

STATE OF ILLINOIS  
DEPARTMENT OF TRANSPORTATION

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
42	*	PERRY	12	1
		ILLINOIS	CONTRACT NO. 78588	
		D9 BRIDGE REPAIR 2018-2		

FOR INDEX OF SHEETS, SEE SHEET NO. 2  
FOR SUMMARY OF QUANTITIES, SEE SHEET NO. 3-5  
FOR STRUCTURAL PAVEMENT DESIGN INFORMATION, SEE SHEET NO. NA

**PROPOSED  
HIGHWAY PLANS**

FAP 42 (IL 13/127)  
OVER BEAUCOUP CREEK  
SECTION D9 BRIDGE REPAIR 2018-2

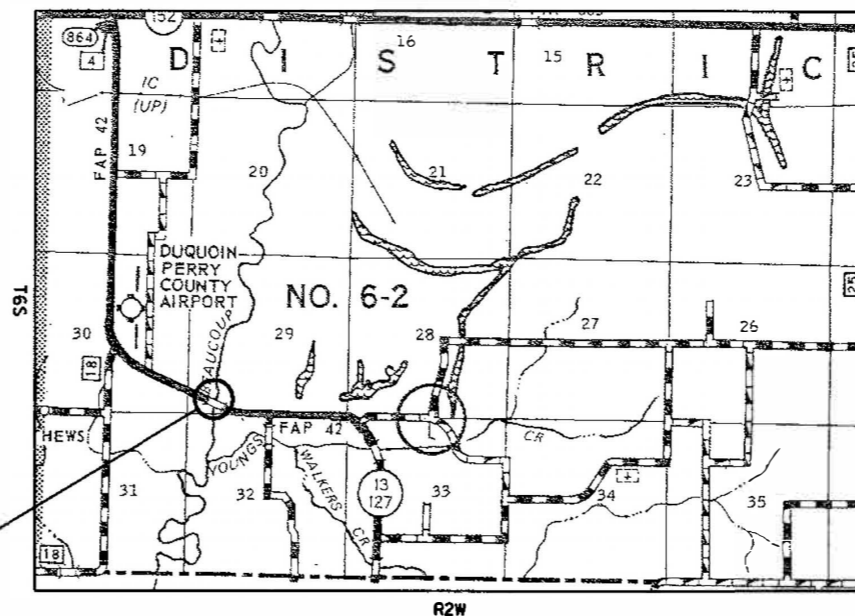
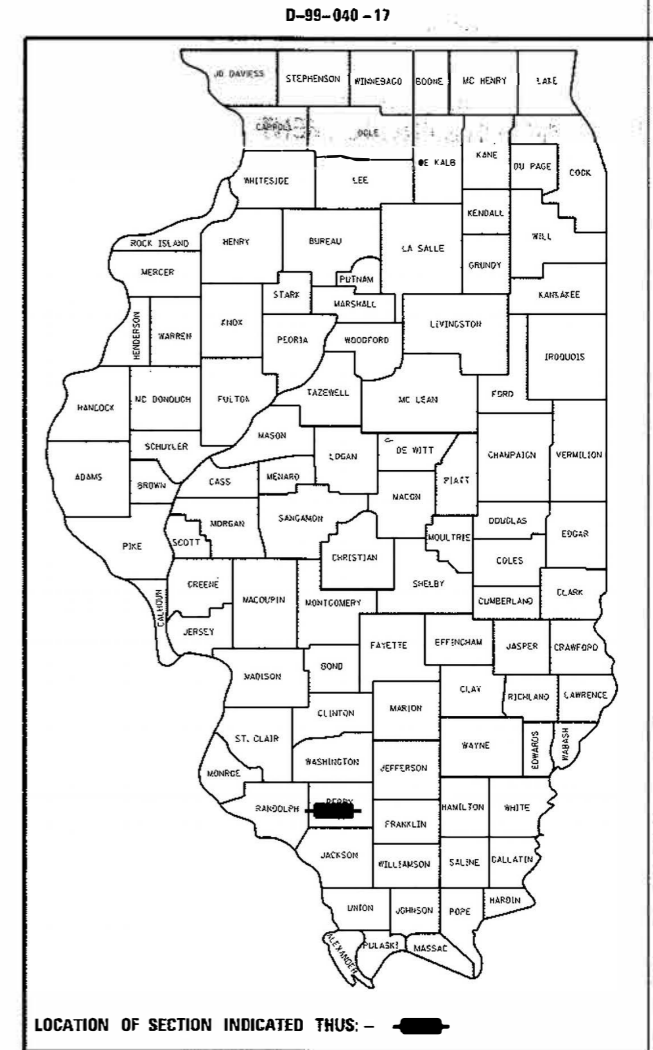
DECK REPAIRS & OVERLAY  
PERRY COUNTY

C-99-040-17

**TRAFFIC DATA**

**IL 127 TRAFFIC DATA**

2015 ADT = 3,700  
14 % TRUCKS



PROJECT LOCATION  
SN 073-0010

DESIGN DESIGNATION : NA  
COORDINATE SYSTEM : ILLINOIS COORDINATE SYSTEM, WEST ZONE  
POSTED SPEED : 55 MPH

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

PROJECT ENGINEER: DAVID PICHE (618) 351-5224  
PROJECT DESIGNER: DAVID HOLLMANN (618) 351-5228

GROSS LENGTH = 532.75 FT. = 0.10 MILES  
NET LENGTH = 532.75 FT. = 0.10 MILES

CONTRACT NO. 78588

STATE OF ILLINOIS  
DEPARTMENT OF TRANSPORTATION

SUBMITTED *Aug 10,* 20 *17*

*Jeffrey Z Keen*  
REGION FIVE ENGINEER

*Oct 13 2017*  
*Harmon M. Addis PE*  
ENGINEER OF DESIGN AND ENVIRONMENT

*Oct 13 2017*  
*David L. [Signature]*  
DIRECTOR OF PROGRAM DEVELOPMENT

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

**GENERAL NOTES**

THE THICKNESS OF HOT-MIX ASPHALT MIXTURE SHOWN ON THE PLANS IS THE NOMINAL THICKNESS. DEVIATIONS FROM THE NOMINAL THICKNESS WILL BE PERMITTED WHEN SUCH DEVIATIONS OCCUR DUE TO IRREGULARITIES IN THE EXISTING SURFACE OR BASE ON WHICH THE HOT-MIX ASPHALT MIXTURE IS PLACED.

FACTORS USED FOR ESTIMATING PLAN QUANTITIES ARE AS FOLLOWS AND SHALL NOT BE USED FOR THE BASIS OF FINAL QUANTITIES:

ALL HOT MIX ASPHALT                      2.016 TONS/CU YD

THE ADVANCE DETECTOR LOOPS ARE TYPICALLY LOCATED 275 FEET IN ADVANCE OF THE STOP BAR. THE BUREAU OF OPERATIONS SHOULD APPROVE THE LOOP LOCATIONS PRIOR TO INSTALLATION.

THE CENTERLINE PAVEMENT MARKING SHOULD BE REMOVED FROM THE STOP BAR TO THE SAND ATTENUATORS OR DRUMS. EDGE LINE PAVEMENT MARKING SHOULD BE REMOVED IF A 10 FOOT LANE WIDTH CANNOT BE MAINTAINED. TEMPORARY EDGE LINES SHOULD BE INSTALLED WHEN THE EDGE LINES ARE REMOVED.

THE QUANTITY OF SHORT TERM PAVEMENT MARKING SHOWN IN THE PLANS IS BASED ON ONE APPLICATION EACH FOR THE HMA SURFACE REMOVAL, BINDER COURSE, AND SURFACE COURSE

AFTER A LIFT OF HOT MIX ASPHALT HAS BEEN PLACED, THE LANE SHALL REMAIN CLOSED TO TRAFFIC UNTIL THE NEW MAT HAS COOLED TO 150 DEGREES FAHRENHEIT

COMMITMENTS: NONE AS OF AUGUST 25, 2017

**STANDARDS**

- 00001-06                      STANDARD SYMBOLS, ABBREVIATIONS AND PATTERNS
- 701001-02                    OFF-ROAD, 2L2W    MORE THAN 15' FROM PAVEMENT EDGE
- 701006-05                    OFF-ROAD, 2L2W    15' TO 24" FROM PAVEMENT EDGE
- 701201-04                    LANE CLOSURE, 2L2W    DAY ONLY, FOR SPEEDS ≥ 45 MPH
- 701311-03                    LANE CLOSURE, 2L2W MOVING OPERATION DAY ONLY
- 701316-11                    LANE CLOSURE, 2L2W BRIDGE REPAIR >45 MPH
- 701901-06                    TRAFFIC CONTROL DEVICES
- 780001-05                    TYPICAL PAVEMENT MARKINGS

**INDEX OF SHEETS**

- 1                      COVER SHEET
- 2                      INDEX OF SHEETS; GENERAL NOTES; STANDARDS
- 3-5                    SUMMARY OF QUANTITIES
- 6                      GENERAL PLAN AND ELEVATION
- 7-9                    DECK REPAIRS
- 10                    JOINT REPAIR DETAILS
- 11                    STAGE CONSTRUCTION DETAILS
- 12                    BUTT JOINT DETAILS

**MIXTURE REQUIREMENTS**

Location(s):	Hot-Mix Asphalt Surface Course
Mixture Use(s):	Hot-Mix Asphalt Surface Course, Mix C, N70 Fine Graded
AC/PG:	PG64-22
ABR % (Max):	See Special Provision
Design Air Voids:	4.0 %, 70 Gyration Design
Mixture Composition: (Gradation Mixture)	IL-9.5mm Fine Graded
Friction Aggregate:	C Surface
Quality Management Program:	OCQA

Prepared By:	<i>[Signature]</i> DISTRICT STUDIES & PLANS ENGINEER
Examined By:	<i>[Signature]</i> DISTRICT LAND ACQUISITION ENGINEER
Examined By:	<i>[Signature]</i> DISTRICT PROGRAM DEVELOPMENT ENGINEER
Examined By:	<i>[Signature]</i> DISTRICT OPERATIONS ENGINEER
Examined By:	<i>[Signature]</i> DISTRICT PROJECT IMPLEMENTATION ENGINEER
Examined By:	<i>[Signature]</i> DISTRICT CONSTRUCTION ENGINEER
Examined By:	<i>[Signature]</i> DISTRICT MATERIALS ENGINEER

• D9 BRIDGE REPAIR 2018-2

# SUMMARY OF QUANTITIES

COUNTY:	PERRY
ROUTE:	FAP 42
FUNDING:	100% STATE ✓
LOCATION:	RURAL ✓
	ROADWAY
	0014 ✓

CODE NUMBER	ITEM DESCRIPTION	UNIT	QUANTITY
40600982	HOT-MIX ASPHALT SURFACE REMOVAL - BUTT JOINT	SQ YD	214
40600990	TEMPORARY RAMP	SQ YD	36
40700100	BITUMINOUS MATERIALS (TACK COAT)	POUND	160
58100200	WATERPROOFING MEMBRANE SYSTEM	SQ YD	1854
67000400	ENGINEER'S FIELD OFFICE, TYPE A	CAL MO	4
67100100	MOBILIZATION	LSUM	1
70100100	TRAFFIC CONTROL AND PROTECTION, STANDARD 701316	EACH	1
70100450	TRAFFIC CONTROL AND PROTECTION, STANDARD 701201	LSUM	1
70106500	TEMPORARY BRIDGE TRAFFIC SIGNALS	EACH	1
70300100	SHORT TERM PAVEMENT MARKING	FOOT	93

10

• D9 BRIDGE REPAIR 2018-2

FILE NAME =	USER NAME = ho@handb	DESIGNED -	REVISED -	<b>STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION</b>	<b>SUMMARY OF QUANTITIES</b>	F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.	
pw\ML084EB\INTEG\Illinois.gov\PW\DOT\Documents\DOT Offices\Dist\ot 9\Projects\78588\CADData\CADsheets\78588		DRAWN -	REVISED -			42		PERRY	12	3	
Default	PLOT SCALE = 100.0000' / in.	CHECKED -	REVISED -			CONTRACT NO. 78588					
	PLOT DATE = 8/18/2017	DATE -	REVISED -			SCALE:	SHEET	OF	SHEETS	STA.	TO STA.

# SUMMARY OF QUANTITIES - CONT

COUNTY:	PERRY
ROUTE:	FAP 42
FUNDING:	100% STATE
LOCATION:	RURAL
	ROADWAY
	0014

CODE NUMBER	ITEM DESCRIPTION	UNIT	QUANTITY
70300150	SHORT TERM PAVEMENT MARKING REMOVAL	SO FT	93
70300220	TEMPORARY PAVEMENT MARKING - LINE 4"	FOOT	1438
* 78001110	PAINT PAVEMENT MARKING - LINE 4"	FOOT	1438
* 86200300	UNINTERRUPTABLE POWER SUPPLY, EXTENDED	EACH	1
X0327979	PAVEMENT MARKING REMOVAL - GRINDING	SO FT	90
X7015005	CHANGEABLE MESSAGE SIGN	CAL DAY	28
Z0016200	DECK SLAB REPAIR (PARTIAL)	SO YD	25
Z0021908	SILICONE JOINT SEALER, 2"	FOOT	68
Z0021916	SILICONE JOINT SEALER, 3"	FOOT	34
Z0041895	POLYMER CONCRETE	CU FT	18.0

\*

\*

10

\* SPECIALTY ITEM

# SUMMARY OF QUANTITIES - CONT

COUNTY:	PERRY
ROUTE:	FAP 42
FUNDING:	100% STATE
LOCATION:	RURAL
	ROADWAY
	0014

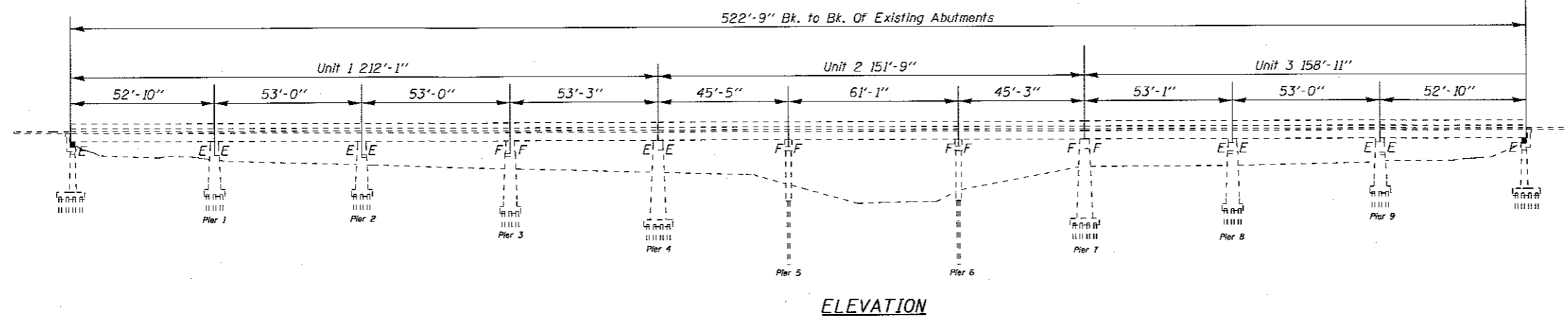
CODE NUMBER	ITEM DESCRIPTION	UNIT	ROADWAY
X0300002	HOT-MIX ASPHALT SURFACE COURSE, IL-9.5FG, N70	TON	160

• D9 BRIDGE REPAIR 2018-2

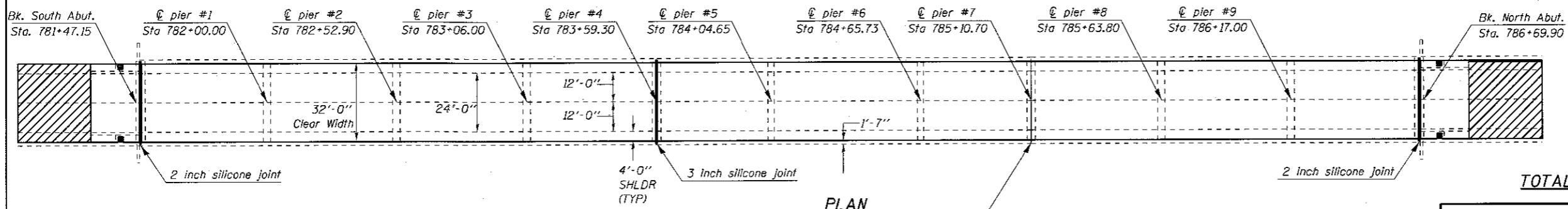
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Default	PLOT SCALE = 100.0000' / in.	CHECKED -	REVISED -			CONTRACT NO. 78588					
	PLOT DATE = 8/18/2017	DATE -	REVISED -			SCALE:	SHEET	OF	SHEETS	STA.	TO STA.

**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.



**ELEVATION**



**PLAN**

**TOTAL BILL OF MATERIAL**

ITEM	UNIT	QUANTITY
Hot-Mix Asphalt Surface Course, IL-9.5FG, N70	Ton	160
Waterproofing Membrane System	Sq. Yd.	1854
Deck Slab Repair (Partial Depth)	Sq. Yd.	25
Silicone Joint Sealer, 2"	Foot	68
Silicone Joint Sealer, 3"	Foot	34
Polymer Concrete	Cu. Ft.	18.0

Existing Preformed Elastomeric Joint Seal to be removed and filled with an Expansion Board Filler as approved by the Engineer. Sawcut a 1/4" x 3/4" joint into the new HMA Surface and seal with a Elastic Jt. Sealer (Full Width), Cast to be included in Waterproofing Membrane System.

**Scope of Work**

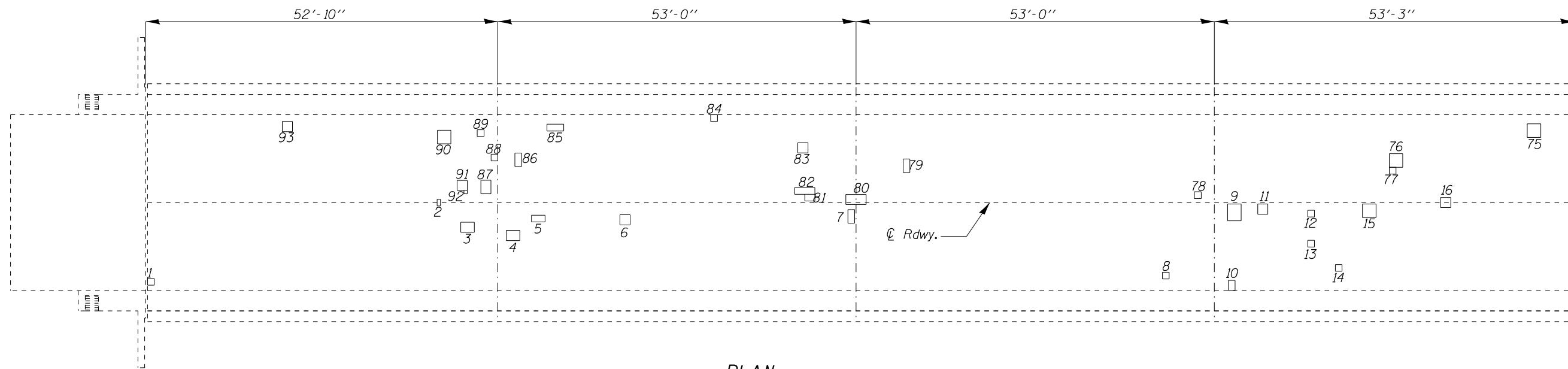
- Setup Traffic Control with drums
- Perform deck patching and work at joints
- Lay WMS and HMA overlay
- Switch stages and repeat

**BRIDGE REPAIR**  
**IL 13/127 (FAP 42) OVER BEAUCOUP CREEK**  
**PERRY COUNTY**  
**D9 CM BRIDGE REPAIR 2018-2**  
**STA. 784+35**  
**SN. 073-0010**



*David Carl Puzey* 7/22/17  
 Expires 11/30/18

FILE NAME =	USER NAME = hollmendo	DESIGNED - DBA	REVISD -	<b>STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION</b>	<b>GENERAL PLAN AND ELEVATION</b>	F.A.P. RTE. 42	SECTION	COUNTY PERRY	TOTAL SHEETS 12	SHEET NO. 6	
		DRAWN -	REVISD -			SCALE:	SHEET OF SHEETS	STA. TO STA.	CONTRACT NO. 78588		
		CHECKED - RPN	REVISD -			ILLINOIS FED. AID PROJECT					
		DATE -	REVISD -								



PLAN

PATCH NUMBER	LENGTH	WIDTH	AREA (SQ YD)
1	1	1	0.11
2	1	0.5	0.06
3	2	1.5	0.33
4	2	1.5	0.33
5	2	1	0.22
6	1.5	1.5	0.25
7	1	2	0.22
8	1	1	0.11
9	2.5	2	0.56
10	1	1.5	0.17
11	1.5	1.5	0.25
12	1	1	0.11
13	1	1	0.11
14	1	1	0.11
15	2	2	0.44
16	1.5	1.5	0.25

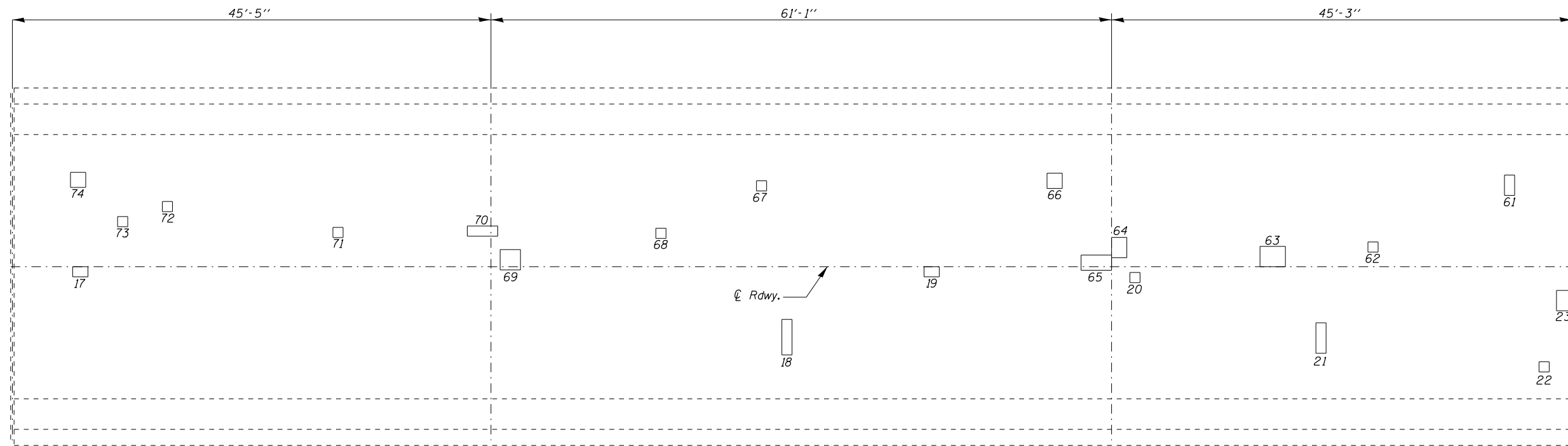
PATCH NUMBER	LENGTH	WIDTH	AREA (SQ YD)
75	2	2	0.44
76	2	2	0.44
77	1	1	0.11
78	1	1	0.11
79	1	2	0.22
80	3	1.5	0.50
81	1.5	1	0.17
82	3	1	0.33
83	1.5	1.5	0.25
84	1	1	0.11
85	1	2.5	0.28
86	1	2	0.22
87	1.5	2	0.33
88	1	1	0.11
89	1	1	0.11
90	2	2	0.44
91	1.5	1.5	0.25
92	0.5	0.5	0.03
93	1.5	1.5	0.25

Notes: Deck sounding was performed in February 2017  
 The Resident Engineer will determine final patch locations and quantities in the field before bridge deck patching operations begin and mark on as built plans.  
 The Bottom 2 1/2" of bridge deck consist of pre-cast pre-stressed stay in place forms. Contractor shall take proper precaution to ensure partial depth patching does not damage the stay in place forms.

**BILL OF MATERIAL**

Item	Unit	Total
Deck Slab Repair (Partial Depth)	Sq Yd	8.3

**DECK SLAB REPAIRS  
 STRUCTURE NO. 073-0010**



PLAN



PATCH NUMBER	LENGTH	WIDTH	AREA (SQ YD)
17	1.5	1	0.17
18	1	3.5	0.39
19	1.5	1	0.17
20	1	1	0.11
21	1	3	0.33
22	1	1	0.11
23	1.5	2	0.33

PATCH NUMBER	LENGTH	WIDTH	AREA (SQ YD)
61	1	2	0.22
62	1	1	0.11
63	2.5	2	0.56
64	2	1.5	0.33
65	3	1.5	0.50
66	1.5	1.5	0.25
67	1	1	0.11
68	1	1	0.11
69	2	2	0.44
70	3	1	0.33
71	1	1	0.11
72	1	1	0.11
73	1	1	0.11
74	1.5	1.5	0.25

Notes: Deck sounding was performed in February 2017  
 The Resident Engineer will determine final patch locations and quantities in the field before bridge deck patching operations begin and mark on as built plans.  
 The Bottom 2 1/2" of bridge deck consist of pre-cast pre-stressed stay in place forms. Contractor shall take proper precaution to ensure partial depth patching does not damage the stay in place forms.

**BILL OF MATERIAL**

Item	Unit	Total
Deck Slab Repair (Partial Depth)	Sq Yd	5.2

**DECK SLAB REPAIRS  
 STRUCTURE NO. 073-0010**

•D9 CM BRIDGE REPAIR 2018-2

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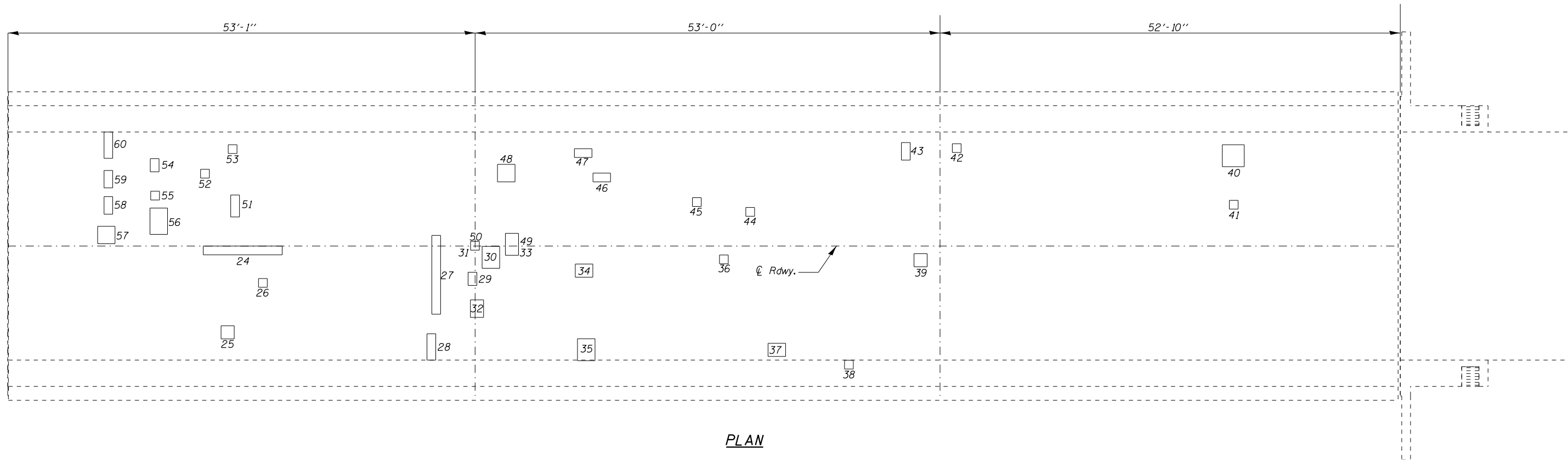
**STATE OF ILLINOIS  
 DEPARTMENT OF TRANSPORTATION**

**DECK REPAIRS**

SCALE: SHEET OF SHEETS STA. TO STA.

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
42	*	PERRY	12	8
CONTRACT NO. 78588				
ILLINOIS FED. AID PROJECT				





PLAN

PATCH NUMBER	LENGTH	WIDTH	AREA (SQ YD)
24	9	1	1.00
25	1.5	1.5	0.25
26	1	1	0.11
27	1	9	1.00
28	1	3	0.33
29	1	1.5	0.17
30	2	2.5	0.56
31	1	1	0.11
32	1.5	2	0.33
33	1.5	2.5	0.42
34	2	1.5	0.33
35	2	2.5	0.56
36	1	1	0.11
37	2	1.5	0.33
38	1	1	0.11
39	1.5	1.5	0.25

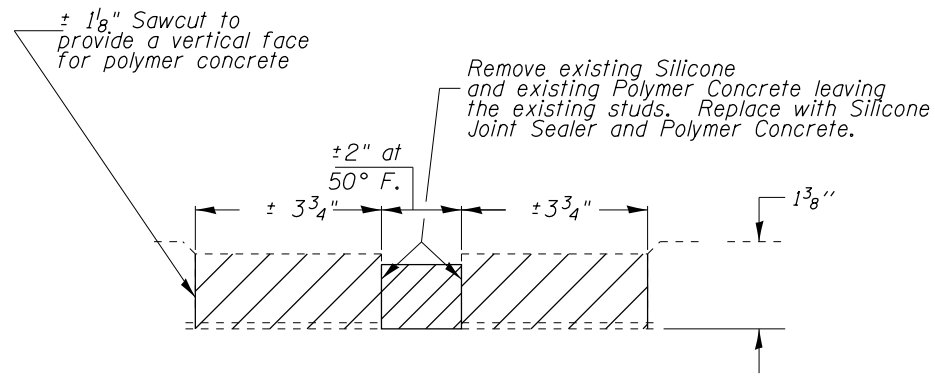
PATCH NUMBER	LENGTH	WIDTH	AREA (SQ YD)
40	2.5	2.5	0.69
41	1	1	0.11
42	1	1	0.11
43	1	2	0.22
44	1	1	0.11
45	1	1	0.11
46	2	1	0.22
47	2	1	0.22
48	2	2	0.44
49	1.5	2.5	0.42
50	1	1	0.11
51	1	2.5	0.28
52	1	1	0.11
53	1	1	0.11
54	1	1.5	0.17
55	1	1	0.11
56	3	2	0.67
57	2	2	0.44
58	1	2	0.22
59	1	2	0.22
60	1	3	0.33

Notes: Deck sounding was performed in February 2017  
 The Resident Engineer will determine final patch locations and quantities in the field before bridge deck patching operations begin and mark on as built plans.  
 The Bottom 2 1/2" of bridge deck consist of pre-cast pre-stressed stay in place forms. Contractor shall take proper precaution to ensure partial depth patching does not damage the stay in place forms.

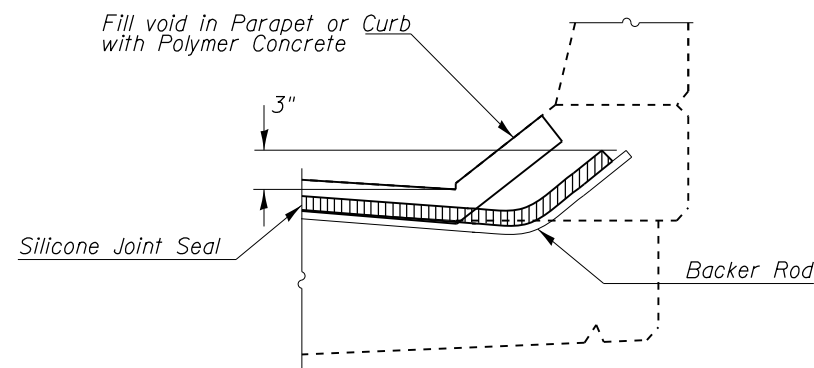
**BILL OF MATERIAL**

Item	Unit	Total
Deck Slab Repair (Partial Depth)	Sq Yd	11.4

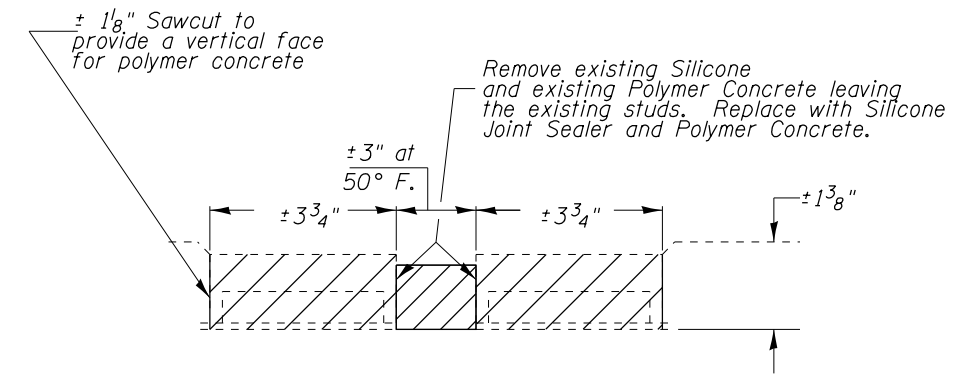
**DECK SLAB REPAIRS  
 STRUCTURE NO. 073-0010**



**SECTION AT  
EXISTING 2" SILICONE JOINT DETAIL**

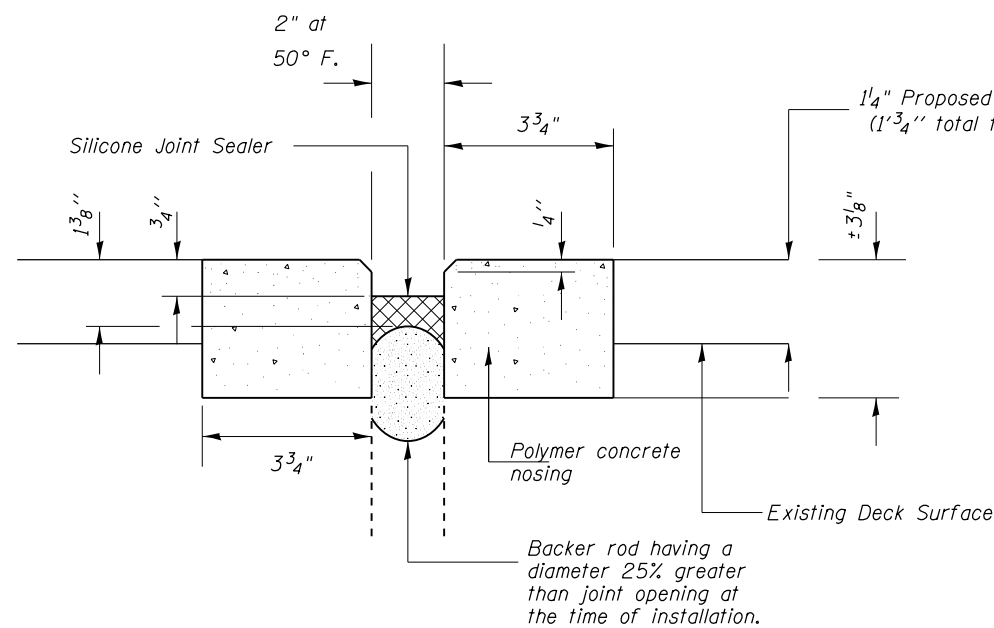


**TYPICAL END OF SEAL TREATMENT  
AT EXPANSION JOINT**

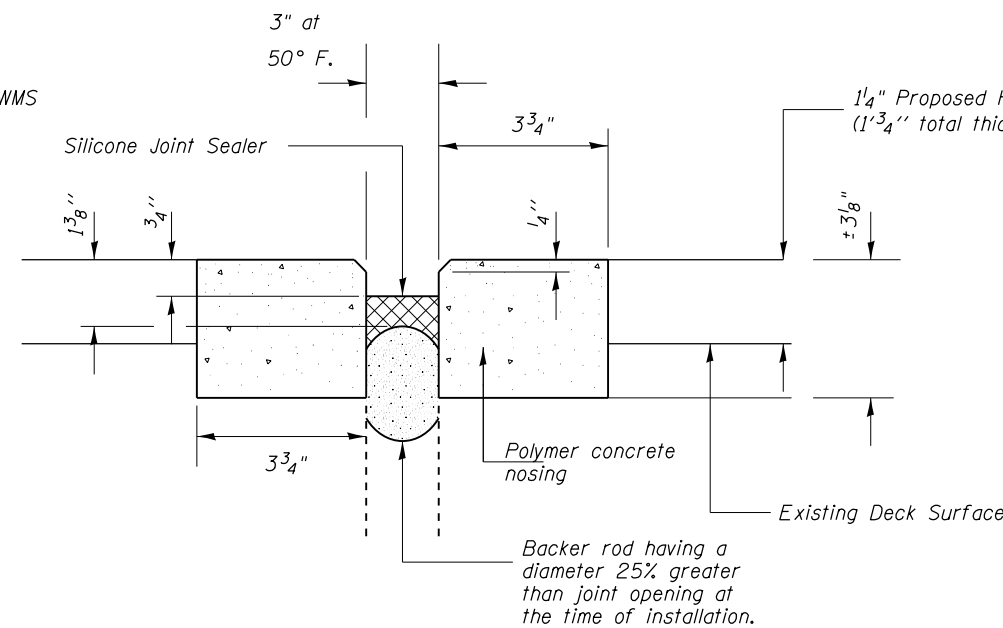


**SECTION AT  
EXISTING 3" SILICONE JOINT DETAIL**

 Cost of Removing Existing Silicone Joint and Polymer Concrete included with Polymer Concrete.



**SILICONE JOINT SEALER DETAIL @ ABUTMENTS  
2" JOINT DETAIL**



**SILICONE JOINT SEALER DETAIL @ PIER 4  
3" JOINT DETAIL**

Notes:  
All joints shall be staged along the  $\phi$  of Roadway.

**BILL OF MATERIALS**

Item description	Unit	Total
Polymer Concrete	Cu Ft.	18.0
Silicone Joint Sealer, 2"	Ft.	68
Silicone Joint Sealer, 3"	Ft.	34

**JOINT REPAIRS  
SN 073-0010**

•D9 CM BRIDGE REPAIR 2018-2

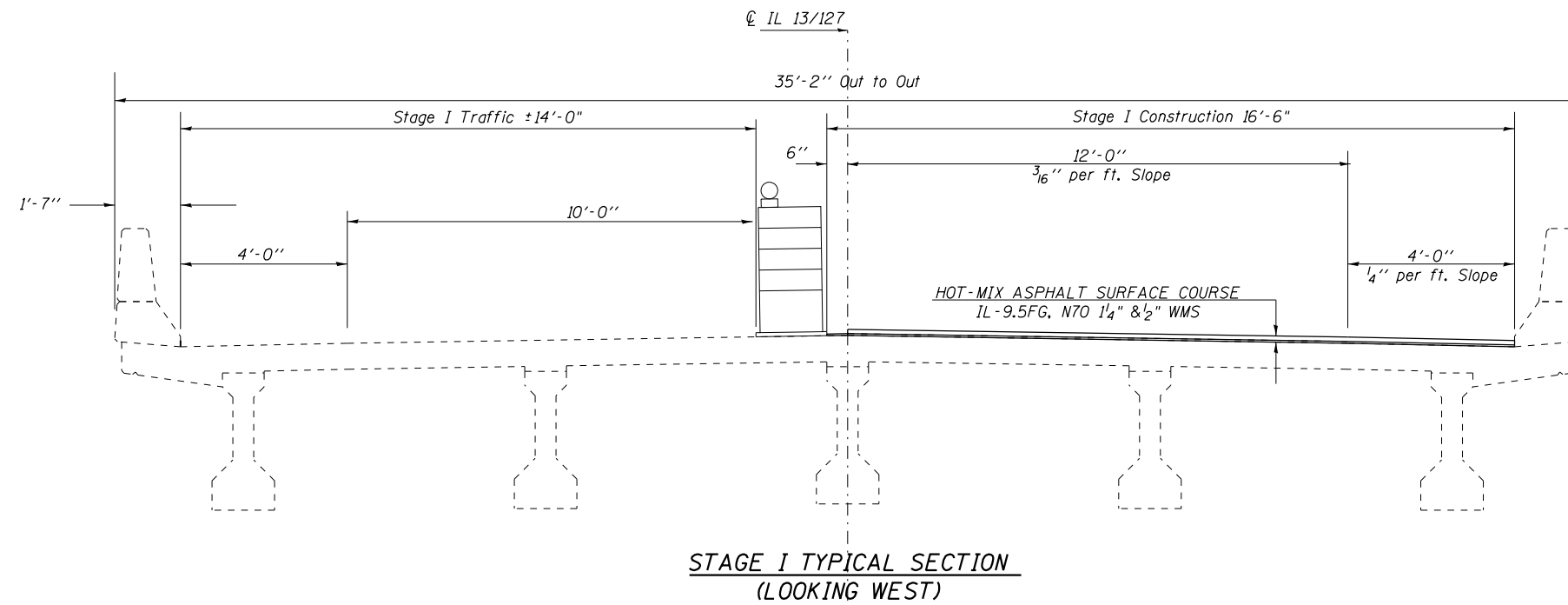
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	PLOT DATE = 8/18/2017	DATE -	REVISED -

**STATE OF ILLINOIS  
DEPARTMENT OF TRANSPORTATION**

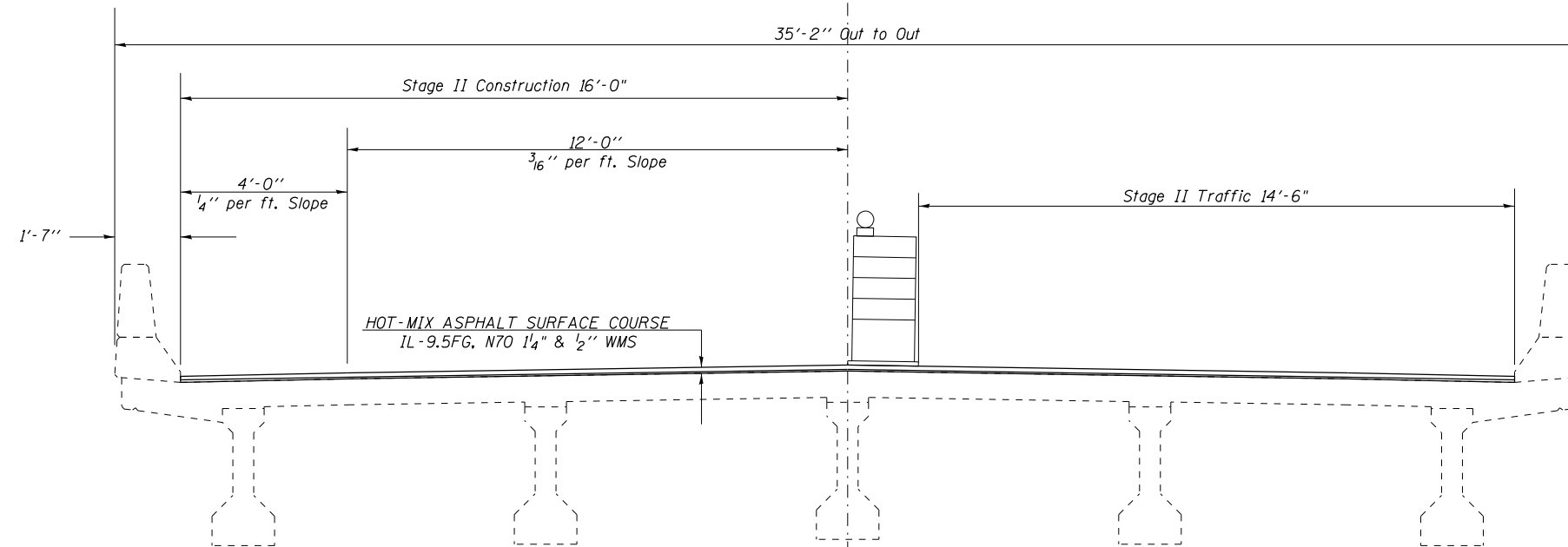
**JOINT REPAIR DETAILS**

SCALE: SHEET OF SHEETS STA. TO STA.

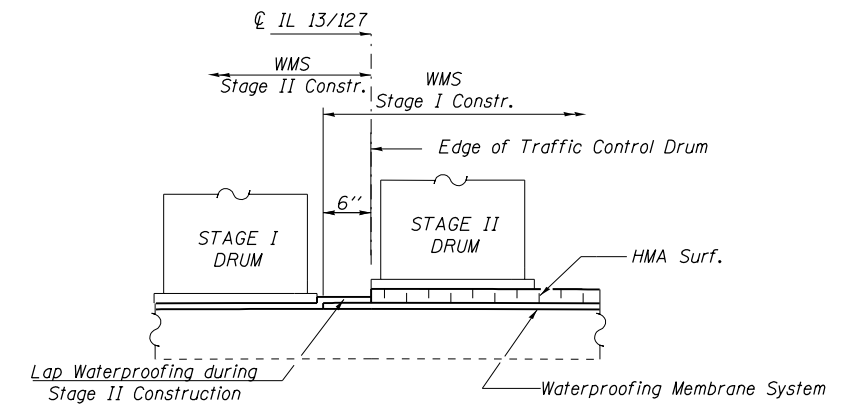
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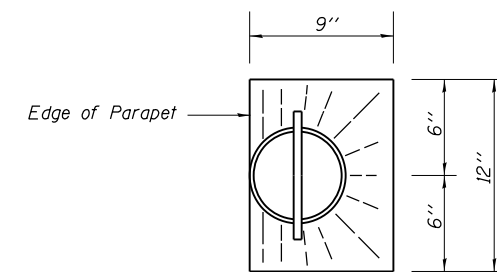
**STAGE I TYPICAL SECTION  
(LOOKING WEST)**



**STAGE II TYPICAL SECTION  
(LOOKING WEST)**



**WATERPROOFING TREATMENT  
AT STAGE CONSTRUCTION LINE**



**TOP PLAN**  
Slope HMA at Drains

**STAGING  
TYPICAL SECTION  
SN 073-0010  
PERRY COUNTY**

•D9 CM BRIDGE REPAIR 2018-2

FILE NAME =	USER NAME = hollmandb	DESIGNED -	REVISED -
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		DATE -	REVISED -

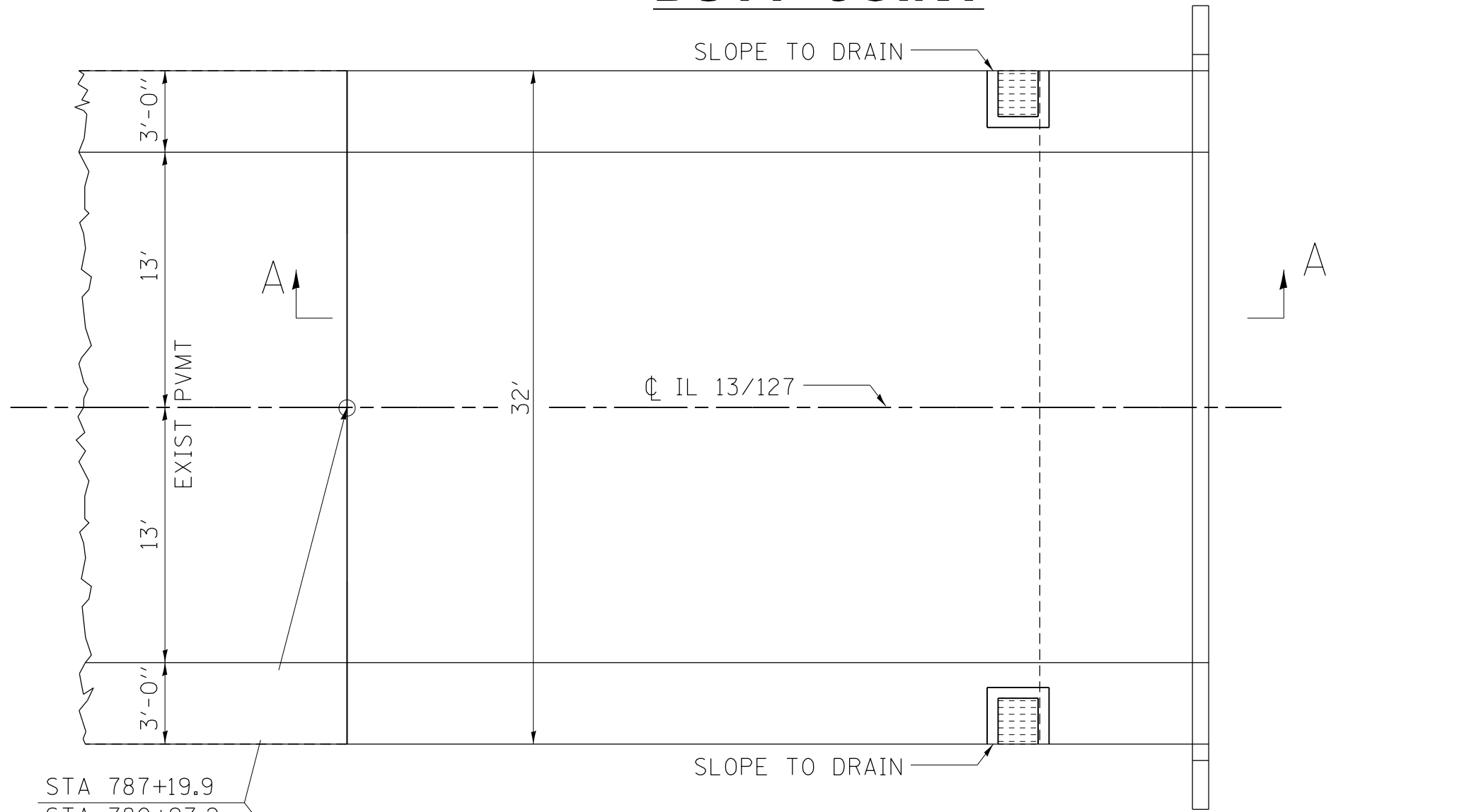
**STATE OF ILLINOIS  
DEPARTMENT OF TRANSPORTATION**

**STAGE CONSTRUCTION DETAILS**

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

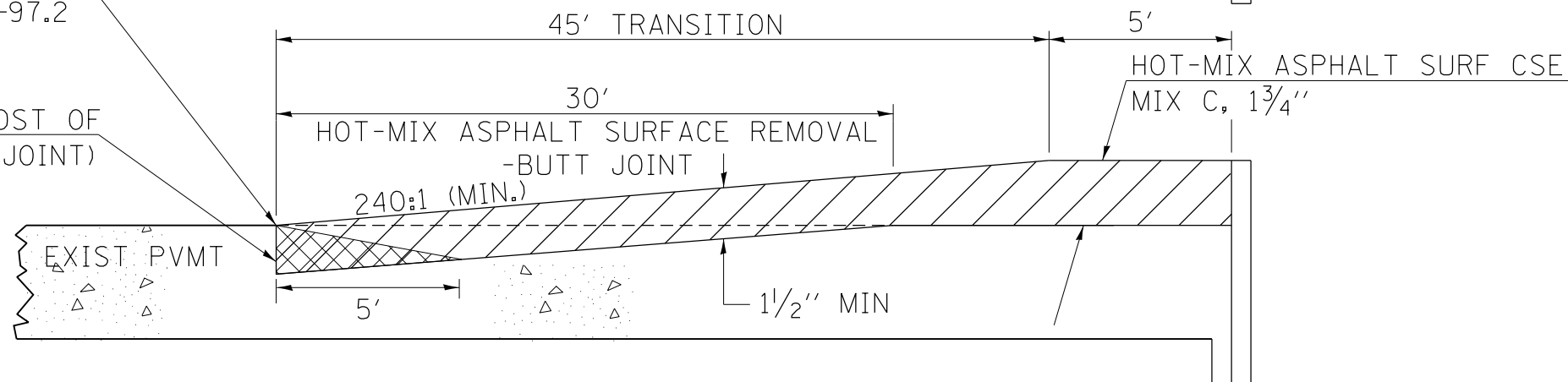
F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
42	•	PERRY	12	11
CONTRACT NO. 78588				
FED. ROAD DIST. NO. ILLINOIS FED. AID PROJECT				

# BUTT JOINT



STA 787+19.9  
STA 780+97.2

SAW CUT (INCLUDED IN THE COST OF  
HMA SURFACE REMOVAL-BUTT JOINT)



## SECTION A-A

 Temporary Ramp

REVISIONS	
DRAWN	10-17-90
REVISED	01-11-07
REVISED	3-25-08
REVISED	5-17-13

STD. 9-86

\* D9 CM BRIDGE REPAIR 2017-2

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	PLOT DATE = 8/18/2017	DATE -	REVISED -

STATE OF ILLINOIS  
DEPARTMENT OF TRANSPORTATION

BUTT JOINT DETAIL

SCALE: SHEET OF SHEETS STA. TO STA.

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
42	*	PERRY	12	12
CONTRACT NO. 78588				
ILLINOIS FED. AID PROJECT				