06-14-2019 LETTING ITEM 144

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
670	(J) BDR, BJR, BRR	MACOUPIN	18	1
	ILLINOIS	CONTRACT NO. 72L23		

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

PROPOSED
HIGHWAY PLANS

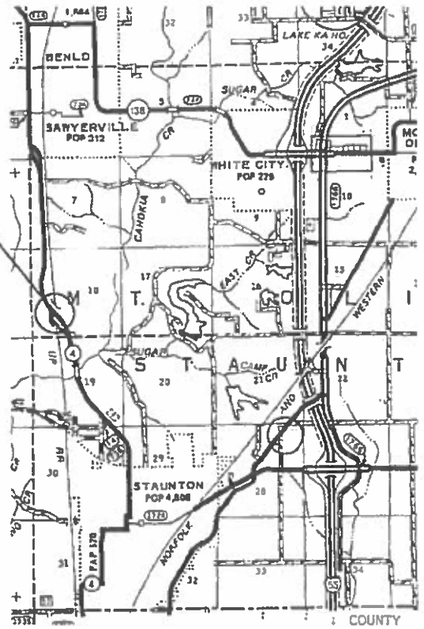
FAP ROUTE 670 (IL 4)
SECTION (J) BDR, BJR, BRR
PROJECT NHPP–5U5L(489)
BRIDGE DECK OVERLAY
MACOUPIN COUNTY

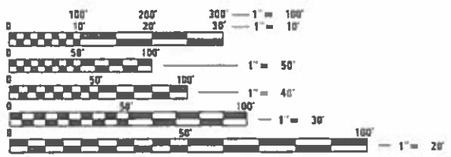
C–96–059–19

FOR INDEX OF SHEETS, SEE SHEET NO. 2

D-96-045-19

LOCATION OF SECTION INDICATED THUS: –





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 EXCAVATORS
1–800–892–0123
OR 811

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

GROSS LENGTH = x.xx FT. = x.xxx MILE
NET LENGTH = x.xx FT. = x.xxx MILE

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

SUBMITTED 20 March 2019
REGIONAL ENGINEER
May 10 2019
ENGINEER OF DESIGN AND ENVIRONMENT
May 10, 19
DIRECTOR OF HIGHWAYS PROJECT IMPLEMENTATION

PRINTED BY THE AUTHORITY
OF THE STATE OF ILLINOIS

CONTRACT NO. 72L23

INDEX OF SHEETS

GENERAL NOTES:

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

STANDARDS

000001-07
001001-02
001006
606101-05
701001-02
701006-05
701201-05
701301-04
701321-17
701901-08
704001-08
780001-05
782006

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION
DIVISION OF HIGHWAYS
DISTRICT 6

EXAMINED 15 March 20 19

ENGINEER OF OPERATIONS

EXAMINED 20 march 20 19

ENGINEER OF PROJECT IMPLEMENTATION

EXAMINED March 15 20 19

ENGINEER OF PROGRAM DEVELOPMENT

PAVING SCHEDULE

STA	TO	STA	BIT MATL (TACK CT) (POUND)	HMA SURF COURSE (TON)
182+32	-	183+78	263	66
186+06	-	187+76	291	73
		TOTALS	554	139

PAVEMENT MARKING REMOVAL SCHEDULE

STA	TO	STA	LOC.	LINE TYPE	PAVT MARK REM (SQ FT)
STAGE I					
180+30	-	183+00	℄	DOUBLE SOLID	225
182+00	-	188+00	RT	SOLID	250
186+60	-	189+83	℄	DOUBLE SOLID	269
STAGE II					
182+03	-	184+65	LT	SOLID	109
185+85	-	187+83	LT	SOLID	83
				TOTAL	936

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

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STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

INDEX, GENERAL NOTES, STANDARDS, SIGNATURES, & QUANTITY SCHEDULES

SCALE: SHEET OF SHEETS STA. TO STA.

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
670	(1) BDR, BJR, BRR	MACOUPIN	18	2

CONTRACT NO. 72L23

ILLINOIS FED. AID PROJECT

CODE NO.	ITEM	UNIT	TOTAL QUANTITY	6-00492-0000 SN 059-0009 80/20 FED/ST BRIDGE 0059 MACOUPIN
28100807	STONE DUMPED RIPRAP, CLASS A4	TON	30	30
40600290	BITUMINOUS MATERIALS (TACK COAT)	POUND	554	554
40600982	HOT-MIX ASPHALT SURFACE REMOVAL - BUTT JOINT	SQ YD	756	756
40600990	TEMPORARY RAMP	SQ YD	100	100
40603310	HOT-MIX ASPHALT SURFACE COURSE, MIX "C", N50	TON	139	139
44000400	GUTTER REMOVAL	FOOT	124	124
48102100	AGGREGATE WEDGE SHOULDER, TYPE B	TON	25	25
50157300	PROTECTIVE SHIELD	SQ YD	103	103
50102400	CONCRETE REMOVAL	CU YD	6.6	6.6
50300255	CONCRETE SUPERSTRUCTURE	CU YD	7.6	7.6
50300260	BRIDGE DECK GROOVING	SQ YD	920	920
50300300	PROTECTIVE COAT	SQ YD	989	989
50800205	REINFORCEMENT BARS, EPOXY COATED	POUND	1320	1320
50800515	BAR SPLICERS	EACH	12	12

CODE NO.	ITEM	UNIT	TOTAL QUANTITY	6-00492-0000 SN 059-0009 80/20 FED/ST BRIDGE 0059 MACOUPIN
52000110	PREFORMED JOINT STRIP SEAL	FOOT	120	120
60602500	CONCRETE GUTTER, TYPE A	FOOT	124	124
67000400	ENGINEER'S FIELD OFFICE, TYPE A	CAL MO	6	6
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
70106500	TEMPORARY BRIDGE TRAFFIC SIGNALS	EACH	1	1
70106700	TEMPORARY RUMBLE STRIPS	EACH	6	6
70107025	CHANGEABLE MESSAGE SIGN	CAL DA	120	120
70300100	SHORT TERM PAVEMENT MARKING	FOOT	100	100
70300150	SHORT TERM PAVEMENT MARKING REMOVAL	SQ FT	33	33
70400100	TEMPORARY CONCRETE BARRIER	FOOT	500	500
70400200	RELOCATE TEMPORARY CONCRETE BARRIER	FOOT	450	450
70600260	IMPACT ATTENUATORS, TEMPORARY (FULLY REDIRECTIVE, NARROW), TEST LEVEL 3	EACH	2	2

REV. - MS

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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.
670	(J) BDR, BJR, BRR	MACOUPIN	18	3
		CONTRACT NO. 72L23		
		ILLINOIS	FED. AID PROJECT	

					6-00492-0000 SN 059-0009 80/20 FED/ST
	CODE NO.	ITEM	UNIT	TOTAL QUANTITY	BRIDGE 0059 MACOUPIN
	70600332	IMPACT ATTENUATORS, RELOCATE (FULLY REDIRECTIVE, NARROW), TEST LEVEL 3	EACH	2	2
*	78001120	PAINT PAVEMENT MARKING - LINE 5"	FOOT	4000	4000
	78300200	RAISED REFLECTIVE PAVEMENT MARKER REMOVAL	EACH	4	4
	X0327979	PAVEMENT MARKING REMOVAL - GRINDING	SQ FT	936	936
	X6030205	FRAMES AND GRATES TO BE ADJUSTED (SPECIAL)	EACH	4	4
	X7200201	WIDTH RESTRICTION SIGNING	L SUM	1	1
	Z0001800	APPROACH SLAB REPAIR (PARTIAL DEPTH)	SQ YD	5	5
	Z0012130	BRIDGE DECK SCARIFICATION, 3/4"	SQ YD	970	970
	Z0012164	BRIDGE DECK MICROSILICA CONCRETE OVERLAY, 2-1/2"	SQ YD	970	970
	Z0012754	STRUCTURAL REPAIR OF CONCRETE (DEPTH EQUAL TO OR LESS THAN 5 INCHES)	SQ FT	15	15
	Z0016002	DECK SLAB REPAIR (FULL DEPTH, TYPE II)	SQ YD	50	50
	Z0018051	DRAINAGE SCUPPERS TO BE ADJUSTED	EACH	4	4
	Z0048665	RAILROAD PROTECTIVE LIABILITY INSURANCE	L SUM	1	1

* SPECIALTY ITEM

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SUMMARY OF QUANTITIES

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

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
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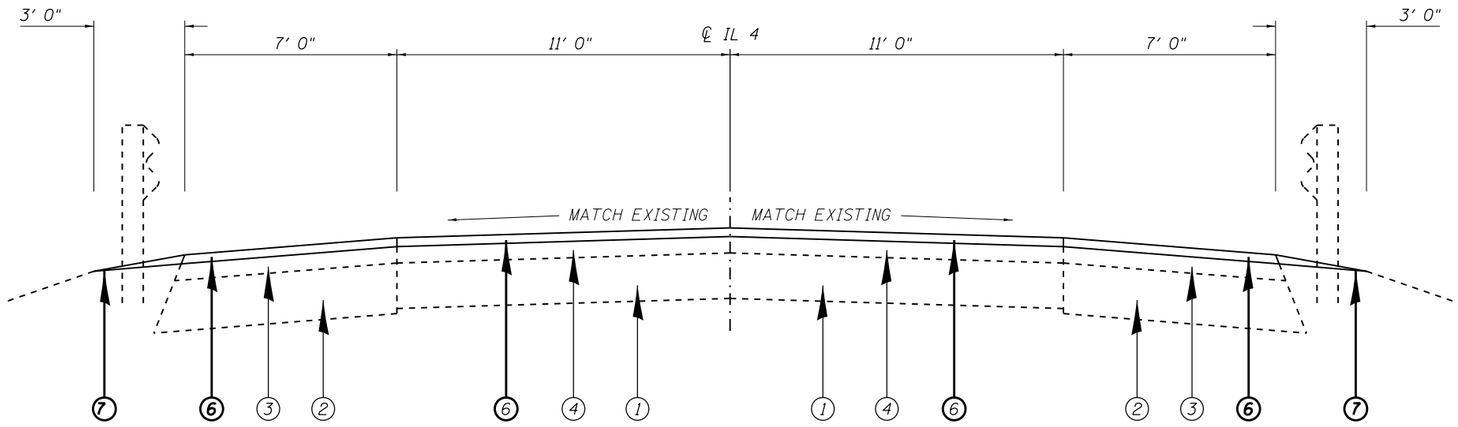
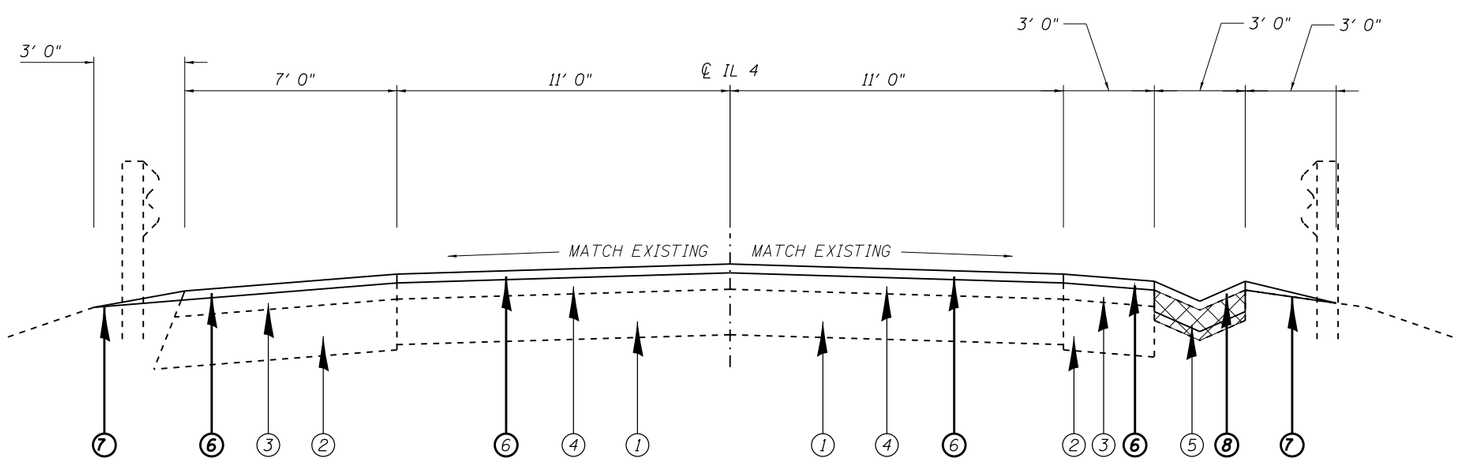
		CONTRACT NO. 72L23		
	ILLINOIS	FED. AID PROJECT		



STA 182+32 TO STA 183+48*



STA 186+36* TO STA 187+76

1. EXISTING PCC PAVEMENT, 9"
2. EXISTING BASE COURSE WIDENING, 10"
3. EXISTING HMA SHOULDER, ±3-1/4"
4. EXISTING HMA OVERLAY, ±3-1/4"
5. EXISTING PCC GUTTER
6. **PROPOSED HMA SURFACE COURSE, 1-3/4"**
7. **PROPOSED AGGRAGATE WEDGE SHOULDER - TYPE B**
8. **PROPOSED CONCRETE GUTTER, TYPE A**

* STA 183+48 TO STA 186+36 = SN 059-0009 AND APPROACHES

NOTE:

NEW TYPE A GUTTER SHALL BE PLACED DURING STAGE II. FINISH GRADE SHALL BE 1-3/4" ABOVE THE EXISTING PAVEMENT AND 1-3/4" ABOVE THE MILLED SURFACE WITHIN THE BUTT JOINT AREA. ANY GRADING NECESSARY PRIOR TO PLACING THE NEW GUTTER SHALL BE ACCOMPLISED USING COMPACTED ROCK OR SAND TO THE SATISFACTION OF THE ENGINEER. GRADING AND MATERIAL PLACEMENT FOR GRADING SHALL BE CONSIDERED INCIDENTAL TO THE CONCRETE GUTTER PAY ITEM AND SHALL NOT BE MEASURED FOR PAYMENT SEPARATELY.

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STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

TYPICAL CROSS SECTIONS

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

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
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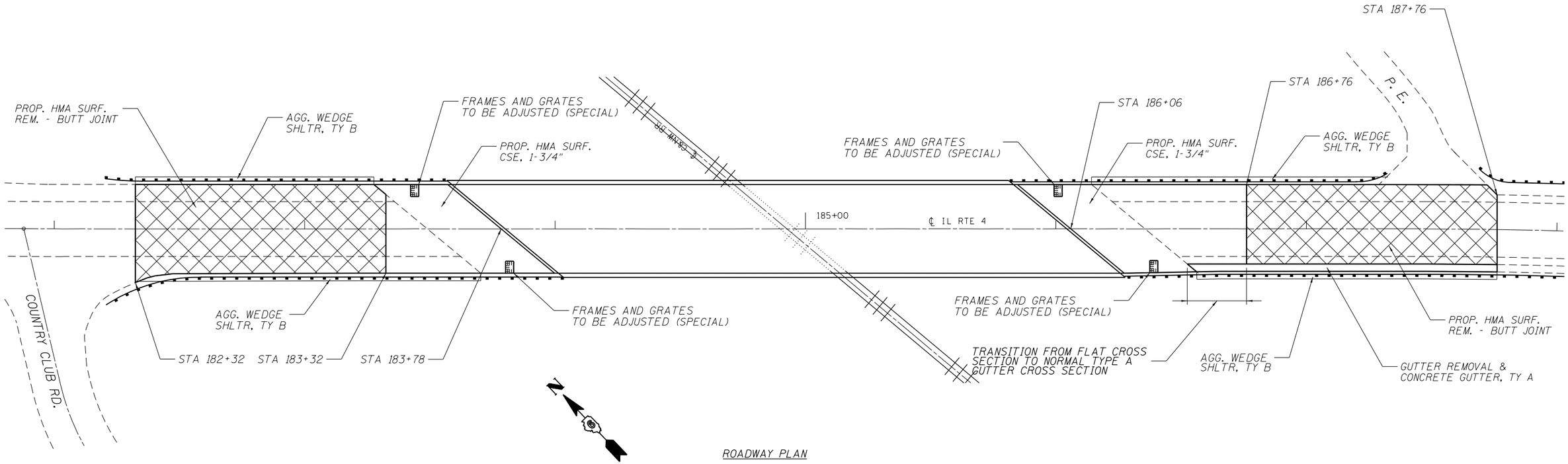
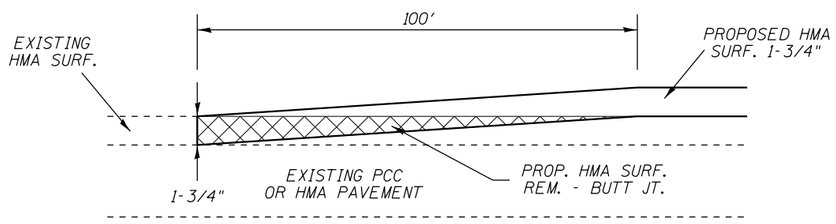
		CONTRACT NO. 72L23		
	ILLINOIS FED. AID PROJECT			



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.
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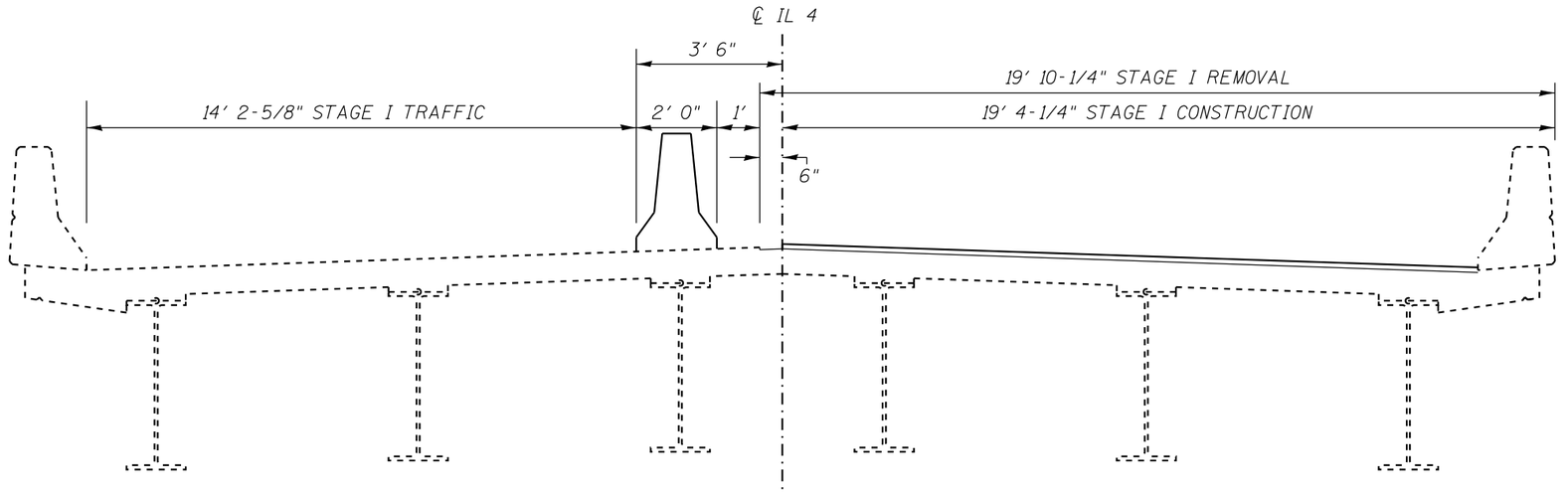
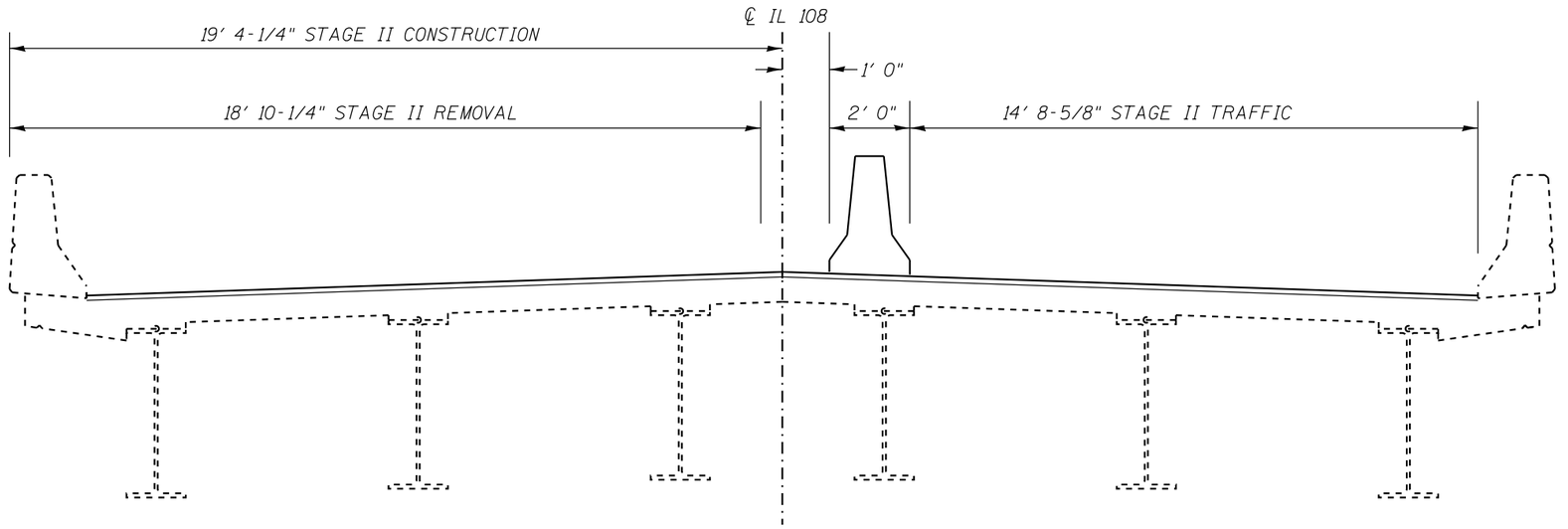
		CONTRACT NO. 72L23		
	ILLINOIS	FED. AID PROJECT		



STAGE I CROSS SECTION (LOOKING NORTH)



STAGE II CROSS SECTION (LOOKING NORTH)

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PLOT DATE = 3/19/2019	DATE -	REVISED -	

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

TRAFFIC STAGING PLAN

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

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
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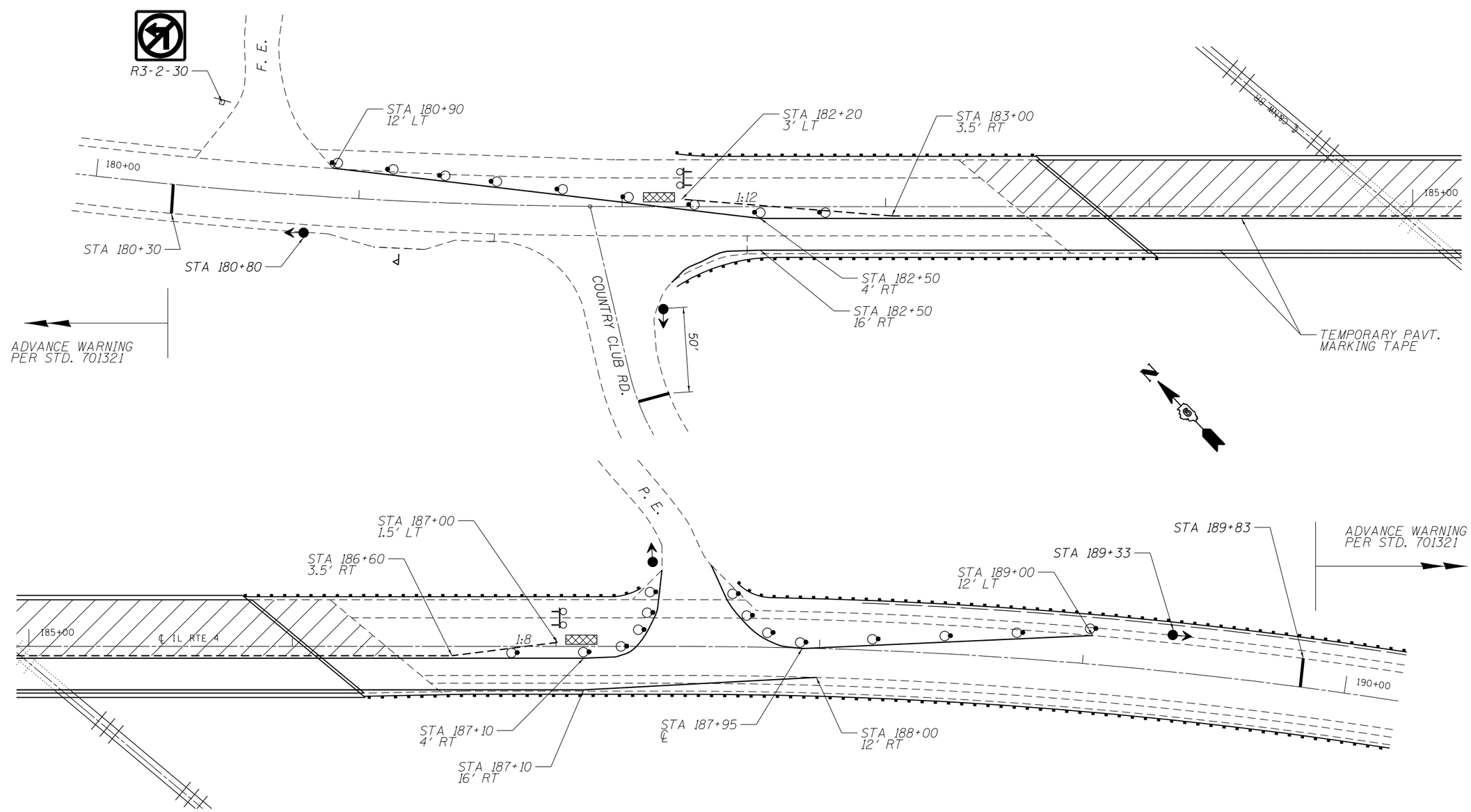
		CONTRACT NO. 72L23		
	ILLINOIS	FED. AID PROJECT		



SYMBOLS

	WORK AREA		TRAFFIC SIGNAL
	SIGN		DRUM WITH STEADY BURNING LIGHT
	IMPACT ATTENUATOR		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, RUMBLE STRIPS, AND TEMPORARY TRAFFIC SIGNALS SHALL BE PAID SEPARATELY.

2. ALL EXISTING STOP SIGNS INSIDE THE WORK ZONE SHALL BE COVERED WHILE TRAFFIC SIGNALS ARE ACTIVE.

3. STOP BARS SHOWN SHALL BE 24" WIDE.

4.TEMPORARY CONCRETE BARRIER OFFSETS GIVEN IN THIS DETAIL REFER TO THE EDGE OF THE BARRIER NEAREST TO LIVE TRAFFIC.

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STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

STAGE I TRAFFIC CONTROL

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

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
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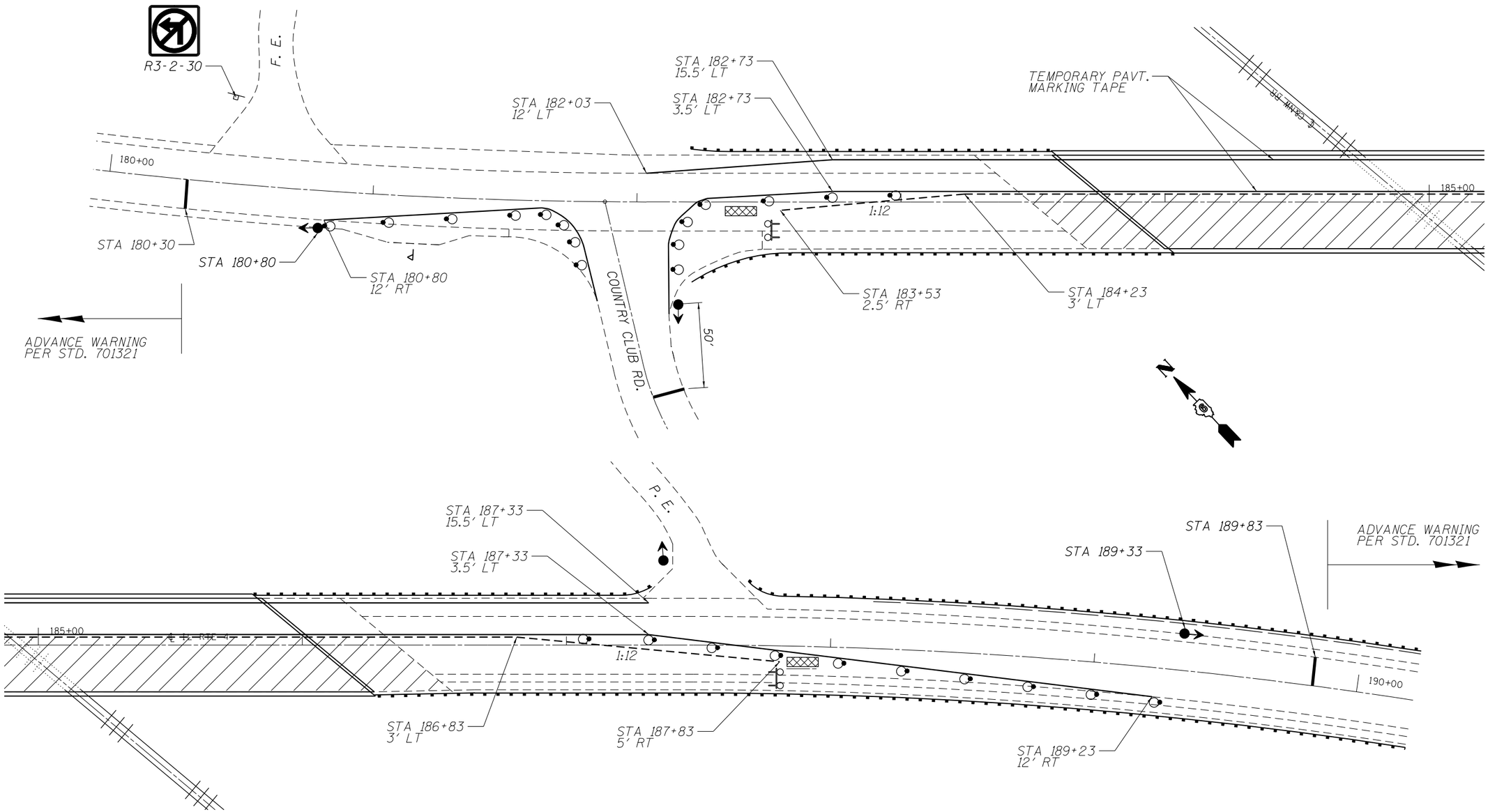
		CONTRACT NO. 72L23		
	ILLINOIS	FED. AID PROJECT		



SYMBOLS

WORK AREA	TRAFFIC SIGNAL
SIGN	DRUM WITH STEADY BURNING LIGHT
IMPACT ATTENUATOR	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, RUMBLE STRIPS, AND TEMPORARY TRAFFIC SIGNALS SHALL BE PAID SEPARATELY.

2. ALL EXISTING STOP SIGNS INSIDE THE WORK ZONE SHALL BE COVERED WHILE TRAFFIC SIGNALS ARE ACTIVE.

3. STOP BARS SHOWN SHALL BE 24" WIDE.

4. TEMPORARY CONCRETE BARRIER OFFSETS GIVEN IN THIS DETAIL REFER TO THE EDGE OF THE BARRIER NEAREST TO LIVE TRAFFIC.

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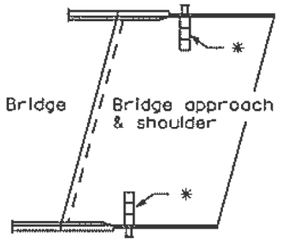
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

STAGE II TRAFFIC CONTROL

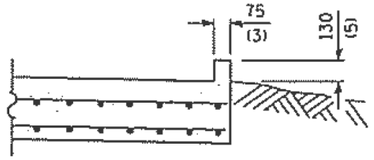
SCALE: | SHEET OF SHEETS | STA. | TO STA.

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
670	(J) BDR, BJR, BRR	MACOUPIN	18	9
		CONTRACT NO. 72L23		
	ILLINOIS	FED. AID PROJECT		

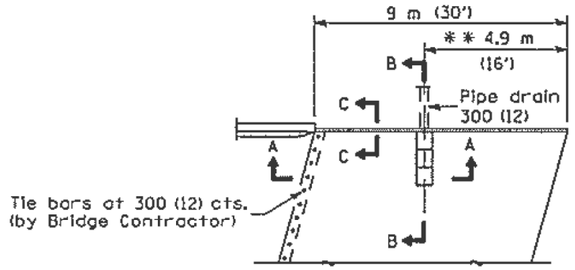
* Type B, C, or D inlet box as required.



GENERAL PLAN

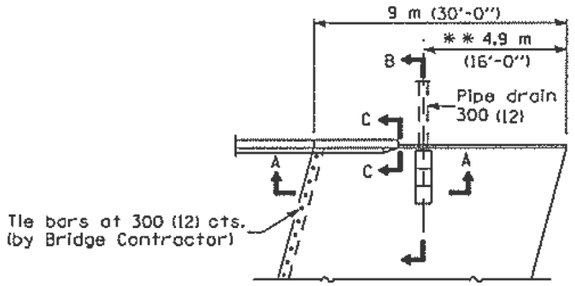


SECTION C-C

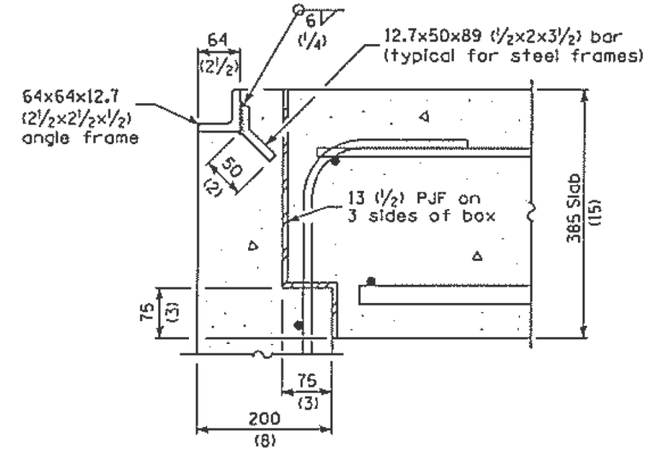


TYPICAL DETAIL PLAN
(W/O Wingwall)

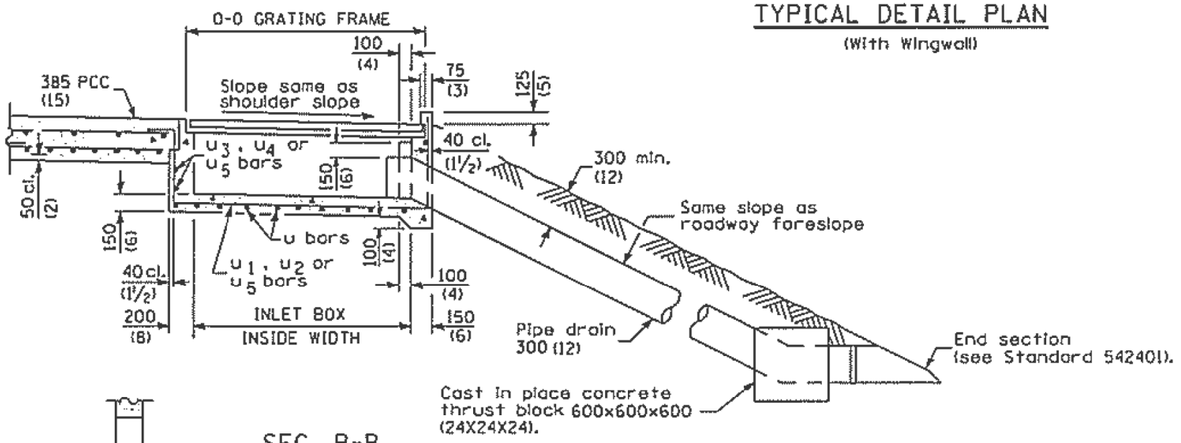
** Vary this dimension as needed to position the Inlet Box and Pipe Drain between the proposed approach guardrail posts.



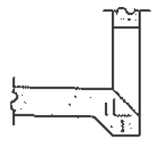
TYPICAL DETAIL PLAN
(With Wingwall)



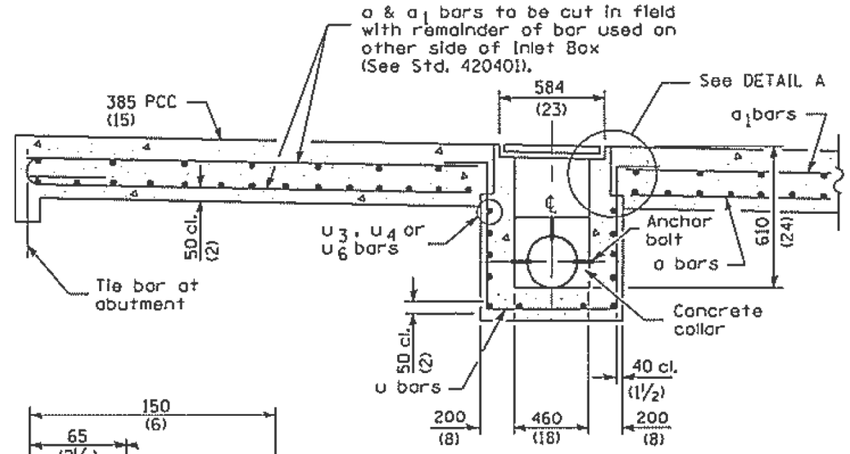
DETAIL A



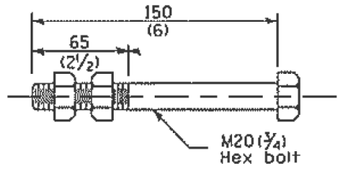
SEC. B-B



BOX OUTLET WHEN PRECAST



SECTION A-A



ANCHOR BOLT
(Used to tie pipe to concrete collar)

INLET TYPE	SHOULDER WIDTH	0-0 GRATING FRAME	INLET BOX INSIDE WIDTH	INLET BOX INSIDE LENGTH
Type B	Less than 1.5 m (5')	0.690 m (2'-3")	0.560 m (1'-10")	460 (18)
Type C	1.5 - 1.8 m (5') (6')	1.325 m (4'-4")	1.195 m (3'-11")	460 (18)
Type D	Greater than 1.8 m (6')	1.960 m (6'-5")	1.830 m (6'-0")	460 (18)

GENERAL NOTES

All exposed edges of the inlet, except the upper perimeter, shall be beveled 20 mm (¾").

All dimensions are in millimeters (inches) unless otherwise shown.

Illinois Department of Transportation

PASSED January 1, 2007
ENGINEER OF POLICY AND PROCEDURES
APPROVED January 1, 2007
ENGINEER OF DESIGN AND ENVIRONMENT
ISSUED 1-1-97

DATE	REVISIONS
1-1-07	Soft converted metric reinforcement bars.
1-1-02	Deleted "Metal" from Section B-B.

BRIDGE APPROACH PAVEMENT (DRAIN DETAIL)

(Sheet 1 of 2)

STANDARD 609006-03

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	DRAWN -	REVISED -
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PLOT DATE = 3/19/2019	DATE -	REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

EXISTING INLET DETAILS
(FOR INFORMATION ONLY)

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

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
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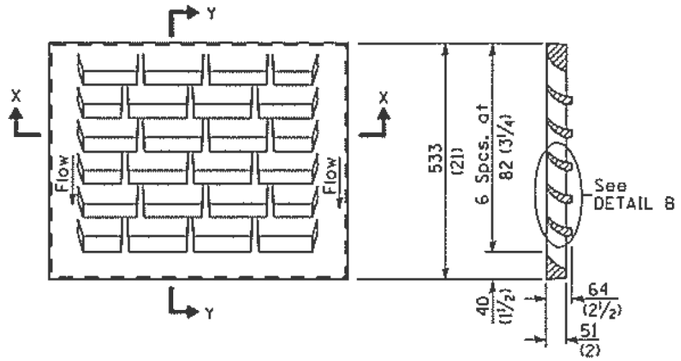
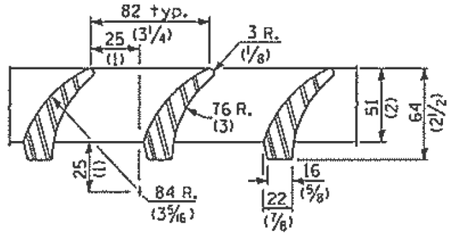
		CONTRACT NO. 72L23		
	ILLINOIS FED. AID PROJECT			



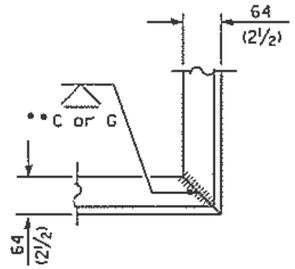
DETAIL OF CAST GRATE

Type B requires 1 grate
Type C requires 2 grates
Type D requires 3 grates

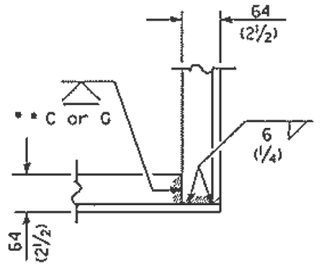
SECTION Y-Y



DETAIL B



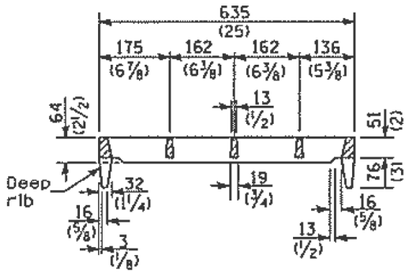
ALT. 1



ALT. 2

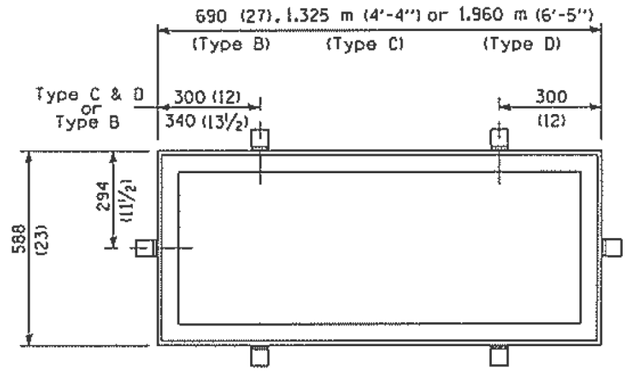
TYPICAL CORNER of STEEL GRATING FRAME

**Cut or Grind flush



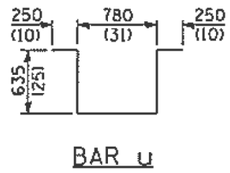
SECTION X-X

(Deep rib shall be omitted for end(s) resting on frame perimeter)

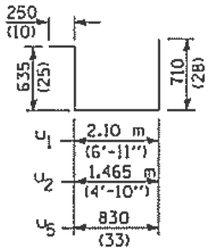


DETAIL OF STEEL FRAME

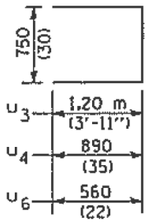
Cast frame to have same basic dimensions.



BAR u



BARS u_1, u_2 & u_5



Bars u_3, u_4 & u_6

INLET BOX

REQUIRED MATERIAL

TYPE B

Bar	Qty.	Size	Length
u	4	No. 13 (No.4)	2.550 m (8'-5")
u_5	3	No. 13 (No.4)	2.425 m (8'-0")
u_6	4	No. 13 (No.4)	1.870 m (6'-2")
Concrete		m3 (cu. yds.)	0.4 (0.5)
Reinf. bars		kg (lbs.)	25.0 (55.0)
Grating		m2 (sq. ft.)	0.34 (3.6)

TYPE C

Bar	Qty.	Size	Length
u	6	No. 13 (No.4)	2.550 m (8'-5")
u_2	3	No. 13 (No.4)	3.060 m (10'-1")
u_4	4	No. 13 (No.4)	2.530 m (8'-4")
Concrete		m3 (cu. yds.)	0.6 (0.8)
Reinf. bars		kg (lbs.)	34.5 (76)
Grating		m2 (sq. ft.)	0.68 (7.3)

TYPE D

Bar	Qty.	Size	Length
u	8	No. 13 (No.4)	2.550 m (8'-5")
u_1	3	No. 13 (No.4)	3.695 m (12'-2")
u_3	4	No. 13 (No.4)	3.150 m (10'-4")
Concrete		m3 (cu. yds.)	0.8 (1.1)
Reinf. bars		kg (lbs.)	44.0 (97.0)
Grating		m2 (sq. ft.)	1.02 (10.9)

All dimensions are in millimeters (inches) unless otherwise shown.

Illinois Department of Transportation

PASSED January 1, 2007
ENGINEER OF POLICY AND PROCEDURES
APPROVED January 1, 2007
ENGINEER OF DESIGN AND ENVIRONMENT

ISSUED 1-1-97

BRIDGE APPROACH PAVEMENT (DRAIN DETAIL)

(Sheet 2 of 2)

STANDARD 609006-03

USER NAME = dudleybm	DESIGNED -	REVISED -
	DRAWN -	REVISED -
PLOT SCALE = 100.0000 ' / in.	CHECKED -	REVISED -
PLOT DATE = 3/19/2019	DATE -	REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

EXISTING INLET DETAILS
(FOR INFORMATION ONLY)

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

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
670	(J) BDR, BJR, BRR	MACOUPIN	18	11
		CONTRACT NO. 72L23		
	ILLINOIS	FED. AID PROJECT		

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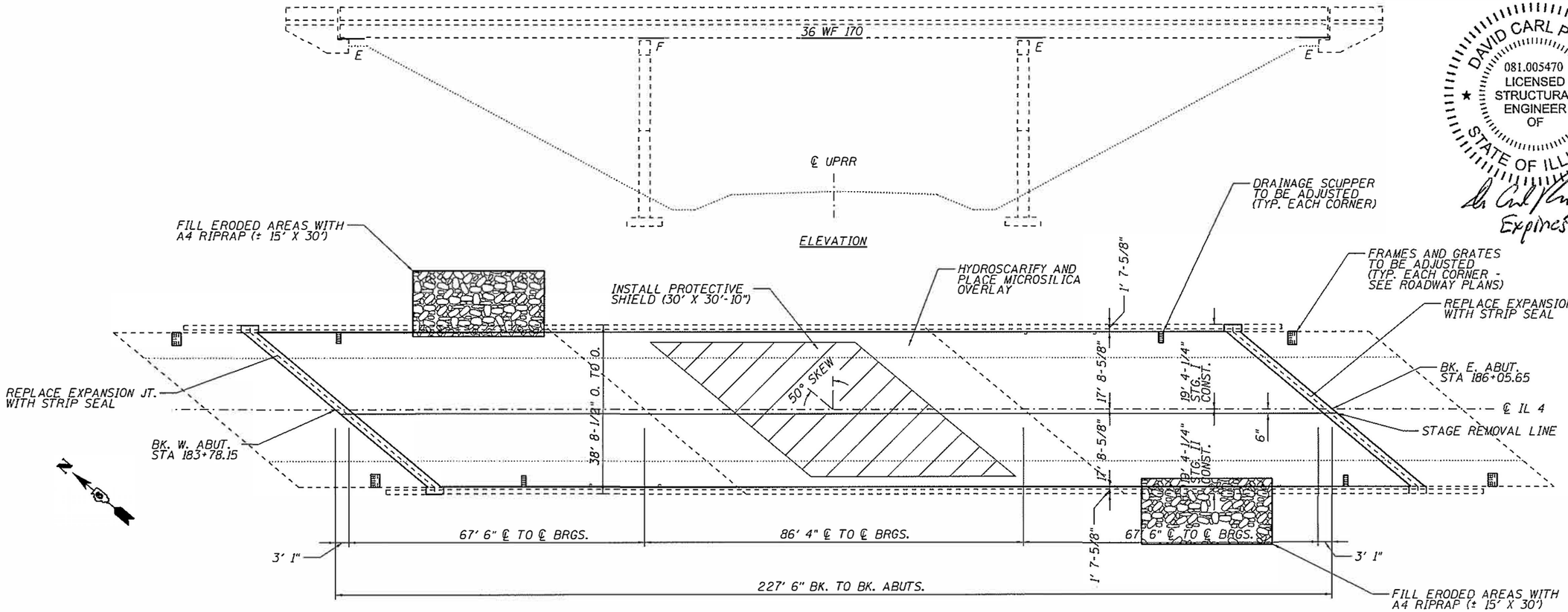

DAVID CARL PUZEY
081.005470
LICENSED STRUCTURAL ENGINEER
OF
STATE OF ILLINOIS

D. Carl Puzey 5/9/19
Expires 11/30/20

STRUCTURE GENERAL NOTES:

SYNTHETIC FIBERS SHALL BE ADDED TO THE BRIDGE DECK MICROSILICA CONCRETE OVERLAY. SEE SPECIAL PROVISIONS.

ALL STRUCTURAL STEEL SHALL BE AASHTO M-270 GRADE 36, UNLESS OTHERWISE NOTED.

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 ACCOMPLISHED 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.

THE ABUTMENT AND DECK SURFACES 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.

PROTECTIVE COAT SHALL BE APPLIED TO NEW CONCRETE ON THE DECK AND PARAPETS ADJACENT TO THE PROPOSED EXPANSION JOINTS AND THE MICROSILICA OVERLAY.

RIPRAP SHALL BE USED TO FILL ERODED AREAS AS SHOWN IN THE PLANS. EXCAVATION FOR RIPRAP, FILTER FABRIC, AND BEDDING MATERIAL WILL NOT BE REQUIRED.

THE ACTUAL GRATE TYPE AND BOLT SPACINGS ON EXISTING DRAINAGE SCUPPERS VARY FROM THOSE SHOWN ON EXISTING PLANS. THE CONTRACTOR SHALL FILED VERIFY ALL DIMENSIONS.

TOTAL BILL OF MATERIAL (059-0009)

ITEM	UNIT	QUANTITY
Concrete Removal	Cu. Yd.	6.6
Concrete Superstructure	Cu. Yd.	7.6
Protective Shield	Sq. Yd.	103
Bridge Deck Grooving	Sq. Yd.	920
Reinforcement Bars, Epoxy Coated	Pound	1320
Bar Splicers	Each	12
Preformed Joint Strip Seal	Foot	120
Bridge Deck Scarification, 3/4"	Sq. Yd.	970
Bridge Deck Microsilica Concrete Overlay, 2-1/2"	Sq. Yd.	970
Deck Slab Repair (Full Depth, Type II)	Sq. Yd.	50
Approach Slab Repair (Partial Depth)	Sq. Yd.	5
Protective Coat	Sq. Yd.	989
Drainage Scuppers To Be Adjusted	Each	4
Structural Repair of Concrete (Depth Equal to or Less Than 5 Inches)	Sq. Ft.	15
Stone Dumped Riprap, Class A4	Ton	30

REV. - MS

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PLOT DATE = 3/19/2019	DATE -	REVISED -	

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

GENERAL PLAN & ELEVATION
SN 059-0009

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

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
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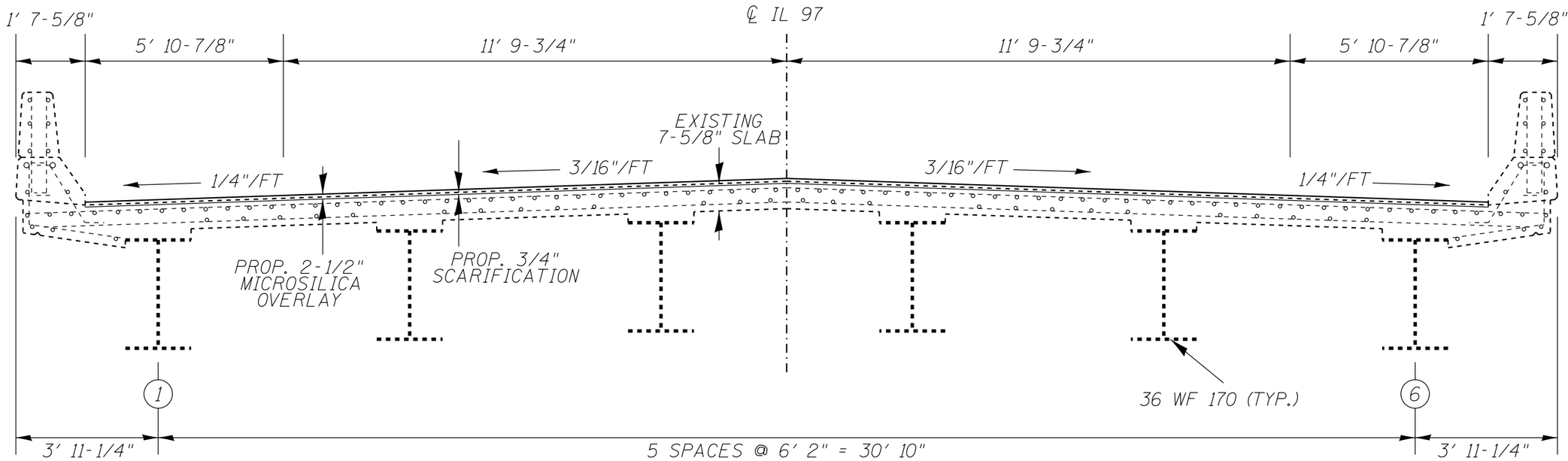
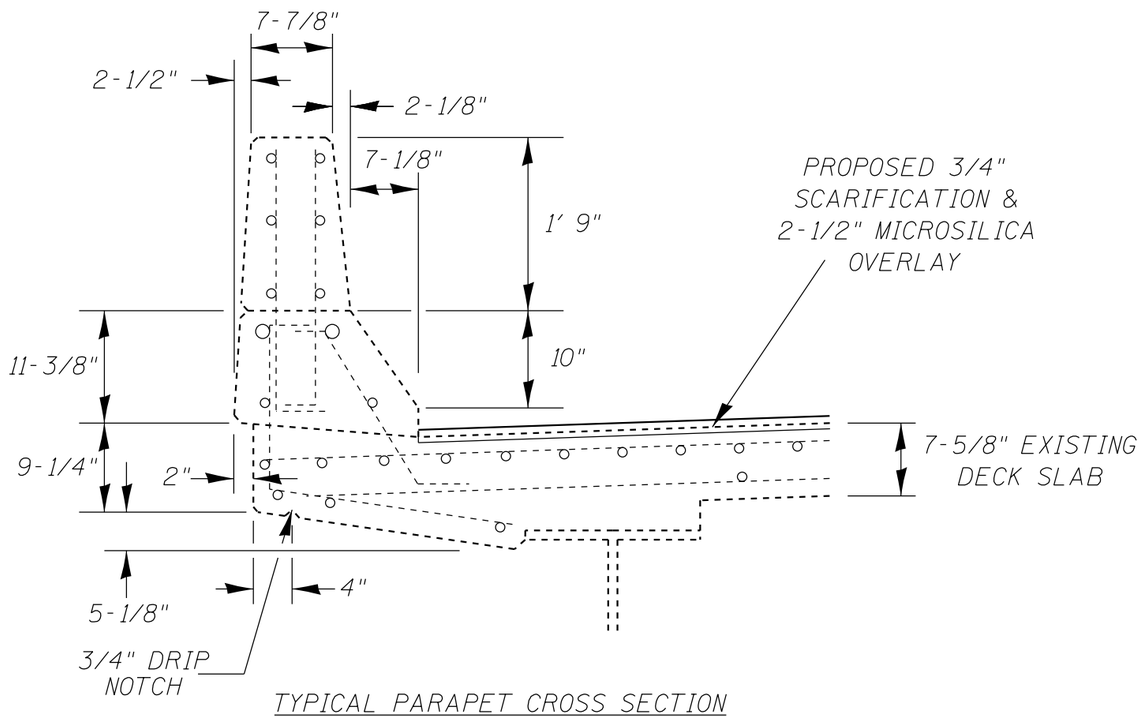
		CONTRACT NO. 72L23		
	ILLINOIS	FED. AID PROJECT		



BRIDGE CROSS SECTION, LOOKING NORTH



TYPICAL PARAPET CROSS SECTION

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PLOT DATE = 3/19/2019	DATE -	REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

BRIDGE CROSS SECTIONS
SN 059–0009

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

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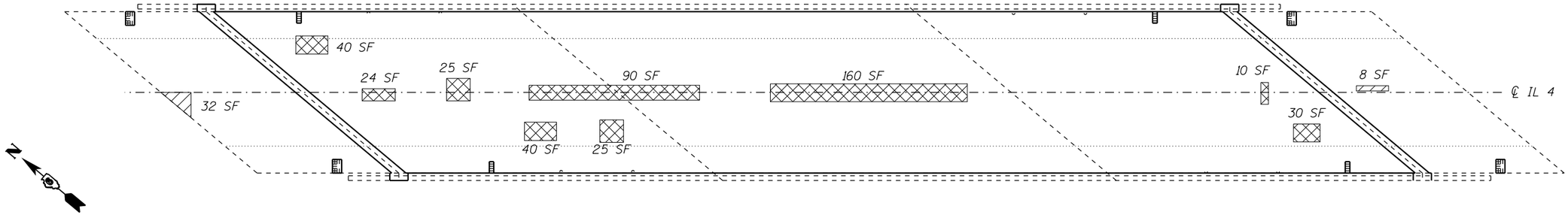
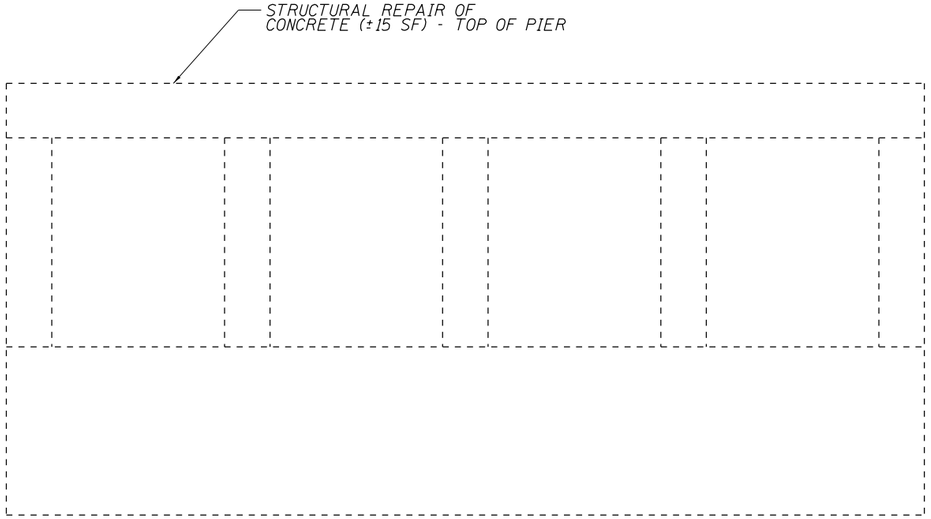
	ILLINOIS FED. AID PROJECT			



PLAN



NORTH PIER - NORTH FACE

DECK SLAB REPAIR
(FULL DEPTH, TYPE II)

APPROACH SLAB REPAIR
(PARTIAL DEPTH)

PATCHING & SUBSTRUCTURE REPAIR BILL OF MATERIAL (059-0009)

ITEM	UNIT	QUANTITY
Deck Slab Repair (Full Depth, Type II)	Sq. Yd.	50
Approach Slab Repair (Partial Depth)	Sq. Yd.	5
Structural Repair of Concrete (Depth Equal to or Less Than 5 Inches)	Sq. Ft.	15

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STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

DECK & SUBSTRUCTURE REPAIRS
SN 059-0009

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

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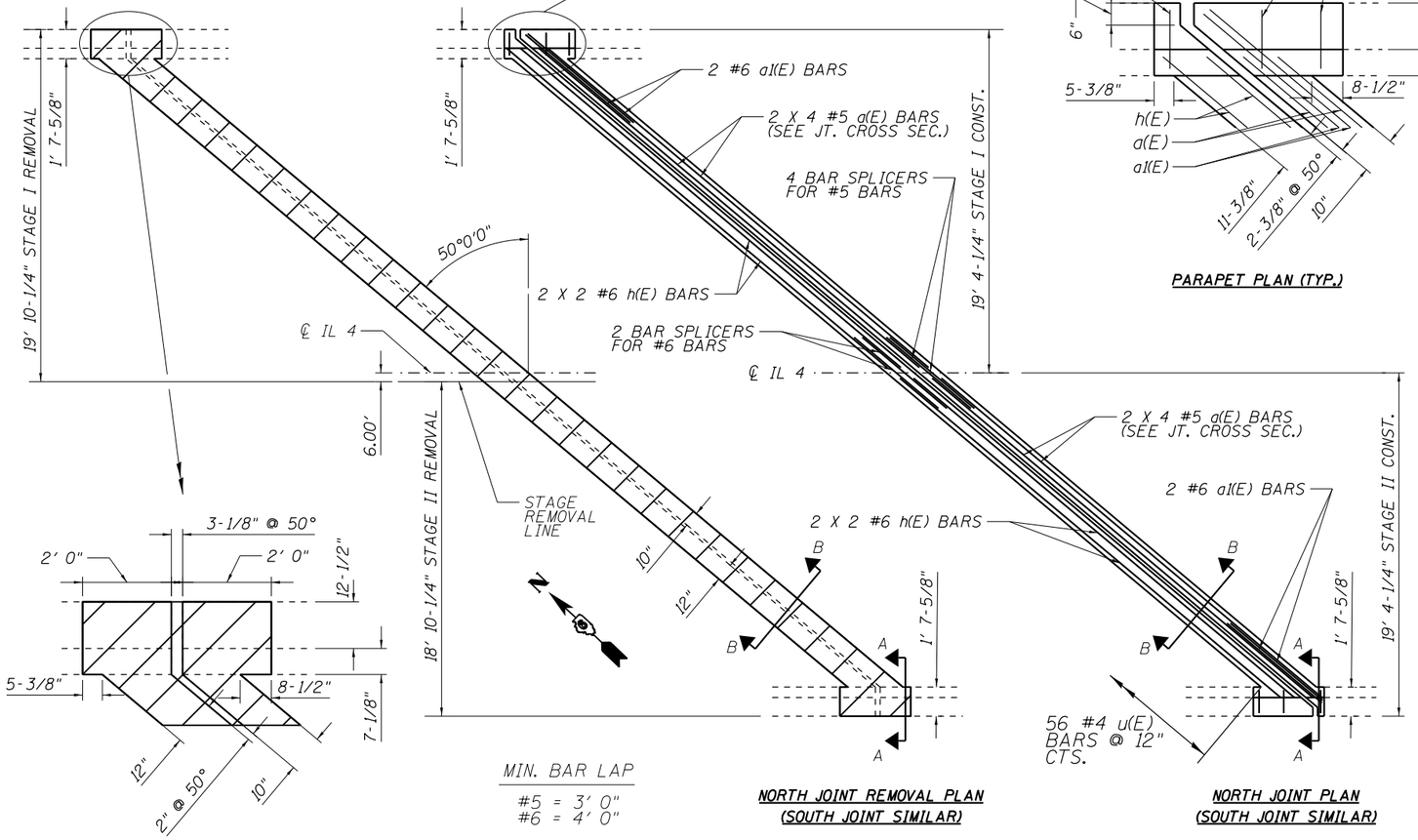
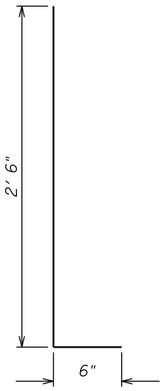
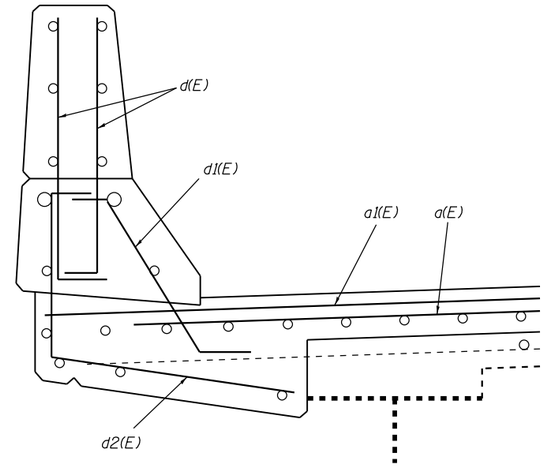


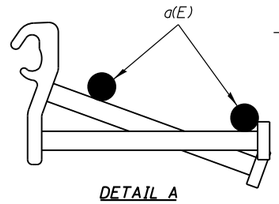
PARAPET PLAN (TYP.)



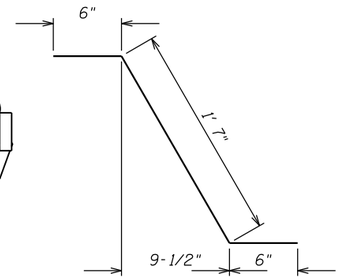
d(E) BAR



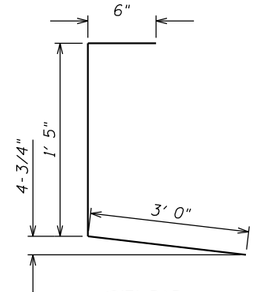
SECTION A-A: PARAPET CROSS SECTION AT JOINT



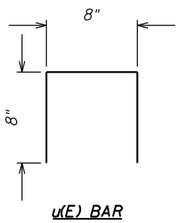
DETAIL A
a(E) TOP MAT PLACEMENT



d1(E) BAR



d2(E) BAR



u(E) BAR

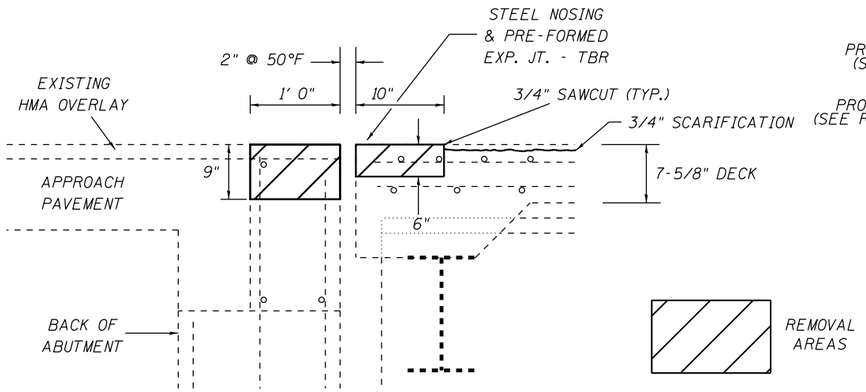
PARAPET REMOVAL PLAN (TYP.)

MIN. BAR LAP
#5 = 3' 0"
#6 = 4' 0"

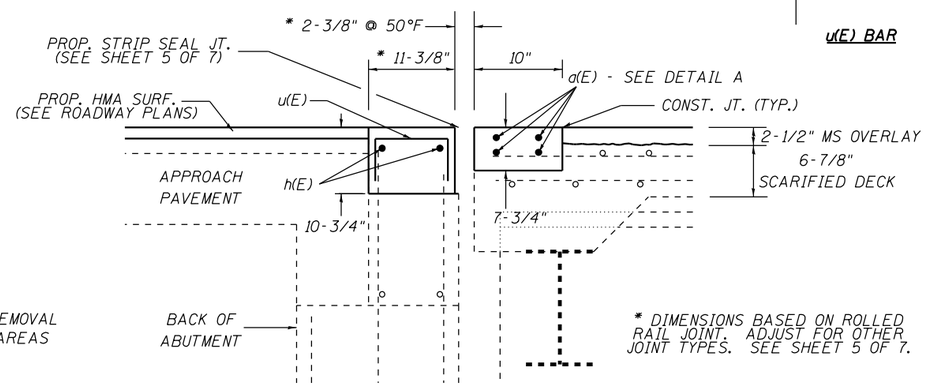
NORTH JOINT REMOVAL PLAN (SOUTH JOINT SIMILAR)

NORTH JOINT PLAN (SOUTH JOINT SIMILAR)

BILL OF MATERIAL - 2 JOINTS				
BAR	#	SIZE	LENGTH	SHAPE
a(E)	32	#5	15' 11"	——
a1(E)	8	#6	6' 6"	——
d(E)	24	#5	3' 0"	⌊
d1(E)	12	#5	2' 7"	⟍
d2(E)	12	#5	4' 11"	⌊
h(E)	16	#6	16' 2"	——
u(E)	112	#4	2' 0"	⊓
REINFORCEMENT BARS (EPOXY COATED)		POUND	1320	
CONC. SUPERSTRUCTURE		CU YD	7.6	
CONC. REMOVAL		CU YD	6.6	



SECTION B-B: TYPICAL JOINT CROSS SECTION (REMOVAL)



SECTION B-B: TYPICAL JOINT CROSS SECTION (PROPOSED)

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PLOT DATE = 3/19/2019	DATE -	REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

JOINT DETAILS
SN 059-0009

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

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
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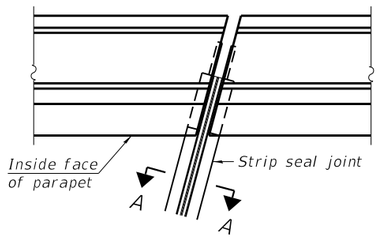
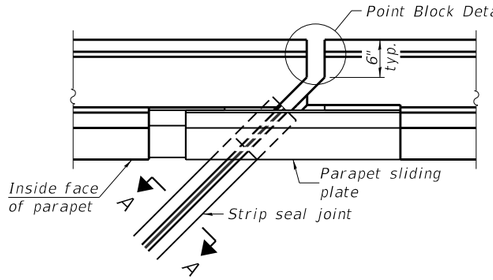
		CONTRACT NO. 72L23		
	ILLINOIS FED. AID PROJECT			

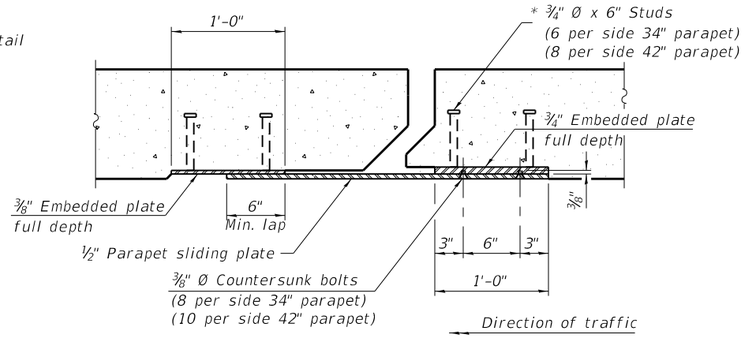


FOR SKEWS ≤ 30°

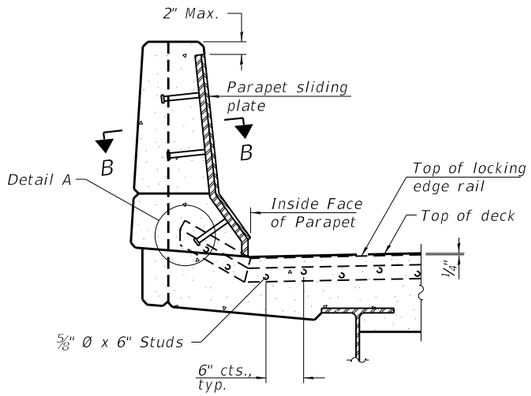


FOR SKEWS > 30°

PLAN AT PARAPET

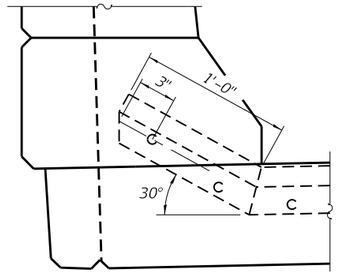


SECTION B-B

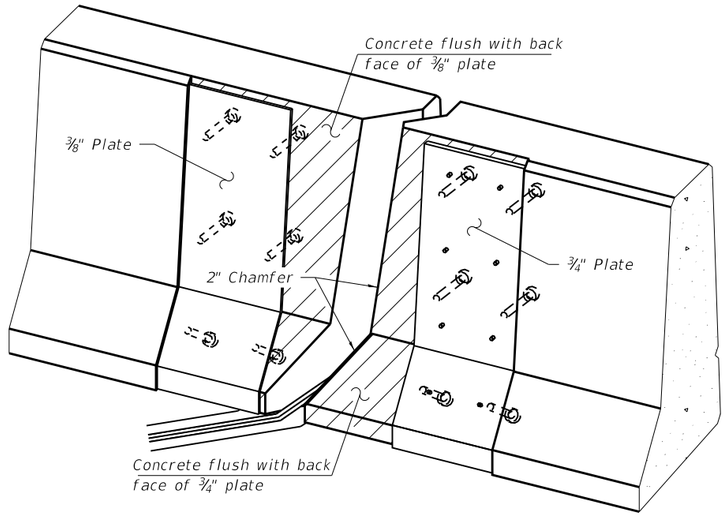


ELEVATION AT PARAPET

(Skews > 30° shown. Skews ≤ 30° similar except as shown in plan view.)



DETAIL A



TRIMETRIC VIEW

(Showing embedded plates only)

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.

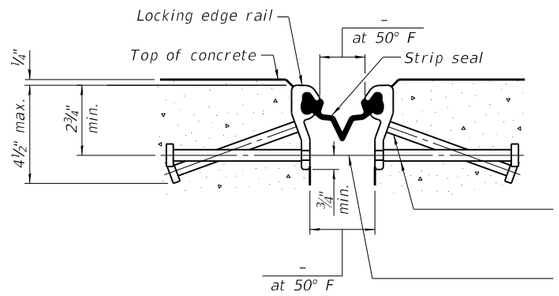
All steel components shall be galvanized after fabrication according to Article 520.03 of the Standard Specifications.

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.

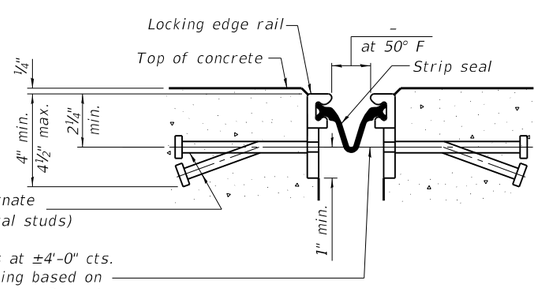
Cost of parapet sliding plates, embedded plates, and anchorage studs included with Preformed Joint Strip Seal.

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



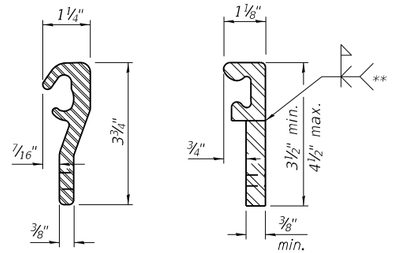
SHOWING WELDED RAIL JOINT

* ⅜" 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 A-A

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

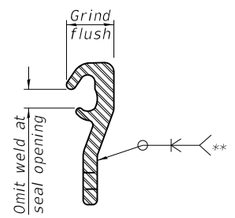


ROLLED (EXTRUDED) RAIL

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	120

EJ-SS

8-11-17

USER NAME = dudleybm	DESIGNED -	REVISED -	
	DRAWN -	REVISED -	
PLOT SCALE = 100.0000 ' / in.	CHECKED -	REVISED -	
PLOT DATE = 3/19/2019	DATE -	REVISED -	

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

PREFORMED JOINT STRIP SEAL
STRUCTURE NO. 059-0009

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

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
670	(J) BDR, BJR, BRR	MACOUPIN	18	16
		CONTRACT NO. 72L23		
	ILLINOIS	FED. AID PROJECT		

MODEL: Default
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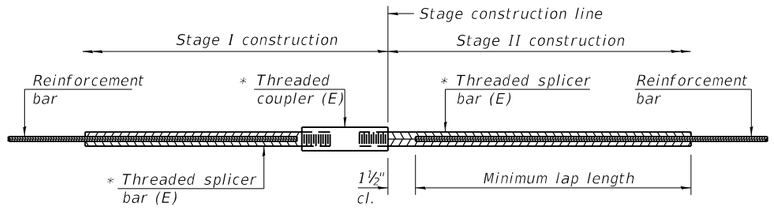
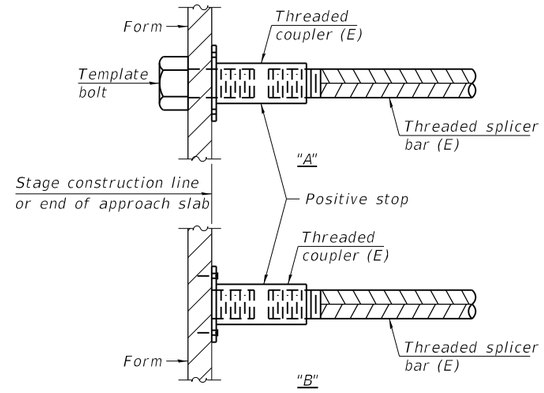


STANDARD BAR SPLICER ASSEMBLY

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

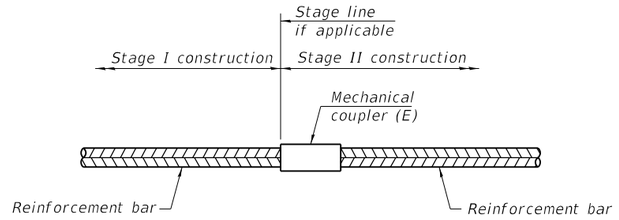
* Epoxy not required on Bar Splicer Assembly components used in conjunction with black bars.

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



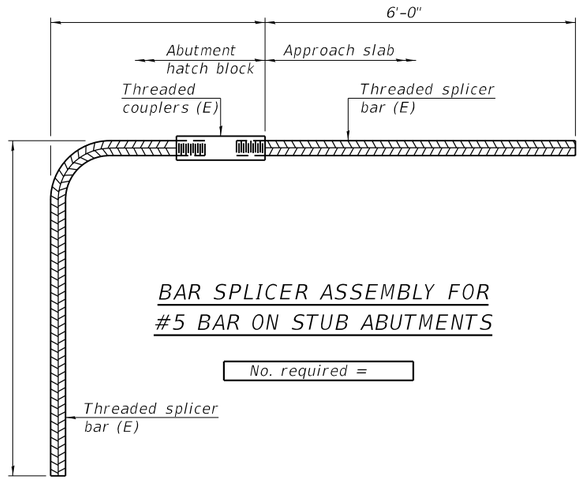
INSTALLATION AND SETTING METHODS

"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



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

USER NAME = dudleybm	DESIGNED -	REVISED -	
	DRAWN -	REVISED -	
PLOT SCALE = 100.0000 ' / in.	CHECKED -	REVISED -	
PLOT DATE = 4/26/2019	DATE -	REVISED -	

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

BAR SPLICER ASSEMBLY AND MECHANICAL SPLICER DETAILS
SN 059-0009

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

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
670	(J) BDR, BJR, BRR	MACOUPIN	18	17
		CONTRACT NO. 72L23		
	ILLINOIS	FED. AID PROJECT		

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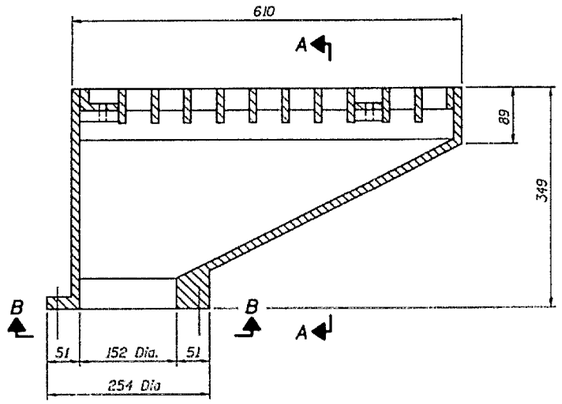
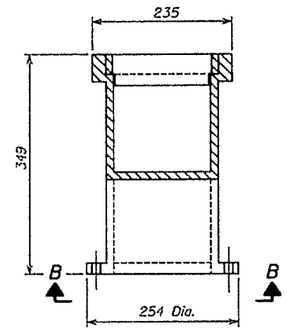
ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
F.A.P. 670	(R, J) VBR	MACOUPIN	44	22
FED. ROAD DIST. NO. 8	ILLINOIS	FED. AID PROJECT		

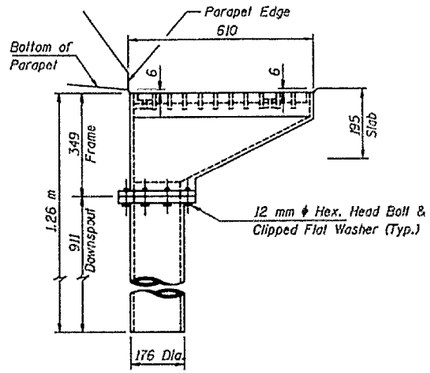
SHEET NO. 7
20 SHEETS



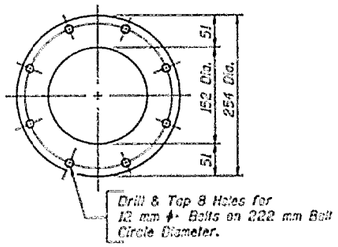
FRAME AND GRATE



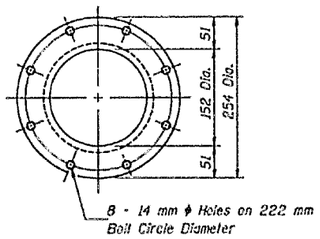
SECTION A-A

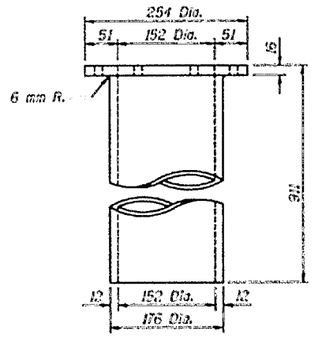


DRAINAGE SCUPPER



VIEW B-B





DOWNSPOUT

Notes:
All cast iron parts shall be gray iron conforming to the requirements of AASHTO M 105, Class 35B.

Bolts and washers shall conform to the requirements of ASTM A 307.

All bolts and washers shall be galvanized according to AASHTO M 232.

As an alternate bolts and washers may be stainless steel conforming to the requirements of ASTM A 193M, Type 304.

Cost of the Grate, Frame, Downspout, bolts and washers including complete installation of Scupper will be paid for at the unit bid price each for "DRAINAGE SCUPPERS SPECIAL"

All dimensions are in millimeters (mm) except as noted.

DESIGNED	ACL
CHECKED	
DRAWN	BSJ
CHECKED	

REVISIONS	
NAME	DATE

CAST IRON DRAINAGE SCUPPER, DS-12 ILLINOIS ROUTE 4 OVER UNION PACIFIC RAILROAD (FORMERLY C & NW RAILROAD) FAP ROUTE 670 SECTION (R,J) VBR MACOUPIN COUNTY STATION 6+710.01 STRUCTURE NUMBER 059-0009

MODEL: Default
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USER NAME = dudleybm	DESIGNED -	REVISED -	
	DRAWN -	REVISED -	
PLOT SCALE = 100.0000 ' / in.	CHECKED -	REVISED -	
PLOT DATE = 4/26/2019	DATE -	REVISED -	

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

EXISTING SCUPPER DETAILS, SN 059-0009
(FOR INFORMATION ONLY)

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

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
670	(J) BDR, BJR, BRR	MACOUPIN	18	18
		CONTRACT NO. 72L23		
	ILLINOIS	FED. AID PROJECT		