

STATE OF ILLINOIS  
DEPARTMENT OF TRANSPORTATION

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
24	D9 CM Patch 2017-5	MASSAC	12	1
ILLINOIS CONTRACT NO. 78571				

FOR INDEX OF SHEETS, SEE SHEET NO. 3  
FOR SUMMARY OF QUANTITIES, SEE SHEET NO. 5-6

**PROPOSED  
HIGHWAY PLANS**

FAI ROUTE 24 (I-24)  
SECTION D9 CM PATCH 2017-5

PAVEMENT PATCHING  
MASSAC COUNTY

**TRAFFIC DATA**

I-24: MP 36.00 TO 38.91			
	2016	2017	2037
PV =	23,250	23,710	35,245
SU =	2,250	2,295	3,410
MU =	6,200	6,325	9,395
ADT =	31,700	32,330	48,050

**TOWNSHIPS  
METROPOLIS**

**SPEED LIMIT  
70 MPH**

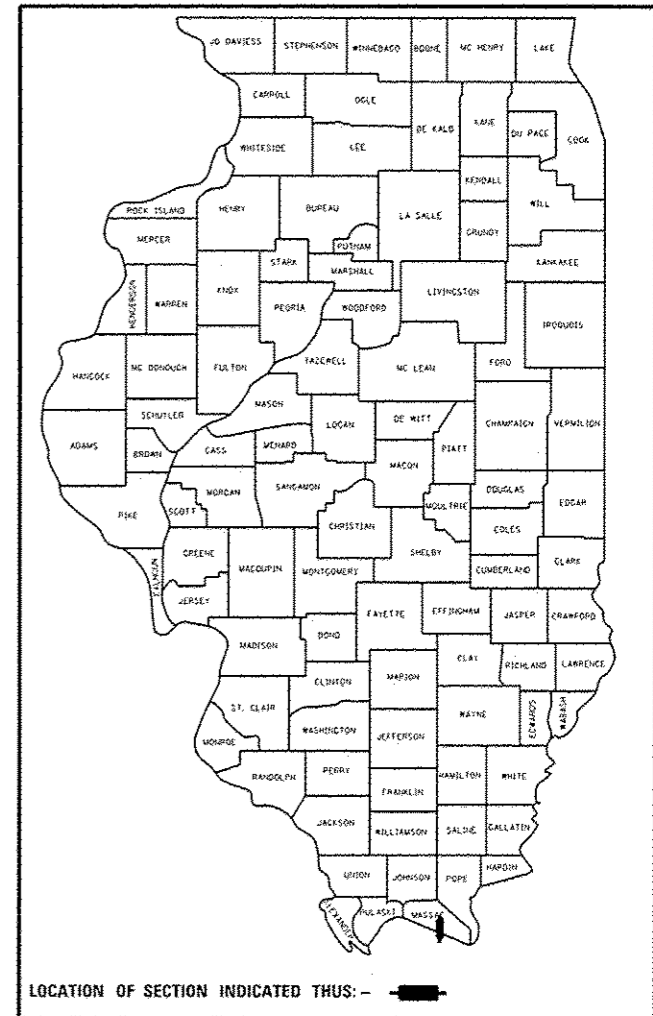
DESIGN DESIGNATION : NA  
COORDINATE SYSTEM : NA  
POSTED SPEED : 70 MPH

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

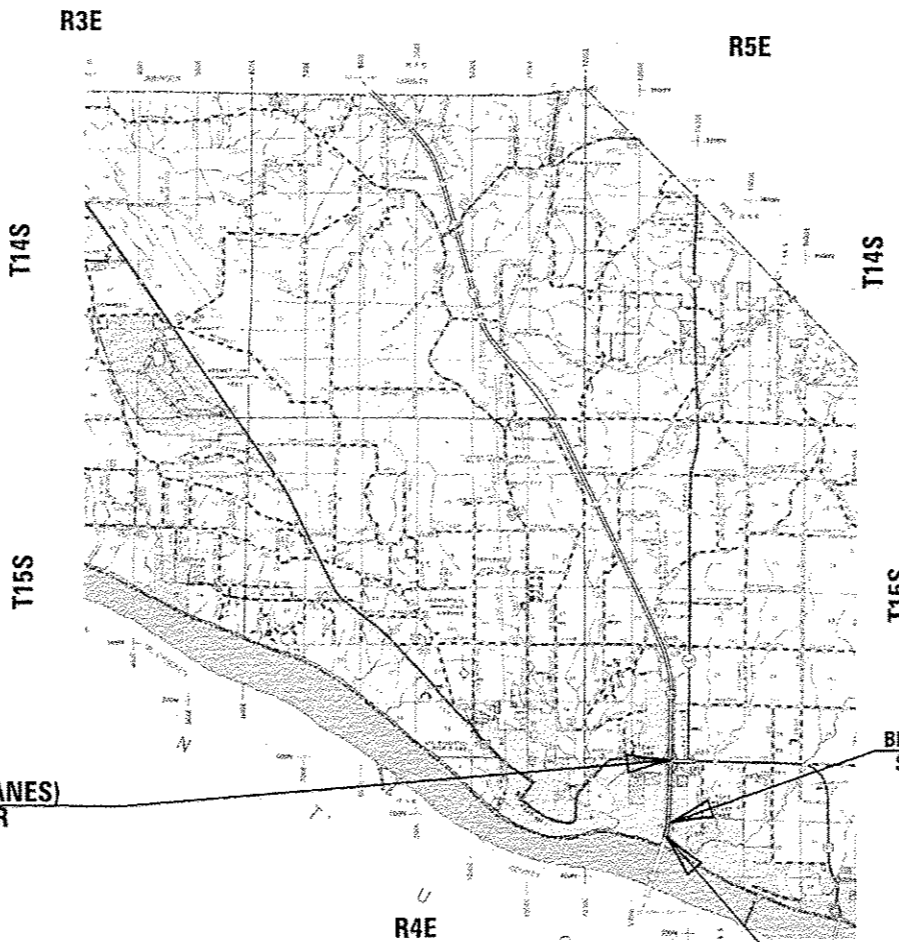
PROJECT ENGINEER CHARLES STEIN 618-351-5210  
PROJECT DESIGNER DARRYL LEFTWICH 618-351-5291

CONTRACT NO. 78571

D-99-022-17



C-99-022-17



PROJECT BEGINS  
STA. 350+00.36 (E.B. LANES)  
& US 45 CROSSOVER  
MP 37.4

BRIDGE OMISSIONS  
SEE SHEET NO. 3

GROSS LENGTH = 8096.14 FT. = 1.533 MILES  
NET LENGTH = 7739.90 FT. = 1.466 MILES

END OF PROJECT  
STA. 430+96.5 (E.B. LANES)  
M.P. 38.91


STATE OF ILLINOIS  
DEPARTMENT OF TRANSPORTATION


SUBMITTED April 7 2017  
Duffrey & Kevin  
REGION FIVE ENGINEER


May 12 2017  
Marion M. Addis P.E.  
ENGINEER OF DESIGN AND ENVIRONMENT


May 12 2017  
Paula [Signature]  
DIRECTOR OF PROGRAM DEVELOPMENT

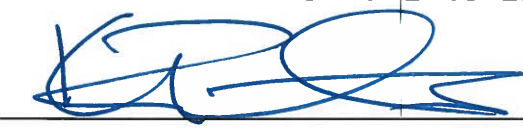
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Prepared By:   
DISTRICT STUDIES & PLANS ENGINEER


Examined By:   
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Examined By:   
DISTRICT PROGRAM DEVELOPMENT ENGINEER

Examined By:   
DISTRICT OPERATIONS ENGINEER

Examined By:   
DISTRICT PROJECT IMPLEMENTATION ENGINEER

Examined By:   
DISTRICT CONSTRUCTION ENGINEER

Examined By:   
DISTRICT MATERIALS ENGINEER

FILE NAME =	USER NAME = Leftwichd	DESIGNED -	REVISED -
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	PLOT DATE = 3/31/2017	DATE -	REVISED -

**STATE OF ILLINOIS  
DEPARTMENT OF TRANSPORTATION**

**SIGNATURE SHEET**

SCALE: SHEET OF SHEETS STA. TO STA.

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
24	D9 CM Patch 2017-5	MASSAC	12	2
ILLINOIS FED. AID PROJECT			CONTRACT NO. 78571	

# INDEX OF SHEETS

SHEET NO	DESCRIPTION
1	COVER SHEET
2	SIGNATURE SHEET
3	INDEX OF SHEETS, HIGHWAY STANDARDS, STATION EQUATIONS, OMISSIONS & COMMITMENTS
4	GENERAL NOTES, MIX DESIGN
5-6	SUMMARY OF QUANTITIES
7	SCHEDULE: CLASS A PATCHES
8	SCHEDULE: PARTIAL DEPTH PATCHING
9	SCHEDULE: CENTER LINE REPAIR
10	SCHEDULE: EDGE LINE REPAIR
11	TYPICAL SECTION
12	DETAIL: HMA OVER BRIDGE APPROACH PAVEMENT

# HIGHWAY STANDARDS

000001-06	STANDARD SYMBOLS ABBREVIATION & PATTERNS
001006	DECIMAL OF INCH & FOOT
420001-08	PAVEMENT JOINTS
421201-06	24 FT CONCRETE PAVEMENT-WITH LUG SYSTEM
442001-04	CLASS A PATCHES
701101-05	OFF ROAD OPERATIONS-MULTILANE-LESS THAN 15 FT TO EOP
701106-02	OFF ROAD OPERATIONS-MULTILANE-MORE THAN 15 FT AWAY
701400-09	APPROACH TO LANE CLOSURE - FREEWAY EXPRESSWAY
701401-10	LANE CLOSURE FREEWAY EXPRESSWAY
701411-09	LANE CLOSURE MULTI LANE-ENTRY OR EXIT RAMP 45 MPH OR MORE
701426-09	LANE CLOSURE MULTI LANE-INTERMITTANT OR MOVING OP 45 MPH OR MORE
701428-01	TRAFFIC CONTROL SETUP REMOVAL FREEWAY EXPRESSWAY
701901-06	TRAFFIC CONTROL DEVICES
780001-05	TYPICAL PAVEMENT MARKINGS
781001-04	TYPICAL APPLICATIONS RAISED REFLECTIVE PAVEMENT MARKERS

# STATION EQUATIONS

NONE

# COMMITMENTS

NONE

# OMISSIONS

SN 064-0030	STA 400+42.91	TO	STA 401+54.74	EBL	(111.83' EB & WB)	SN 064-0031	STA 400+49.93	TO	STA 401+61.76	WBL
SN 064-0032	STA 412+49.34	TO	STA 413+90.00	EBL	(140.66' EB & WB)	SN 064-0033	STA 412+61.53	TO	STA 414+02.19	WBL
SN 064-0034	STA 416+75.71	TO	STA 417+79.28	EBL	(103.57' EB 103.93' WB)	SN 064-0034	STA 416+84.54	TO	STA 417+88.47	WBL

FILE NAME =	USER NAME = Leftwichdl	DESIGNED -	REVISED -	<b>STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION</b>	<b>INDEX OF SHEETS STANDARDS AND OMISSIONS</b>			F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
pw:\IL\084EBIDINTEG.illinois.gov\PWIDOT\Documents\DOT Offices\District 9\Projects\78571\Drawings\CAD\Sheets\78571-sht.dgn		CHECKED -	REVISED -					24	D9 CM Patch 2017-5	MASSAC	12	3
Default	PLOT SCALE = 100.0000' / in.	DATE -	REVISED -		SCALE:	SHEET	OF	SHEETS	STA.	TO	STA.	ILLINOIS FED. AID PROJECT
	PLOT DATE = 4/7/2017	DATE -	REVISED -									CONTRACT NO. 78571

## GENERAL NOTES

QUANTITIES SHOWN IN THE PLANS FOR PATCHING ARE ESTIMATES. THE ACTUAL AMOUNT OF PATCHING REQUIRED WILL BE DETERMINED BY THE ENGINEER.

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

ALL BITUMINOUS CONCRETE . . . . . 2.016 TONS/CU.YD.

IF ANY STATION FALLS WITHIN THE PATCH AREA, THE NEW PATCH SHALL BE RESTAMPED. THE STATION SYMBOL STAMPS USED SHALL BE FURNISHED BY THE CONTRACTOR. THEY SHALL BE 5 1/2" TALL OF A DESIGN APPROVED BY THE ENGINEER, AND SHALL REMAIN THE PROPERTY OF THE CONTRACTOR.

EXISTING CONTINUOUSLY REINFORCED CONCRETE PAVEMENT ALONG I-24 IN MASSAC COUNTY HAS 22 #5 BARS AT 6.5 FT CENTERS AND #4 TRAVERSE BARS AT 4 FT CENTERS.

THERE ARE NO AVAILABLE WASTE SITES ON THE EXISTING RIGHT OF WAY WITHIN THE PROJECT LIMITS. DISPOSAL WILL BE THE RESPONSIBILITY OF THE CONTRACTOR AND WASTE MUST BE DISPOSED OF IN ACCORDANCE WITH ARTICLE 202.3 OF THE STANDARD SPECIFICATIONS.

## HMA MIXTURE REQUIREMENTS TABLE

The following HMA mixture requirements are applicable for this project

Location(s):	Partial Depth Patching, Centerline & Edgeline Repair
Mixture Use(s):	Polymerized Hot-Mix Asphalt Surface Course, Mix E, N90
PG:	SBS PG76-22
Design Air Voids:	4.0 %, 90 Gyration Design
Mixture Composition: (Mixture Gradation)	IL-9.5mm
Friction Aggregate:	E Surface
Mixture Weight:	112 lbs/Sq Yd/in
Quality Management Program:	QCQA
Sublot Size:	NA
Number of Roller Passes	NA

# SUMMARY OF QUANTITIES

COUNTY:	Massac
ROUTE:	FAI 24
FUNDING:	100% STATE
LOCATION:	RURAL
	ROADWAY
	0005

CODE NUMBER	ITEM DESCRIPTION	UNIT	QUANTITY
40600295	POLYMERIZED BITUMINOUS MATERIALS (TACK COAT)	POUND	908
40603570	POLYMERIZED HOT-MIX ASPHALT SURFACE COURSE, MIX "E", N90	TON	216
44000157	HOT-MIX ASPHALT SURFACE REMOVAL, 2"	SQ YD	1,796
44200577	CLASS A PATCHES, TYPE II, 12 INCH	SQ YD	199
44200583	CLASS A PATCHES, TYPE IV, 12 INCH	SQ YD	67
44213000	PATCHING REINFORCEMENT	SQ YD	266
44213200	SAW CUTS	FOOT	1,714
67100100	MOBILIZATION	LSUM	1
70100420	TRAFFIC CONTROL AND PROTECTION, STANDARD 701411	EACH	4
70100800	TRAFFIC CONTROL AND PROTECTION, STANDARD 701401	LSUM	1
70200100	NIGHTTIME WORK ZONE LIGHTING	LSUM	1
70300100	SHORT TERM PAVEMENT MARKING	FOOT	749





# PAVEMENT PATCHING - PARTIAL DEPTH

## (OVER BRIDGE APPROACH PAVEMENT)

INITIAL PATCHING SURVEY				PATCH DETAILS			*	PARTIAL DEPTH PATCHING	POLYMERIZED BIT MATLS (TACK COAT)
PATCH NO	MP	DIRECTION	LANE	WIDTH FT	LENGTH FT	AREA SQ YD	HMA SURF REM VAR DP SQ YD		
EB I-24									
1	38.3	EB	BRIDGE JT	26	6	17.33	17.4	3.0	7.8
2	38.3	EB	BRIDGE JT	26	35	101.11	101.2	17.1	45.5
3	38.6	EB	BRIDGE JT LT	13	6	8.67	8.7	1.5	3.9
WB I-24									
4	38.7	WB	BRIDGE JT	13	6	8.67	8.7	1.5	3.9
5	38.7	WB	BRIDGE JT	14	6	9.33	9.4	1.6	4.2
6	38.6	WB	BRIDGE JT	13	6	8.67	8.7	1.5	3.9
7	38.4	WB	BRIDGE JT	26	10	28.89	28.9	4.9	13.0
8	38.3	WB	BRIDGE JT	20	4	8.89	8.9	1.5	4.0
PROJECT TOTALS							192	33	87.0

- \* HMA SURFACE REMOVAL DOWN TO BRIDGE APPROACH SLAB - DEPTH VARIES FROM 4" TO 1 3/4" AT BRIDGE JOINT  
SEE DETAIL OF EXISTING HMA OVERLAY TAPERS AT BRIDGE APPROACH PAVEMENT



## SCHEDULE FOR I-24 CENTERLINE REPAIR - MASSAC CO

FAI-24		SECTION LENGTH (INFO ONLY)	MILL WIDTH	HMA SURF REMOVAL	POLY HMA SURF CSE MIX "E"	POLYMERIZED BIT MATLS TACK CT	THPL PAVEMENT MARKING	TEMP PAVEMENT MARKING	TEMP PAVEMENT MARKING	SHORT TERM PAVEMENT MARKING	SHORT TERM PAVEMENT MARKING	RAISED REFLECTIVE PVMT MKR	RAISED REFLECTIVE PVMT MKR	COMMENTS
				2"	2"		LINE 4"	LINE 4"	REMOVAL	*	*	REMOVAL	REMOVAL	
	COMMENT	FEET	INFO	SQ YD	TONS	LB	FOOT	FOOT	SQ FT	FOOT	SQ FT	FOOT	FOOT	FOOT
<b>I-24 EB CENTER LINE</b>														
STA 352+44.00	TO STA 367+00.00	1456.00												CENTERLINE WORK BEGINS
STA 367+00.00	TO STA 390+00.00	2300.00												NO WORK
STA 390+00.00	TO STA 400+22.91	1022.91	2	228	26	103	256	256	86	103	35	13	13	
STA 400+22.91	TO STA 400+42.91	20.00	2	5	1	3	5	5	2	2	4	1	1	
STA 400+42.91	TO STA 401+54.74	111.83	2	25	3	12	28	28	10	12	4	2	2	BRIDGE OMISSION
STA 401+54.74	TO STA 401+74.74	20.00	2	5	1	3	5	5	2	2	4	1	1	
STA 401+74.74	TO STA 412+29.34	1054.60												
STA 412+29.34	TO STA 412+49.34	20.00	2	5	1	3	5	5	2	2	4	1	1	
STA 412+49.34	TO STA 413+90.00	140.66												BRIDGE OMISSION
STA 413+90.00	TO STA 414+10.00	20.00	2	5	1	3	5	5	2	2	4	1	1	
STA 414+10.00	TO STA 416+55.71	245.71	2	55	7	25	62	62	21	25	9	4	4	
STA 416+55.71	TO STA 416+75.71	20.00	2	5	1	3	5	5	2	2	4	1	1	
STA 416+75.71	TO STA 417+79.28	103.57												BRIDGE OMISSION
STA 417+79.28	TO STA 417+99.28	20.00	2	5	1	3	5	5	2	2	4	1	1	
STA 417+99.28	TO STA 430+96.50	1297.22	2	289	33	131	325	325	109	130	44	17	17	CENTERLINE WORK ENDS
<b>EB LANES TOTAL</b>					627	75	289	701	701	238	282	116	42	42
<b>I-24 WB CENTER LINE</b>														
STA 352+44.00	TO STA 367+00.00	1456.00												CENTERLINE WORK BEGINS
STA 367+00.00	TO STA 390+00.00	2300.00												NO WORK
STA 390+00.00	TO STA 400+29.93	1029.93	2	229	26	104	258	258	86	103	35	13	13	
STA 400+29.93	TO STA 400+49.93	20.00	2	5	1	3	5	5	2	2	4	1	1	
STA 400+49.93	TO STA 401+61.76	111.83												BRIDGE OMISSION
STA 401+61.76	TO STA 401+81.76	20.00	2	5	1	3	5	5	2	2	4	1	1	
STA 401+81.76	TO STA 412+41.53	1059.77	2	236	27	107	265	265	89	106	36	14	14	
STA 412+41.53	TO STA 412+61.53	20.00	2	5	1	3	5	5	2	2	4	1	1	
STA 412+61.53	TO STA 414+02.19	140.66												BRIDGE OMISSION
STA 414+02.19	TO STA 414+22.19	20.00	2	5	1	3	5	5	2	2	4	1	1	
STA 414+22.19	TO STA 416+64.54	242.35	2	54	7	25	61	61	21	25	9	4	4	
STA 416+64.54	TO STA 416+84.54	20.00	2	5	1	3	5	5	2	2	4	1	1	
STA 416+84.54	TO STA 417+88.47	103.93												BRIDGE OMISSION
STA 417+88.47	TO STA 418+08.47	20.00	2	5	1	3	5	5	2	2	4	1	1	
STA 418+08.47	TO STA 430+96.50	1288.03	2	287	33	130	323	323	108	129	43	17	17	CENTERLINE WORK ENDS
<b>WB LANES TOTAL</b>					836	99	384	937	937	316	375	147	54	54
<b>PROJECT TOTALS</b>					1463	174	673	1638	1638	554	657	263	96	96

• SEE FULL DEPTH SCHEDULE  
AND EDGE LINE REPAIR SCHEDULE  
FOR ADDITIONAL QUANTITIES

## SCHEDULE FOR I-24 RIGHT EDGE OF PAVEMENT REPAIR - MASSAC CO

FAI-24		SECTION LENGTH (INFO ONLY)	MILL WIDTH	HMA SURF REMOVAL	POLY HMA SURF CSE MIX "E"	POLYMERIZED BIT MATLS TACK CT	THPL PAVEMENT MARKING	TEMP PAVEMENT MARKING	TEMP PAVEMENT MARKING	COMMENTS
				2"	2"		LINE 4"	LINE 4"	REMOVAL	
	COMMENT	FEET	INFO	SQ YD	TONS	LB	FOOT	FOOT	SQ FT	
<b>I-24 EB</b>										
MP	37.7	RT EP	20.00	2	5	1	2	20	20	7
MP	37.7	RT EP	350.00	2	78	9	35	350	350	117
MP	38.7	RT EP	100.00	2	23	3	10	100	100	34
<b>EB LANES TOTAL</b>					106	13	47	470	470	158
<b>I-24 WB</b>										
MP	38.8	RT EP	100.00	2	23	3	10	100	100	34
MP	38.6	RT EP	30.00	2	7	1	3	30	30	10
MP	38.4	RT EP	25.00	2	6	1	3	25	25	9
MP	38.1	RT EP	50.00	2	12	2	5	50	50	17
MP	37.8	RT EP	200.00	2	45	6	20	200	200	67
MP	37.7	RT EP	600.00	2	134	16	60	600	600	200
<b>WB LANES TOTAL</b>					227	29	101	1005	1005	337
<b>PROJECT TOTALS</b>					333	42	148	1475	1475	495

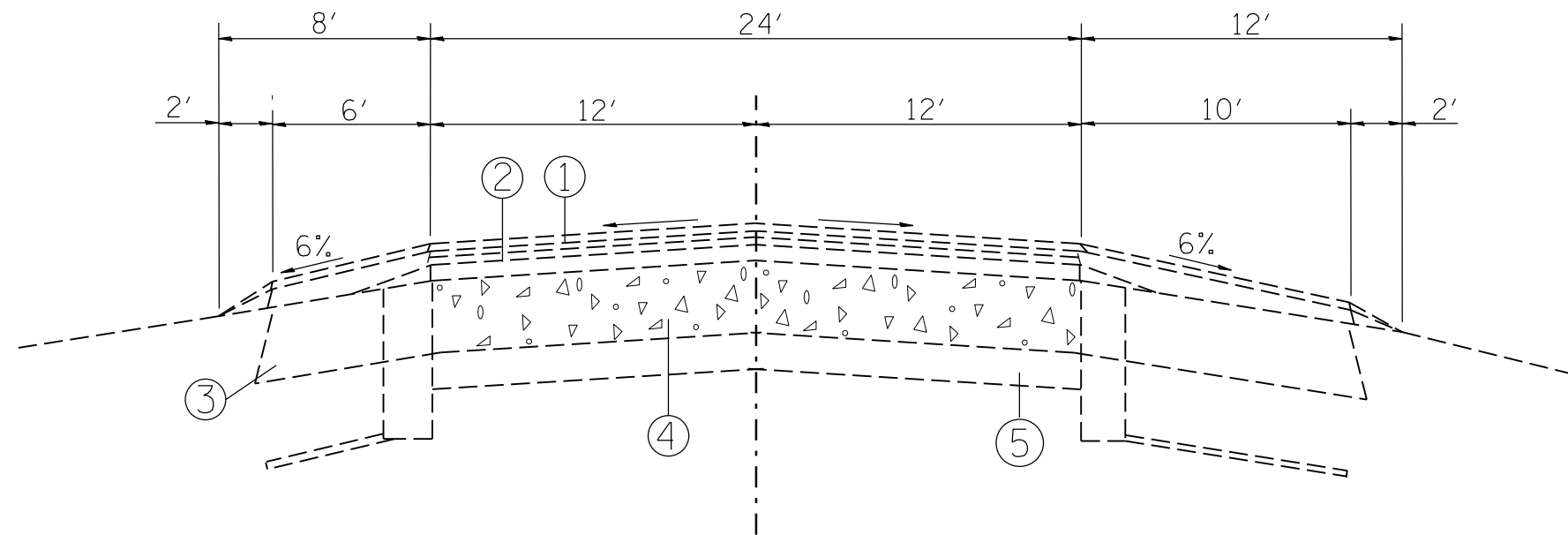
• SEE FULL DEPTH SCHEDULE  
AND CENTERLINE REPAIR SCHEDULE  
FOR ADDITIONAL QUANTITIES

# TYPICAL SECTION

FAI RTE 24  
EB & WB LANES



(LOOKING IN DIRECTION OF TRAVEL)



- ① EXIST. POLY. BIT. CONC. SURF. CSE., SUPERPAVE, MIX. D, N105, 1 1/2"
- ② EXIST. POLY. BIT. CONC. BINDER CSE., SUPERPAVE, IL 19.0, N105, 2 1/2"
- ③ EXIST. BITUMINOUS SHOULDERS
- ④ EXIST. 8" C.R.C PAVEMENT
- ⑤ EXIST. 4" AGGREGATE SUB-BASE

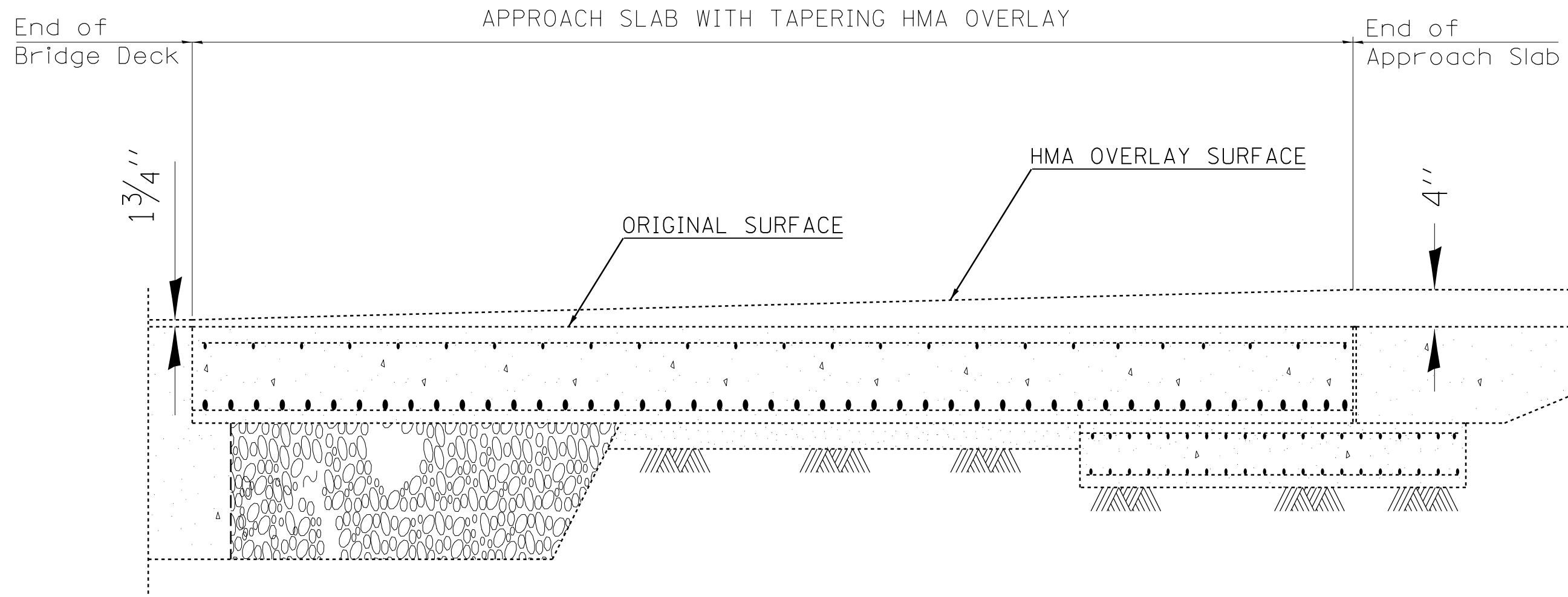
TYPICAL FOR I-24 EB & WB LANES

STA 350+00.36 (MP 37.4) TO STA. 428+03.85 (MP 38.91)

FILE NAME =	USER NAME = Leftwichdl	DESIGNED -	REVISED -	<b>STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION</b>	<b>TYPICAL SECTION</b>			F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
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Default	PLOT DATE = 4/7/2017	DATE -	REVISED -		SCALE: SHEET OF SHEETS STA. TO STA.			CONTRACT NO. 78571				
							ILLINOIS FED. AID PROJECT					

# DETAIL

## EXISTING HMA OVERLAY TAPERS AT BRIDGE APPROACH PAVEMENT



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Default	PLOT DATE = 4/7/2017	DATE -	REVISED -

**STATE OF ILLINOIS  
DEPARTMENT OF TRANSPORTATION**

**DETAIL OF EXISTING HMA TAPER  
OVER BRIDGE APPROACH PAVEMENT**

SCALE: SHEET OF SHEETS STA. TO STA.

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