11-17-2017 LETTING ITEM 023

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
510	(120) BRR	HANCOCK	14	1
	ILLINOIS	CONTRACT NO. 72K14		

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

FOR INDEX OF SHEETS, SEE SHEET NO. 2

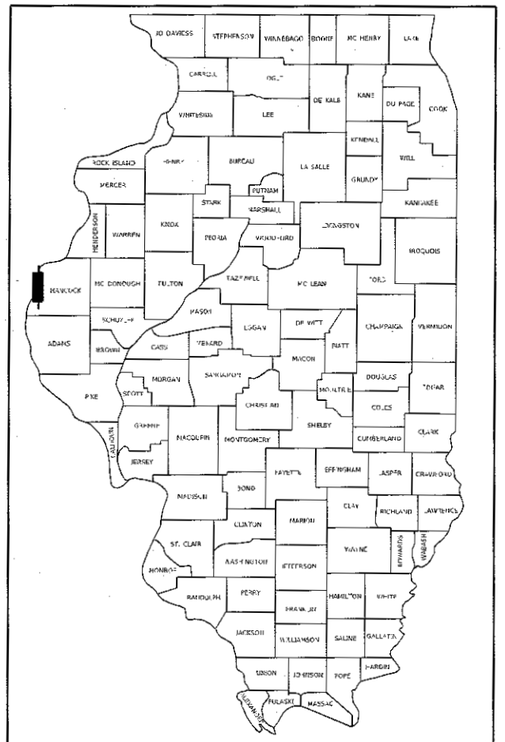
PROPOSED
CONTRACT MAINTENANCE

FAP ROUTE 510 (IL 96)
SECTION (120) BRR

BRIDGE DECK OVERLAY
HANCOCK COUNTY

C-96-078-17

D-96-078-17



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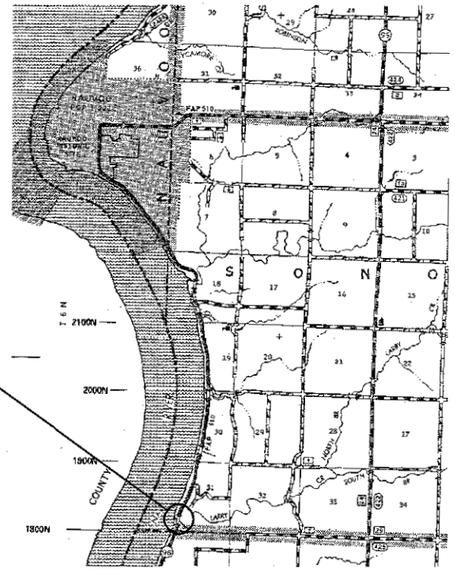

PROJECT LOCATION
SN 034-0026
IL 96 OVER LARRY CREEK
5.3 MI N US 136 IN HAMILTON

N

100' 200' 300' — 1"=100'
0 10' 20' 30' — 1"=10'
0 50' 100' — 1"=50'
0 50' 100' — 1"=40'
0 50' 100' — 1"=30'
0 50' 100' — 1"=20'

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

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

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

SUBMITTED 29 August 20 17
REGIONAL ENGINEER
Oct 13 20 17
ENGINEER OF DESIGN AND ENVIRONMENT
Oct 13 20 17
DIRECTOR OF PROGRAM DEVELOPMENT

BRIDGE MAINTENANCE ENGINEER: BRANDON DUDLEY – (217) 785-9290

GROSS LENGTH = 520 FT. = 0.10 MILE
NET LENGTH = 520 FT. = 0.10 MILE

PRINTED BY THE AUTHORITY
OF THE STATE OF ILLINOIS

CONTRACT NO. 72K14

INDEX OF SHEETS

STANDARDS

000001-06
001001-02
001006
701001-02
701006-05
701201-04
701301-04
701306-03
701321-16
701326-04
701901-06
704001-08
780001-05
782006

GENERAL NOTES:

BASE COURSE WIDENING SHALL BE COMPLETED PRIOR TO STAGING TRAFFIC.

AREAS OF DECK REPAIRS SHOWN ARE ESTIMATED. THE ENGINEER SHALL SHOW ACTUAL LOCATIONS OF DECK REPAIRS ON AS-BUILT PLANS.

PAVING SCHEDULE				
STA	TO	STA	BIT MATL (TACK CT) (POUND)	HMA SURF COURSE (TON)
829+30	-	830+99	270	59
833+01	-	834+50	238	52
		TOTALS	508	111

PAVEMENT MARKING REMOVAL SCHEDULE					
STA	TO	STA	LOC.	LINE TYPE	PAVT MARK REM (SQ FT)
STAGE I					
827+70	-	830+20	℄	DOUBLE SOLID	208
829+70	-	834+30	LT	SOLID	192
833+80	-	836+30	℄	DOUBLE SOLID	208
STAGE II					
829+70	-	834+30	RT	SOLID	192
				TOTAL	800

SHOULDER IMPROVEMENT SCHEDULE							
STA	TO	STA	SIDE	BASE COURSE WIDENING 8" (SQ YD)	PAVED SHLDR REM (SQ YD)	EARTH EX. WIDENING (CU YD)	AGG WEDGE SHLDR (TON)
829+30	-	830+99	RT	75	75	4.2	6.4
829+30	-	830+99	LT	75	75	4.2	6.4
833+01	-	834+50	RT	66	66	3.7	5.7
833+01	-	834+50	LT	66	66	3.7	5.7
			TOTALS	282	282	15.8	24.2

MIXTURE USE(S)	HMA BASE CSE WIDENING *	HMA SURFACE CSE
AC/PG	PG 64-22	PG 64-22
DESIGN AIR VOIDS	4.0% @ N50	4.0% @ N50
MIX COMPOSITION (GRADATION MIXTURE)	IL 19.0	IL 9.5
FRICTION AGGREGATE	N/A	MIX "C"
QUALITY MANAGEMENT	QC/QA	QC/QA
SUBLOT SIZE	N/A	N/A

* BASE COURSE PAY ITEM ALLOWS FOR HMA OR PCC USE.

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION
DIVISION OF HIGHWAYS
DISTRICT 6

EXAMINED August 8th 20 17
[signature]
ENGINEER OF OPERATIONS

EXAMINED Aug 18th 20 17
[signature]
ENGINEER OF PROJECT IMPLEMENTATION

EXAMINED August 8 20 17
[signature]
ENGINEER OF PROGRAM DEVELOPMENT

CODE NO.	ITEM	UNIT	TOTAL QUANTITY	0-01624-6009 100% STATE BRIDGE 0047 RURAL
20200500	EARTH EXCAVATION (WIDENING)	CU YD	16	16
35650300	BASE COURSE WIDENING 8"	SQ YD	282	282
40600290	BITUMINOUS MATERIALS (TACK COAT)	POUND	508	508
40600982	HOT-MIX ASPHALT SURFACE REMOVAL - BUTT JOINT	SQ YD	711	711
40600990	TEMPORARY RAMP	SQ YD	86	86
40603310	HOT-MIX ASPHALT SURFACE COURSE, MIX "C", N50	TON	111	111
44004250	PAVED SHOULDER REMOVAL	SQ YD	282	282
48102100	AGGREGATE WEDGE SHOULDER, TYPE B	TON	25	25
50102400	CONCRETE REMOVAL	CU YD	3.3	3.3
50300100	FLOOR DRAINS	EACH	17	17
50300255	CONCRETE SUPERSTRUCTURE	CU YD	4.0	4.0
50300260	BRIDGE DECK GROOVING	SQ YD	663	663
50300300	PROTECTIVE COAT	SQ YD	16	16
50800205	REINFORCEMENT BARS, EPOXY COATED	POUND	650	650

CODE NO.	ITEM	UNIT	TOTAL QUANTITY	0-01624-6009 100% STATE BRIDGE 0047 RURAL ✓
50800515	BAR SPLICERS	EACH	12	12
52000110	PREFORMED JOINT STRIP SEAL	FOOT	70	70
67100100	MOBILIZATION	L SUM	1	1
70100405	TRAFFIC CONTROL AND PROTECTION, STANDARD 701321	EACH	1	1
70100450	TRAFFIC CONTROL AND PROTECTION, STANDARD 701201	L SUM	1	1
70100460	TRAFFIC CONTROL AND PROTECTION, STANDARD 701306	L SUM	1	1
70100500	TRAFFIC CONTROL AND PROTECTION, STANDARD 701326	L SUM	1	1
70106500	TEMPORARY BRIDGE TRAFFIC SIGNALS	EACH	1	1
70106700	TEMPORARY RUMBLE STRIPS	EACH	6	6
70300100	SHORT TERM PAVEMENT MARKING	FOOT	100	100
70300150	SHORT TERM PAVEMENT MARKING REMOVAL	SQ FT	33	33
70400100	TEMPORARY CONCRETE BARRIER	FOOT	440	440
70400200	RELOCATE TEMPORARY CONCRETE BARRIER	FOOT	440	440
70600260	IMPACT ATTENUATORS, TEMPORARY (FULLY REDIRECTIVE, NARROW), TEST LEVEL 3	EACH	2	2

14

14

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STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

SUMMARY OF QUANTITIES

SCALE: | SHEET OF SHEETS | STA. | TO STA.

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
510	(120) BRR	HANCOCK	14	3
		CONTRACT NO. 72K14		
	ILLINOIS	FED. AID PROJECT		

				0-01624-6009 100% STATE BRIDGE 0047 RURAL
CODE NO.	ITEM	UNIT	TOTAL QUANTITY	
70600332	IMPACT ATTENUATORS, RELOCATE (FULLY REDIRECTIVE, NARROW), TEST LEVEL 3	EACH	2	2
* 78001120	PAINT PAVEMENT MARKING - LINE 5"	FOOT	3000	3000
78300200	RAISED REFLECTIVE PAVEMENT MARKER REMOVAL	EACH	4	4
X0322469	PLUG EXISTING FLOOR DRAINS	EACH	37	37
X0327979	PAVEMENT MARKING REMOVAL - GRINDING	SQ FT	800	800
X7015005	CHANGEABLE MESSAGE SIGN	CAL DA	120	120
X7200201	WIDTH RESTRICTION SIGNING	L SUM	1	1
Z0012130	BRIDGE DECK SCARIFICATION, 3/4"	SQ YD	708	708
Z0012164	BRIDGE DECK MICROSILICA CONCRETE OVERLAY, 2-1/2"	SQ YD	708	708
Z0012754	STRUCTURAL REPAIR OF CONCRETE (DEPTH EQUAL TO OR LESS THAN 5")	SQ FT	10	10
Z0016001	DECK SLAB REPAIR (FULL DEPTH, TYPE I)	SQ YD	4	4
Z0016002	DECK SLAB REPAIR (FULL DEPTH, TYPE II)	SQ YD	67	67

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* SPECIALTY ITEM

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STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

SUMMARY OF QUANTITIES

SCALE: | SHEET OF SHEETS | STA. | TO STA.

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
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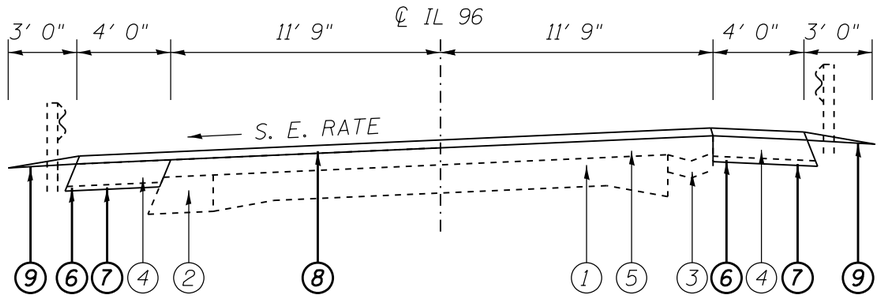
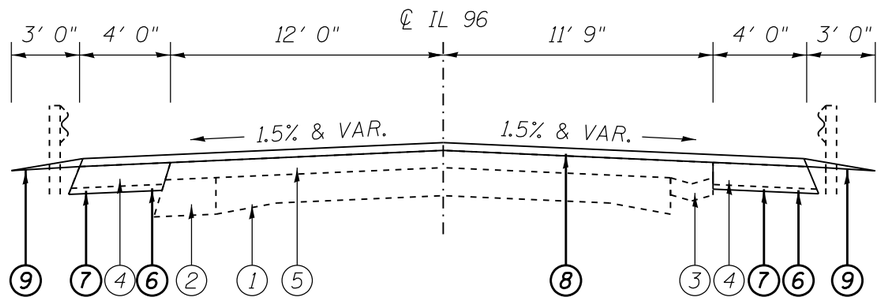
		CONTRACT NO. 72K14		
	ILLINOIS FED. AID PROJECT			

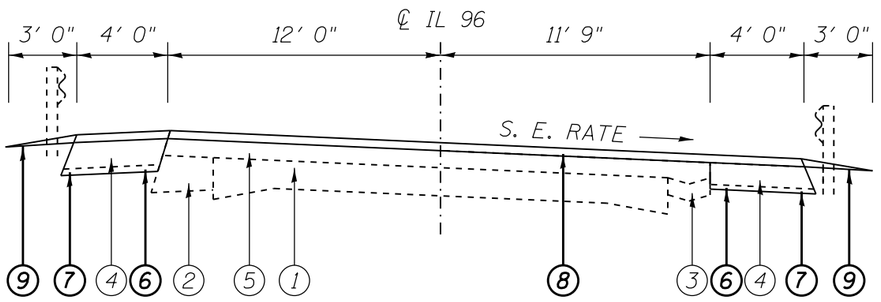


STA 829+30.00 TO STA 830+98.70 *

* BRIDGE APPROACH PAVEMENT
STA 830+78.70 TO STA 830+98.70



STA 833+01.73 TO STA 833+05.00



STA 833+05.00 TO STA 834+50.00 **

** BRIDGE APPROACH PAVEMENT
STA 833+01.78 TO 833+21.78

1. EXISTING PCC PAVEMENT (9-6-9)
2. EXISTING HMA BASE COURSE WIDENING
3. EXISTING PCC GUTTER
4. EXISTING HMA SHOULDER, 6"
5. EXISTING HMA OVERLAYS, ±4"
6. **PROPOSED EARTH EXCAVATION (WIDENING)**
7. **PROPOSED BASE COURSE WIDENING, 8"**
8. **PROPOSED HMA SURFACE COURSE, 1-3/4"**
9. **PROPOSED AGGRAGATE WEDGE SHOULDER - TYPE B**

EXISTING CURVE DATA
P.I. STA= 828+89.96
Δ= 14°-12′-00″ LT
D= 3°-47′-00″
R= 1514.43′
T= 188.63′
L= 375.33′
E= 11.70′
e= 6.1%
T.R.=
S.E. RUN=
P.C. STA= 827+01.33
P.T. STA= 830+76.20
S.E. ATTAINED: 830+26.40 TO 831+75.94

EXISTING CURVE DATA
P.I. STA= 836+66.10
Δ= 16°-58′-00″ LT
D= 3°-00′-00″
R= 1909.86′
T= 284.86′
L= 565.56′
E= 21.13′
e= 5.3%
T.R.=
S.E. RUN=
P.C. STA= 833+81.22
P.T. STA= 839+46.78
S.E. ATTAINED: 833+05.00 TO 834+55.00

NOTES:

BASE COURSE WIDENING 8" SHALL BE EXTENDED TO THE FACE OF THE CONCRETE PARAPET AT THE BRIDGE APPROACHES.

HIGH SIDE OF CURVE: WHEN THE SUPERELEVATION RATE OF THE PAVEMENT IS BETWEEN 0% AND 4%, THE SHOULDER SHALL BE SLOPED AT 4%. WHEN THE SUPERELEVATION RATE OF THE PAVEMENT EXCEEDS 4%, THE SHOULDER SHALL BE SLOPED SO THAT THE ALGEBRAIC DIFFERENCE BETWEEN PAVEMENT AND SHOULDER WILL NOT BE GREATER THAN 8%.

LOW SIDE OF CURVE: WHEN THE SUPERELEVATION RATE OF THE PAVEMENT IS GREATER THAN 4%, THE SHOULDER SHALL HAVE THE SAME CROSS SLOPE. OTHERWISE THE SHOULDER CROSS SLOPE SHALL BE 4%.

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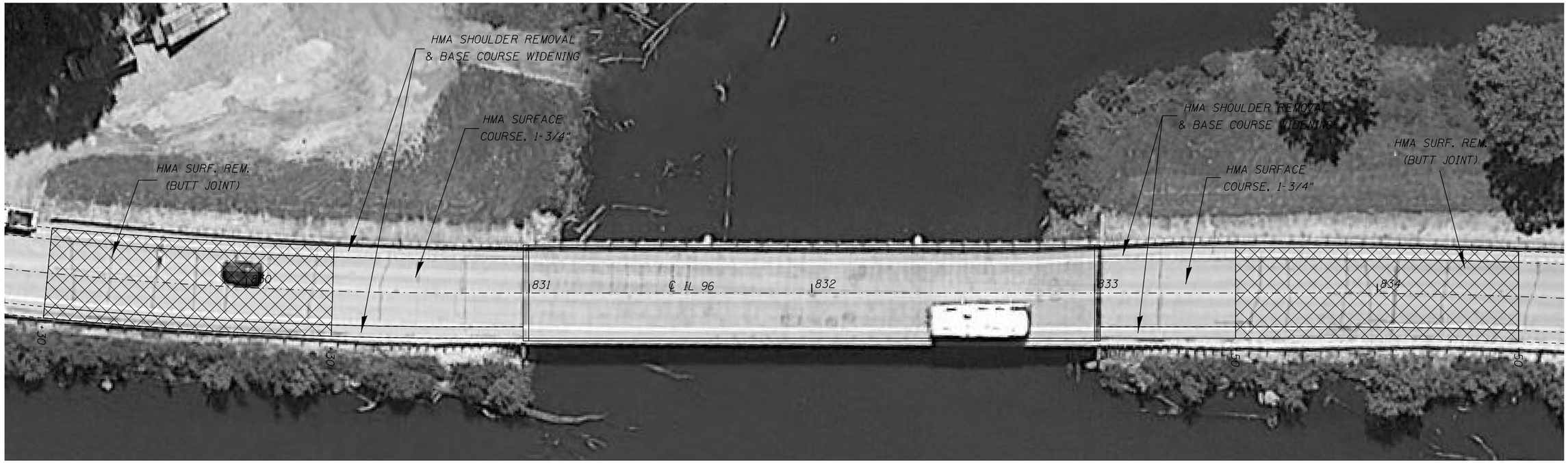
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

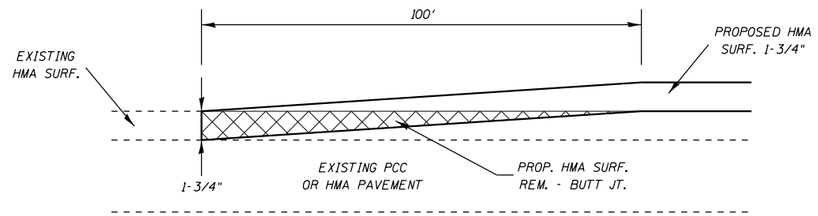
TYPICAL SECTIONS

SCALE: | SHEET OF SHEETS | STA. | TO STA.

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
510	(120) BRR	HANCOCK	14	6
		CONTRACT NO. 72K14		
	ILLINOIS FED. AID PROJECT			



ROADWAY PLAN



BUTT JOINT ELEVATION

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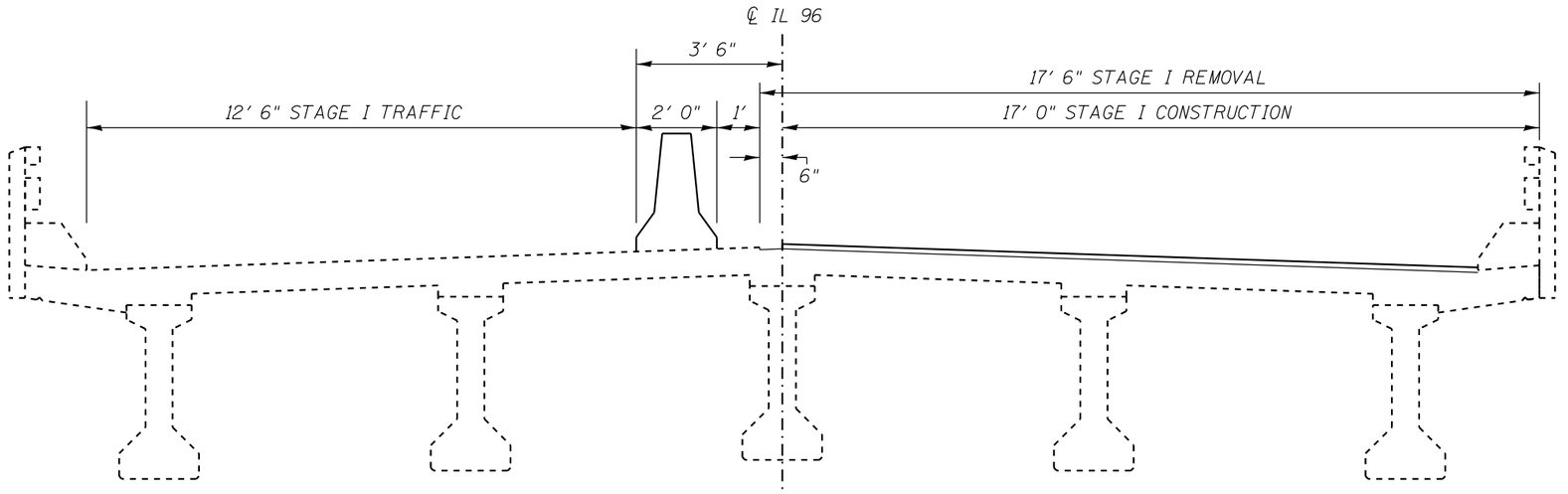
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

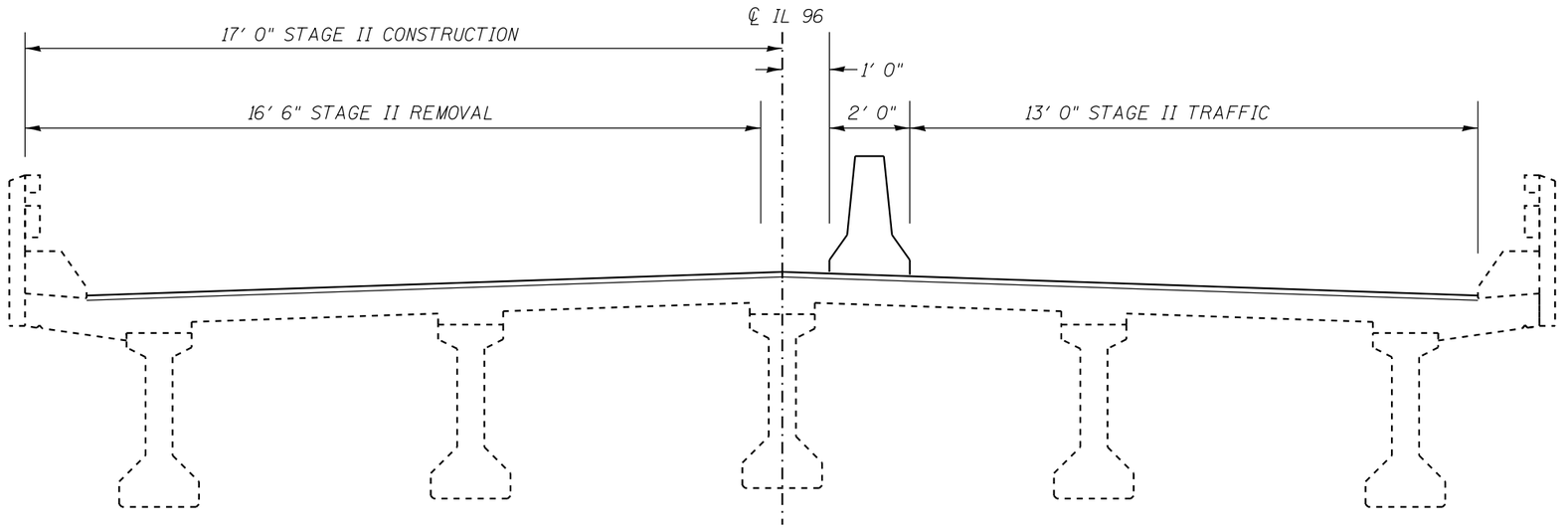
ROADWAY PLAN

SCALE: | SHEET OF SHEETS | STA. | TO STA.

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
510	(120) BRR	HANCOCK	14	4
		CONTRACT NO. 72K14		
	ILLINOIS	FED. AID PROJECT		



STAGE I CROSS SECTION (LOOKING SOUTH)



STAGE II CROSS SECTION (LOOKING SOUTH)

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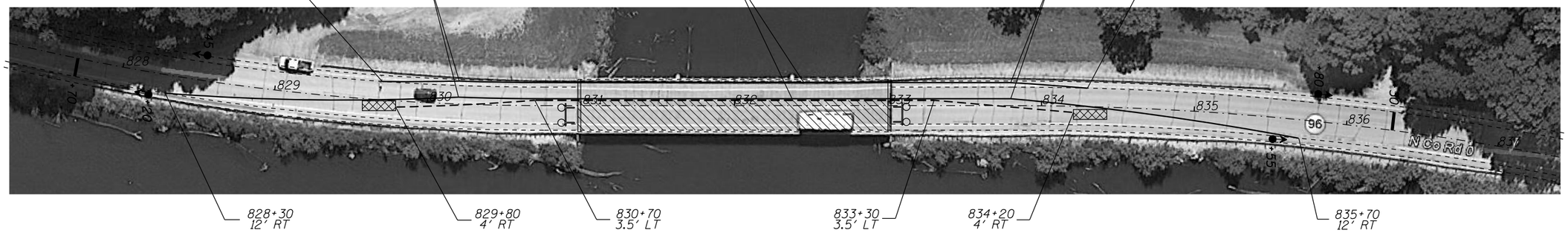
PLOT DATE = 8/23/2017	DATE -	REVISED -	

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

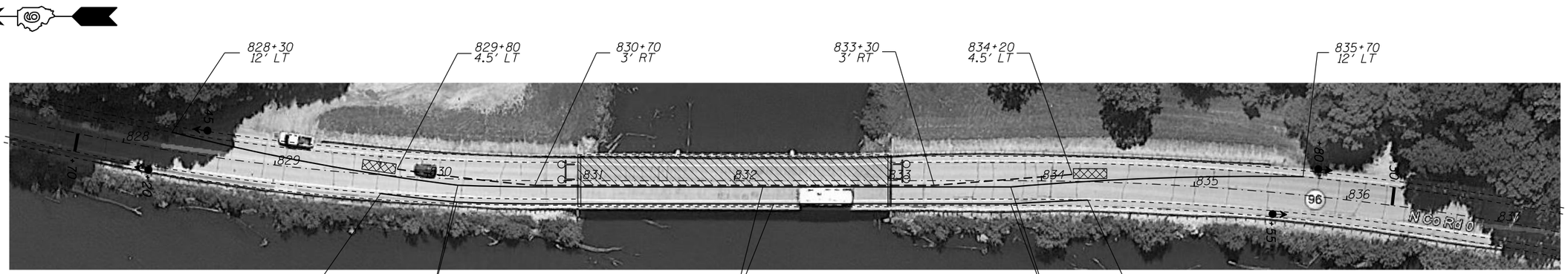
STAGING DETAIL

SCALE: | SHEET OF SHEETS | STA. | TO STA.

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
510	(120) BRR	HANCOCK	14	7
		CONTRACT NO. 72K14		
	ILLINOIS FED. AID PROJECT			



STAGE I TRAFFIC CONTROL PLAN



STAGE II TRAFFIC CONTROL PLAN

SYMBOLS

- WORK AREA
- TEMPORARY CONCRETE BARRIER
- IMPACT ATTENUATOR
- TRAFFIC SIGNAL
- TYPE III BARRICADE WITH FLASHING LIGHTS

TRAFFIC CONTROL NOTES:

1. *TRAFFIC CONTROL DEVICES NOT SHOWN IN THIS DETAIL SHALL BE PER STANDARD 701321. DEVICES AND TEMPORARY PAVEMENT MARKINGS SHOWN IN THIS DETAIL SHALL BE INCLUDED IN THE COST OF TRAFFIC CONTROL AND PROTECTION, STANDARD 701321. IMPACT ATTENUATORS, TEMPORARY RUMBLE STRIPS, AND TEMPORARY CONCRETE BARRIER SHALL BE PAID SEPARATELY.*

2. *TEMPORARY CONCRETE BARRIER OFFSETS GIVEN IN THIS DETAIL REFER TO THE EDGE OF THE BARRIER NEAREST TO LIVE TRAFFIC. ALL BARRIER WALL TAPERS SHALL BE 12:1.*

3. *AN EXTRA "SIGNAL AHEAD", W3-3(0)-48 SIGN SHALL BE PROVIDED ON EACH END OF THE TRAFFIC CONTROL SETUP. THEY SHALL BE PLACED 200' AFTER THE FIRST SET OF RUMBLE STRIPS IN EACH DIRECTION. OTHER SIGNS AFFECTED BY THIS ADDITION SHALL BE MOVED 500' PRIOR TO THEIR ORIGINAL PLACEMENT LOCATION PER STANDARD 701321 OR AS DIRECTED BY THE ENGINEER.*

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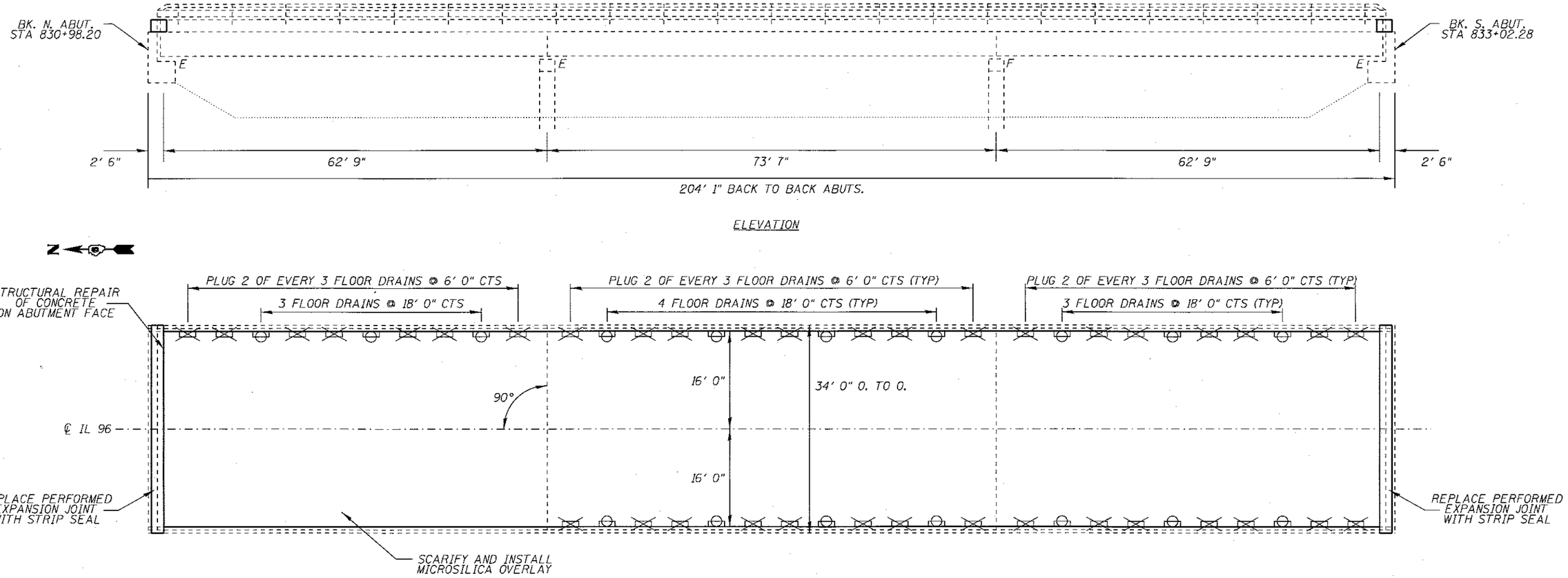
PLOT DATE = 8/23/2017	DATE -	REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

TRAFFIC CONTROL DETAIL

SCALE: | SHEET OF SHEETS | STA. | TO STA.

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
510	(120) BRR	HANCOCK	14	8
		CONTRACT NO. 72K14		
	ILLINOIS	FED. AID PROJECT		



ELEVATION

PLAN

GENERAL NOTES:

ALL STRUCTURAL STEEL SHALL BE AASHTO M-270 GRADE 36

REINFORCEMENT BARS DESIGNATED (E) SHALL BE EPOXY COATED.

PRIOR TO POURING THE NEW CONCRETE DECK, ALL HEAVY OR LOOSE MILL SCALE AND OTHER LOOSE OR POTENTIALLY DETRIMENTAL FOREIGN MATERIAL SHALL BE REMOVED FROM THE SURFACES IN CONTACT WITH CONCRETE. TIGHTLY ADHERED PAINT MAY REMAIN UNLESS OTHERWISE NOTED. REMOVAL SHALL BE ACCOMPLISED BY METHODS THAT WILL NOT DAMAGE THE STEEL AND THE COST WILL BE INCLUDED IN CONCRETE REMOVAL.

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

EXISTING REINFORCEMENT BARS EXTENDING INTO THE REMOVAL AREA SHALL BE CLEANED, STRAIGHTENED, AND INCORPORATED INTO THE NEW CONSTRUCTION. ANY REINFORCEMENT BARS THAT ARE DAMAGED DURING CONCRETE REMOVAL SHALL BE REPLACED WITH AN APPROVED BAR SPLICER OR ANCHORAGE SYSTEM. COST INCLUDED WITH CONCRETE REMOVAL.

JOINT OPENINGS SHALL BE ADJUSTED ACCORDING TO ARTICLE 520.04 OF THE STANDARD SPECIFICATIONS WHEN THE DECK IS POURED AT AN AMBIENT TEMPERATURE OTHER THAN 50°F.

AREAS OF DECK REPAIRS SHOWN ARE ESTIMATED. THE ENGINEER SHALL SHOW ACTUAL LOCATIONS OF DECK REPAIRS ON AS-BUILT PLANS.

THE ABUTMENT SURFACE IN THE AREAS OF EXPANSION JOINT REPLACEMENT SHALL HAVE A TINED FINISH AS PER ARTICLE 420.09(e)(1) OF THE STANDARD SPECIFICATIONS. COST INCLUDED WITH CONCRETE SUPERSTRUCTURE. THE DECK SURFACE IN THE AREAS OF EXPANSION JOINT REPLACEMENT SHALL BE GROOVED WITH THE DECK OVERLAY PER ARTICLE 503.16(a)(3)b OF THE STANDARD SPECIFICATIONS AND SHALL BE PAID AT THE BID PRICE PER SQUARE YARD FOR "BRIDGE DECK GROOVING."

PROTECTIVE COAT SHALL ONLY BE APPLIED TO THE DECK AND PARAPETS ADJACENT TO THE PROPOSED EXPANSION JOINTS AND NOT THE MICROSILICA OVERLAY.

LICENSED STRUCTURAL ENGINEER
DAVID CARL PUZEY
081-005470
SPRINGFIELD
ILLINOIS
STATE OF ILLINOIS

9/25/17
Expires 11/30/18

TOTAL BILL OF MATERIAL (034-0026)

ITEM	UNIT	QUANTITY
Concrete Removal	Cu. Yd.	3.3
Concrete Superstructure	Cu. Yd.	4.0
Bridge Deck Grooving	Sq. Yd.	663
Reinforcement Bars, Epoxy Coated	Pound	650
Bar Splicers	Each	12
Preformed Joint Strip Seal	Foot	70
Bridge Deck Scarification, 3/4"	Sq. Yd.	708
Bridge Deck Microsilica Concrete Overlay, 2-1/2"	Sq. Yd.	708
Deck Slab Repair (Full Depth, Type I)	Sq. Yd.	4
Deck Slab Repair (Full Depth, Type II)	Sq. Yd.	67
Floor Drains	Each	17
Plug Existing Floor Drains	Each	37
Structural Repair of Concrete (Depth Equal to or Less Than 5 Inches)	Sq. Ft.	10
Protective Coat	Sq. Yd.	16

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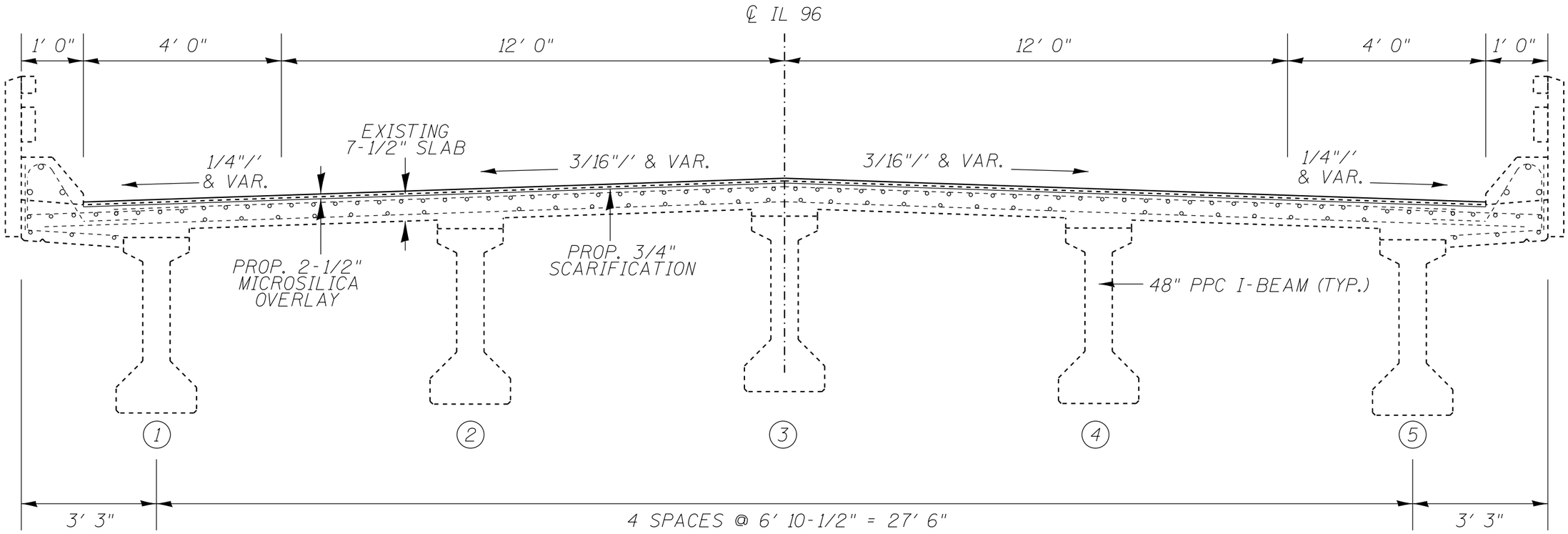
PLOT DATE = 9/23/2017	DATE -	REVISED -	

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

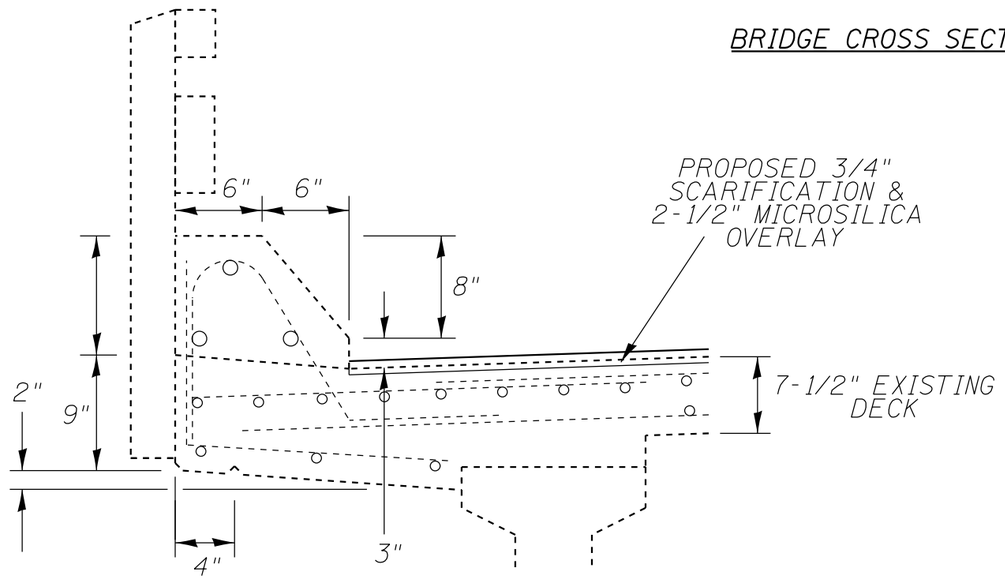
GENERAL PLAN & ELEVATION
SN 034-0026

SCALE: | SHEET 1 OF 6 SHEETS | STA. | TO STA.

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
510	(120) BRR	HANCOCK	14	9
		CONTRACT NO. 72K14		
	ILLINOIS FED. AID PROJECT			



BRIDGE CROSS SECTION (LOOKING SOUTH)



CURB CROSS SECTION

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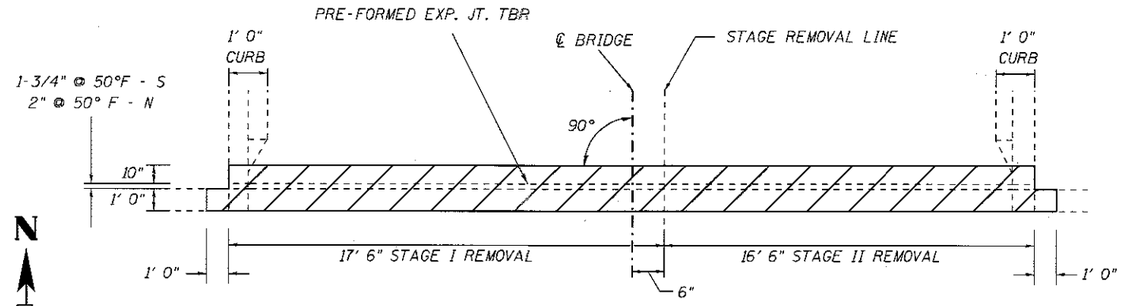
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

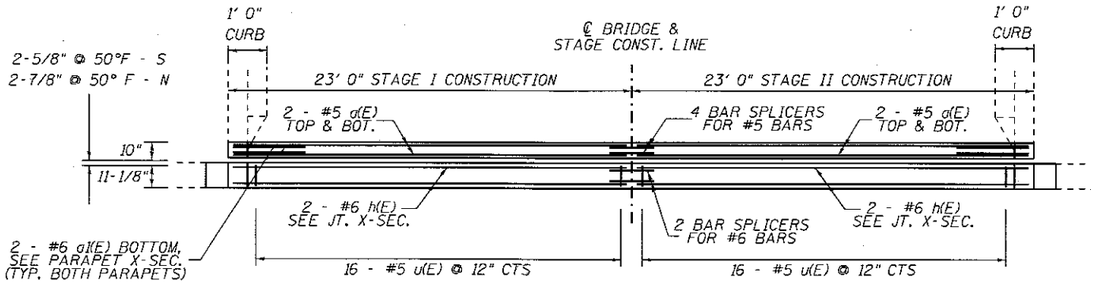
BRIDGE CROSS SECTION
SN 034-0026

SCALE: | SHEET 2 OF 6 SHEETS | STA. | TO STA.

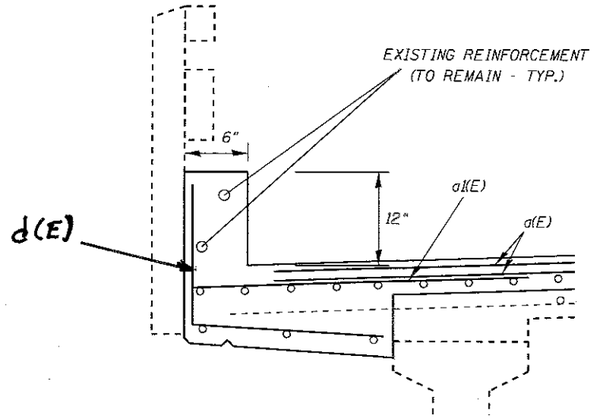
F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
510	(120) BRR	HANCOCK	14	10
		CONTRACT NO. 72K14		
	ILLINOIS	FED. AID PROJECT		



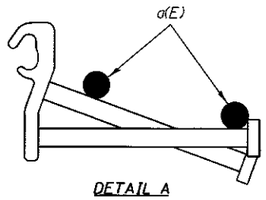
JOINT REMOVAL PLAN,
SOUTH JOINT SHOWN, NORTH JOINT SIMILAR



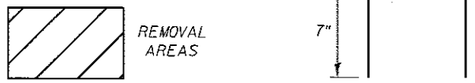
JOINT PLAN,
SOUTH JOINT SHOWN, NORTH JOINT SIMILAR

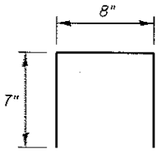


PARAPET CROSS SECTION AT JOINT

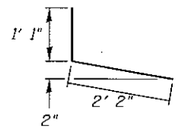


DETAIL A
d(E) TOP MAT PLACEMENT





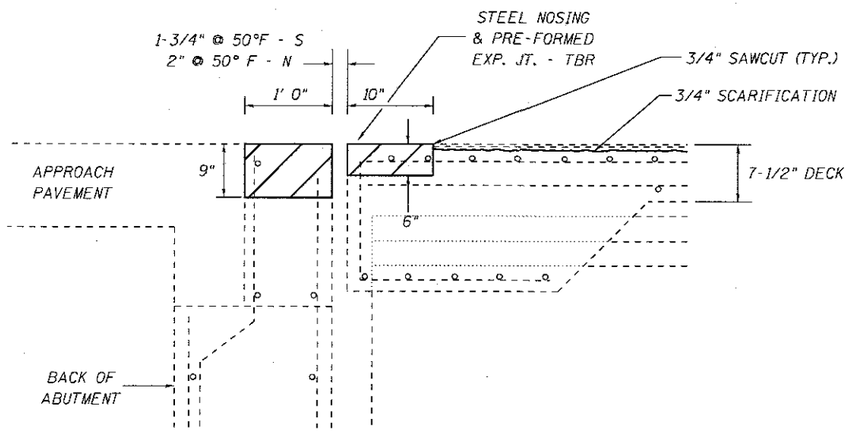
u(E) BAR



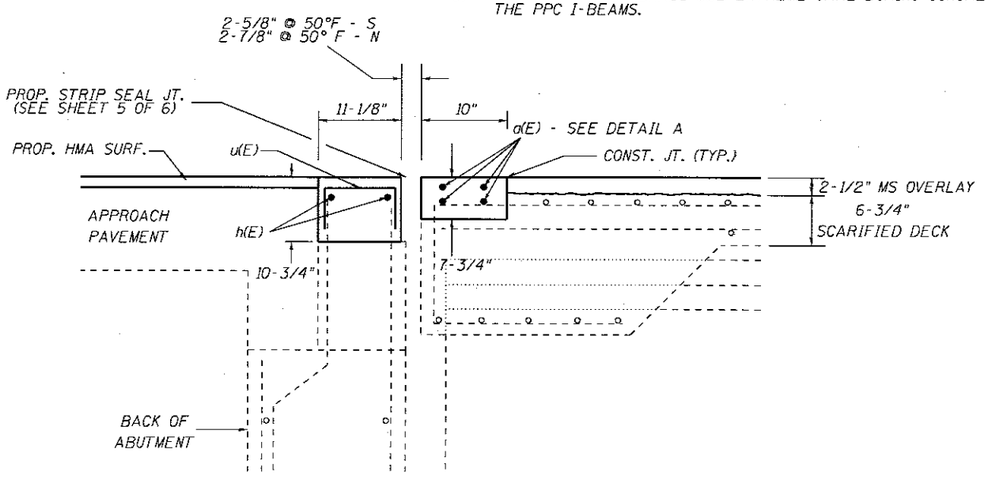
d(E) BAR

NOTES:

1. ANY BRIDGE RAIL HARDWARE ENCOUNTERED IN THE REMOVAL AREAS SHALL BE LEFT IN PLACE AND RE-INCORPORATED INTO THE NEW CONCRETE. ANY GUARDRAIL THAT INTERFERES WITH JOINT WORK SHALL BE REMOVED AND RE-INSTALLED AT THE CONTRACTOR'S EXPENSE.
2. REMOVAL OF EXISTING EXPANSION JOINT SHALL BE INCLUDED IN THE COST OF CONCRETE REMOVAL.
3. THE CONTRACTOR SHALL USE EXTREME CARE DURING CONCRETE REMOVAL SO AS NOT TO DAMAGE THE PPC I-BEAMS.



JOINT REMOVAL CROSS SECTION - TYP.



JOINT CROSS SECTION - TYP.

BILL OF MATERIAL - 2 JOINTS

BAR	#	SIZE	LENGTH	SHAPE
d(E)	16	#5	16' 0"	——
d1(E)	8	#5	4' 0"	——
d(E)	8	#5	3' 3"	——
h(E)	8	#6	16' 8"	⌐
u(E)	64	#5	1' 10"	⊓

REINFORCEMENT BARS (EPOXY COATED)	POUND	650
CONC. SUPERSTRUCTURE	CU YD	4.0
CONC. REMOVAL	CU YD	3.3

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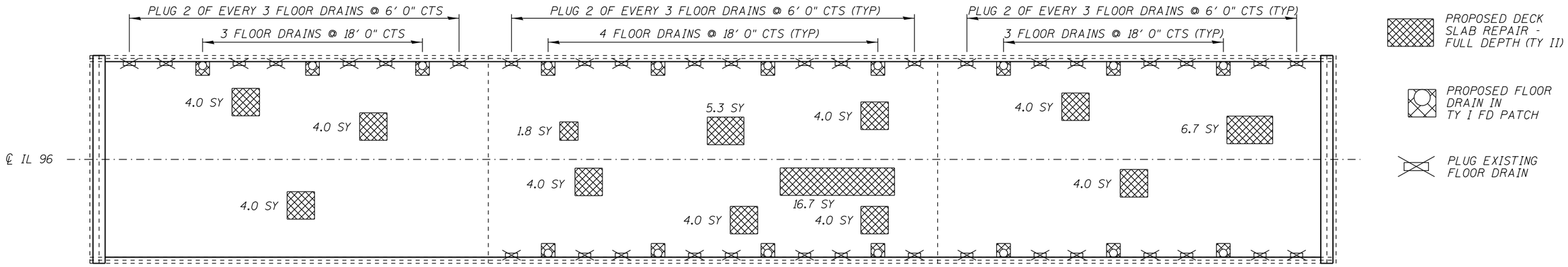
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

JOINT DETAILS
SN 034-0026

SCALE: | SHEET 3 OF 6 SHEETS | STA. | TO STA.

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
510	(120) BRR	HANCOCK	14	11
		CONTRACT NO. 72K14		
	ILLINOIS FED. AID PROJECT			

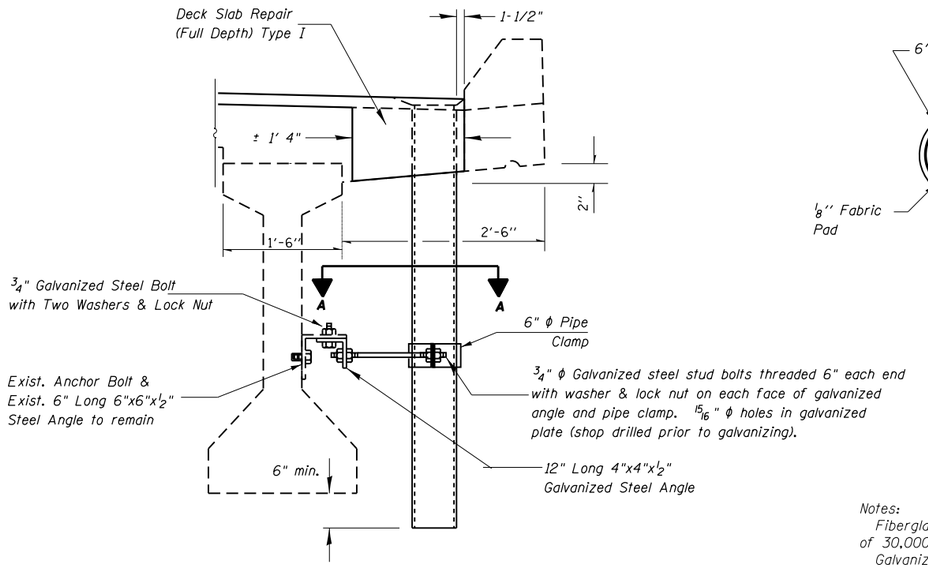


PATCHING PLAN

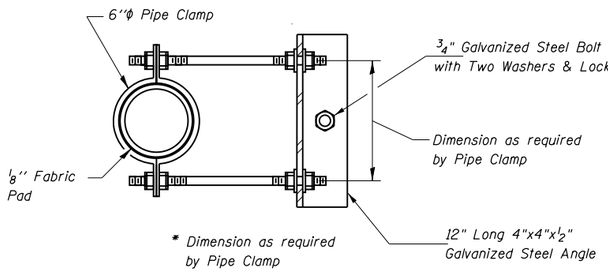
NOTES:

NEW FLOOR DRAINS SHALL BE INSTALLED AFTER SCARIFICATION OPERATIONS ARE COMPLETED FOR EACH STAGE. FULL DEPTH PATCHES APPROXIMATELY 16" SQUARE SHALL BE USED TO REMOVE THE EXISTING FLOOR DRAINS AND INSTALL PROPOSED DRAINS. COST OF EXISTING FLOOR DRAIN REMOVAL SHALL BE INCLUDED WITH FULL DEPTH PATCHING AND WILL NOT BE MEASURED FOR PAYMENT SEPARATELY. THE DECK PATCHES SURROUNDING THE NEW DRAINS SHALL BE CAST FULL DEPTH MONOLITHICALLY WITH THE OVERLAY.

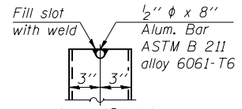
IDENTIFIED PATCHING LOCATIONS NOT ASSOCIATED WITH FLOOR DRAIN INSTALLATION ARE ESTIMATED FROM A DECK SURVEY PERFORMED ON 7/6/2017. THESE LOCATIONS INDICATE PORTIONS OF THE DECK THAT HAVE HIGHER POTENTIAL FOR REQUIRING FULL DEPTH REPAIRS. THE CONTRACTOR SHALL NOT PERFORM FULL DEPTH PATCHING ANYWHERE ON THE DECK UNLESS THE SCARIFICATION OPERATIONS REVEAL THE NEED TO DO SO. THE PATCHING SURVEY INFORMATION IS INCLUDED FOR INFORMATION ONLY.



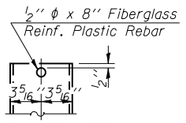
SECTION AT PROPOSED FLOOR DRAIN



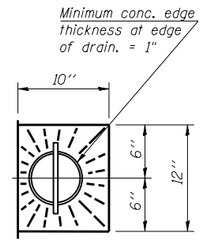
SECTION A-A



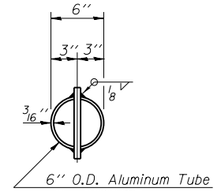
ALUMINUM TUBE



FIBERGLASS PIPE



TOP PLAN



6" O.D. Aluminum Tube
alloy 6061-T6 or
6" ϕ Fiberglass Pipe

TOP PLAN
(Showing Aluminum Tube)

Notes:
Fiberglass pipe shall conform to ASTM D 2996, with short-time rupture strength hoop tensile stress of 30,000 p.s.i. minimum.
Galvanize pipe clamp and angle according to AASHTO M232. Cost of all hardware shown shall be included in the bid price for floor drains.

BILL OF MATERIAL

ITEM	UNIT	QUANTITY
Deck Slab Repair (Full Depth, Type I)	Sq. Yd.	4
Deck Slab Repair (Full Depth, Type II)	Sq. Yd.	67
Floor Drains	Each	17
Plug Existing Floor Drains	Each	37

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STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

DECK REPAIR & FLOOR DRAIN DETAILS
SN 034-0026

SCALE: | SHEET 4 OF 6 SHEETS | STA. | TO STA.

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
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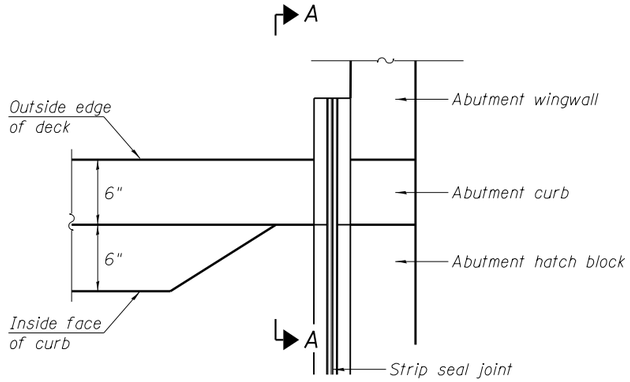
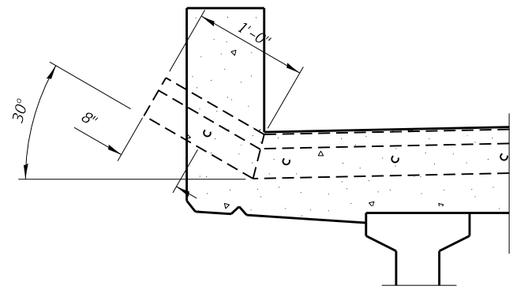
		CONTRACT NO. 72K14		
	ILLINOIS	FED. AID PROJECT		



PLAN THROUGH CURB



SECTION A-A

Notes:

The strip seal shall be made continuous and shall have a minimum thickness of ¼". The configuration of the strip seal shall match the configuration of the locking edge rails. Open or "webbed" strip seal gland configurations are not permitted. The gland shall be sized for a maximum rated movement of 4 inches.

The locking edge rails depicted are configured for typical applications and are conceptual only. The actual configuration of the locking edge rails and matching strip seal may vary from manufacturer to manufacturer provided they fit the application and meet the minimum anchorage shown. Flanged edge rails, however, will not be allowed. Locking edge rails may exceed the 4½" maximum depth provided the anchorage system is revised according to the manufacturer's recommendation.

The manufacturer's recommended installation methods shall be followed.

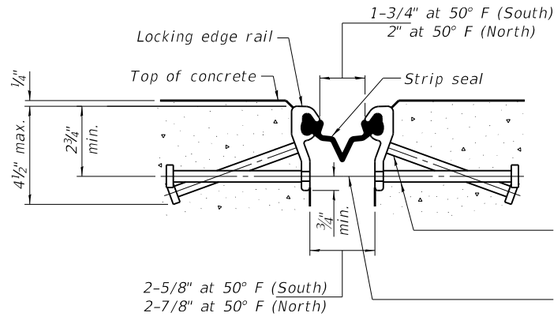
All steel components shall be galvanized after fabrication according to Article 520.03 of the Standard Specifications.

The Maximum space between locking edge rail segments shall be 3/16" and sealed with a suitable sealant; however, any rail joint within 10' measured perpendicular to the face of the curb or parapet shall be welded as shown in the locking edge rail splice detail.

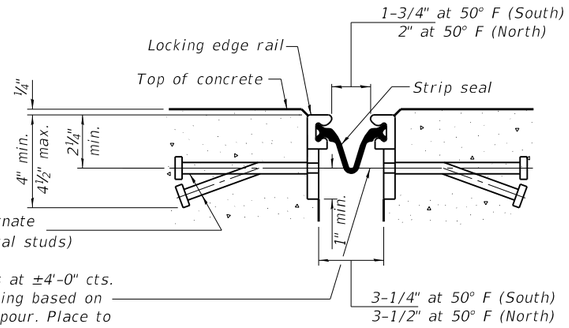
Cost of parapet sliding plates, embedded plates, and anchorage studs included with Preformed Joint Strip Seal.

34" F-shape barrier shown, 42" F-shape similar as noted.

The concrete opening below the strip seal will vary based on the locking edge rail chosen by the Contractor. Deck and parapet lengths shown elsewhere in the plans are dimensioned to the concrete opening, not the joint opening, and are based on the rolled locking edge rail. If the Contractor elects to use a different locking edge rail, dimensional adjustments may be required. One exception to this would be the strip seal joint at the end of the precast bridge approach slab. For these cases the pavement connector length shall be adjusted, not the length of the bridge approach slab.



SHOWING ROLLED RAIL JOINT



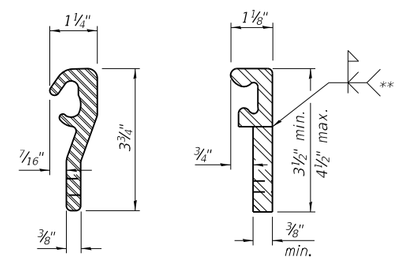
SHOWING WELDED RAIL JOINT

* ⅝" Ø x 6" studs @ 6" cts. (alternate angled/bent studs with horizontal studs)

⅜" ϕ threaded rods in 7/16" ϕ holes at ±4'-0" cts. for holding the proper joint opening based on the temperature during the deck pour. Place to miss studs. All rods shall be burned, or sawed off flush with the plates after concrete is set.

SECTION THROUGH JOINT

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



ROLLED (EXTRUDED) RAIL

WELDED RAIL

LOCKING EDGE RAILS

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

LOCKING EDGE RAIL SPLICE

The inside of the locking edge rail groove shall be free of weld residue. Rolled rail shown, welded rail similar.

BILL OF MATERIAL

Item	Unit	Total
Preformed Joint Strip Seal	Foot	70

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STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

PREFORMED JOINT STRIP SEAL
SN 034-0026

SCALE: | SHEET 5 OF 6 SHEETS | STA. | TO STA.

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
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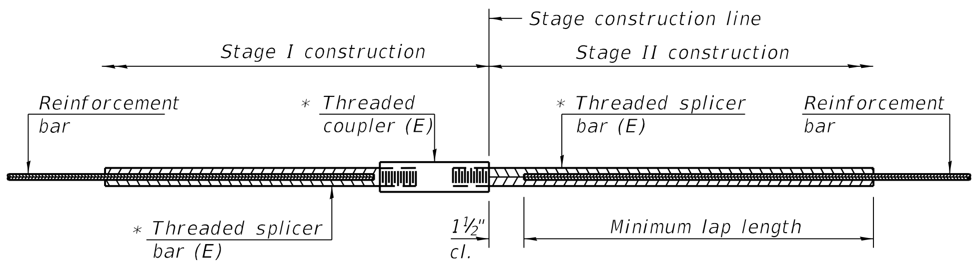
		CONTRACT NO. 72K14		
	ILLINOIS	FED. AID PROJECT		

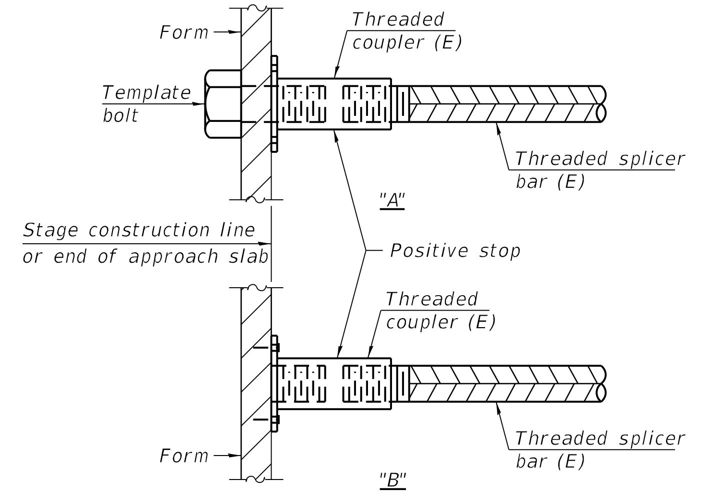


STANDARD BAR SPLICER ASSEMBLY

Threaded splicer bar length = min. lap length + 1½" + thread length

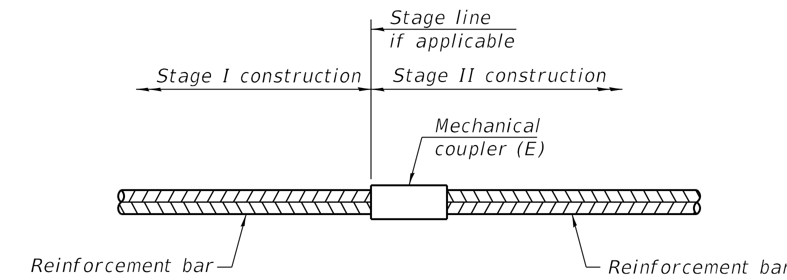
* Epoxy not required on Bar Splicer Assembly components used in conjunction with black bars.

Location	Bar size	No. assemblies required	Minimum lap length
Abuts. (deck side)	#5	8	3' 6"
Abuts. (appr. side)	#6	4	4' 0"



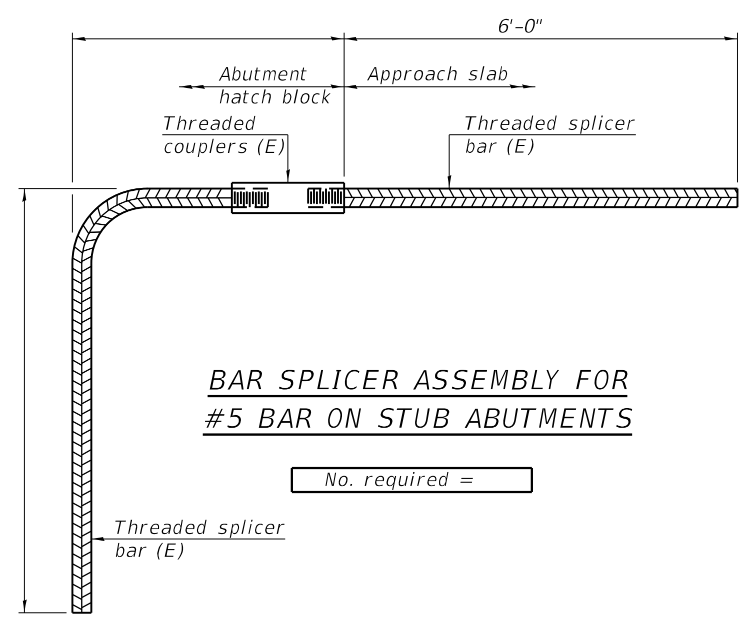
INSTALLATION AND SETTING METHODS

"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.



STANDARD MECHANICAL SPLICER

Location	Bar size	No. assemblies required



BAR SPLICER ASSEMBLY FOR #5 BAR ON STUB ABUTMENTS

No. required =

NOTES

Splicer bars shall be deformed with threaded ends and have a minimum 60 ksi yield strength.

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

Bar splicer assemblies shall be epoxy coated according to the requirements for reinforcement bars. See Section 508 of the Standard Specifications.

See approved list of bar splicer assemblies and mechanical splicers for alternatives.

BSD-1 2-17-2017

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BAR SPLICER ASSEMBLY AND MECHANICAL SPLICER DETAILS
SN 034-0026

SCALE: SHEET 6 OF 6 SHEETS STA. TO STA.

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
510	(120) BRR	HANCOCK	14	14

CONTRACT NO. 72K14

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