

STATE OF ILLINOIS  
DEPARTMENT OF TRANSPORTATION

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
116	D7 BRIDGE REPAIRS 2024-1	CUMBERLAND	24	1
		ILLINOIS	CONTRACT NO. 74B27	

D-97-048-22

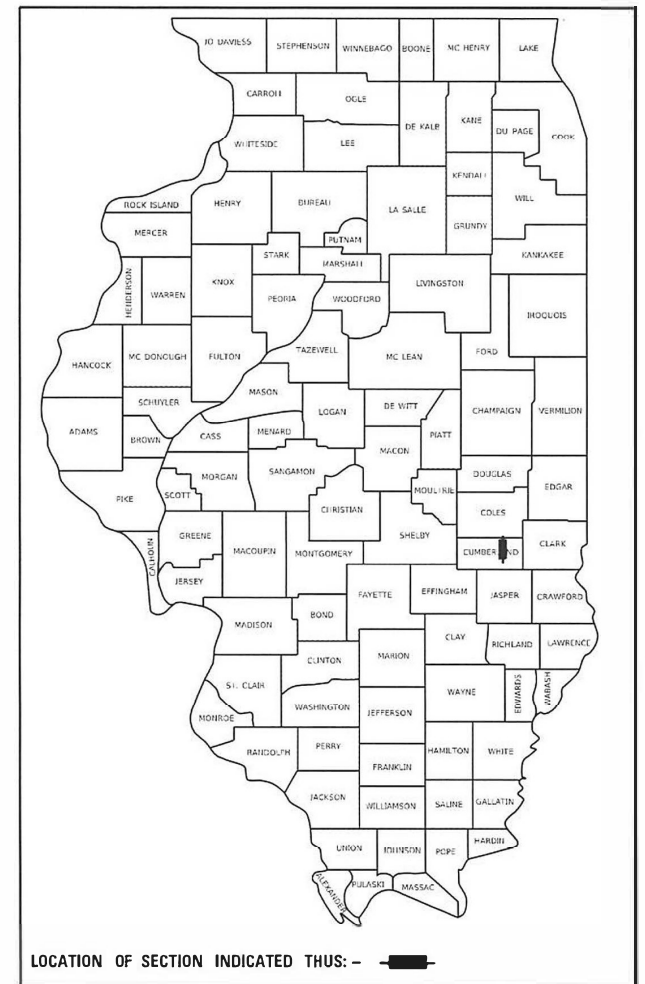
FOR INDEX OF SHEETS, SEE SHEET NO. 2

# PROPOSED HIGHWAY PLANS

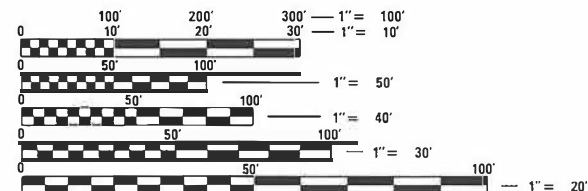
FAP ROUTE 116 (IL 130)  
SECTION D7 BRIDGE REPAIRS 2024-1  
PROJECT HBFP-3Ezs(269)  
BRIDGE JOINT REPAIR  
CUMBERLAND COUNTY

ADT (2022) = 2,500

C-97-095-22



SN 018-0058  
STA 254+69.5  
OVER HURRICANE CREEK



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

PROJECT ENGINEER: JACQUELYN SEALS  
PROJECT MANAGER: BRIAN BIERMAN

CONTRACT NO. 74B27

GROSS LENGTH = 555 FT. = 0.11 MILE  
NET LENGTH = 555 FT. = 0.11 MILE

STATE OF ILLINOIS  
DEPARTMENT OF TRANSPORTATION

SUBMITTED OCTOBER 13 20 23  
Jeffrey P. Myrberg  
December 8, 2023 REGIONAL ENGINEER

Steph M. Smith  
December 8, 2023 ENGINEER OF DESIGN AND ENVIRONMENT  
DIRECTOR OF HIGHWAYS PROJECT IMPLEMENTATION

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**GENERAL NOTES**

THIS PROJECT IS LOCATED AT SN 018-0058 CROSSING HURRICANE CREEK ON FAP 116 (IL 130) IN CUMBERLAND COUNTY APPROXIMATELY 3.5 MILES NORTH OF GREENUP. THE WORK INCLUDED IN THIS SECTION CONSISTS OF BRIDGE JOINT REPAIRS, CONCRETE DECK OVERLAY, HOT-MIX ASPHALT BASE COURSE WIDENING AND RESURFACING, STRIPING AND ANY OTHER WORK NECESSARY TO COMPLETE THIS PROJECT.

THE CONTRACTOR SHALL MAINTAIN ACCESS TO ALL FIELD ENTRANCES AND SIDE ROADS LOCATED WITHIN THE STRUCTURE TRAFFIC CONTROL.

AFTER BRIDGE REPAIRS AND DECK CONCRETE OVERLAYS ARE COMPLETED, TRAFFIC CONTROL STANDARD 701321 (SPECIAL) SHALL BE REMOVED AND HMA SURFACE COURSE SHALL BE LAID OVER THE EXISTING CONCRETE APPROACH PAVEMENT AND NEW 8" HMA BASE COURSE WIDENING USING TRAFFIC CONTROL STANDARD 701201.

TEMPORARY CONCRETE BARRIER WALL SHALL BE SUPPORTED WITH TEMPORARY HMA RAMPS AS SHOWN ON THE PLANS TO ACCOUNT FOR THE PAVEMENT ELEVATION DIFFERENCE DURING STAGE CONSTRUCTION.

DURING THE HMA RESURFACING OF THE EXISTING CONCRETE APPROACH SHOULDER, CARE SHALL BE TAKEN TO ENSURE PROPER DRAINAGE TO THE EXISTING APPROACH FRAME AND GRATE.

THE CONTRACTOR SHALL COORDINATE THEIR WORK WITH THE RESIDENT ENGINEER SO ALL LANES OF IL 130 SHALL BE OPEN TO TRAFFIC DURING THE SOLAR ECLIPSE FROM 7:00 AM ON SATURDAY APRIL 6, 2024 THROUGH 10:00 PM ON MONDAY APRIL 8, 2024 UNLESS DOING SO CAUSES A SIGNIFICANT BURDEN.

THE RESIDENT ENGINEER SHALL BE THE SOLE JUDGE CONCERNING THE CURING TIME FOR HOT-MIX ASPHALT LIFTS.

BITUMINOUS MATERIALS (TACK COAT) SHALL BE APPLIED AT THE FOLLOWING RATES:  
 0.025 LB/SQ FT ON ASPHALT  
 0.05 LB/SQ FT ON MILLED AND CONCRETE SURFACES

THE FOLLOWING MIXTURE REQUIREMENTS ARE APPLICABLE TO THIS PROJECT:

LOCATION(S)	MIXTURE USE(S)	PG	DESIGN AIR VOIDS	MIXTURE COMPOSITION	FRICTION AGGREGATE	MIXTURE WEIGHT	QUALITY MANAGEMENT PROGRAM	SUBLOT SIZE
MAINLINE	HMA SURFACE COURSE, IL-9.5, MIX "C", N70	PG 64-22	4.0% @ N=70	IL - 9.5	MIXTURE C	N70	QC/QA	3000
8" HMA WIDENING	HMA BINDER COURSE, IL-19.0, N70(ALL LIFTS)	PG 64-22	4.0% @ N=70	IL - 19.0	N/A	N70	QC/QA	3000

**INDEX OF SHEETS**

**SHEET NO. ITEM**

1	COVER SHEET
2	GENERAL NOTES, INDEX OF SHEETS & LIST OF STANDARDS
3-4	SUMMARY OF QUANTITIES
5	TYPICAL SECTIONS
6	SCHEDULES OF QUANTITIES
7-8	STAGE CONSTRUCTION SHEETS
9	PAVING DETAIL
10-20	BRIDGE REPAIR PLANS
21-24	DISTRICT DETAILS

THE FOLLOWING STANDARDS ARE A PART OF THESE PLANS AND ARE INCLUDED FOLLOWING THE LAST NUMBERED SHEET OF THE PLANS.

**STANDARD NO. DESCRIPTION**

000001-08	STANDARD SYMBOLS, ABBREVIATIONS AND PATTERNS
001001-02	AREAS OF REINFORCEMENT BARS
001006	DECIMAL OF AN INCH AND OF A FOOT
701001-02	OFF-RD OPERATIONS, 2L, 2W, MORE THAN 15' AWAY
701006-05	OFF-RD OPERATIONS, 2L, 2W, 15' TO 24' FROM PAVEMENT EDGE
701011-04	OFF-RD MOVING OPERATIONS, 2L, 2W, DAY ONLY
701201-05	LANE CLOSURE, 2L, 2W, DAY ONLY, FOR SPEED ≥ 45 MPH
701301-04	LANE CLOSURE, 2L, 2W, SHORT TIME OPERATIONS
701306-04	LANE CLOSURE, 2L, 2W, SLOW MOVING OPERATIONS DAY ONLY, FOR SPEEDS ≥ 45 MPH
701311-03	LANE CLOSURE, 2L, 2W, MOVING OPERATIONS - DAY ONLY
701321-18	LANE CLOSURE, 2L, 2W, BRIDGE REPAIR WITH BARRIER
701901-09	TRAFFIC CONTROL DEVICES
780001-05	TYPICAL PAVEMENT MARKINGS
420001-10	PAVEMENT JOINTS
643001-02	SAND MODULE IMPACT ATTENUATORS
704001-08	TEMPORARY CONCRETE BARRIER
782006-01	GUARDRAIL AND BARRIER WALL REFLECTOR MOUNTING DETAILS

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**STATE OF ILLINOIS  
DEPARTMENT OF TRANSPORTATION**

**GENERAL NOTES, INDEX OF SHEETS,  
AND HIGHWAY STANDARDS**

SCALE: SHEET OF SHEETS STA. TO STA.

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
116	D7 BRIDGE REPAIRS 2024-1	CUMBERLAND	24	2
CONTRACT NO. 74B27				
ILLINOIS FED. AID PROJECT				

80% FED  
20% STATE

80% FED  
20% STATE

SUMMARY OF QUANTITIES			TOTAL QUANTITIES	CONSTRUCTION TYPE CODE		
CODE NO	ITEM	UNIT		0047		
35600708	HOT-MIX ASPHALT BASE COURSE WIDENING, 8"	SO YD	184	184		
40600290	BITUMINOUS MATERIALS (TACK COAT)	POUND	374	374		
40600982	HOT-MIX ASPHALT SURFACE REMOVAL - BUTT JOINT	SO YD	249	249		
40600990	TEMPORARY RAMP	SO YD	107	107		
40604052	HOT-MIX ASPHALT SURFACE COURSE, IL-9.5, MIX "C", N70	TON	75	75		
42001300	PROTECTIVE COAT	SO YD	1216	1216		
50102400	CONCRETE REMOVAL	CU YD	24	24		
50300255	CONCRETE SUPERSTRUCTURE	CU YD	26.5	26.5		
50500405	FURNISHING AND ERECTING STRUCTURAL STEEL	POUND	1730	1730		
50800205	REINFORCEMENT BARS, EPOXY COATED	POUND	4920	4920		
50800515	BAR SPLICERS	EACH	50	50		
52000110	PREFORMED JOINT STRIP SEAL	FOOT	104	104		
52100010	ELASTOMERIC BEARING ASSEMBLY, TYPE I	EACH	8	8		
52100520	ANCHOR BOLTS, 1"	EACH	16	16		

SUMMARY OF QUANTITIES			TOTAL QUANTITIES	CONSTRUCTION TYPE CODE		
CODE NO	ITEM	UNIT		0047		
70600270	IMPACT ATTENUATORS, TEMPORARY (FULLY REDIRECTIVE, WIDE) TEST LEVEL 3	EACH	2	2		
67000400	ENGINEER'S FIELD OFFICE, TYPE A	CAL MO	3	3		
67100100	MOBILIZATION	L SUM	1	1		
70100450	TRAFFIC CONTROL AND PROTECTION, STANDARD 701201	L SUM	1	1		
70100460	TRAFFIC CONTROL AND PROTECTION, STANDARD 701306	L SUM	1	1		
70103815	TRAFFIC CONTROL SURVEILLANCE	CAL DA	6	6		
70106500	TEMPORARY BRIDGE TRAFFIC SIGNALS	EACH	1	1		
70106700	TEMPORARY RUMBLE STRIPS	EACH	6	6		
70107005	PAVEMENT MARKING BLACKOUT TAPE, 5"	FOOT	1411	1411		
70107025	CHANGEABLE MESSAGE SIGN	CAL DA	28	28		
70400100	TEMPORARY CONCRETE BARRIER	FOOT	588	588		
70400125	PINNING TEMPORARY CONCRETE BARRIER	EACH	12	12		
70400200	RELOCATE TEMPORARY CONCRETE BARRIER	FOOT	550	550		

• SPECIALTY ITEM

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.
116	D7 BRIDGE REPAIRS 2024-1	CUMBERLAND	24	3
CONTRACT NO. 74B27				
ILLINOIS FED. AID PROJECT				

80% FED  
20% STATE

SUMMARY OF QUANTITIES			TOTAL QUANTITIES	CONSTRUCTION TYPE CODE		
CODE NO	ITEM	UNIT		0047		
70600330	IMPACT ATTENUATORS, RELOCATE (FULLY REDIRECTIVE), TEST LEVEL 3	EACH	2	2		
78001110	PAINT PAVEMENT MARKING - LINE 4"	FOOT	2562	2562		
X5030250	BRIDGE DECK GROOVING (LONGITUDINAL)	SO YD	891	891		
X7010202	TRAFFIC CONTROL AND PROTECTION, STANDARD 701321 (SPECIAL)	EACH	1	1		
Z0001800	APPROACH SLAB REPAIR (PARTIAL DEPTH)	SO YD	10	10		
Z0001899	JACK AND REMOVE EXISTING BEARINGS	EACH	8	8		
Z0012111	BRIDGE DECK FLY ASH OR GGBF SLAG CONCRETE OVERLAY, 2 1/2"	SO YD	1151	1151		
Z0012130	BRIDGE DECK SCARIFICATION 3/4"	SO YD	1151	1151		
Z0016001	DECK SLAB REPAIR (FULL DEPTH, TYPE I)	SO YD	18	18		
Z0016002	DECK SLAB REPAIR (FULL DEPTH, TYPE II)	SO YD	14	14		
Z0029090	DIAMOND GRINDING (BRIDGE SECTION)	SO YD	1055	1055		

SUMMARY OF QUANTITIES				TOTAL QUANTITIES	CONSTRUCTION TYPE CODE		
CODE NO	ITEM	UNIT			0059		

• SPECIALTY ITEM

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**STATE OF ILLINOIS  
DEPARTMENT OF TRANSPORTATION**

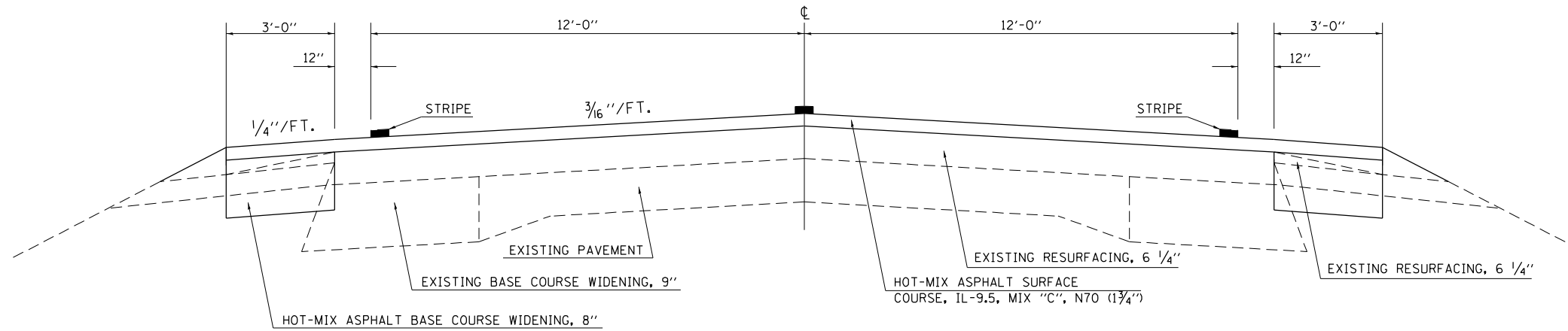
<b>SUMMARY OF QUANTITIES</b>	
SCALE:	SHEET OF SHEETS STA. TO STA.

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
116	D7 BRIDGE REPAIRS 2024-1	CUMBERLAND	24	4
CONTRACT NO. 74B27				
ILLINOIS FED. AID PROJECT				



### OUTSIDE APPROACH PAVEMENT SECTION

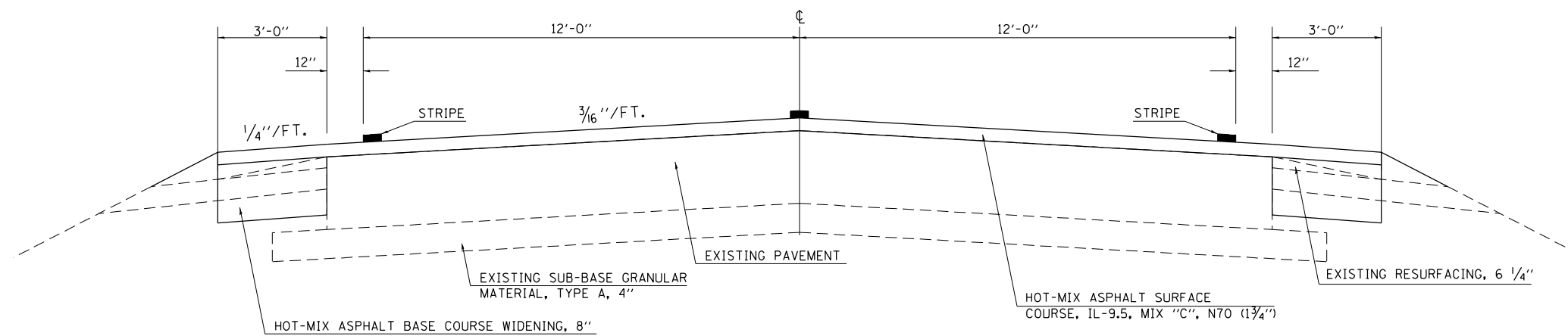
• SEE STATIONING FOR PROPOSED SHOULDER LOCATIONS



LT STA 251+43 TO LT STA 252+52  
 LT STA 257+37 TO LT STA 258+13  
 RT STA 251+43 TO RT STA 252+52  
 RT STA 257+37 TO RT STA 257+76

### INSIDE APPROACH PAVEMENT SECTION

• SEE STATIONING FOR PROPOSED SHOULDER LOCATIONS



LT STA 252+52 TO LT STA 252+62  
 LT STA 256+37 TO LT STA 257+37  
 RT STA 252+52 TO RT STA 253+02  
 RT STA 256+77 TO RT STA 257+37

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**STATE OF ILLINOIS  
DEPARTMENT OF TRANSPORTATION**

<b>TYPICALS</b>	
SCALE:	SHEET OF SHEETS STA. TO STA.

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
116	D7 BRIDGE REPAIRS 2024-1	CUMBERLAND	24	5
CONTRACT NO. 74B27				
ILLINOIS FED. AID PROJECT				

MAINLINE PAVING SCHEDULE

STATION TO STATION				LENGTH	WIDTH	HOT-MIX ASPHALT SURFACE REMOVAL - BUTT JOINT	TEMPORARY RAMP	HOT-MIX ASPHALT SURFACE COURSE, IL-9.5, MIX "C", N70	BITUMINOUS MATERIALS (TACK COAT)
				FEET	FEET	SQ YD	SQ YD	TON	POUND
STA 252+17	TO	STA 252+52	35	26	101	17	10	46	
STA 252+52	TO	STA 252+81	29	26	0	0	8	38	
STA 252+81	TO	STA 253+19	38	26	0	26	5	49	
BRIDGE OMISSION									
STA 256+20	TO	STA 256+58	38	26	0	26	5	49	
STA 256+58	TO	STA 257+37	79	26	0	0	22	103	
STA 257+37	TO	STA 257+72	35	26	101	17	10	46	
TOTALS:						202	87	61	330

SHOULDER PAVING SCHEDULE

STATION TO STATION				LENGTH	WIDTH	HOT-MIX ASPHALT BASE COURSE WIDENING, 8"	HOT-MIX ASPHALT SURFACE REMOVAL - BUTT JOINT	TEMPORARY RAMP	BITUMINOUS MATERIALS (TACK COAT)	HOT-MIX ASPHALT SURFACE COURSE, IL-9.5, MIX "C", N70
				FEET	FEET	SQ YD	SQ YD	SQ YD	POUND	TON
LT STA 251+43	TO	LT STA 252+17	74	3	25	0	0	0	0.0	
LT STA 252+17	TO	LT STA 252+52	35	3	12	12	2	5	1.1	
LT STA 252+52	TO	LT STA 252+62	10	3	3	0	0	1	0.3	
LT STA 252+62	TO	LT STA 252+81	19	3	0	0	3	3	0.6	
BRIDGE OMISSION										
LT STA 256+20	TO	LT STA 256+37	17	3	0	0	3	3	0.6	
LT STA 256+37	TO	LT STA 257+37	100	3	33	0	0	8	3.3	
LT STA 257+37	TO	LT STA 257+72	35	3	12	12	2	1	1.1	
LT STA 257+72	TO	LT STA 258+13	41	3	14	0	0	0	0.0	
RT STA 251+43	TO	RT STA 252+17	74	3	25	0	0	0	0.0	
RT STA 252+17	TO	RT STA 252+52	35	3	12	12	2	5	1.1	
RT STA 252+52	TO	RT STA 253+02	50	3	17	0	0	4	1.6	
RT STA 253+02	TO	RT STA 253+19	17	3	0	0	3	3	0.6	
BRIDGE OMISSION										
RT STA 256+58	TO	RT STA 256+77	19	3	0	0	3	3	0.6	
RT STA 256+77	TO	RT STA 257+37	60	3	20	0	0	5	2.0	
RT STA 257+37	TO	RT STA 257+72	35	3	12	12	2	5	1.1	
RT STA 257+72	TO	RT STA 257+76	4	3	1	0	0	0	0.0	
TOTALS:						184	47	20	44	14

STRIPING SCHEDULE

STATION TO STATION				LENGTH	PAINT PAVEMENT MARKING - LINE 4"	PAVEMENT MARKING BLACKOUT TAPE, 5"
				FEET	FOOT	FOOT
STA 249+84	TO	STA 251+43	159	0	318	
STA 251+43	TO	STA 257+52	609	2364	747	
STA 257+52	TO	STA 257+77	25	81	56	
STA 257+77	TO	STA 258+13	36	117	45	
STA 257+77	TO	STA 259+73	196	0	245	
TOTALS:				2562	1411	

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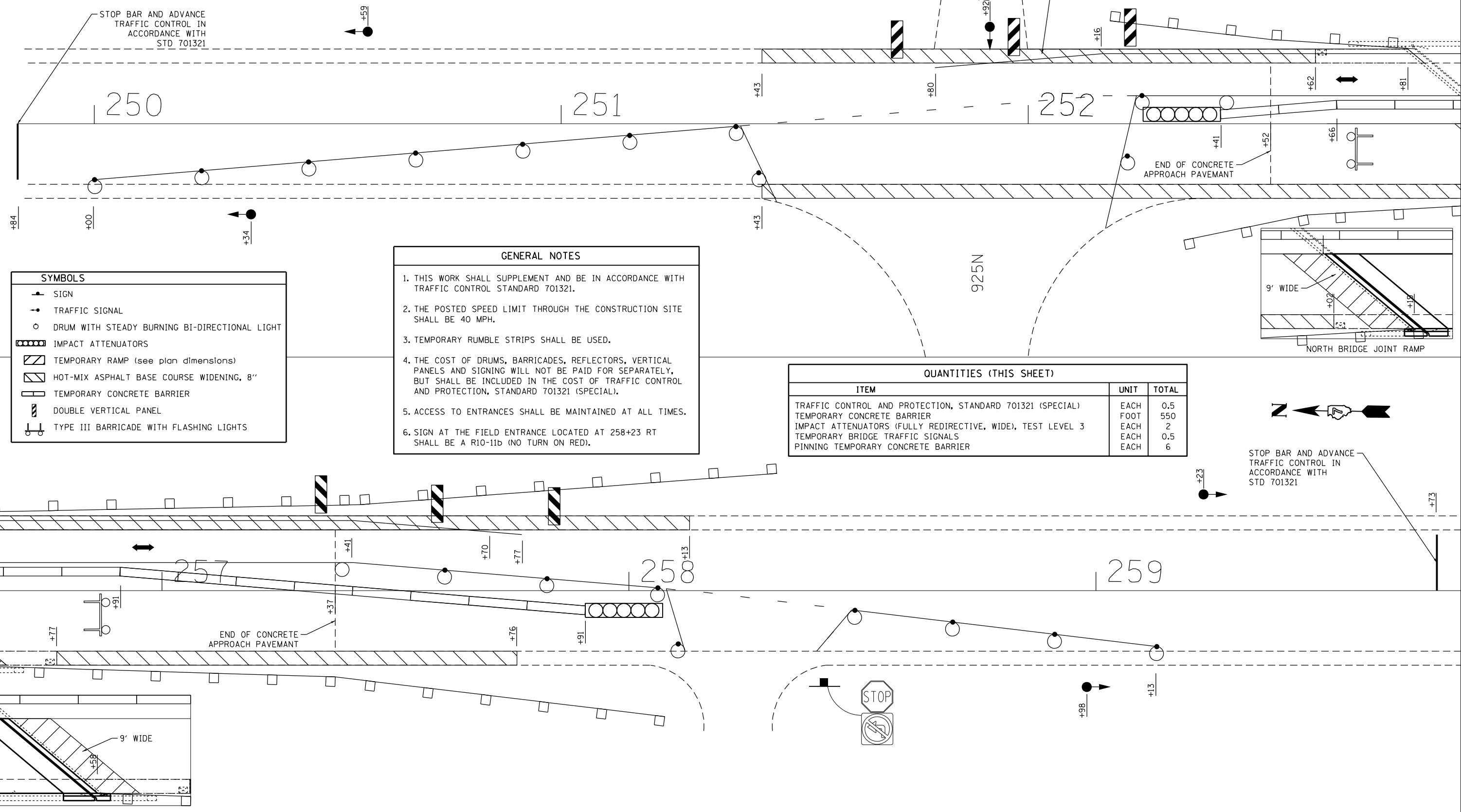
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STATE OF ILLINOIS  
DEPARTMENT OF TRANSPORTATION

SCHEDULES			
SCALE:	SHEET	OF	SHEETS
	STA.	TO	STA.

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
116	D7 BRIDGE REPAIRS 2024-1	CUMBERLAND	24	6
CONTRACT NO. 74B27				
ILLINOIS FED. AID PROJECT				

PRE-STAGE I CONSTRUCTION:  
 PRE-STAGE I CONSTRUCTION SHALL INCLUDE THE REMOVAL OF THE EXISTING AGGREGATE SHOULDER AND THE CONSTRUCTION OF HMA BASE COURSE WIDENING, 8" ALONG THE NB SHOULDER. TRAFFIC CONTROL SHALL BE IN ACCORDANCE WITH TRAFFIC CONTROL AND PROTECTION, STANDARD 701326.



SYMBOLS	
	SIGN
	TRAFFIC SIGNAL
	DRUM WITH STEADY BURNING BI-DIRECTIONAL LIGHT
	IMPACT ATTENUATORS
	TEMPORARY RAMP (see plan dimensions)
	HOT-MIX ASPHALT BASE COURSE WIDENING, 8"
	TEMPORARY CONCRETE BARRIER
	DOUBLE VERTICAL PANEL
	TYPE III BARRICADE WITH FLASHING LIGHTS

**GENERAL NOTES**

1. THIS WORK SHALL SUPPLEMENT AND BE IN ACCORDANCE WITH TRAFFIC CONTROL STANDARD 701321.
2. THE POSTED SPEED LIMIT THROUGH THE CONSTRUCTION SITE SHALL BE 40 MPH.
3. TEMPORARY RUMBLE STRIPS SHALL BE USED.
4. THE COST OF DRUMS, BARRICADES, REFLECTORS, VERTICAL PANELS AND SIGNING WILL NOT BE PAID FOR SEPARATELY, BUT SHALL BE INCLUDED IN THE COST OF TRAFFIC CONTROL AND PROTECTION, STANDARD 701321 (SPECIAL).
5. ACCESS TO ENTRANCES SHALL BE MAINTAINED AT ALL TIMES.
6. SIGN AT THE FIELD ENTRANCE LOCATED AT 258+23 RT SHALL BE A R10-11b (NO TURN ON RED).

QUANTITIES (THIS SHEET)		
ITEM	UNIT	TOTAL
TRAFFIC CONTROL AND PROTECTION, STANDARD 701321 (SPECIAL)	EACH	0.5
TEMPORARY CONCRETE BARRIER	FOOT	550
IMPACT ATTENUATORS (FULLY REDIRECTIVE, WIDE), TEST LEVEL 3	EACH	2
TEMPORARY BRIDGE TRAFFIC SIGNALS	EACH	0.5
PINNING TEMPORARY CONCRETE BARRIER	EACH	6

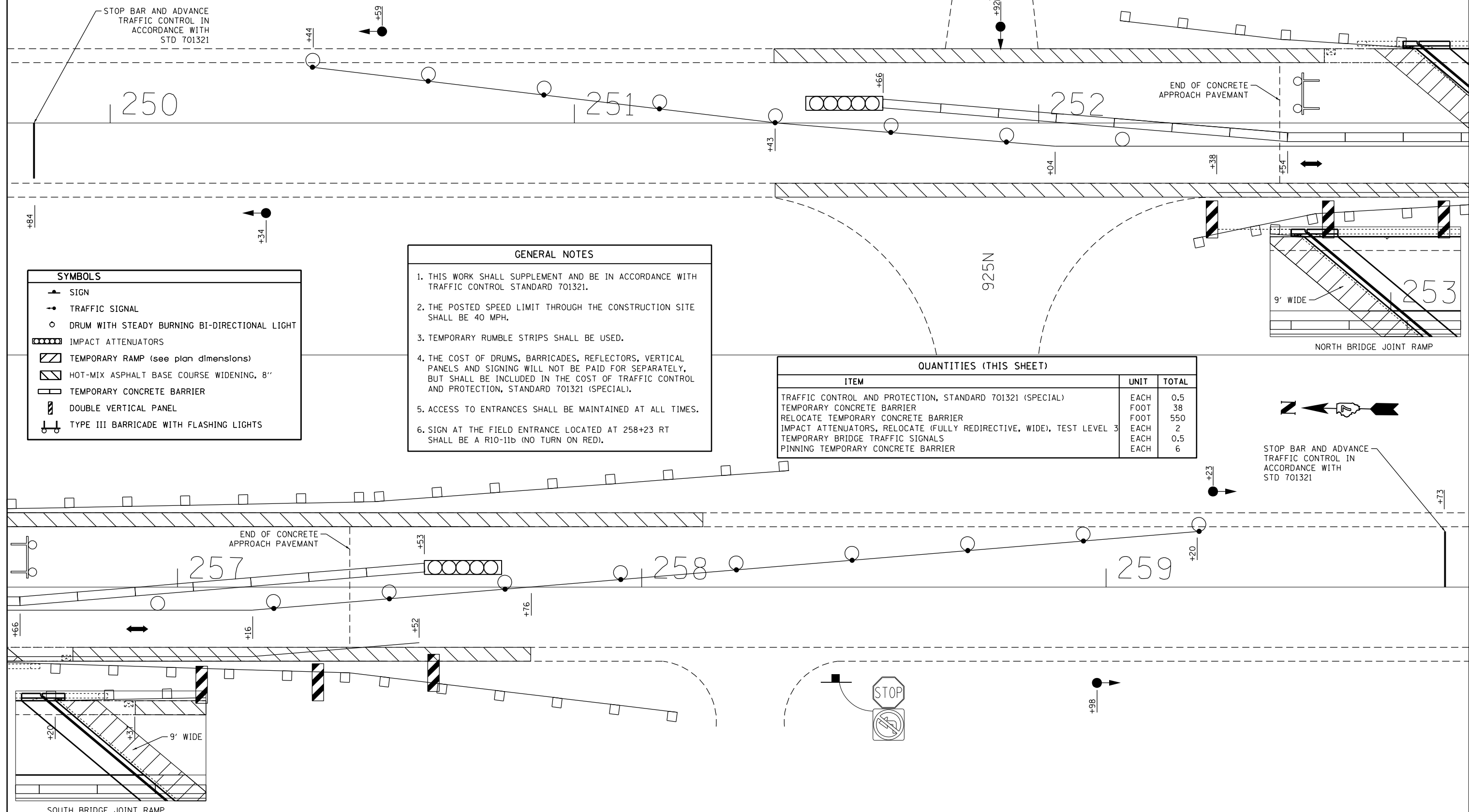
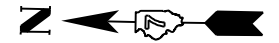


STOP BAR AND ADVANCE TRAFFIC CONTROL IN ACCORDANCE WITH STD 701321

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	CHECKED - DATE -	REVISED - REVISED -		SCALE:	SHEET OF SHEETS	STA. TO STA.	CONTRACT NO. 74827 ILLINOIS FED. AID PROJECT					

POST-STAGE CONSTRUCTION:  
 POST-STAGE CONSTRUCTION SHALL INCLUDE THE REMOVAL OF THE TEMPORARY  
 CONCRETE BARRIERS AND TEMPORARY STRIPING, BUTT JOINT MILLING, PAVEMENT  
 AND SHOULDER HMA OVERLAYS AND PERMANENT STRIPING.



SYMBOLS	
	SIGN
	TRAFFIC SIGNAL
	DRUM WITH STEADY BURNING BI-DIRECTIONAL LIGHT
	IMPACT ATTENUATORS
	TEMPORARY RAMP (see plan dimensions)
	HOT-MIX ASPHALT BASE COURSE WIDENING, 8"
	TEMPORARY CONCRETE BARRIER
	DOUBLE VERTICAL PANEL
	TYPE III BARRICADE WITH FLASHING LIGHTS

- GENERAL NOTES**
1. THIS WORK SHALL SUPPLEMENT AND BE IN ACCORDANCE WITH TRAFFIC CONTROL STANDARD 701321.
  2. THE POSTED SPEED LIMIT THROUGH THE CONSTRUCTION SITE SHALL BE 40 MPH.
  3. TEMPORARY RUMBLE STRIPS SHALL BE USED.
  4. THE COST OF DRUMS, BARRICADES, REFLECTORS, VERTICAL PANELS AND SIGNING WILL NOT BE PAID FOR SEPARATELY, BUT SHALL BE INCLUDED IN THE COST OF TRAFFIC CONTROL AND PROTECTION, STANDARD 701321 (SPECIAL).
  5. ACCESS TO ENTRANCES SHALL BE MAINTAINED AT ALL TIMES.
  6. SIGN AT THE FIELD ENTRANCE LOCATED AT 258+23 RT SHALL BE A R10-11b (NO TURN ON RED).

QUANTITIES (THIS SHEET)		
ITEM	UNIT	TOTAL
TRAFFIC CONTROL AND PROTECTION, STANDARD 701321 (SPECIAL)	EACH	0.5
TEMPORARY CONCRETE BARRIER	FOOT	38
RELOCATE TEMPORARY CONCRETE BARRIER	FOOT	550
IMPACT ATTENUATORS, RELOCATE (FULLY REDIRECTIVE, WIDE), TEST LEVEL 3	EACH	2
TEMPORARY BRIDGE TRAFFIC SIGNALS	EACH	0.5
PINNING TEMPORARY CONCRETE BARRIER	EACH	6



STOP BAR AND ADVANCE  
 TRAFFIC CONTROL IN  
 ACCORDANCE WITH  
 STD 701321

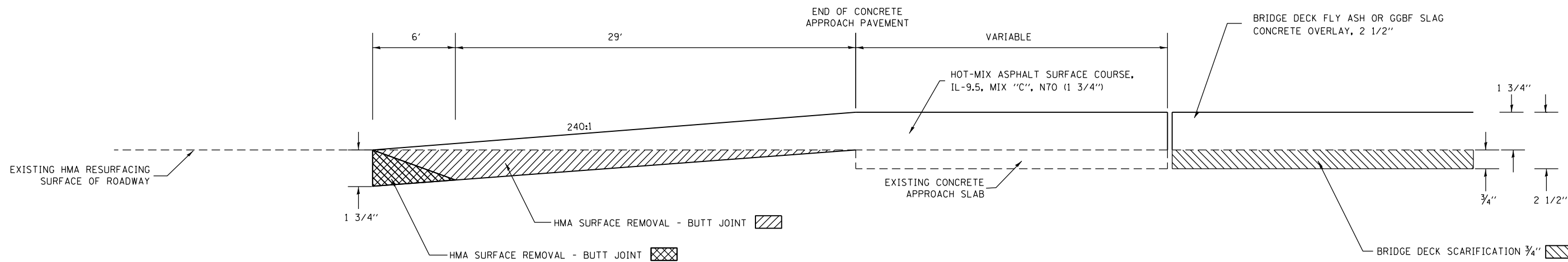
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**STATE OF ILLINOIS  
 DEPARTMENT OF TRANSPORTATION**

**STAGE 2 CONSTRUCTION  
 701321 SPECIAL**

SCALE: SHEET OF SHEETS STA. TO STA.

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
116	D7 BRIDGE REPAIRS 2024-1	CUMBERLAND	24	8
				CONTRACT NO. 74B27
ILLINOIS FED. AID PROJECT				



NOT TO SCALE

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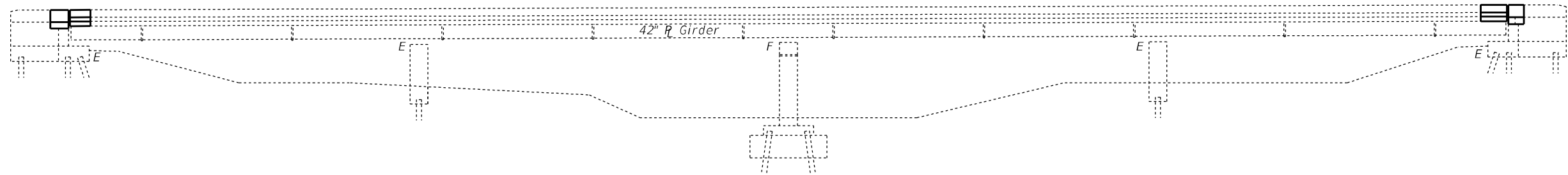
**STATE OF ILLINOIS  
DEPARTMENT OF TRANSPORTATION**

**PAVING DETAIL**

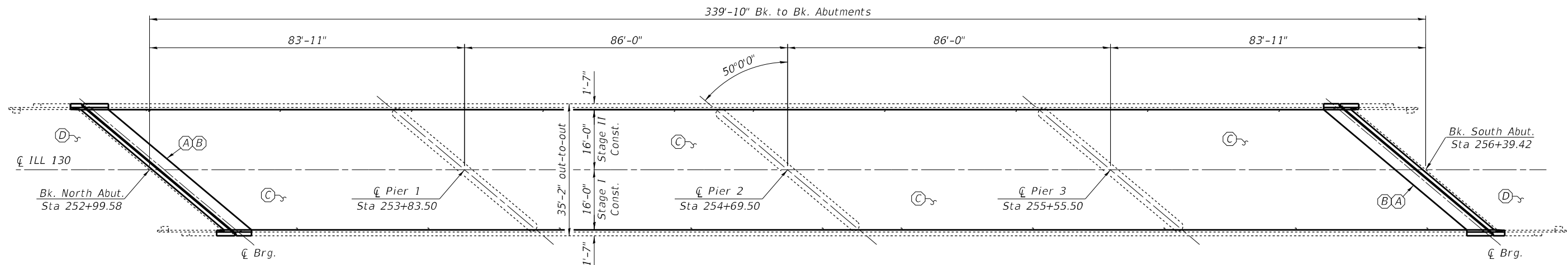
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F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
116	07 BRIDGE REPAIRS 2024-1	CUMBERLAND	24	9
				CONTRACT NO. 74B27
ILLINOIS FED. AID PROJECT				

EXISTING STRUCTURE: SN 018-0058 carries ILL 130 over Hurricane Creek. The four span, steel girder structure was built in 1981. The proposed project consists of replacement of the expansion joints with new strip seals, bearing replacement, full depth deck and partial depth approach patching, bridge deck scarification, bridge deck concrete overlay, & diamond grinding.

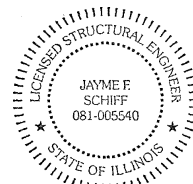


ELEVATION



PLAN

- (A) - Remove Existing Joints and Construct Strip Seal Expansion Joint
- (B) - Remove Existing Rocker Bearings and Install new Elastomeric Bearings
- (C) - Bridge Deck Scarification  $\frac{3}{4}$ ", Deck Patching, Bridge Deck Fly Ash or GGBF Slag Concrete Overlay  $2\frac{1}{2}$ ", Diamond Grinding (Bridge Section), & Bridge Deck Grooving (Longitudinal)
- (D) - Approach Patching



EXPIRES 11-30-2024

*Jayme F. Schiff*

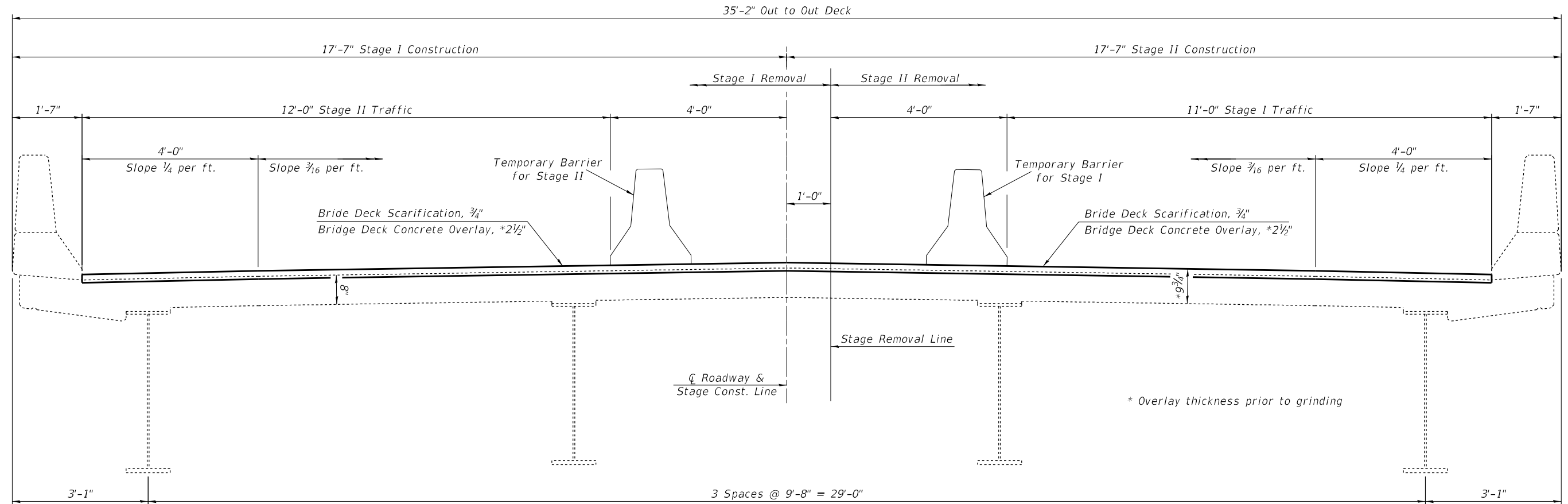
STATE OF ILLINOIS  
DEPARTMENT OF TRANSPORTATION

GENERAL PLAN & ELEVATION  
S.N. 018-0058

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
116	D7 BRIDGE REPAIRS 2024-1	CUMBERLAND	24	10
CONTRACT NO. 74B27				
ILLINOIS FED. AID PROJECT				

SCALE: SHEET 1 OF 11 SHEETS STA. TO STA.

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 PLOT DATE: 10/20/2023  
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**STAGE CONSTRUCTION DETAIL**  
Looking North

**GENERAL NOTES**

Plan dimensions and details relative to existing plans are subject to nominal construction variations. The Contractor shall field verify existing dimensions and details affecting new construction and make necessary approved adjustments prior to construction or ordering of materials. Such variations shall not be cause for additional compensation for a change in scope of the work, however, the Contractor will be paid for the quantity actually furnished at the unit price bid for the work.

Removal and reinstallation of guardrail sections will be necessary for construction of the expansion joints. The existing guardrail sections shall be reused. Any embedded anchors that are within the concrete removal areas shall be replaced with approved epoxy grouted anchor bolts with standard washers. This work and all materials shall be included in the contract unit price for CONCRETE SUPERSTRUCTURE

Reinforcement Bars designated (E) shall be epoxy coated.

Existing reinforcement bars extending into the removal area shall be cleaned, straightened and incorporated into the new construction. Any reinforcement bars that are damaged during concrete removal operations shall be 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.

All new structural steel and bearing assemblies shall be hot-dip galvanized. See Special Provision for "Hot Dip Galvanizing for Structural Steel".

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

Protective Coat to be applied to areas of new concrete only, including bridge deck concrete overlay.

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

Full depth deck slab repairs performed in the exterior bays of the bridge deck (between the parapet walls and the first interior beams) shall be limited to individual lengths no greater than 10'. In these portions of the deck, repair areas longer than 10' shall be divided into segments not greater than 10' in length, and the segments shall be poured in alternating sequence. Subsequent segments repaired in sequence shall not be removed until 72 hours shall have elapsed from the end of the previous, adjacent pour, and the adjacent pour shall have attained a minimum modulus of rupture of 650psi.

Existing structural steel that will be in contact with new structural steel shall be cleaned and painted prior to erection as required by the Special Provision for "Cleaning and Painting Contact Surface Areas of Existing Steel Structures".

**TOTAL BILL OF MATERIAL**

ITEM	UNIT	QUANTITY
Concrete Removal	Cu. Yd.	24.0
Concrete Superstructure	Cu. Yd.	26.5
Reinforcement Bars, Epoxy Coated	Pound	4,920
Bar Splicers	Each	50
Bridge Deck Scarification, 3/4"	Sq. Yd.	1,151
Bridge Deck Fly Ash or GGBF Slag Concrete Overlay, 2 1/2"	Sq. Yd.	1,151
Diamond Grinding (Bridge Section)	Sq. Yd.	1,055
Bridge Deck Grooving (Longitudinal)	Sq. Yd.	891
Preformed Joint Strip Seal	Foot	104
Protective Coat	Sq. Yd.	1,216
Deck Slab Repair (Full Depth, Type I)	Sq. Yd.	18.0
Deck Slab Repair (Full Depth, Type II)	Sq. Yd.	14.0
Approach Slab Repair (Partial Depth)	Sq. Yd.	10.0
Jack & Remove Existing Bearings	Each	8
Elastomeric Bearing Assembly, Type I	Each	8
Anchor Bolts, 1" Diameter	Each	16
Furnishing and Erecting Structural Steel	Pound	1,730

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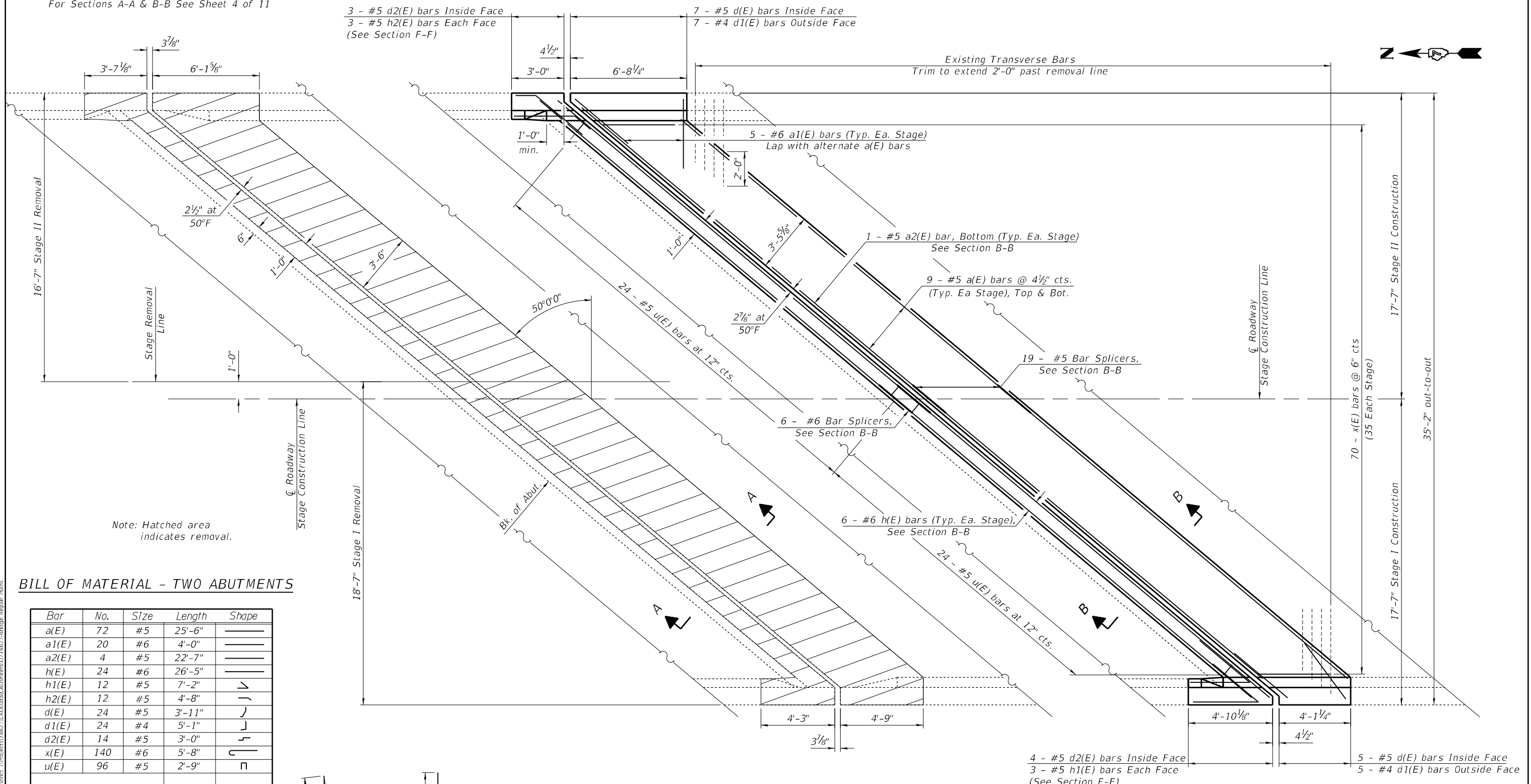
**STATE OF ILLINOIS  
DEPARTMENT OF TRANSPORTATION**

**STAGE CONSTRUCTION, GENERAL NOTES, &  
BILL OF MATERIALS S.N. 018-0058**

SCALE: SHEET 2 OF 11 SHEETS STA. TO STA.

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
116	D7 BRIDGE REPAIRS 2024-1	CUMBERLAND	24	11
CONTRACT NO. 74827				
ILLINOIS FED. AID PROJECT				

For Sections A-A & B-B See Sheet 4 of 11



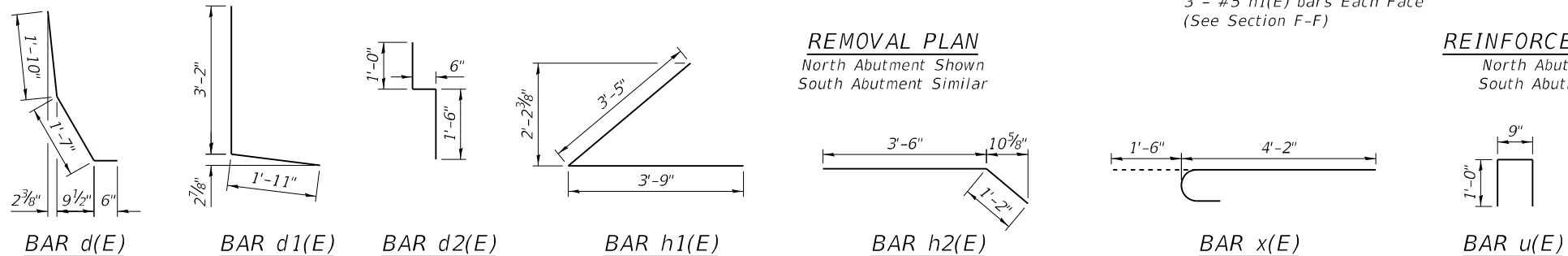
Note: Hatched area indicates removal.

**BILL OF MATERIAL - TWO ABUTMENTS**

Bar	No.	Size	Length	Shape
a(E)	72	#5	25'-6"	—
a1(E)	20	#6	4'-0"	—
a2(E)	4	#5	22'-7"	—
h(E)	24	#6	26'-5"	—
h1(E)	12	#5	7'-2"	┘
h2(E)	12	#5	4'-8"	┘
d(E)	24	#5	3'-11"	┘
d1(E)	24	#4	5'-1"	┘
d2(E)	14	#5	3'-0"	┘
x(E)	140	#6	5'-8"	┘
u(E)	96	#5	2'-9"	∩

ITEM	UNIT	QUANTITY
Concrete Removal	Cu. Yd.	24.0
Concrete Superstructure	Cu. Yd.	26.5
Reinforcement Bars, Epoxy Coated	Pound	4,920
Bar Splicers	Each	50



**STATE OF ILLINOIS  
DEPARTMENT OF TRANSPORTATION**

**EXPANSION JOINT REPLACEMENT DETAILS**  
**S.N. 018-0058**

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
116	D7 BRIDGE REPAIRS 2024-1	CUMBERLAND	24	12
CONTRACT NO. 74827				

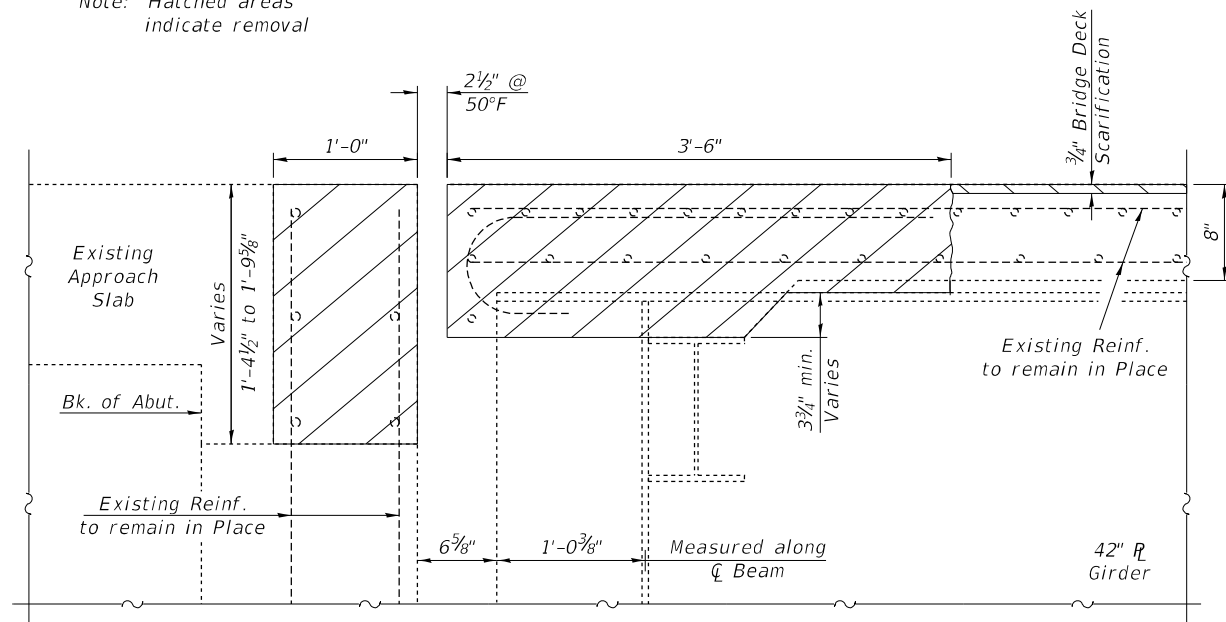
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ILLINOIS FED. AID PROJECT

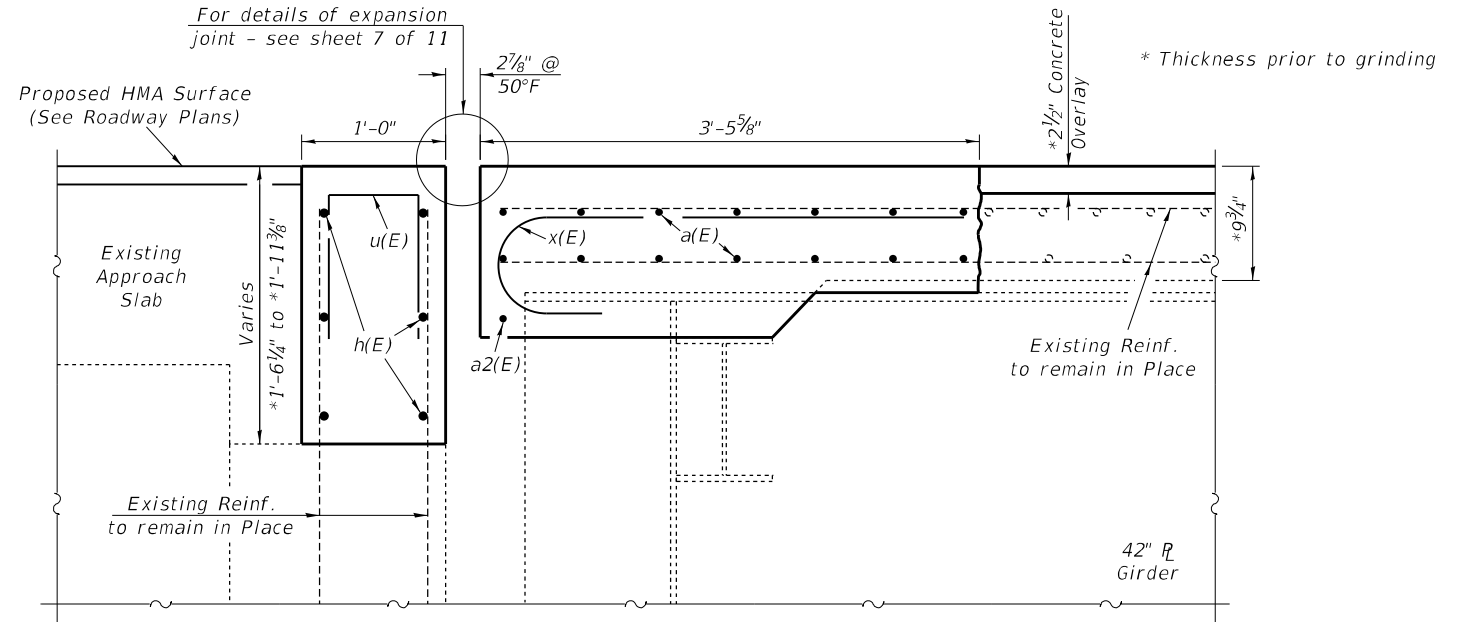
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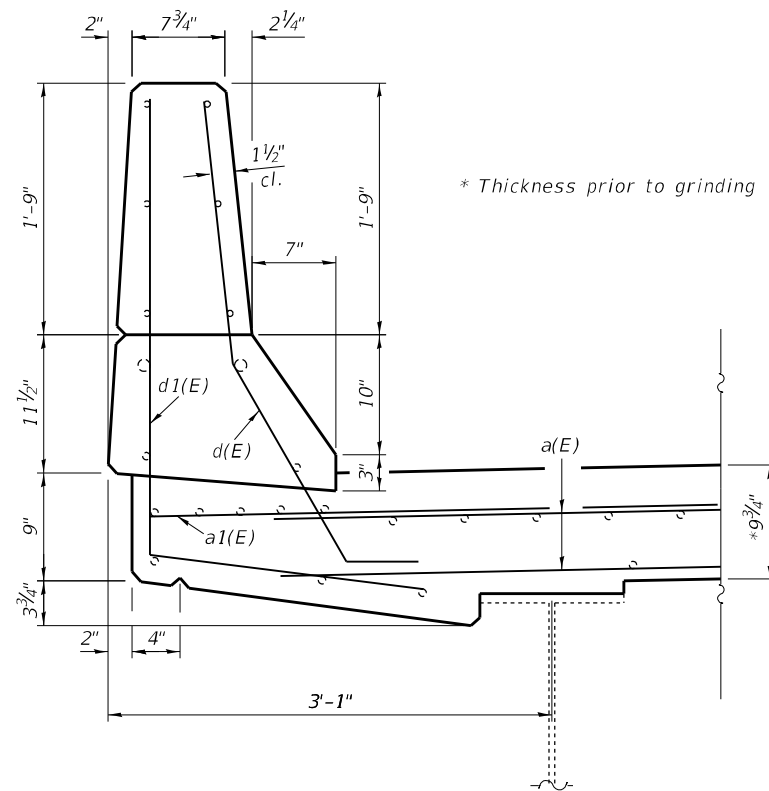
Note: Hatched areas indicate removal



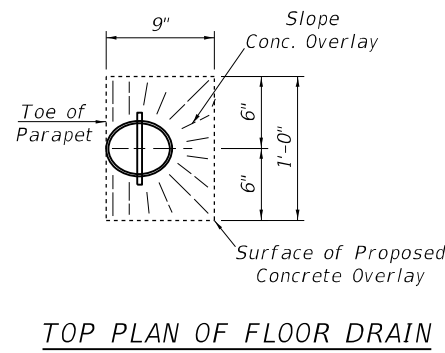
SECTION A-A



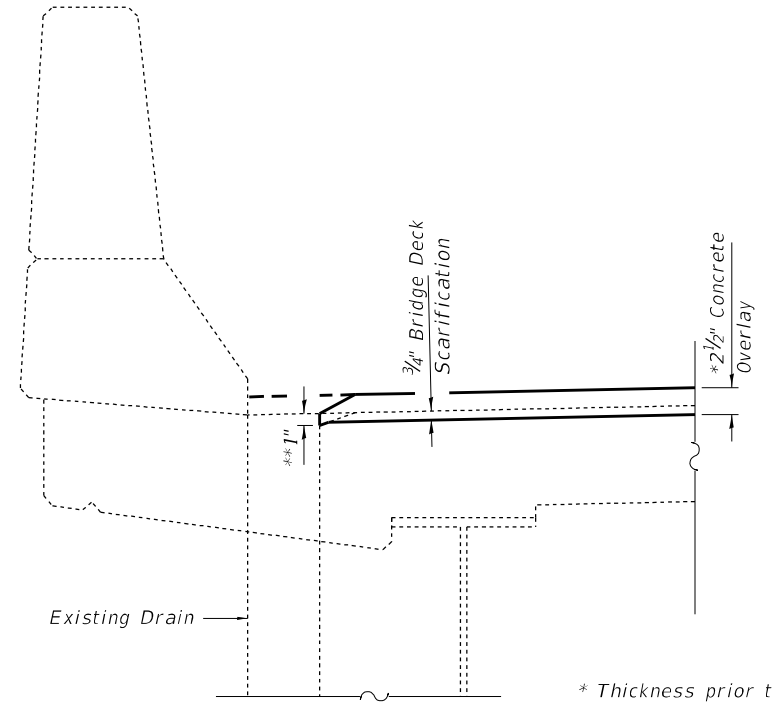
SECTION B-B



SECTION THRU DECK PARAPET



TOP PLAN OF FLOOR DRAIN



FLOOR DRAIN PRESERVATION

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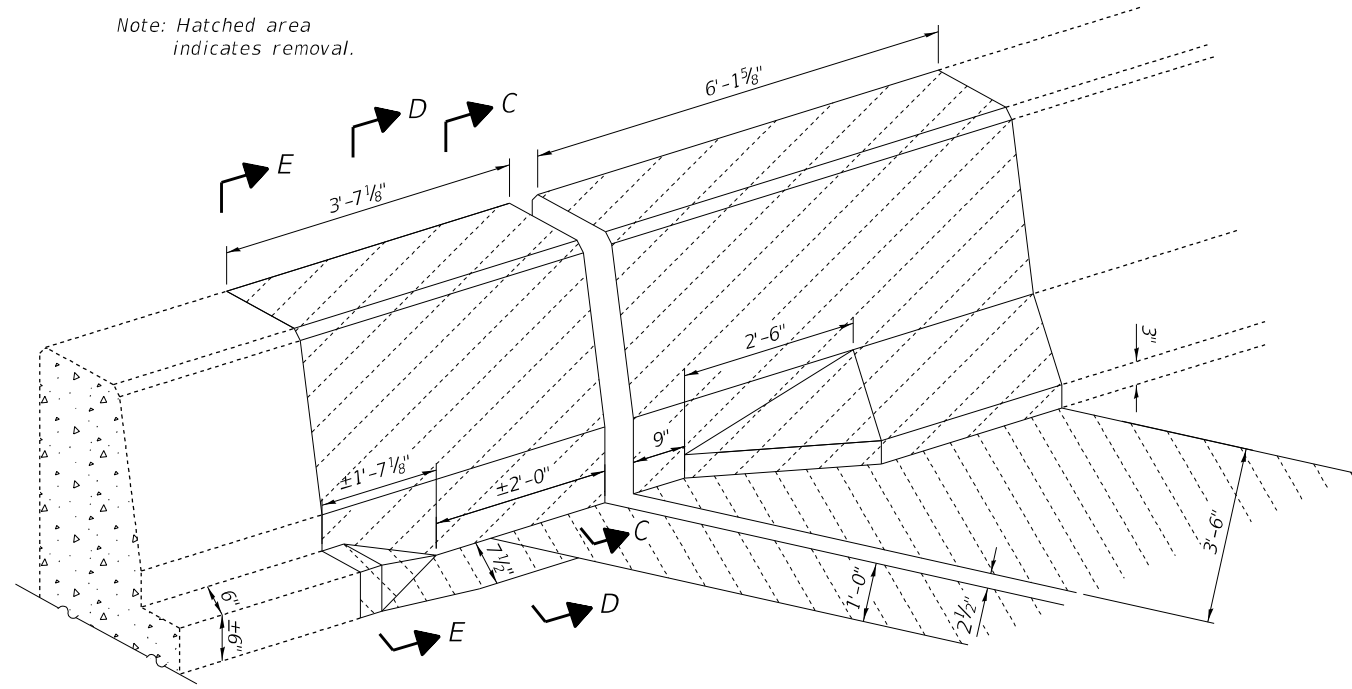
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	DATE - February 2023	REVISED -

**STATE OF ILLINOIS  
DEPARTMENT OF TRANSPORTATION**

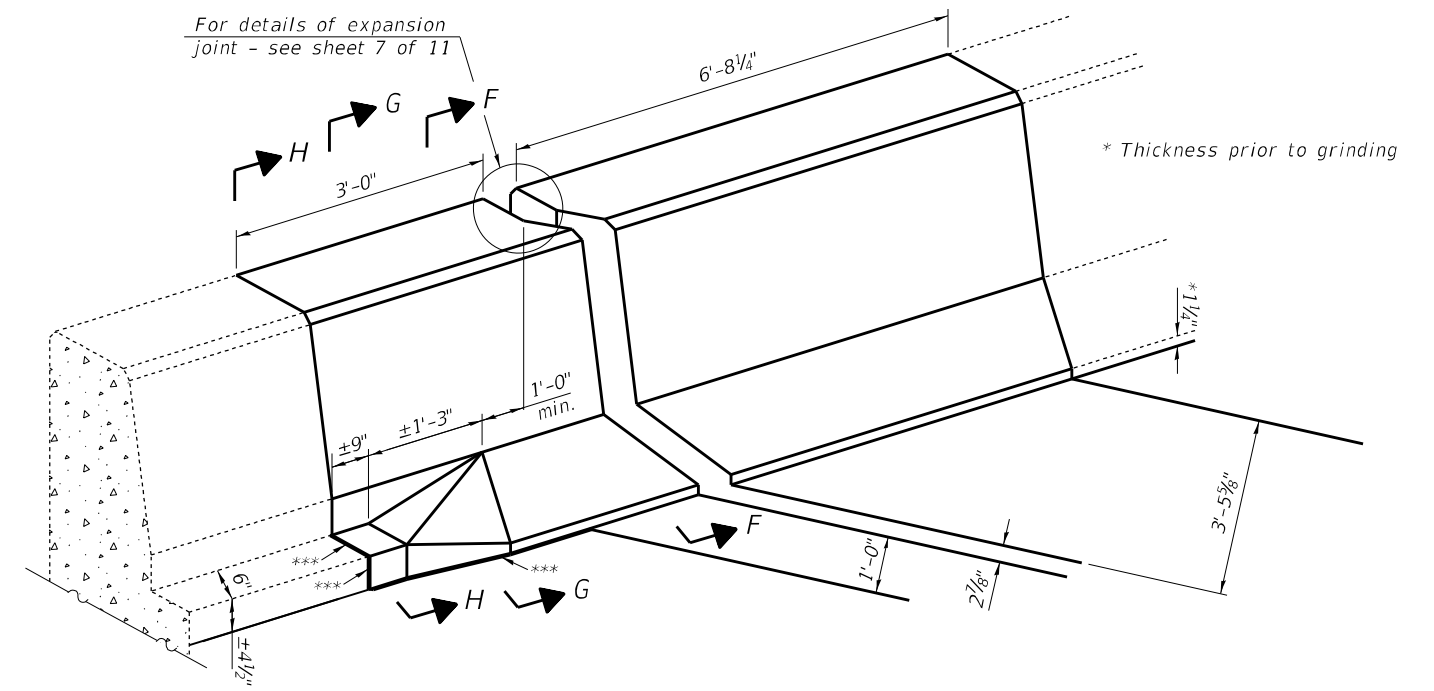
<b>EXPANSION JOINT REPLACEMENT DETAILS</b>			
<b>S.N. 018-0058</b>			
SCALE:	SHEET 4 OF 11 SHEETS	STA.	TO STA.

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
116	D7 BRIDGE REPAIRS 2024-1	CUMBERLAND	24	13
CONTRACT NO. 74827				
ILLINOIS FED. AID PROJECT				

Note: Hatched area indicates removal.

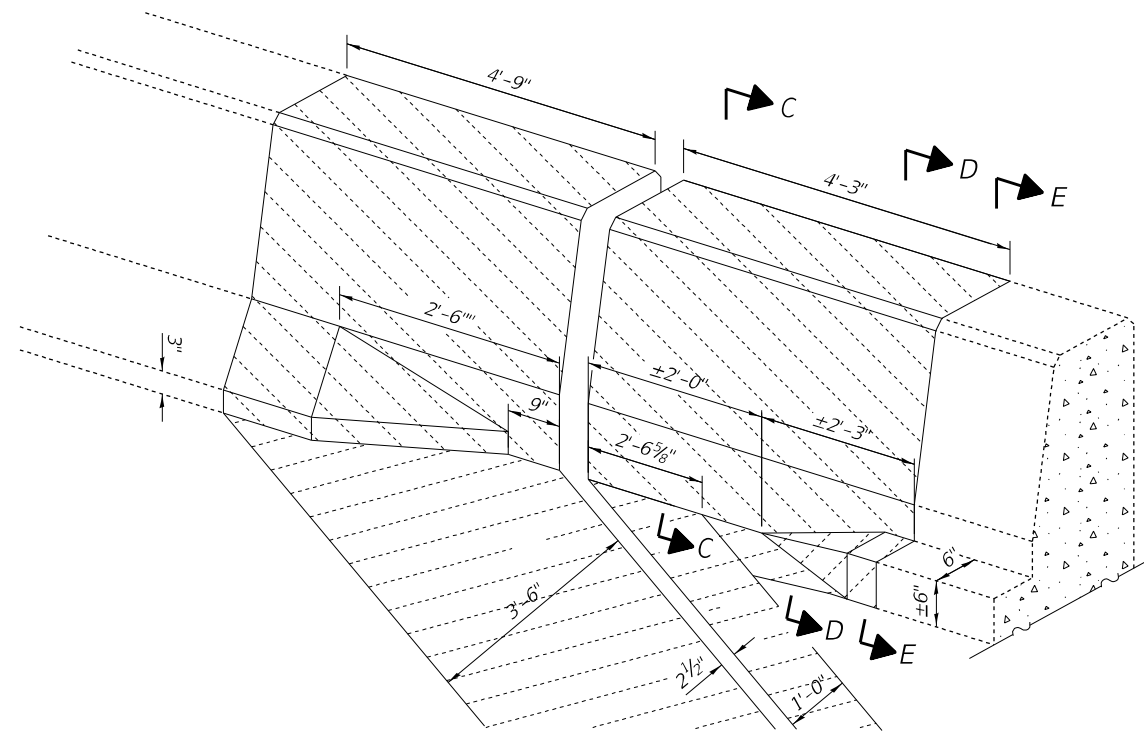


**CONCRETE REMOVAL AT NORTHEAST CORNER**  
Southwest Corner Similar

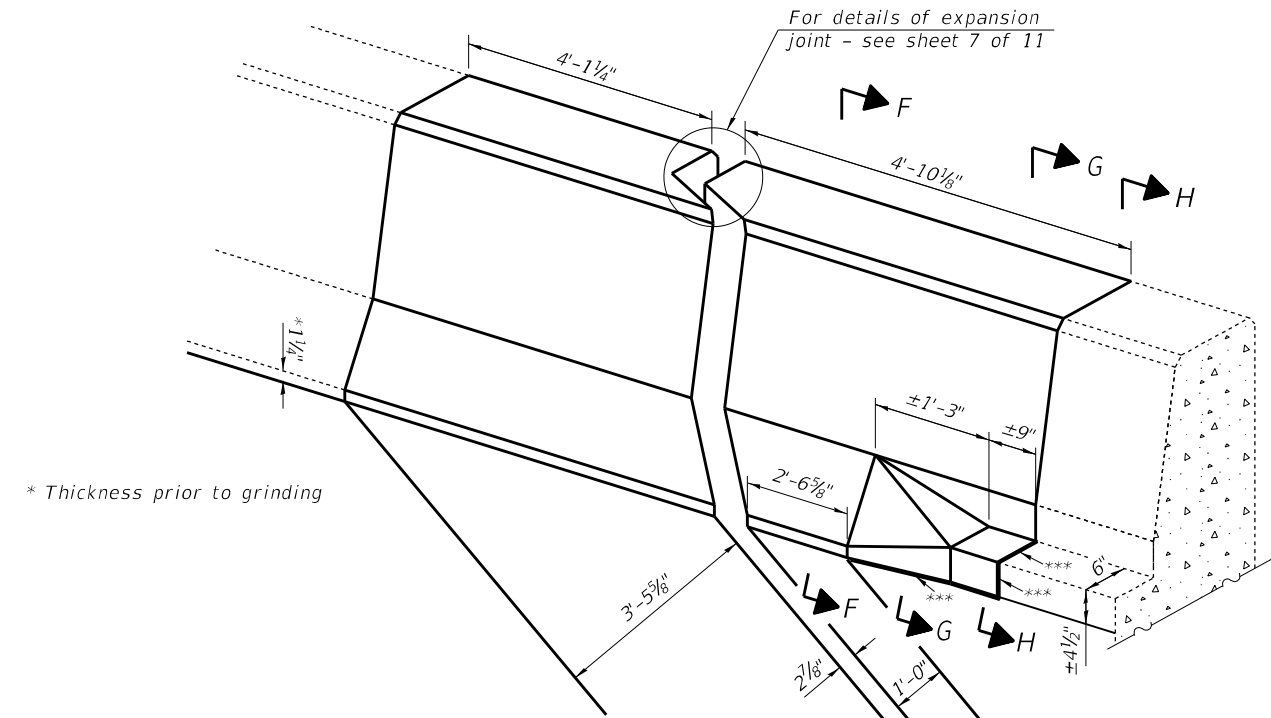


**PROPOSED WING WALL AT NORTHEAST CORNER**  
Southwest Corner Similar

\*\*\* 1/2" Preformed Expansion Joint Filler according to Article 1051.09 of the Standard Specifications; full depth of approach slab.



**CONCRETE REMOVAL AT NORTHWEST CORNER**  
Southeast Corner Similar



**PROPOSED WING WALL AT NORTHWEST CORNER**  
Southeast Corner Similar

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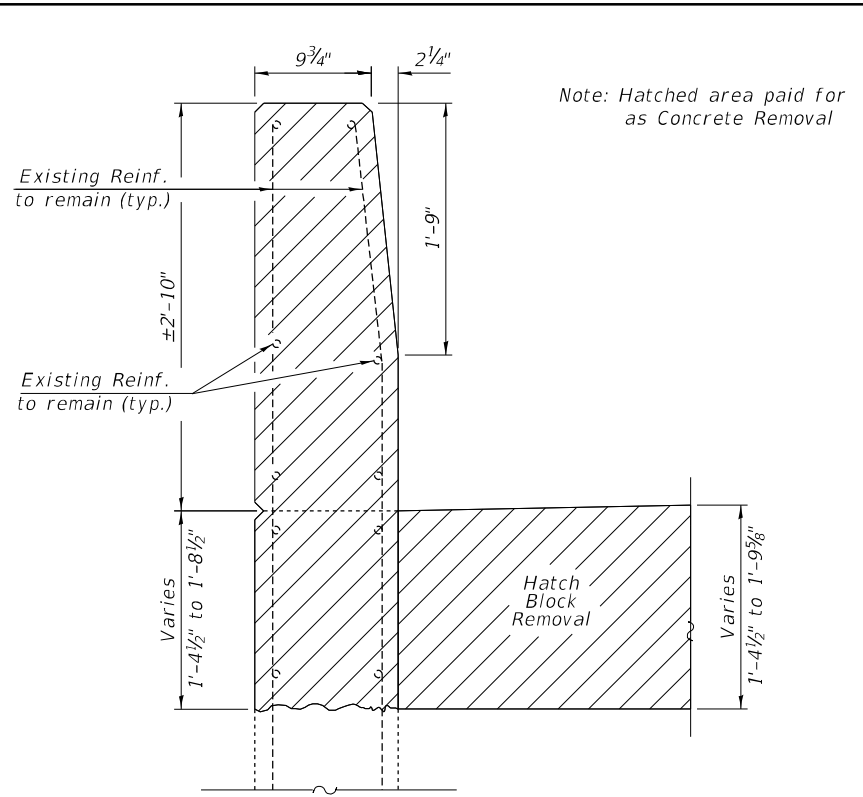
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	DATE - February 2023	REVISED -

**STATE OF ILLINOIS  
DEPARTMENT OF TRANSPORTATION**

**EXPANSION JOINT REPLACEMENT DETAILS  
S.N. 018-0058**

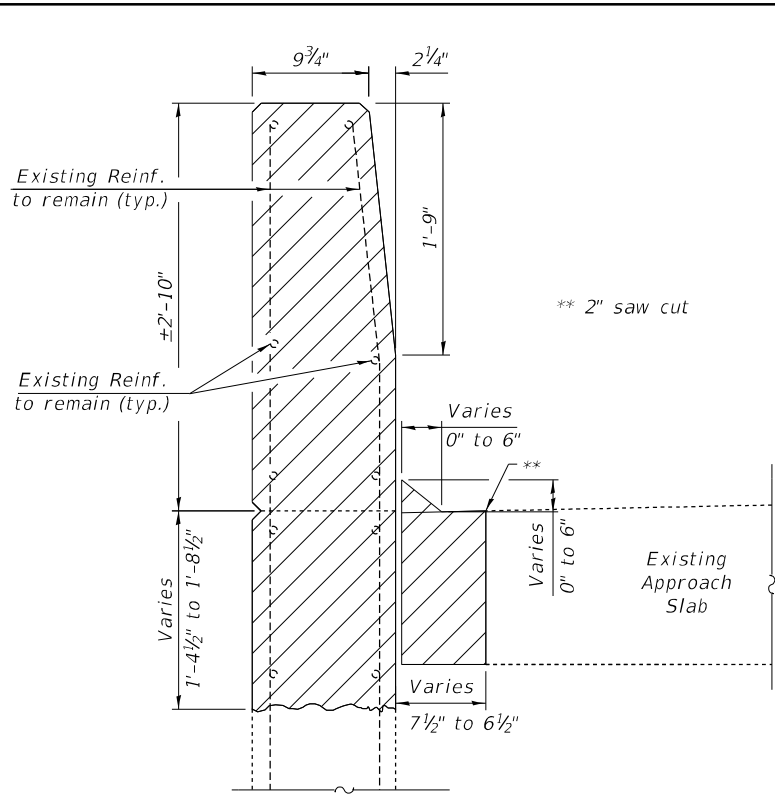
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F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
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ILLINOIS FED. AID PROJECT			CONTRACT NO. 74B27	



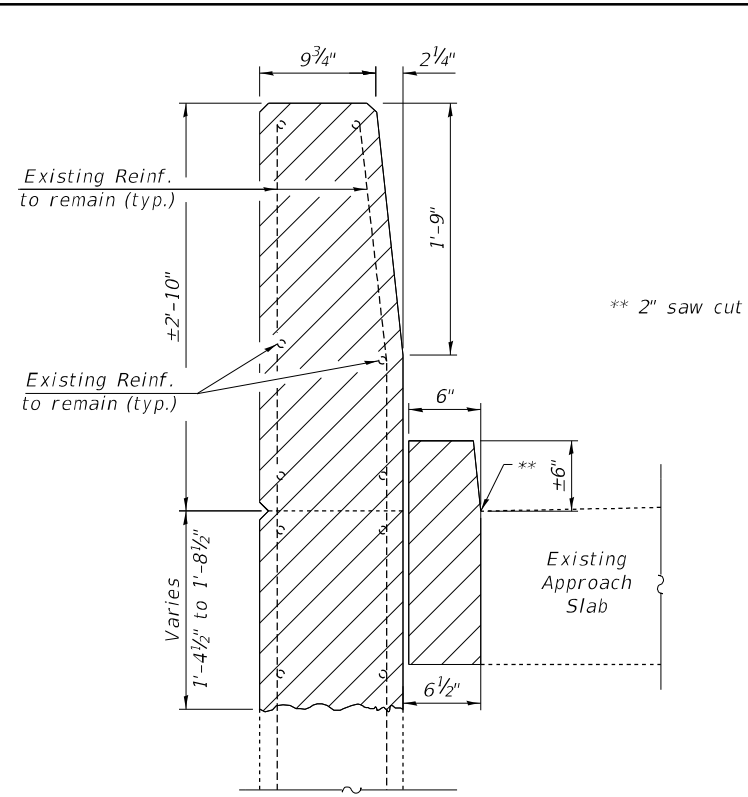
**SECTION C-C**

Removal section at wing wall



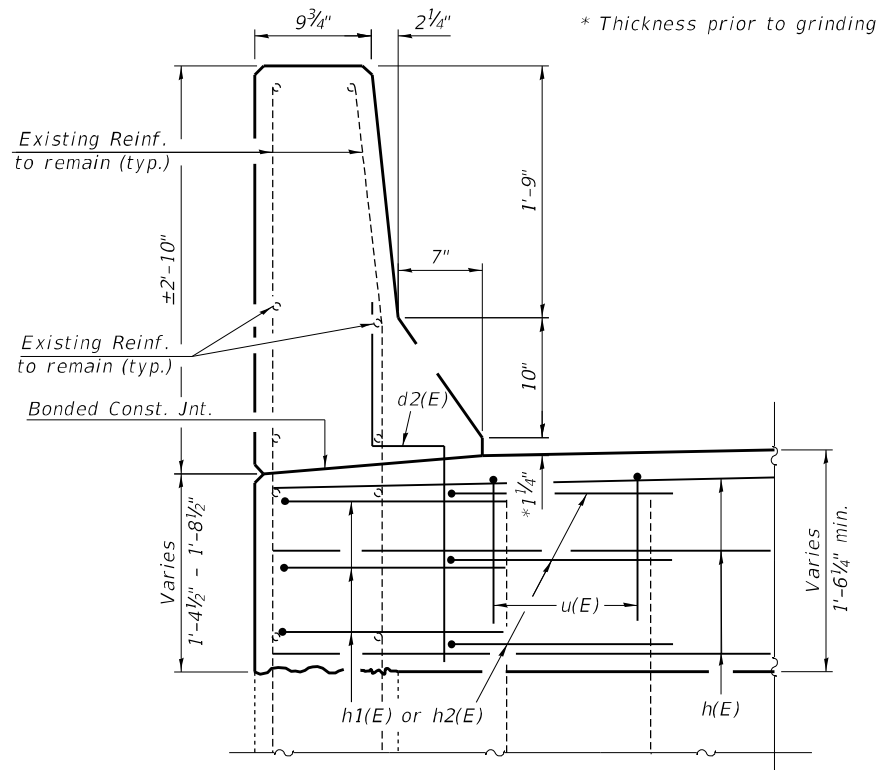
**SECTION D-D**

Removal section thru wingwall and curb transition



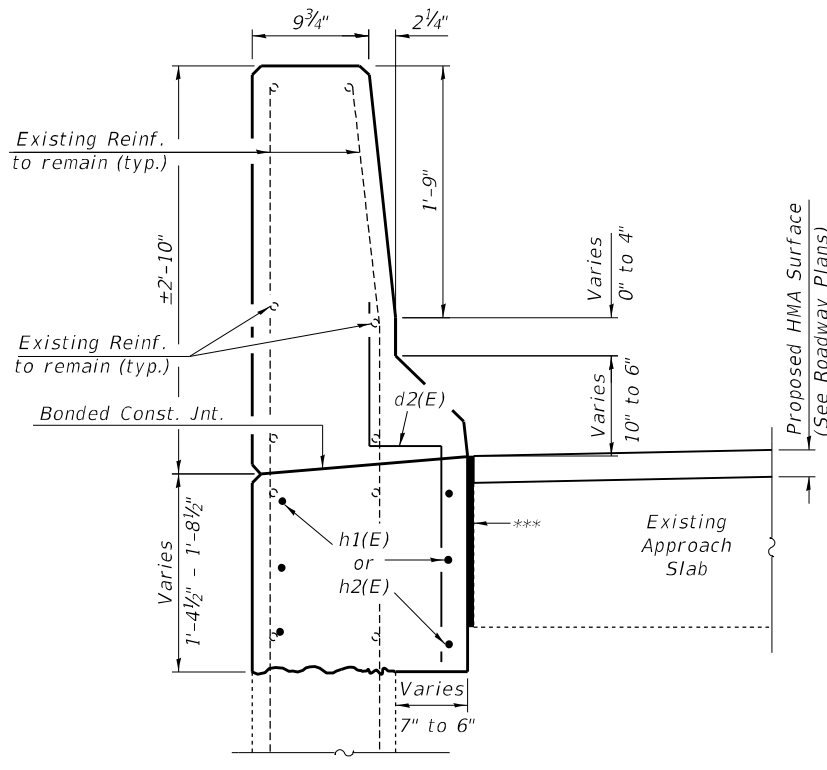
**SECTION E-E**

Removal section at existing curb



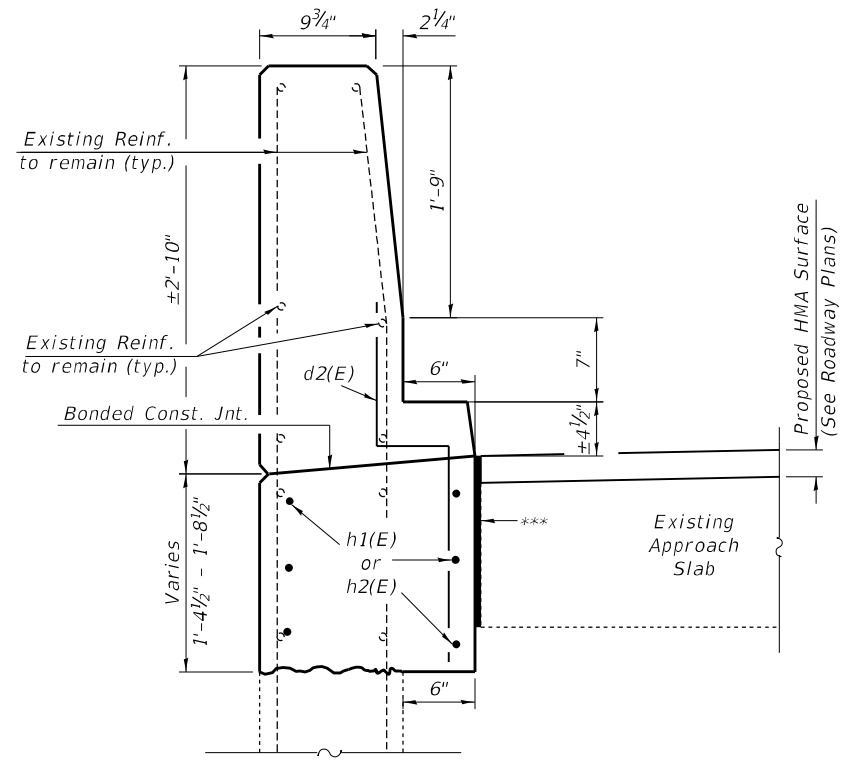
**SECTION F-F**

Proposed section thru wing wall at expansion joint



**SECTION G-G**

Section thru proposed wing wall transition



**SECTION H-H**

Section thru proposed wing wall

\*\*\* 1/2" Preformed Expansion Joint Filler according to Article 1051.09 of the Standard Specifications; full depth of approach slab.

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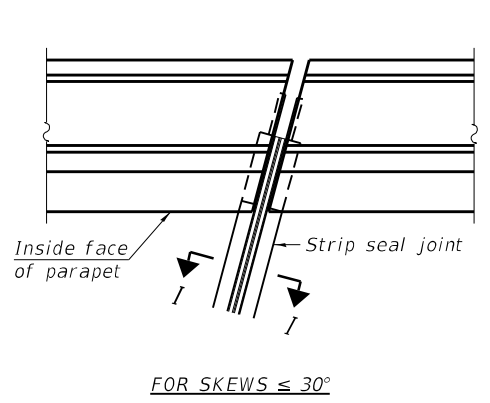
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**STATE OF ILLINOIS  
DEPARTMENT OF TRANSPORTATION**

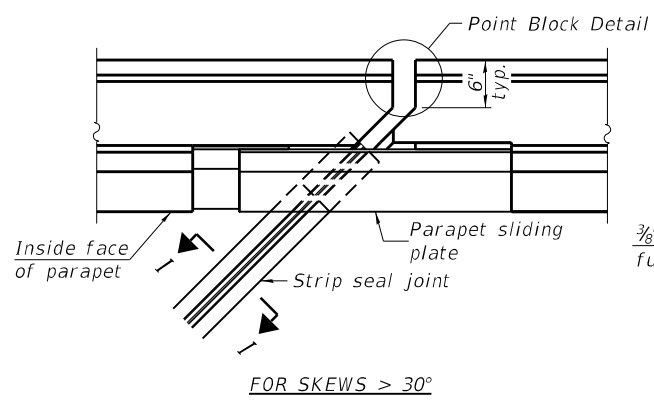
**EXPANSION JOINT REPLACEMENT DETAILS  
S.N. 018-0058**

SCALE: SHEET 6 OF 11 SHEETS STA. TO STA.

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
116	D7 BRIDGE REPAIRS 2024-1	CUMBERLAND	24	15
CONTRACT NO. 74827				
ILLINOIS FED. AID PROJECT				

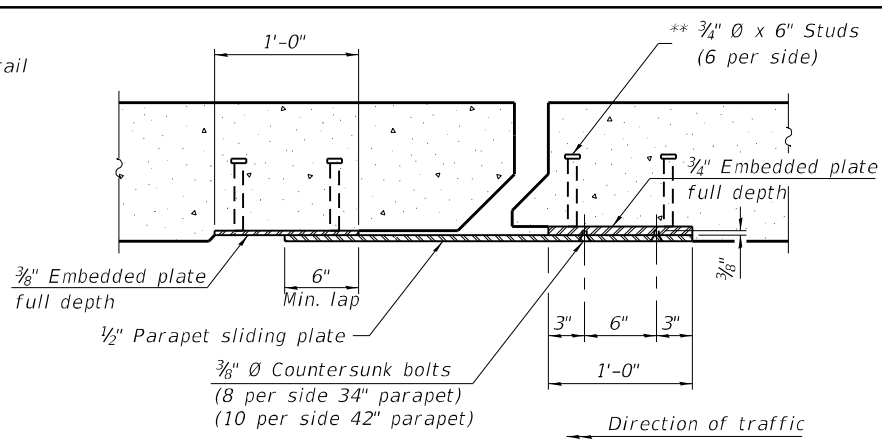


FOR SKEWS ≤ 30°

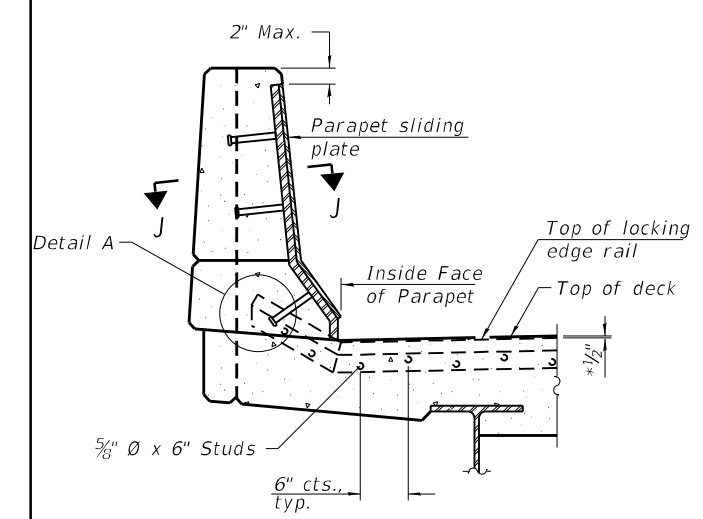


FOR SKEWS > 30°

**PLAN AT PARAPET**

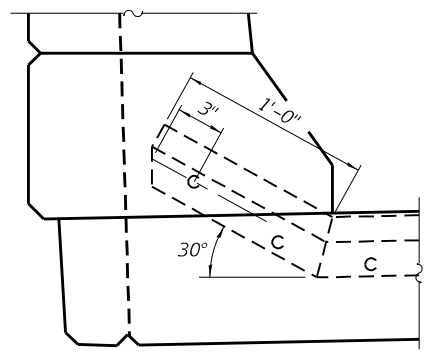


**SECTION J-J**

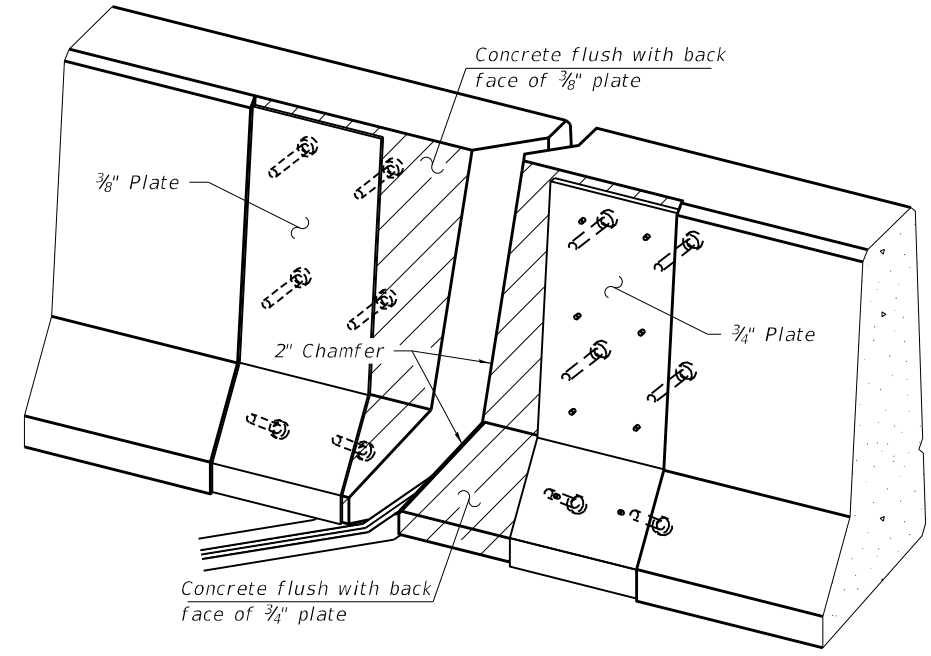


**ELEVATION AT PARAPET**

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

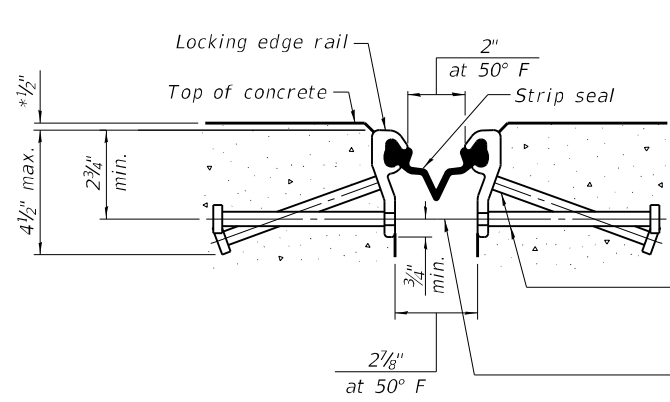


**DETAIL A**



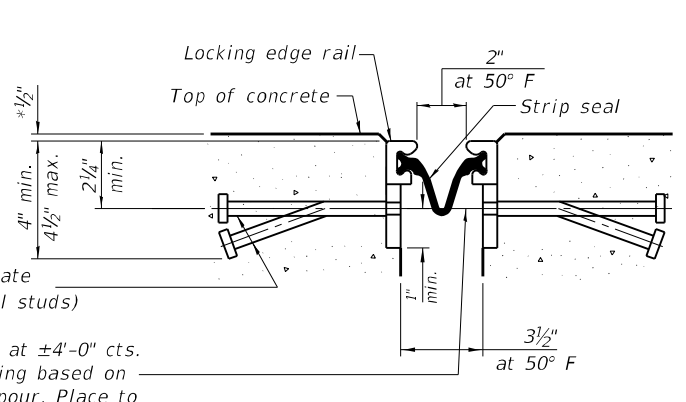
**TRIMETRIC VIEW**  
(Showing embedded plates only)

**Notes:**  
 The strip seal shall be made continuous and shall have a minimum thickness of 1/4". The configuration of the strip seal shall match the configuration of the locking edge rails. Open or "webbed" strip seal gland configurations are not permitted. The gland shall be sized for a maximum rated movement of 4 inches.  
 The 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 4 1/2" 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.  
 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**

\* Thickness prior to grinding



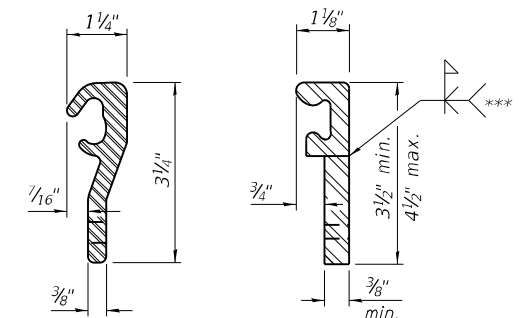
**SHOWING WELDED RAIL JOINT**

\*\* 5/8" Ø x 6" studs @ 6" cts. (alternate angled/bent studs with horizontal studs)

3/8" Ø threaded rods in 7/16" Ø 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.

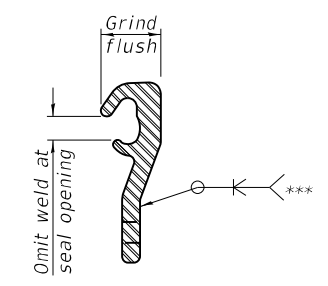
**SECTION I-I**

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



**LOCKING EDGE RAILS**  
 ROLLED (EXTRUDED) RAIL WELDED RAIL

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



**LOCKING EDGE RAIL SPLICE**

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

**BILL OF MATERIAL**

Item	Unit	Total
Preformed Joint Strip Seal	Foot	104

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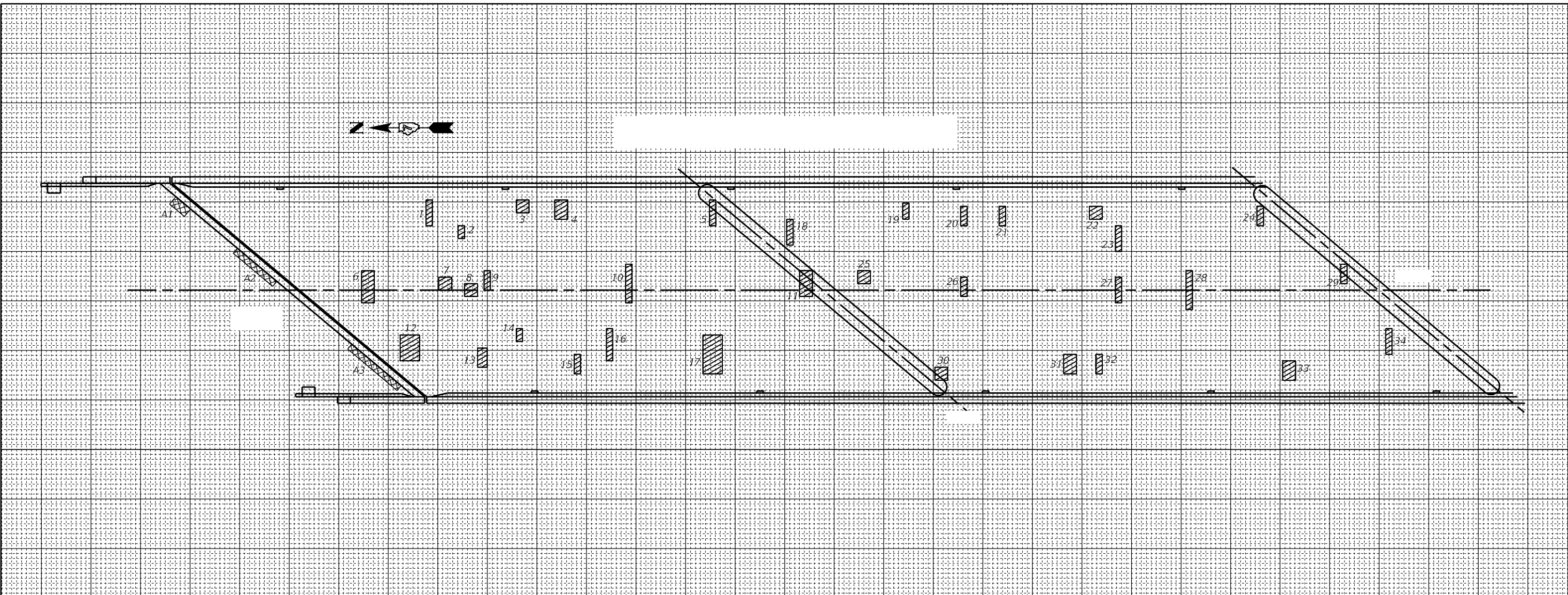
**STATE OF ILLINOIS  
DEPARTMENT OF TRANSPORTATION**

**PREFORMED JOINT STRIP SEAL  
S.N. 018-0058**

SCALE: SHEET 7 OF 11 SHEETS STA. TO STA.

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
116	D7 BRIDGE REPAIRS 2024-1	CUMBERLAND	24	16
ILLINOIS FED. AID PROJECT			CONTRACT NO. 74827	

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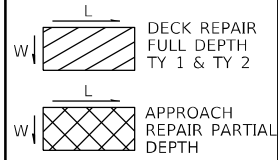
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2	1.0	2.0	0.2	
3	2.0	2.0	0.4	
4	2.0	3.0		0.7
5	1.0	4.0	0.4	
6	2.0	4.0		0.9
7	2.0	2.0	0.4	
8	2.0	2.0	0.4	
9	1.0	3.0	0.3	
10	1.0	6.0		0.7
11	2.0	4.0		0.9
12	3.0	4.0		1.3
13	1.5	3.0	0.5	
14	1.0	2.0	0.2	
15	1.0	3.0	0.3	
16	1.0	5.0	0.6	

PATCH NO.	SIZE		DECK SLAB REPAIR (FD TY I)	DECK SLAB REPAIR (FD TY II)
	LENGTH	WIDTH	SQ YD	SQ YD
17	3.0	6.0		2.0
18	1.0	4.0	0.4	
19	1.0	2.5	0.3	
20	1.0	3.0	0.3	
21	1.0	3.0	0.3	
22	2.0	2.0	0.4	
23	1.0	4.0	0.4	
24	1.0	3.0	0.3	
25	2.0	2.0	0.4	
26	1.0	3.0	0.3	
27	1.0	4.0	0.4	
28	1.0	6.0		0.7
29	1.0	3.0	0.3	
30	2.0	2.0	0.4	
31	2.0	3.0		0.7
32	1.0	3.0	0.3	

PATCH NO.	SIZE		DECK SLAB REPAIR (FD TY I)	DECK SLAB REPAIR (FD TY II)
	LENGTH	WIDTH	SQ YD	SQ YD
33	2.0	3.0		0.7
34	1.0	4.0	0.4	
TOTAL ROUNDS TO:			10.0	9.0

PATCH NO.	SIZE		APPROACH SLAB REPAIR (PARTIAL DEPTH)
	LENGTH	WIDTH	SQ YD
A1	1.5	3.0	0.5
A2	1.0	8.0	0.9
A3	1.0	10.0	1.1
TOTAL			2.5

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



DATE OF SURVEY: 2-15-2023  
 SURVEY BY: DPM & TMW  
 METHOD OF SURVEY: VISUAL

ESTIMATED PAY QUANTITIES:  
 DECK SLAB REPAIR (FULL DEPTH TYPE I)  
 10.0 SQ YD  
 DECK SLAB REPAIR (FULL DEPTH TYPE II)  
 9.0 SQ YD  
 APPROACH SLAB REPAIR (PARTIAL DEPTH)  
 2.5 SQ YD

USER NAME = jessica.hille	DESIGNED - T. Walk	REVISED -
PLOT SCALE = 100,0000' / in.	DRAWN - T. Walk	REVISED -
PLOT DATE = 10/20/2023	CHECKED - D. Macklin	REVISED -
	DATE - February 2022	REVISED -

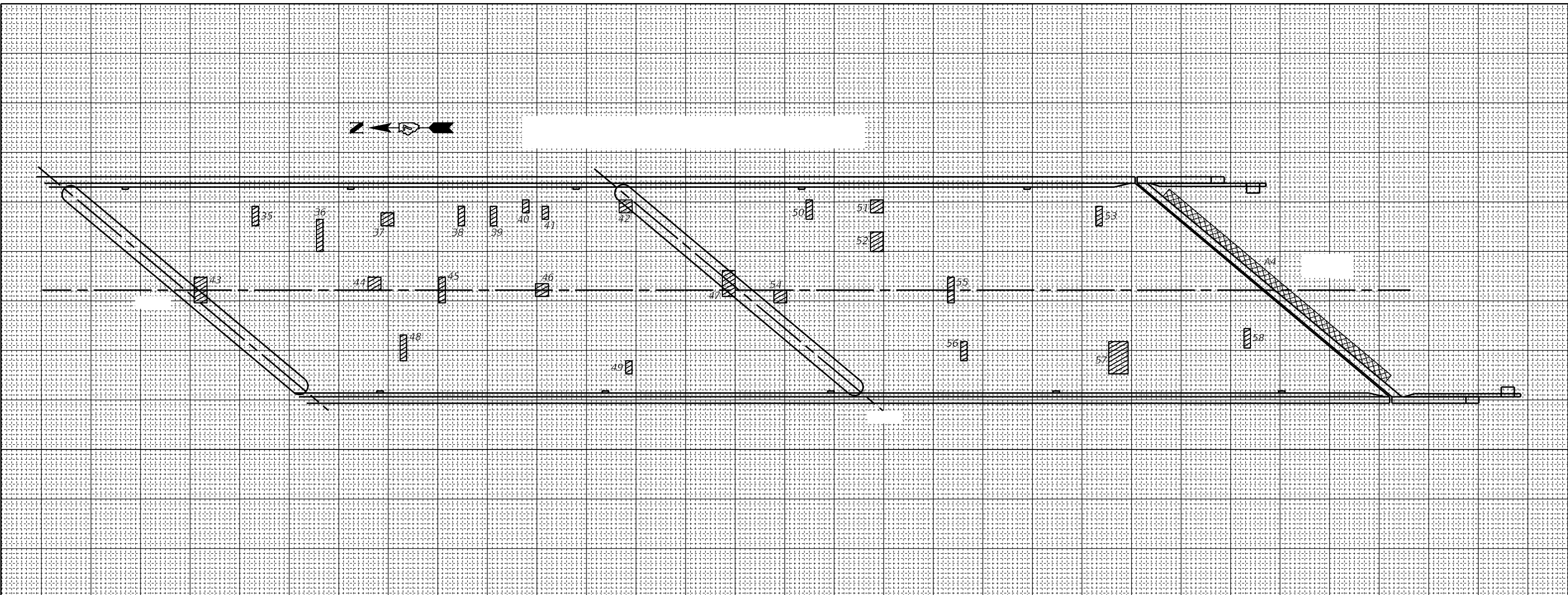
STATE OF ILLINOIS  
 DEPARTMENT OF TRANSPORTATION

BRIDGE DECK AND APPROACH PATCHING, SPANS 1 & 2  
 SN. 018-0058

SCALE: SHEET 8 OF 11 SHEETS STA. TO STA.

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
116	D7 BRIDGE REPAIRS 2024-1	CUMBERLAND	24	17
CONTRACT NO. 74B27				
ILLINOIS FED. AID PROJECT				

MODEL: Default  
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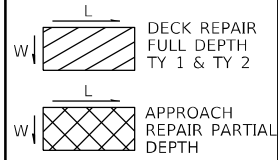


PATCH NO.	SIZE		DECK SLAB REPAIR (FD TY I) SQ YD	DECK SLAB REPAIR (FD TY II) SQ YD
	LENGTH	WIDTH		
35	1.0	3.0	0.3	
36	1.0	5.0	0.6	
37	2.0	2.0	0.4	
38	1.0	3.0	0.3	
39	1.0	3.0	0.3	
40	1.0	2.0	0.2	
41	1.0	2.0	0.2	
42	2.0	2.0	0.4	
43	2.0	4.0		0.9
44	2.0	2.0	0.4	
45	1.0	4.0	0.4	
46	2.0	2.0	0.4	
47	2.0	4.0		0.9
48	1.0	4.0	0.4	
49	1.0	2.0	0.2	
50	1.0	3.0	0.3	

PATCH NO.	SIZE		DECK SLAB REPAIR (FD TY I) SQ YD	DECK SLAB REPAIR (FD TY II) SQ YD
	LENGTH	WIDTH		
51	2.0	2.0	0.4	
52	2.0	3.0		0.7
53	1.0	3.0	0.3	
54	2.0	2.0	0.4	
55	1.0	4.0	0.4	
56	1.0	4.0	0.4	
57	3.0	5.0		1.7
58	1.0	3.0	0.3	
TOTAL ROUNDS TO:			8.0	5.0

PATCH NO.	SIZE		APPROACH SLAB REPAIR (PARTIAL DEPTH) SQ YD
	LENGTH	WIDTH	
A4	4.0	45.0	7.5
TOTAL			7.5

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



DATE OF SURVEY: 2-15-2023  
 SURVEY BY: DPM & TMW  
 METHOD OF SURVEY: VISUAL

ESTIMATED PAY QUANTITIES:  
 DECK SLAB REPAIR (FULL DEPTH TYPE I) 8.0 SQ YD  
 DECK SLAB REPAIR (FULL DEPTH TYPE II) 5.0 SQ YD  
 APPROACH SLAB REPAIR (PARTIAL DEPTH) 7.5 SQ YD

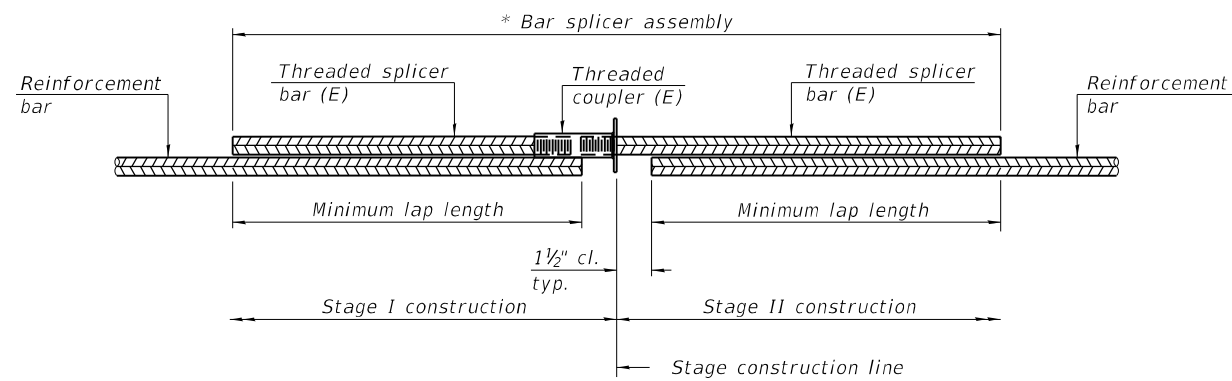
USER NAME = jessica.hille	DESIGNED - T. Walk	REVISED -
PLOT SCALE = 100,000' / in.	DRAWN - T. Walk	REVISED -
PLOT DATE = 10/20/2023	CHECKED - D. Macklin	REVISED -
	DATE - February 2022	REVISED -

STATE OF ILLINOIS  
 DEPARTMENT OF TRANSPORTATION

BRIDGE DECK AND APPROACH PATCHING, SPANS 3 & 4  
 SN. 018-0058

SCALE: SHEET 9 OF 11 SHEETS STA. TO STA.

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
116	D7 BRIDGE REPAIRS 2024-1	CUMBERLAND	24	18
CONTRACT NO. 74B27				
ILLINOIS FED. AID PROJECT				

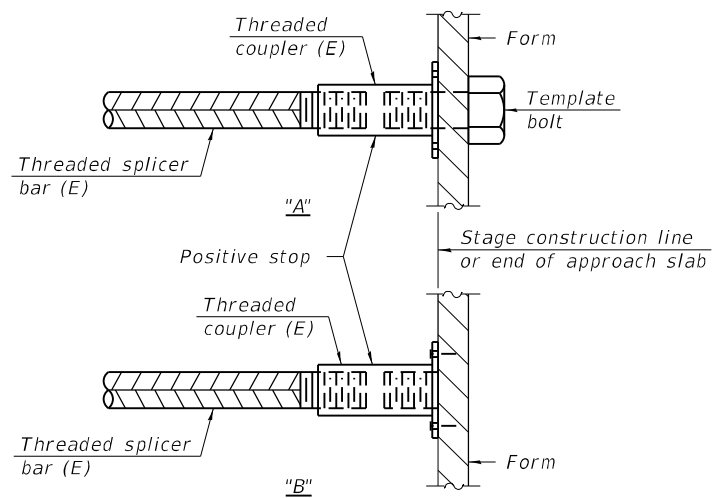


**STANDARD BAR SPLICER ASSEMBLY PLAN**  
 (All components shall be provided from one supplier)

Threaded splicer bar length = min. lap length + 1 1/2" + thread length

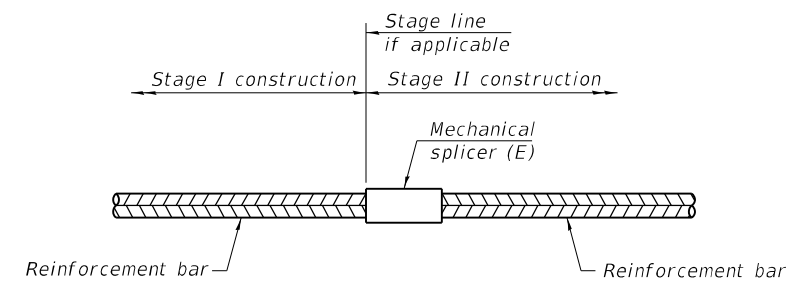
\* Epoxy not required on Bar Splicer Assembly components used in conjunction with black bars.

Location	Bar size	No. assemblies required	Minimum lap length
Deck	#5	38	3'-6"
Approach	#6	12	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

1-1-2020

STATE OF ILLINOIS  
 DEPARTMENT OF TRANSPORTATION

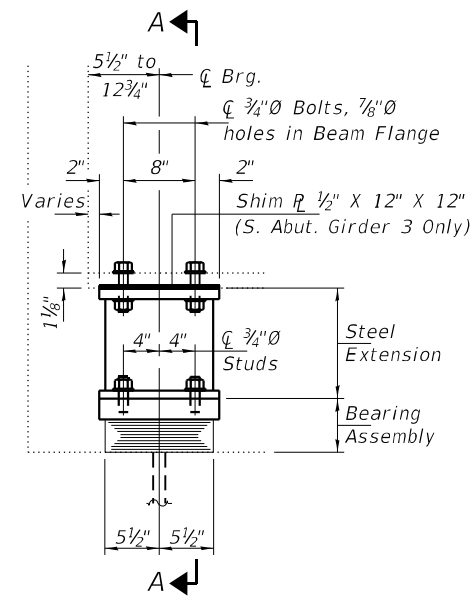
BAR SPLICER ASSEMBLY AND MECHANICAL SPLICER DETAILS  
 S.N. 018-0058

USER NAME = jessica.hille	DESIGNED - T. Walk	REVISED -
	DRAWN - T. Walk	REVISED -
PLOT SCALE = 100,0000' / in.	CHECKED - D. Macklin	REVISED -
PLOT DATE = 10/20/2023	DATE - February 2023	REVISED -

SCALE: SHEET 10 OF 11 SHEETS STA. TO STA.

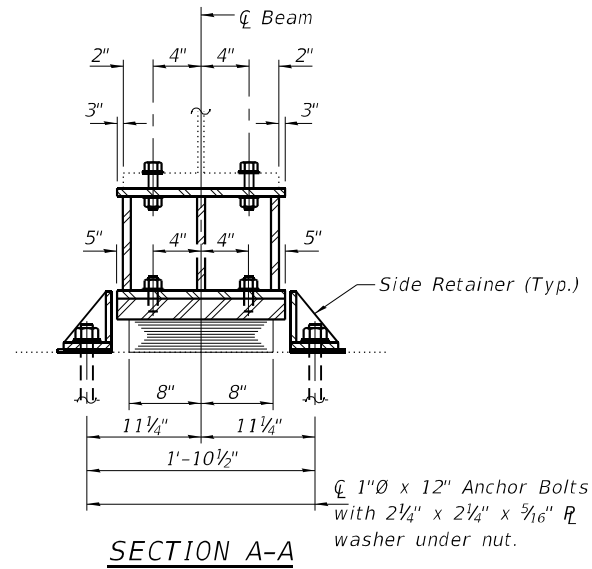
F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
116	D7 BRIDGE REPAIRS 2024-1	CUMBERLAND	24	19
				CONTRACT NO. 74B27
ILLINOIS FED. AID PROJECT				

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ELEVATION AT BOTH ABUTMENT'S

TYPE I ELASTOMERIC EXP. BRG.

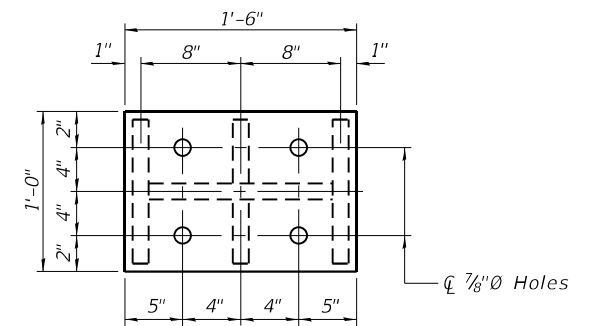


SECTION A-A

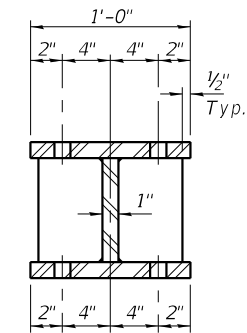
BEAM REACTIONS

R <sub>l</sub>	(K)	48.2
R <sub>t</sub>	(K)	7.2
Imp.	(K)	17.6
R (Total)	(K)	137.8

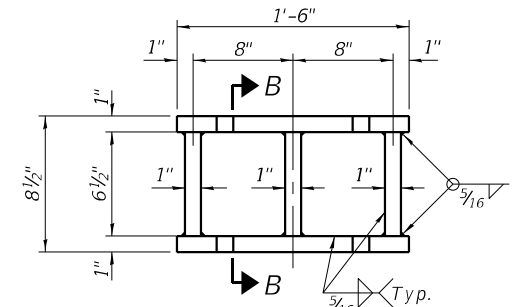
Notes:  
 Diaphragm removal and reinstallation may be required to facilitate drilling holes. Cost included with Furnishing and Erecting Structural Steel.  
 New steel extensions, shim plates and connection bolts are included with Furnishing and Erecting Structural Steel.  
 Prior to ordering any material, the Contractor shall verify in the field all bearing height and shim thickness dimensions. Adjustment must account for deck heave due to pack rust (if present).  
 Min. jack capacity = 70 Tons.  
 Anchor bolts shall be ASTM F1554 all-thread (or an Engineer-approved alternate material) of the grade(s) and diameter(s) specified. ASTM A307 Grade C anchor bolts may be used in lieu of ASTM F1554 Grade 36 (F<sub>y</sub>=36ksi). The corresponding specified grade of AASHTO M314 anchor bolts may be used in lieu of ASTM F1554.  
 Drilled and set anchor bolts shall be installed according to Article 521.06 of the Standard Specifications.  
 Cost of Side retainers and Stainless Steel plates shall be included in the cost of Elastomeric Bearing Assembly, Type I.



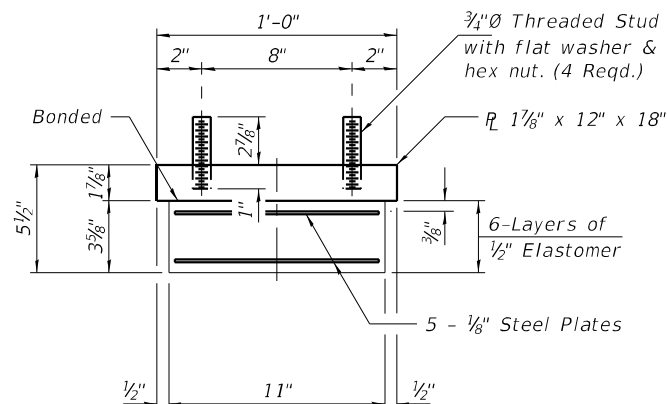
PLAN TOP AND BOTTOM PLATE



SECTION B-B

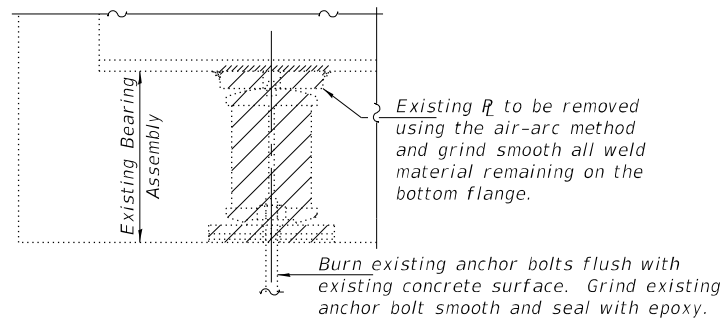


STEEL EXTENSION DETAIL



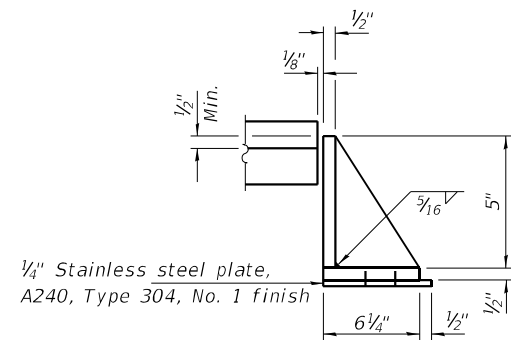
BEARING ASSEMBLY

Note:  
 Shim plates shall not be placed under Bearing Assembly.



EXISTING BEARING REMOVAL DETAIL

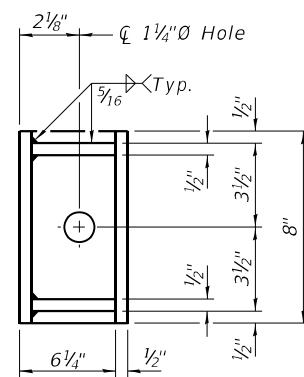
Cost included with Jack and Remove Existing Bearings.



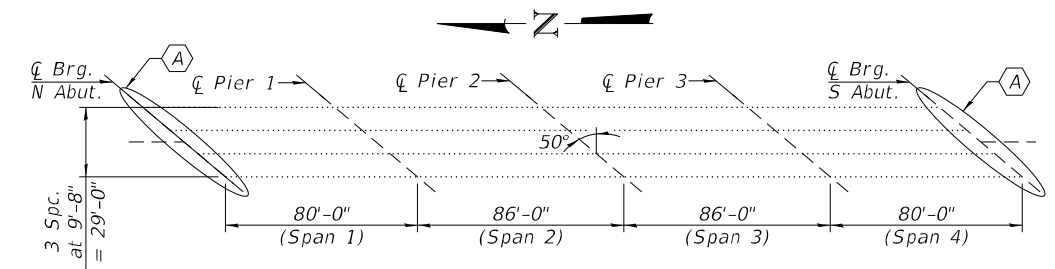
SIDE RETAINER

(48 Required)

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



SIDE RETAINER-CLIP DETAILS



PARTIAL FRAMING PLAN

(A) - Bearing Removal and Replacement.

TOTAL BILL OF MATERIAL

ITEM	UNIT	QUANTITY
Jack and Remove Existing Bearings	Each	8
Elastomeric Bearing Assembly, Type I	Each	8
Furnishing and Erecting Structural Steel	Pound	1730
Anchor Bolts, 1"Ø	Each	16

All Steel to be galvanized.

DESIGNED - Chi-Cheung Chau  
 CHECKED - Adrian T. Halloway  
 DRAWN - Venkat Ramana Reddy  
 CHECKED - CCC ATH

EXAMINED  
 ENGINEER OF STRUCTURAL SERVICES  
 PASSED  
 ENGINEER OF BRIDGES AND STRUCTURES

DATE - DECEMBER 6, 2023  
 REVISED -  
 REVISED -

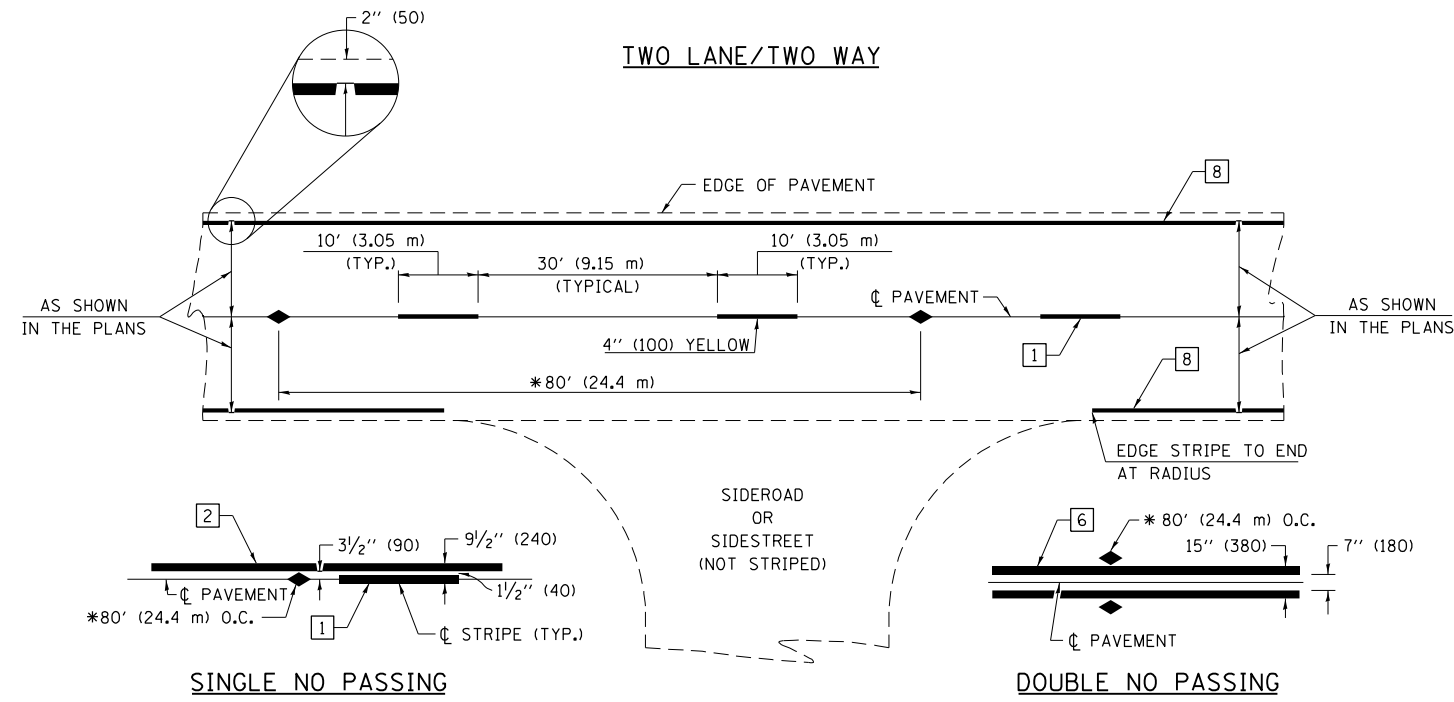
STATE OF ILLINOIS  
 DEPARTMENT OF TRANSPORTATION

BEARING DETAILS  
 FAP 116 (IL - 130) OVER HURRICANE CREEK  
 SN 018 - 0058

SHEET NO. 11 OF 11 SHEETS

F.A.I RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
116	D7 Bridge Repairs 2024-1	CUMBERLAND	24	20
CONTRACT NO. 74B27				
ILLINOIS FED. AID PROJECT				

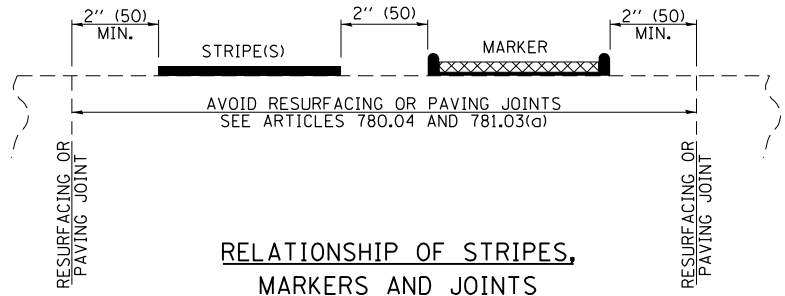




\* REDUCE TO 40' (12.2 m) O.C. ON CURVES WITH POSTED OR ADVISORY SPEEDS OF 45 mph (70 km/h) OR LESS.

PAVEMENT MARKING LEGEND

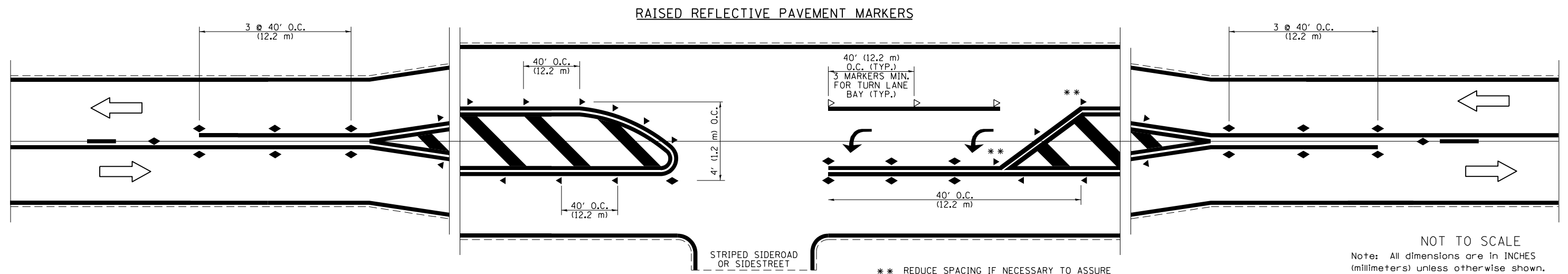
- 1 4" (100) SKIP-DASH (YELLOW)
- 2 4" (100) SOLID (YELLOW)
- 3 12" (300) DIAGONAL (YELLOW)
- 4 4" (100) DOUBLE YELLOW (NARROW)
- 5 12" (300) SOLID WHITE
- 6 4" (100) DOUBLE YELLOW (WIDE)
- 7 6" (150) SKIP-DASH (WHITE)
- 8 4" (100) SOLID (WHITE)
- 9 12" (300) DIAGONAL (WHITE)
- 10 6" (150) SOLID (WHITE)
- 11 24" (600) STOP BAR (WHITE)
- 12 8" (200) SOLID (WHITE)
- 13 4" (100) PARKING WHITE



RELATIONSHIP OF STRIPES, MARKERS AND JOINTS

TYPICAL PAVEMENT MARKERS LEGEND

- ◆ TWO-WAY AMBER MARKER
- ▶ ONE-WAY AMBER MARKER
- ▷ ONE-WAY CRYSTAL MARKER



\*\* REDUCE SPACING IF NECESSARY TO ASSURE MARKERS AT CORNER POINTS.

NOT TO SCALE  
Note: All dimensions are in INCHES (millimeters) unless otherwise shown.

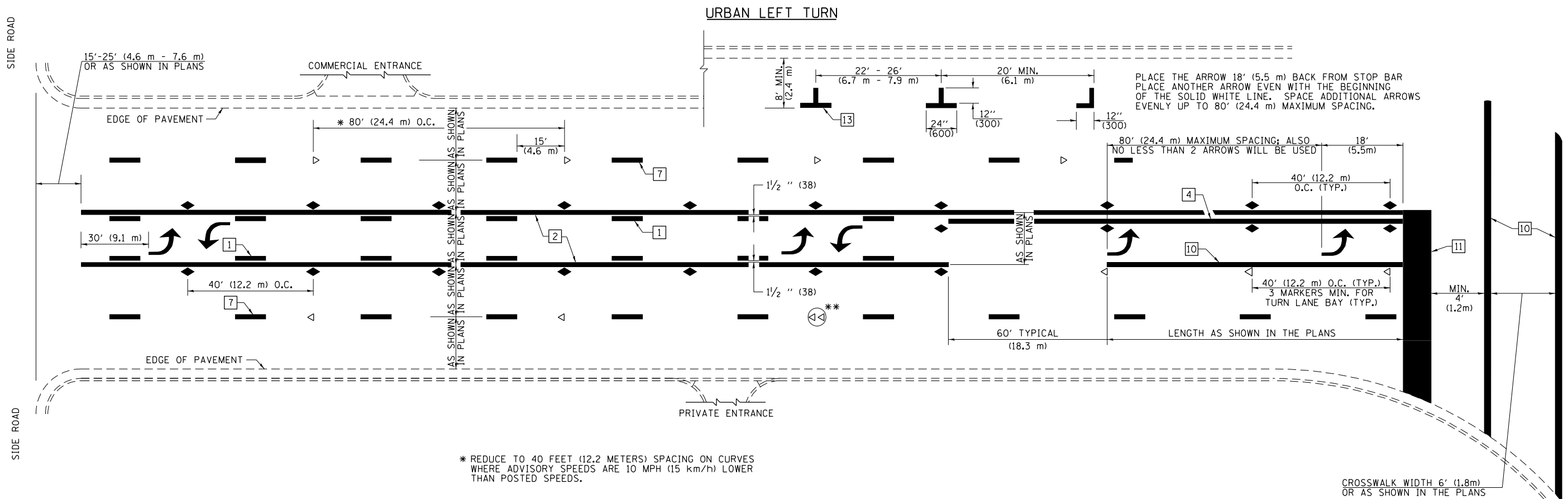
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PLOT SCALE = 100.0000' / in.		DATE -	REVISED -
PLOT DATE = 10/20/2023			

STATE OF ILLINOIS  
DEPARTMENT OF TRANSPORTATION

PAVEMENT MARKING AND RAISED REFLECTIVE PAVEMENT MARKERS  
(RURAL & URBAN APPLICATIONS)

SCALE: SHEET NO. 1 OF 4 SHEETS STA. TO STA.

DISTRICT 7 DETAIL NO. 78000001				
F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
116	07 BRIDGE REPAIRS 2024-1	CUMBERLAND	24	21
CONTRACT NO. 74B27				
ILLINOIS FED. AID PROJECT				



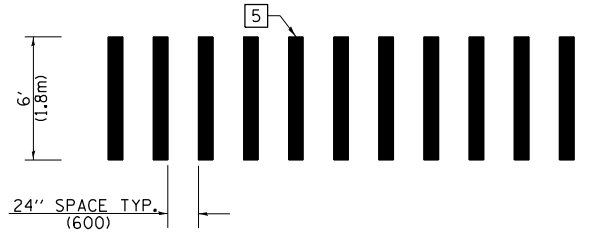
- \* REDUCE TO 40 FEET (12.2 METERS) SPACING ON CURVES WHERE ADVISORY SPEEDS ARE 10 MPH (15 km/h) LOWER THAN POSTED SPEEDS.
- \*\* DOUBLE LANE LINE MARKERS SHALL BE SPECIFIED AND SPACED AS SHOWN IN HIGHWAY STANDARD 781001 FOR MULTI-LANE DIVIDED AND UNDIVIDED HIGHWAYS.

**PAVEMENT MARKING LEGEND**

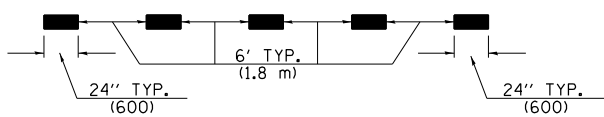
- 1 4" (100) SKIP-DASH (YELLOW)
- 2 4" (100) SOLID (YELLOW)
- 3 12" (300) DIAGONAL (YELLOW)
- 4 4" (100) DOUBLE YELLOW (NARROW)
- 5 12" (300) SOLID WHITE
- 6 4" (100) DOUBLE YELLOW (WIDE)
- 7 6" (150) SKIP-DASH (WHITE)
- 8 4" (100) SOLID (WHITE)
- 9 12" (300) DIAGONAL (WHITE)
- 10 6" (150) SOLID (WHITE)
- 11 24" (600) STOP BAR (WHITE)
- 12 8" (200) SOLID (WHITE)
- 13 4" (100) PARKING WHITE

**GENERAL NOTES**

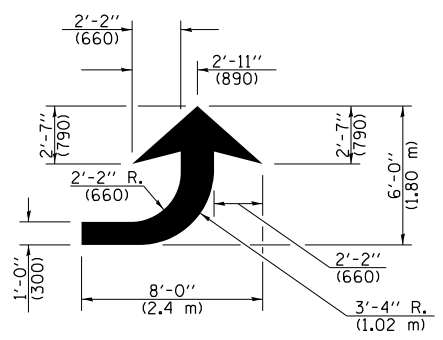
1. TURN ARROW PAIRS SHALL BE PLACED AT 250' (75 m) INTERVALS AND SHALL BE EVENLY SPACED BETWEEN BOTH ENDS OF THE BIDIRECTIONAL LEFT TURN LANE. USE A MINIMUM OF TWO PAIRS PER BLOCK.
2. THE SOLID YELLOW PAVEMENT MARKINGS [2] SHOULD GENERALLY START OR END NEAR THE RADIUS POINT OF EACH STREET RETURN EXCEPT WHERE ONE OR BOTH ENDS WOULD INCLUDE STOP BARS.
3. THE SKIP-DASH PAVEMENT MARKINGS [1] OR [7] SHOULD BE CENTERED BETWEEN BOTH ENDS OF EACH CITY BLOCK AND SHALL BE PLACED SO THEY LINE UP ACROSS FROM EACH OTHER.
4. USE LARGE ARROW SIZE FOR BOTH RURAL AND URBAN LOCATIONS. (SEE SECTION 780 FOR SYMBOLS TABLE)
5. LANE LINE EXTENSIONS SHALL BE THE SAME COLOR AND WIDTH AS THE LANE LINE BEING EXTENDED.
6. ALL WHITE SKIP-DASH LINES SHALL BE 6" IN WIDTH.



**CROSSWALK DETAIL (DECATUR CITY LIMITS ONLY)**

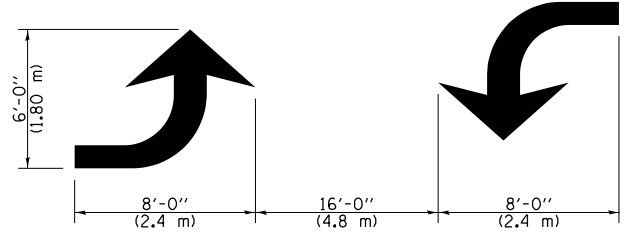


**LANE LINE EXTENSIONS**



**LEFT ARROW**

REVERSE FOR RIGHT ARROW  
AREA = 15.6 SQ. FT. (1.47 m<sup>2</sup>)  
(WHITE)



**TYPICAL DOUBLE TURN ARROWS (WHITE)**

NOT TO SCALE

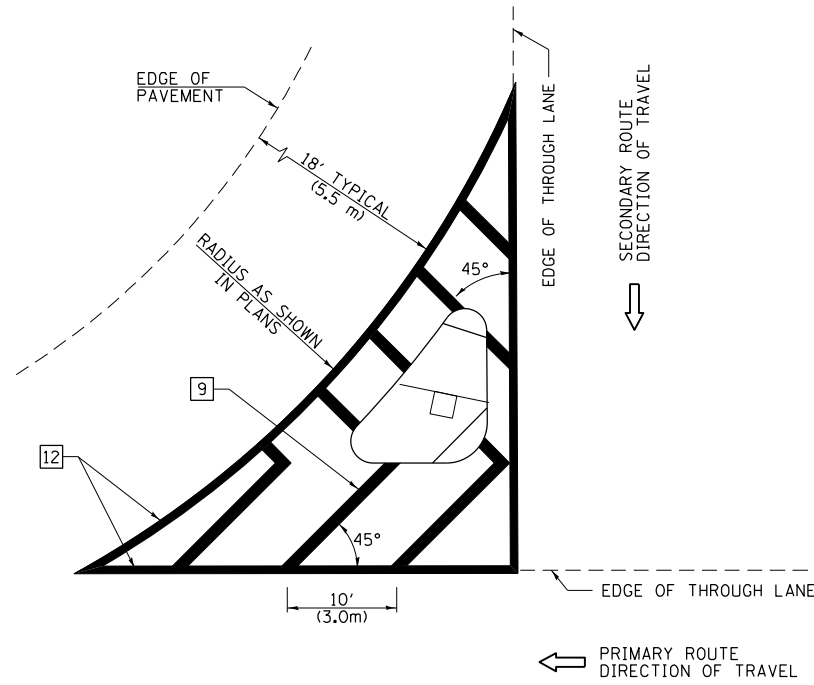
Note: All dimensions are in INCHES (millimeters) unless otherwise shown.

**DISTRICT 7 DETAIL NO. 7800001**

FILE NAME =	USER NAME = jessica.hille	DESIGNED -	REVISED - NAS 06/22	<b>STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION</b>	<b>PAVEMENT MARKING AND RAISED REFLECTIVE PAVEMENT MARKERS (RURAL &amp; URBAN APPLICATIONS)</b>	F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
pw:\idot-pw\Bentley.com\PIWIDOT\Documents\IDOT Offices\District 7\Projects\74B27\CADD\Drawings\74B27-shd-details.dgn	DRAWN	REVISD -	REVISD -			116	07 BRIDGE REPAIRS 2024-1	CUMBERLAND	24	22
PLOT SCALE = 100.0000' / in.	CHECKED -	REVISD -	REVISD -			CONTRACT NO. 74B27				
PLOT DATE = 10/20/2023	DATE -	REVISD -	REVISD -			ILLINOIS FED. AID PROJECT				

**ISLANDS**

**OPTION 1**

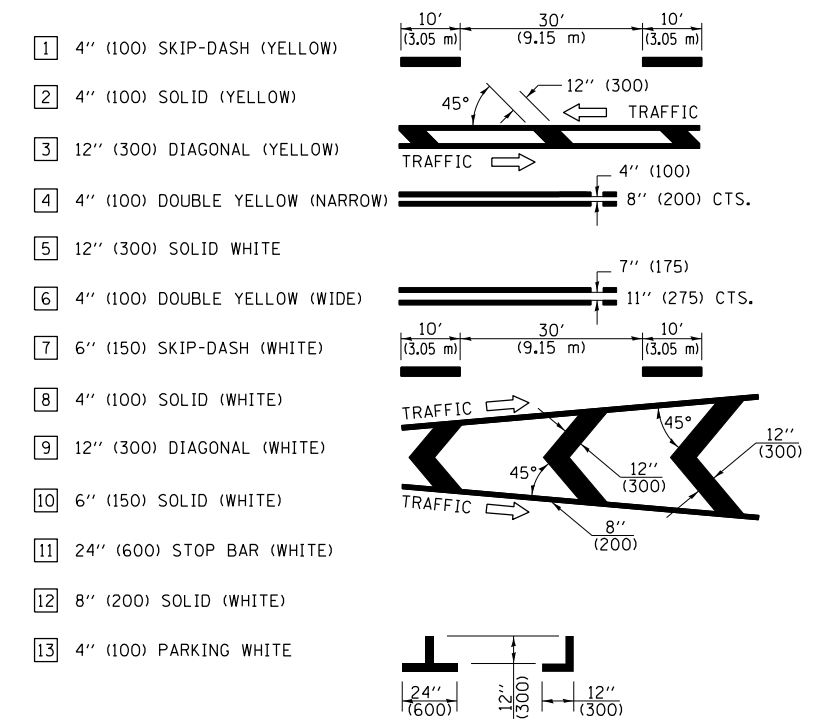


**GENERAL NOTES**

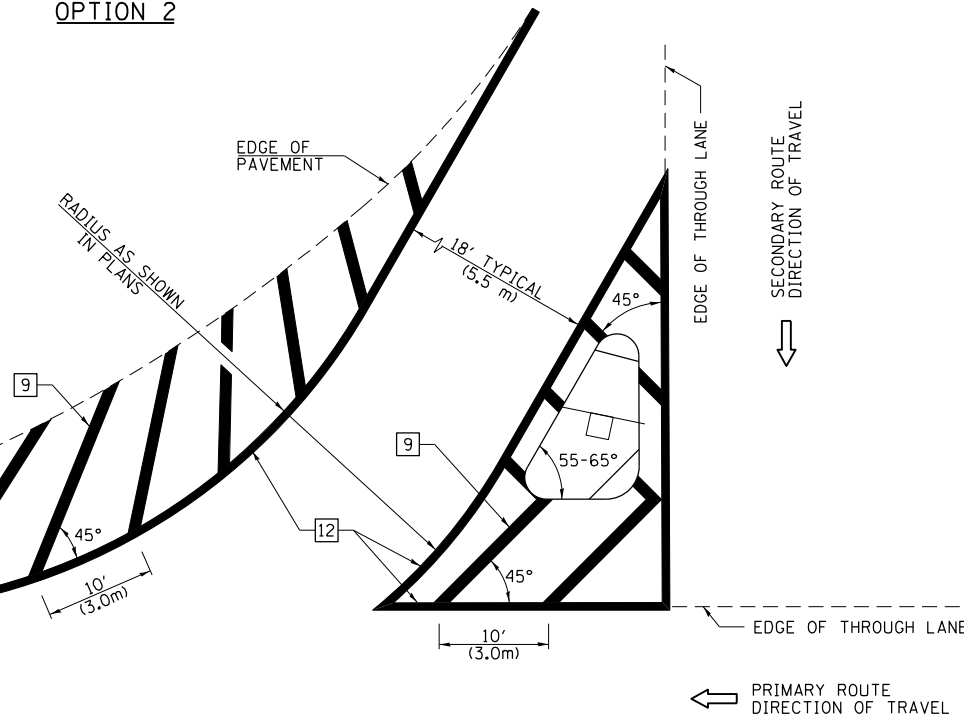
1. RAISED AND CORRUGATED MEDIANS SHALL BE OUTLINED WITH [2].
2. SOME OF THE INFORMATION INCLUDED WITH THIS DETAIL MAY NOT BE APPLICABLE TO THIS IMPROVEMENT.
3. PAVEMENT MARKINGS ARE TO BE EXTENDED THROUGH OMISSIONS WHEN APPLICABLE.
4. FINAL PAVEMENT MARKINGS SHALL BE IN PLACE PRIOR TO PLACING ANY RAISED REFLECTIVE PAVEMENT MARKERS.
5. THE FOLLOWING CRITERIA SHALL BE USED FOR SELECTING THE DIAGONAL PAVEMENT MARKING SPACING:
 

< 30 MPH (< 50 km/h)	15' (4.5 m)
30-45 MPH (50-75 km/h)	20' (6.0 m)
> 45 MPH (> 75 km/h)	30' (9.0 m)
6. THE USE OF ISLAND STRIPING OPTION 1 OR OPTION 2 SHALL BE AS SHOWN ON THE PLANS.

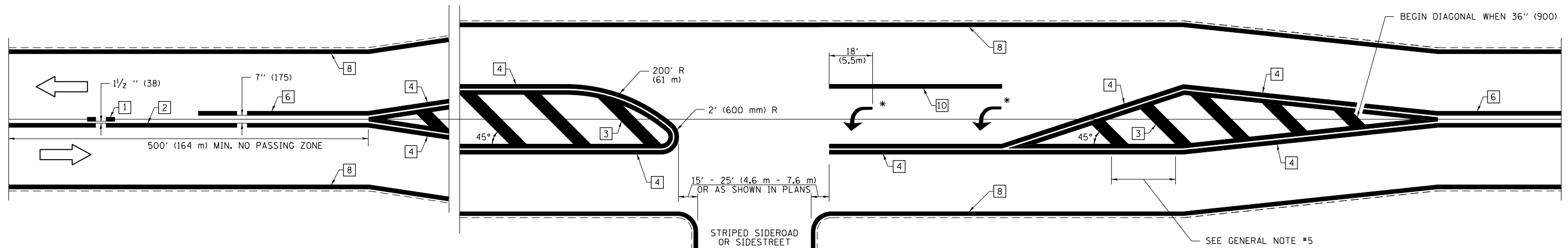
**PAVEMENT MARKING LEGEND**



**OPTION 2**



**RURAL LEFT TURN STRIPING**



\* PLACE AN ARROW 18' (5.5 m) BACK FROM END OF THE SOLID WHITE LINE. PLACE ANOTHER ARROW EVEN WITH THE BEGINNING OF THE SOLID WHITE LINE. SPACE ADDITIONAL ARROWS EVENLY UP TO 80' (24.4 m) MAXIMUM SPACING. USE MINIMUM OF 2 ARROWS.

NOT TO SCALE

Note: All dimensions are in INCHES (millimeters) unless otherwise shown.

**DISTRICT 7 DETAIL NO. 7800001**

FILE NAME =	USER NAME = jessica.hille	DESIGNED -	REVISED - NAS 06/22
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PLOT SCALE = 100.0000' / 1"		DATE -	REVISED -
PLOT DATE = 10/20/2023			

**STATE OF ILLINOIS  
DEPARTMENT OF TRANSPORTATION**

**PAVEMENT MARKING AND RAISED REFLECTIVE PAVEMENT MARKERS  
(RURAL & URBAN APPLICATIONS)**

SCALE: SHEET NO. 3 OF 4 SHEETS STA. TO STA.

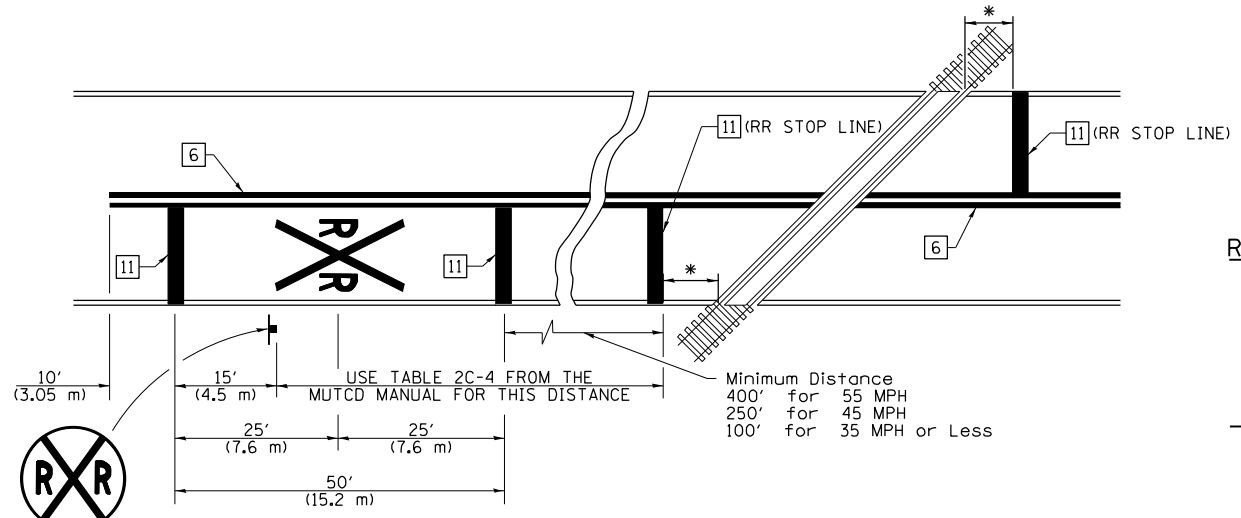
F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
116	07 BRIDGE REPAIRS 2024-1	CUMBERLAND	24	23
CONTRACT NO. 74B27				
ILLINOIS FED. AID PROJECT				

# SUPPLEMENTAL PAVEMENT MARKING TREATMENT FOR RAILROAD-HIGHWAY GRADE CROSSING

## PAVEMENT MARKING LEGEND

- 1 4" (100) SKIP-DASH (YELLOW)
  - 2 4" (100) SOLID (YELLOW)
  - 3 12" (300) DIAGONAL (YELLOW)
  - 4 4" (100) DOUBLE YELLOW (NARROW)
  - 5 12" (300) SOLID WHITE
  - 6 4" (100) DOUBLE YELLOW (WIDE)
  - 7 6" (150) SKIP-DASH (WHITE)
  - 8 4" (100) SOLID (WHITE)
  - 9 12" (300) DIAGONAL (WHITE)
  - 10 6" (150) SOLID (WHITE)
  - 11 24" (600) STOP BAR (WHITE)
  - 12 8" (200) SOLID (WHITE)
  - 13 4" (100) PARKING WHITE
- 

### PAVEMENT MARKINGS AT RAILROAD-HIGHWAY GRADE CROSSING

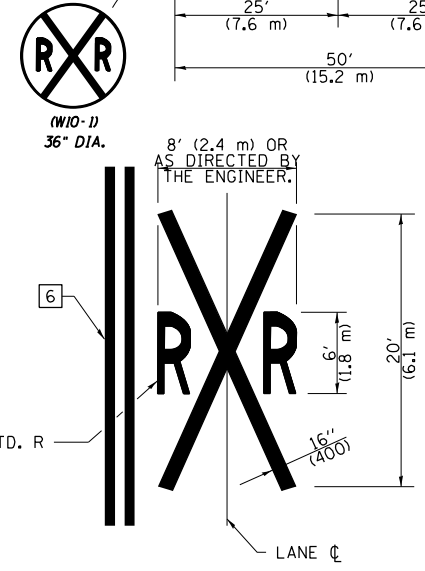


### NOTES

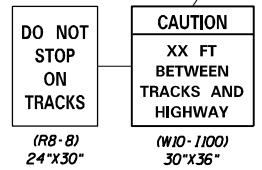
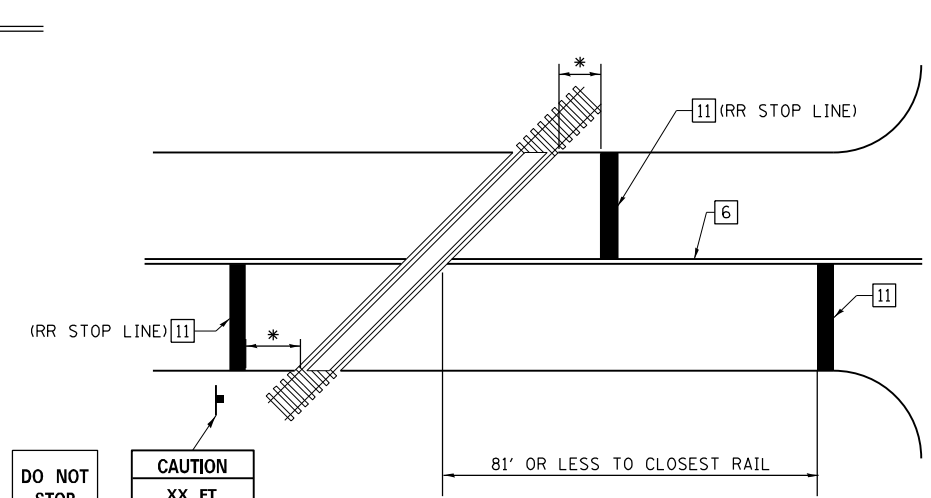
THE TRAVERSE SPREAD OF THE "X" MAY VARY ACCORDING TO LANE WIDTH.

ON MULTI-LANE ROADS, THE STOP LINES SHALL EXTEND ACROSS ALL APPROACH LANES AND SEPARATE RRR SYMBOLS SHALL BE PLACED ADJACENT TO EACH OTHER IN EACH LANE.

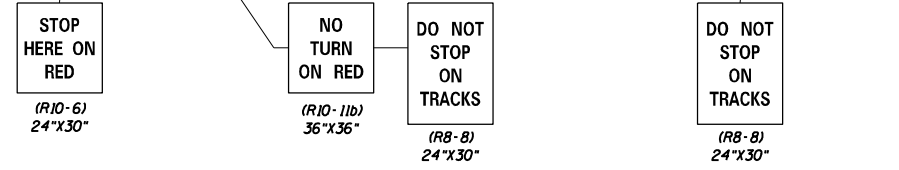
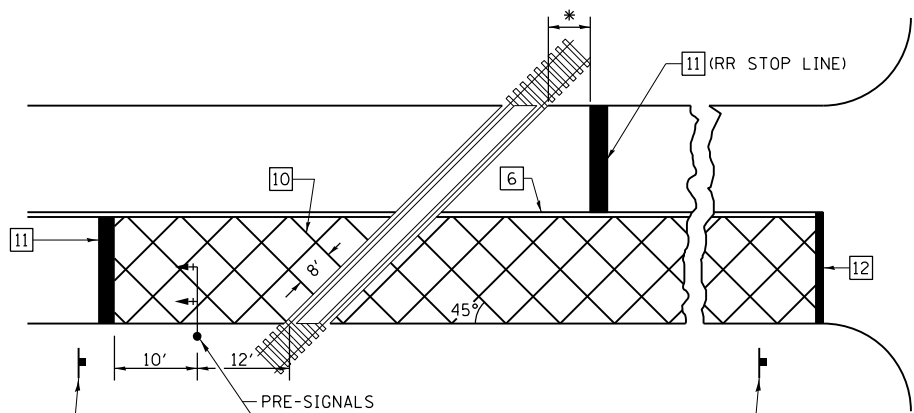
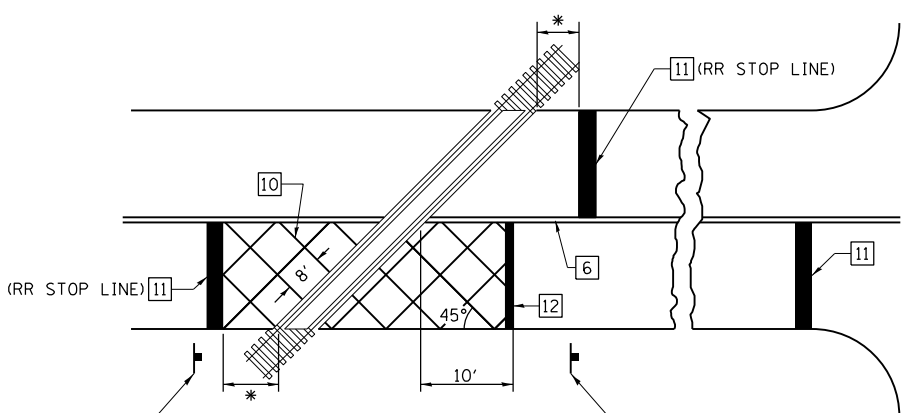
WHEN THE PAVEMENT MARKING SYMBOL IS USED, A PORTION OF THE SYMBOL SHOULD BE LOCATED DIRECTLY ADJACENT TO THE ADVANCE WARNING SIGN (W10-1) AS PLACED BY TABLE II-1, CONDITION B OF THE MUTCD.



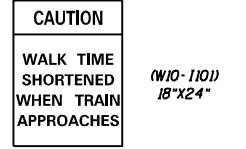
### RAILROAD CROSSING WITH NON-SIGNALIZED INTERSECTION



### RAILROAD CROSSING WITH INTERCONNECT AND PRE-SIGNALS



- ### GENERAL NOTES
- SUPPLEMENTAL PAVEMENT MARKINGS TO BE INSTALLED ONLY ON APPROACHES TO INTERSECTIONS CONTROLLED BY TRAFFIC SIGNALS WHICH ARE INTERCONNECTED WITH THE RAILROAD WARNING SIGNALS.
  - EXTEND PAVEMENT MARKINGS TO THE INTERSECTION ONLY WHERE PRE-SIGNALS ARE USED.
  - WHEN PEDESTRIAN SIGNALS ARE PRESENT WITH INTERCONNECTED SIGNALS, WARNING SIGN W10-1101 (18"X24") SHALL BE PLACED NEAR EACH PEDESTRIAN SIGNAL HEAD. COUNTDOWN PEDESTRIAN SIGNAL HEADS SHALL NOT BE UTILIZED ALONG WITH INTERCONNECTED SIGNALS.
  - PLEASE REFER TO THE IDOT BUREAU OF OPERATION MEMO OPS T-06 DATED DECEMBER 1, 2020 FOR ADDITIONAL INFORMATION.



- \* 15' FROM NEAR RAIL OR 8' FROM AND PARALLEL TO GATE IF PRESENT
- \*\* WARNING SIGN W10-1100 SHALL BE USED AS AN INTERIM MEASURE AT INTERCONNECTED SIGNAL LOCATIONS WHERE PRE-SIGNALS ARE TO BE INSTALLED IN THE FUTURE. THIS SIGN SHALL BE REMOVED WHEN THE PRE-SIGNALS ARE INSTALLED AND THE PAVEMENT MARKINGS ARE EXTENDED TO THE INTERSECTION.

NOT TO SCALE  
Note: All dimensions are in INCHES (millimeters) unless otherwise shown.

### DISTRICT 7 DETAIL NO. 7800001

FILE NAME =	USER NAME = jessica.hille	DESIGNED -	REVISED - NAS 06/22
pw:\idot-pw\bentley.com\PIDOT\Documents\IDOT Offices\District 7\Projects\74827\CADD\Drawings\Drawings\74827-shd-details.dgn		CHECKED -	REVISED -
		DATE -	REVISED -

STATE OF ILLINOIS  
DEPARTMENT OF TRANSPORTATION

PAVEMENT MARKING AND RAISED REFLECTIVE PAVEMENT MARKERS  
(RURAL & URBAN APPLICATIONS)

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
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SCALE: SHEET NO. 4 OF 4 SHEETS STA. TO STA.