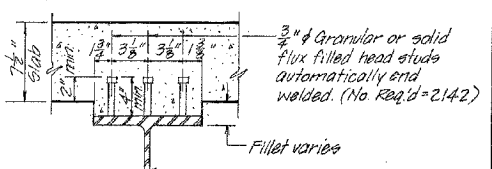
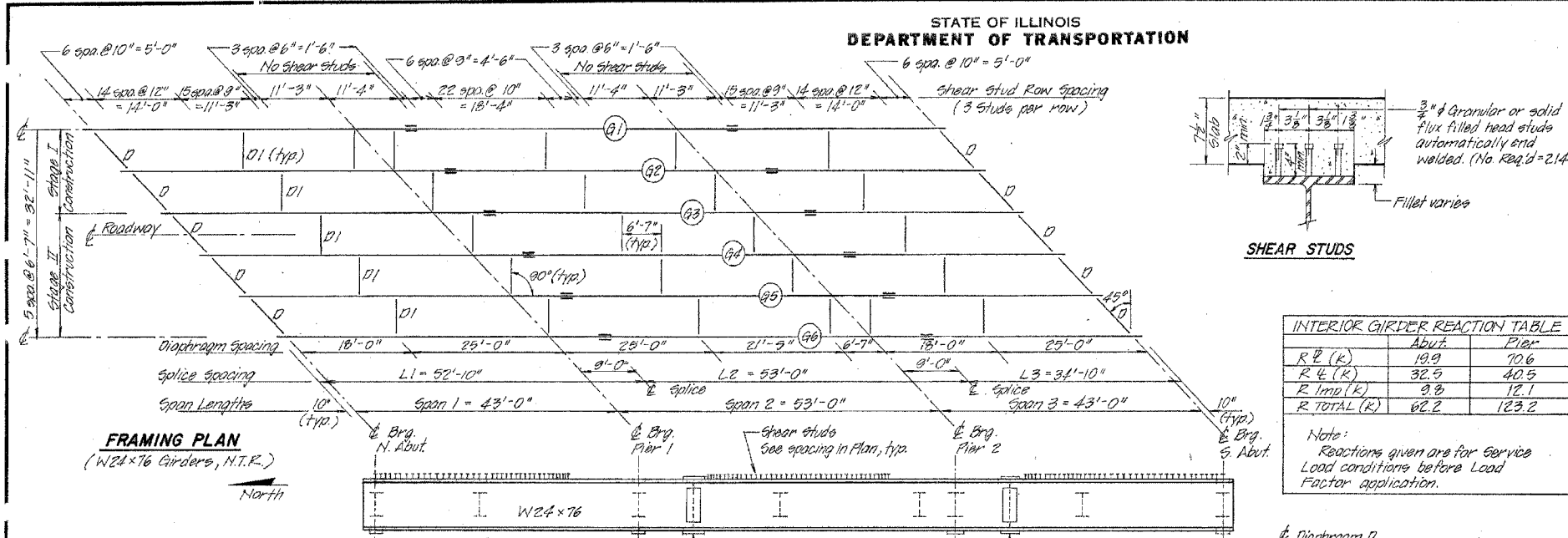
**CONTINUOUS SEAL TYPE
NEOPRENE EXPANSION JOINTS**
For 2", 2 1/2" and 4" Movement

ILLINOIS RTE. 130 OVER
LONG BRANCH CREEK
STATION 745+75
FA RTE. 116 SECTION 123 BR-2
RICHLAND COUNTY

ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
FAP 116		RICHLAND	31	29
STA.	TO STA.			
FED. ROAD DIST. NO.	ILLINOIS	FED. AID PROJECT		

* D-7 Joint Repairs 2006-3

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION



INTERIOR GIRDER REACTION TABLE

	Abut.	Pier
R ₁ (k)	19.9	70.6
R ₄ (k)	32.5	40.5
R _{1md} (k)	9.8	12.1
R TOTAL (k)	62.2	123.2

Note: Reactions given are for Service Load conditions before Load Factor application.

ROUTE NO. SECTION COUNTY TOTAL SHEETS SHEET NO. 8

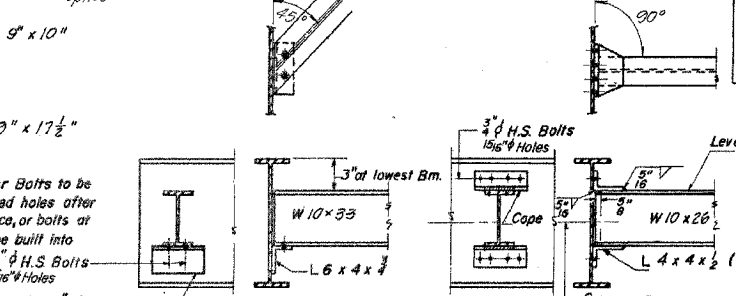
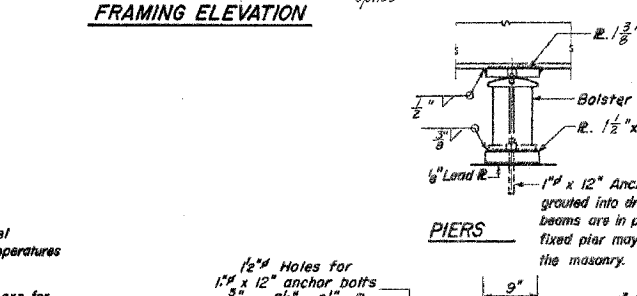
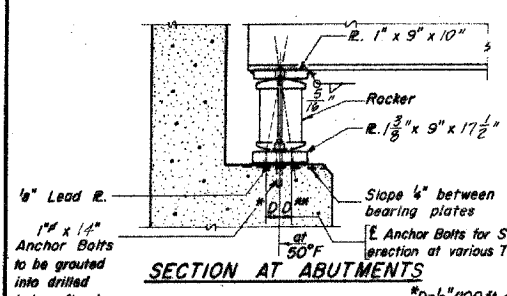
S.A. 116 123 RICHLAND 18 12 SHEETS 11

FED. ROAD DIST. NO. ILLINOIS FED. AID PROJECT

INTERIOR GIRDER MOMENT TABLE (Max. Girder G4)

	0.4 Sp 1 & 3	Pier	0.5 Sp 2
I _s (in ⁴)	2100	2100	2100
I _{c1} (in ⁴) n=27	4916	—	4916
I _{c2} (in ⁴) n=9	6531	—	6531
I _s (in ⁴)	176	176	176
I _{c1} (in ⁴) n=27	251	—	251
I _{c2} (in ⁴) n=9	276	—	276
I _{nc} (in ⁴)	0.854	0.854	0.854
I _{nc} (in ⁴)	143	299	131
F _s non-comp (k.s.i)	9.8	17.7	8.9
I _{nc} (in ⁴)	0.287	0.287	0.287
I _{nc} (in ⁴)	55	70	61
F _s comp (k.s.i)	2.6	4.8	2.9
I _{nc} (in ⁴)	560	296	640
I _{nc} (in ⁴)	167	86	180
Total I _{nc} + I _{mp} (in ⁴)	727	382	820
F _s + I (k.s.i)	31.6	26.0	35.7
F _s Total (k.s.i)	44.0	48.5	47.5
V _R (k)	45.7	—	40.4

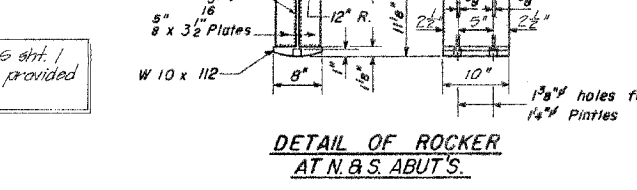
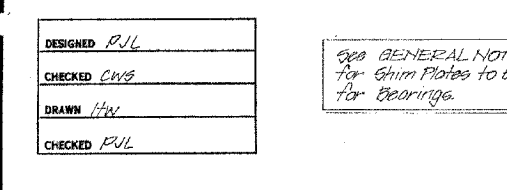
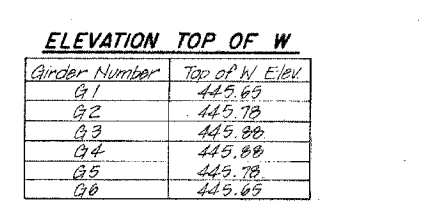
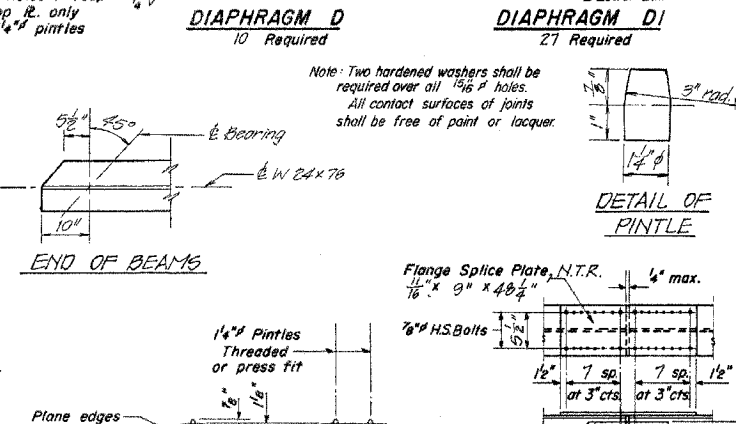
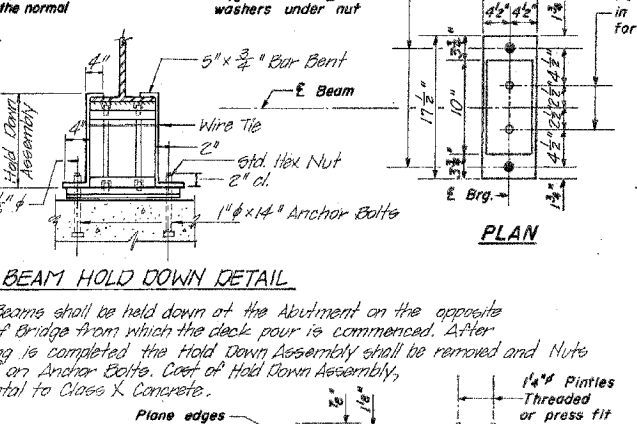
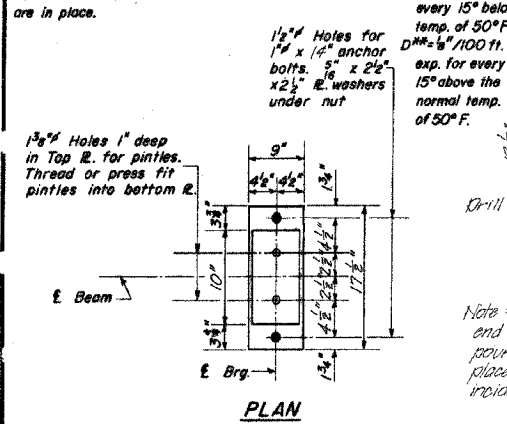
Notes:
 1) I_s & I_{nc} are the moment of inertia & section modulus of the steel section used in computing F_s Total.
 2) I_{c1} & I_{c2} (n=27) are the moment of inertia & section modulus of the composite section used in computing F_s Total resulting from composite dead load forces with allowance for long term concrete creep.
 3) I_{c2} & I_{nc} (n=9) are the moment of inertia & section modulus of the composite section used in computing F_s Total resulting from live load plus impact.
 4) V_R is the maximum live load plus impact shear range in span used for shear connector design.
 5) The load factor (1.3) [I_{nc} + I_{mp}] is used in computing moments & stresses.



ELEVATION TOP OF W

Girder Number	Top of W Elev.
G1	445.65
G2	445.78
G3	445.88
G4	445.88
G5	445.78
G6	445.65

Note: All girders (W24x76) and field splice plates (flanges & webs) are subject to tensile stresses & shall conform to the requirements for Notch Toughness (Zone 2) of the A588 specifications. These members are designated "N.T.R." on this sheet.



GIRDER AND FRAMING DETAILS

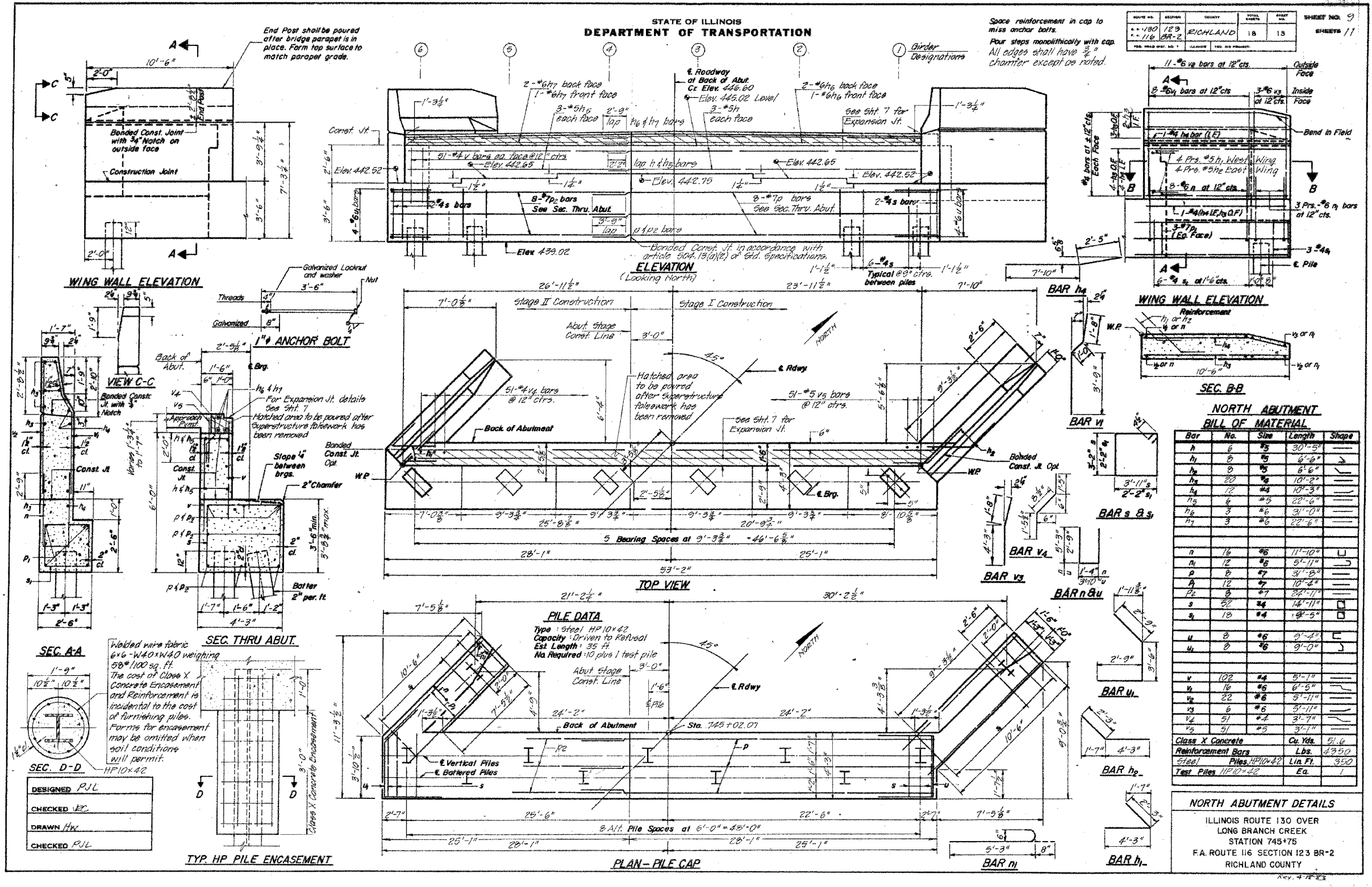
ILLINOIS ROUTE 130 OVER LONG BRANCH CREEK
STATION 745+75
FA. ROUTE 116 SECTION 123 BR-2
RICHLAND COUNTY

DESIGNED P.J.L.
CHECKED C.W.S.
DRAWN H.V.
CHECKED P.J.L.

GENERAL NOTES: 1. Shim Plates to be provided for bearing.

ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
FAP 116	*	RICHLAND	31	30
STA.		TO STA.		
FED. ROAD DIST. NO.	ILLINOIS	FED. AID PROJECT		

* D-7 Joint Repairs 2006-3



ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
130	116	RICHLAND	18	13
116	BR-2			

NORTH ABUTMENT BILL OF MATERIAL

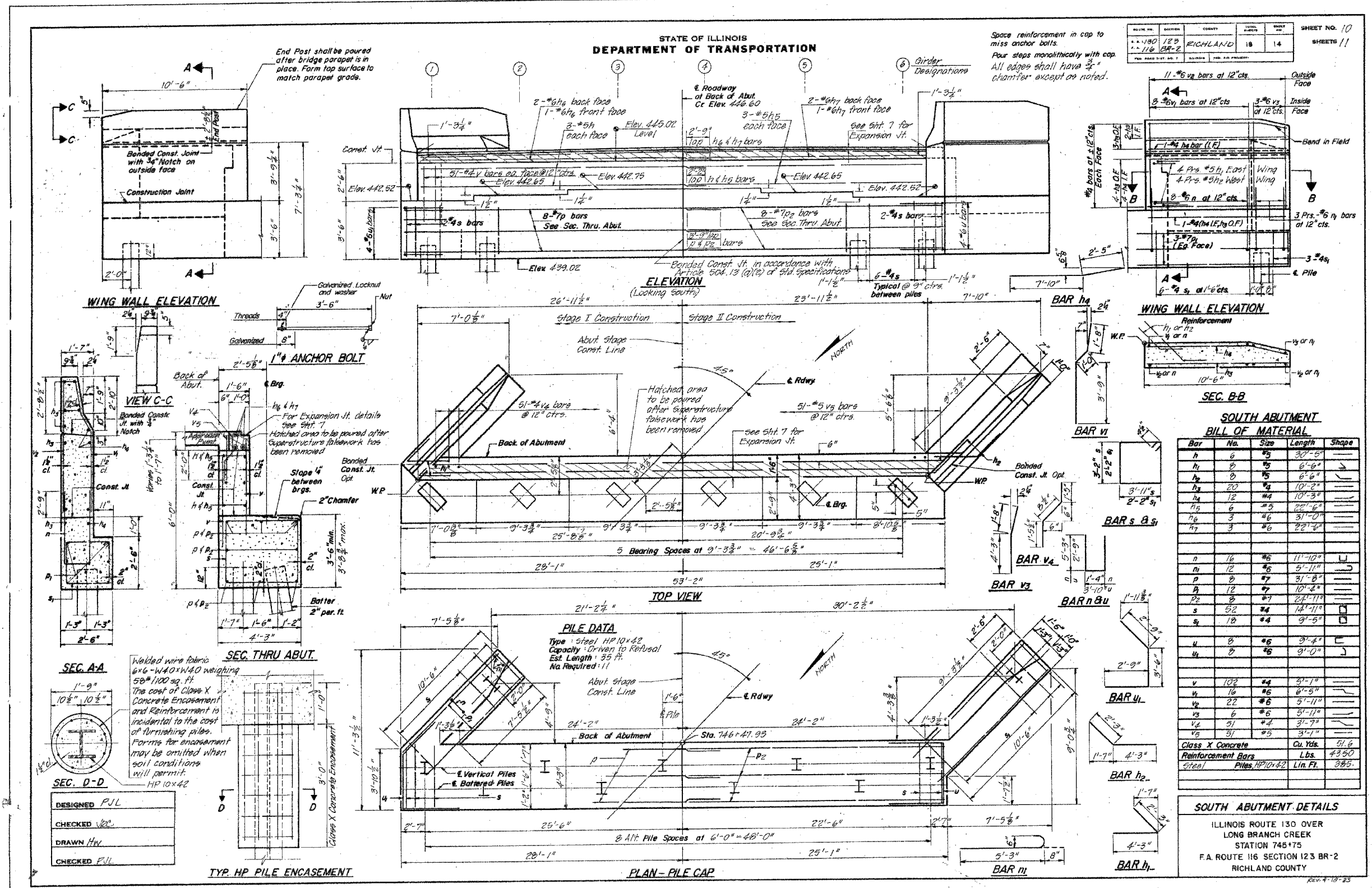
Bar	No.	Size	Length	Shape
n	8	#5	30'-5"	
n ₁	8	#5	8'-6"	
n ₂	8	#5	8'-6"	
n ₃	20	#5	10'-2"	
n ₄	12	#5	10'-3"	
n ₅	6	#5	22'-6"	
n ₆	3	#6	31'-0"	
n ₇	3	#6	22'-6"	
n	16	#6	11'-10"	
n ₁	12	#6	5'-11"	
p	8	#7	31'-8"	
p ₁	12	#7	10'-2"	
p ₂	8	#7	22'-11"	
s	8	#4	14'-11"	
s ₁	18	#4	9'-5"	
v	102	#4	5'-10"	
v ₁	16	#6	6'-5"	
v ₂	22	#6	5'-11"	
v ₃	6	#6	5'-11"	
v ₄	91	#4	31'-7"	
v ₅	31	#5	3'-1"	
Class X Concrete		Cu Yds.	51.6	
Reinforcement Bars		Lbs.	4750	
Steel Piles HP10x42		Lin. Ft.	350	
Test Piles HP10x42		Ea.	1	

NORTH ABUTMENT DETAILS

ILLINOIS ROUTE 130 OVER
LONG BRANCH CREEK
STATION 745+75
F.A. ROUTE 116 SECTION 123 BR-2
RICHLAND COUNTY

ROUTE NO.	SECTION	COUNTY	SHEET NO.	SHEET NO.
FAP 116	*	RICHLAND	31	31
STA.		TO STA.		
FED. ROAD DIST. NO.	ELLERRE	FED. AID PROJECT		

* D-7 Joint Repairs 2006-3



ROUTE NO.	SECTION	COUNTY	SHEET NO.	SHEET NO.
FAP 116	*	RICHLAND	31	31

SOUTH ABUTMENT

BILL OF MATERIAL

Bar	No.	Size	Length	Shape
A	8	#5	30'-9"	
B	8	#5	6'-6"	
C	8	#5	6'-6"	
D	20	#4	10'-2"	
E	12	#4	10'-3"	
F	6	#5	22'-6"	
G	3	#6	31'-0"	
H	3	#6	22'-6"	
I	16	#6	11'-10"	
J	12	#6	5'-11"	
K	8	#7	31'-8"	
L	12	#7	10'-2"	
M	8	#7	24'-11"	
N	52	#4	14'-11"	
O	18	#4	9'-5"	
P	8	#6	9'-4"	
Q	8	#6	9'-0"	
R	102	#4	5'-1"	
S	16	#6	8'-5"	
T	22	#6	5'-11"	
U	6	#6	5'-11"	
V	51	#4	31'-7"	
W	51	#5	31'-1"	

Class X Concrete Cu. Yds. 51.6
 Reinforcement Bars Lbs. 4350
 Piles HP10x42 Lin. Ft. 385

SOUTH ABUTMENT DETAILS

ILLINOIS ROUTE 130 OVER
 LONG BRANCH CREEK
 STATION 746+75
 F.A. ROUTE 116 SECTION 123 BR-2
 RICHLAND COUNTY