

F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
VAR.	2014-029RS	VARIOUS*	25	1
		ILLINOIS	CONTRACT NO. 60Y15	

*COOK, DUPAGE AND LAKE

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION
DIVISION OF HIGHWAYS

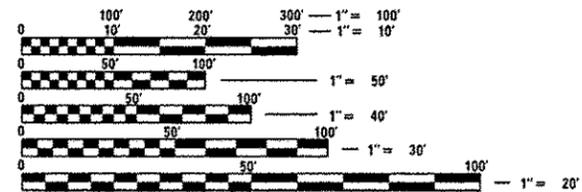
**PROPOSED
HIGHWAY PLANS**

FOR INDEX OF SHEETS, SEE SHEET NO. 2

THIS PROJECT IS LOCATED IN:
THE VILLAGE OF ADDISON
THE VILLAGE OF ARLINGTON HEIGHTS
THE VILLAGE OF GLENCOE
THE VILLAGE OF LINCOLNWOOD
THE VILLAGE OF MORTON GROVE
THE VILLAGE OF NORTHBROOK
THE VILLAGE OF PALATINE
THE VILLAGE OF SCHAUMBURG
THE VILLAGE OF SKOKIE
THE VILLAGE OF WILMETTE
THE CITY OF CHICAGO
THE CITY OF HIGHLAND PARK
THE CITY OF ROLLING MEADOWS

VARIOUS ROUTES
SECTION: 2014-029RS
VARIOUS NORTH EXPRESSWAY LOCATIONS
INTERMITTENT RESURFACING
COOK, DUPAGE, AND LAKE COUNTIES
C-91-305-14

FOR GENERAL LOCATION MAP, SEE SHEETS NO. 4 AND NO. 5



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

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

PROJECT ENGINEER: DANIEL WILGREEN (847) 705-4240
PROJECT MANAGER: KEN ENG (847) 705-4247

CONTRACT NO. 60Y15

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION
DIVISION OF HIGHWAYS

SUBMITTED April 10 20 14
John Furlan
DEPUTY DIRECTOR OF HIGHWAYS, REGION ENGINEER

May 9 20 14
John D. Baranzelli, PE, BC
ENGINEER OF DESIGN AND ENVIRONMENT

Mar 9 20 14
Osman Osman, PE, BC
DIRECTOR OF HIGHWAYS, CHIEF ENGINEER

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INDEX OF SHEETS

STATE STANDARDS

GENERAL NOTES

<u>SHEET NO.</u>	<u>DESCRIPTION</u>	<u>STANDARD NO.</u>	<u>DESCRIPTION</u>
1	TITLE SHEET	000001-06	TYPICAL SYMBOLS, ABBREVIATIONS AND PATTERNS
2	INDEX OF SHEETS, STATE STANDARDS AND GENERAL NOTES	701400-07	APPROACH TO LANE CLOSURE, FREEWAY/EXPRESSWAY
3	SUMMARY OF QUANTITIES	701401-08	LANE CLOSURE, FREEWAY/EXPRESSWAY
4-5	GENERAL LOCATION MAP	701411-08	MULTI-LANE, TRAFFIC CONTROL AT ENTRANCE OR EXIT RAMP
6	ROUTE INFORMATION	701426-06	MULTI-LANE, INTERMITTENT OR MOVING OPERATION
7	SUMMARY OF INTERMITTENT RESURFACING SCHEDULE	701428	TRAFFIC CONTROL SETUP & REMOVAL FREEWAY/EXPRESSWAY
8	NB I-290 TO WB I-90 RAMP RESURFACING PLAN	701446-05	TWO LANE CLOSURE FREEWAY/EXPRESSWAY
9-16	INTERMITTENT RESURFACING SCHEDULE	701901-03	TRAFFIC CONTROL DEVICES
17	BUTT JOINT AND HMA TAPER DETAILS (BD-32)		
18	ENTRANCE AND EXIT RAMP CLOSURE DETAILS (TC-08)		
19	FREEWAY SINGLE & MULTI-LANE WEAVE (TC-09)		
20-21	MULTI-LANE FREEWAY PAVEMENT MARKING DETAILS (TC-12)		
22	FREEWAY SHOULDER CLOSURES AND PARTIAL RAMP CLOSURES (TC-17)		
23	SIGNING FOR FLAGGING OPERATIONS AT WORK ZONE OPENINGS ON FREEWAYS/EXPRESSWAYS (TC-18)		
24	STANDARD TRAFFIC SIGNAL DESIGN DETAILS (TS-05, SHEET 2 OF 7)		
25	DETECTOR LOOP INSTALLATION DETAIL FOR ROADWAY RESURFACING (TS-07)		

NO WORK SHALL BE PERFORMED ON ANY BRIDGES OR ELEVATED STRUCTURES.

THE CONTRACTOR WILL NOT BE ALLOWED TO SET UP A YARD OR FIELD OFFICE ON STATE (OR TOLLWAY) PROPERTY WITHOUT WRITTEN PERMISSION FROM THE DEPARTMENT (OR ISTHA)

ANY PAVEMENT MARKINGS AND RAISED REFLECTIVE PAVEMENT MARKERS OBLITERATED BY MILLING AND RESURFACING OPERATIONS ON SIDE STREETS AND ENTRANCES SHALL BE REPLACED AND PAID FOR IN KIND.

BEFORE BEGINNING ANY WORK, THE CONTRACTOR SHALL RETAIN AND RECORD FOR FUTURE REFERENCE, ALL EXISTING PAVEMENT MARKING LINES (AND RAISED REFLECTIVE PAVEMENT MARKERS) IN ORDER THAT THESE LOCATIONS CAN BE RE-ESTABLISHED FOR STRIPING. EXACT LOCATIONS OF ALL PAVEMENT MARKINGS SHALL BE AS DIRECTED BY THE ENGINEER.

ALL INTERMITTENT RESURFACING LOCATIONS WILL BE DETERMINED IN THE FIELD BY THE ENGINEER.

THE CONTRACTOR SHALL CONTACT THE DISTRICT ONE TRAFFIC CONTROL SUPERVISOR AT (847) 705-4470 A MINIMUM OF 72 HOURS IN ADVANCE OF BEGINNING WORK.

THE ENGINEER SHALL CONTACT JERNARD PERKINS, AREA TRAFFIC FIELD ENGINEER AT (708) 524-2145 MINIMUM OF TWO (2) WEEKS PRIOR TO PLACEMENT OF PERMANENT PAVEMENT MARKINGS.

THE EXISTING ROADWAY TYPICAL SECTION IS ASSUMED TO HAVE A 3 INCH HOT-MIX ASPHALT OVERLAY ON TOP OF A TEN INCH CONCRETE BASE.

ALL INTERMITTENT RESURFACING LOCATIONS SHOWN IN THE PLANS ARE TWO (2) INCH MILL AND RESURFACE ONLY. THE MINIMUM WIDTH FOR INTERMITTENT RESURFACING SHALL BE THREE (3) FEET.

THE COST OF ANY PARTIAL OR FULL DEPTH PATCHING REQUIRED AFTER THE REMOVAL OF THE EXISTING 2 INCH HOT-MIX ASPHALT SURFACE SHALL BE PAID FOR IN ACCORDANCE WITH ARTICLE 109.04 OF THE STANDARD SPECIFICATIONS.

ANY DETECTOR OR INDUCTION LOOPS DAMAGED BY MILLING SHALL BE REPLACED IN KIND. IT SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR TO QUANTIFY LOOP REPLACEMENTS NEEDED AND PROVIDE THE RESIDENT ENGINEER THIS INFORMATION PRIOR TO GRINDING OR REMOVAL.

NO PATCHING OR RESURFACING IS TO BE DONE WITHIN FIFTY (50) FEET OF ANY RAILROAD CROSSING.

WHEN MILLED PAVEMENT IS OPEN TO TRAFFIC, THE MAXIMUM GRADE DIFFERENTIAL BETWEEN PASSES OF THE MILLING MACHINE SHALL NOT EXCEED 1 1/2 INCHES (40MM) WHERE THE SPEED LIMIT IS 45 MPH (80 KM/H) OR LESS AND 1 INCH (25 MM) WHERE THE SPEED LIMIT IS GREATER THAN 45 MPH (80 KM/H), WITH WRITTEN APPROVAL FROM THE RESIDENT ENGINEER. A MAXIMUM GRADE DIFFERENTIAL OF 3 INCHES (75 MM) MAY BE ALLOWED IF THE EDGE OF THE MILLING IS SLOPED A MINIMUM OF 1:3 (V:H).

HOT-MIX ASPHALT MIXTURE REQUIREMENTS		QUALITY MANAGEMENT PROGRAM (QMP)
MIXTURE TYPE	AIR VOIDS (%) @ N _{DES.}	
INTERMITTENT RESURFACING		
POLYMERIZED HOT-MIX ASPHALT SURFACE COURSE, MIX "F", N90 (IL 9.5MM), 2"	4% @ 90 GYR	QC/OA
NB I-290 TO WB I-90 RAMP		
POLYMERIZED HOT-MIX ASPHALT SURFACE COURSE, MIX "F", N90 (IL 9.5MM), 1 3/4"	4% @ 90 GYR	QC/OA
HOT-MIX ASPHALT SURFACE COURSE, MIX "D", N70 (IL 9.5MM), 1 3/4"	4% @ 70 GYR	QC/OA
HOT-MIX ASPHALT BINDER COURSE, IL-19.0, N70 (2 1/4" - VARIES)	4% @ 70 GYR	QC/OA
QMP DESIGNATION: QUALITY CONTROL/QUALITY ASSURANCE (QC/OA)		

THE UNIT WEIGHT USED TO CALCULATE ALL HMA SURFACE MIXTURE QUANTITIES IS 112 LBS/50 YD/IN.

THE "AC TYPE" FOR POLYMERIZED HMA MIXES SHALL BE "SBS/SBR PG 76-22" AND FOR NON-POLYMERIZED HMA THE "AC TYPE" SHALL BE "PG 64-22" UNLESS MODIFIED BY DISTRICT ONE SPECIAL PROVISIONS. FOR USE OF RECYCLED MATERIALS SEE SPECIAL PROVISIONS. QUALITY MANAGEMENT PROGRAM (QMP) IDENTIFIES THE PARTICULAR QUALITY CONTROL SPECIFICATION THAT APPLIES TO THE HMA MIXTURE

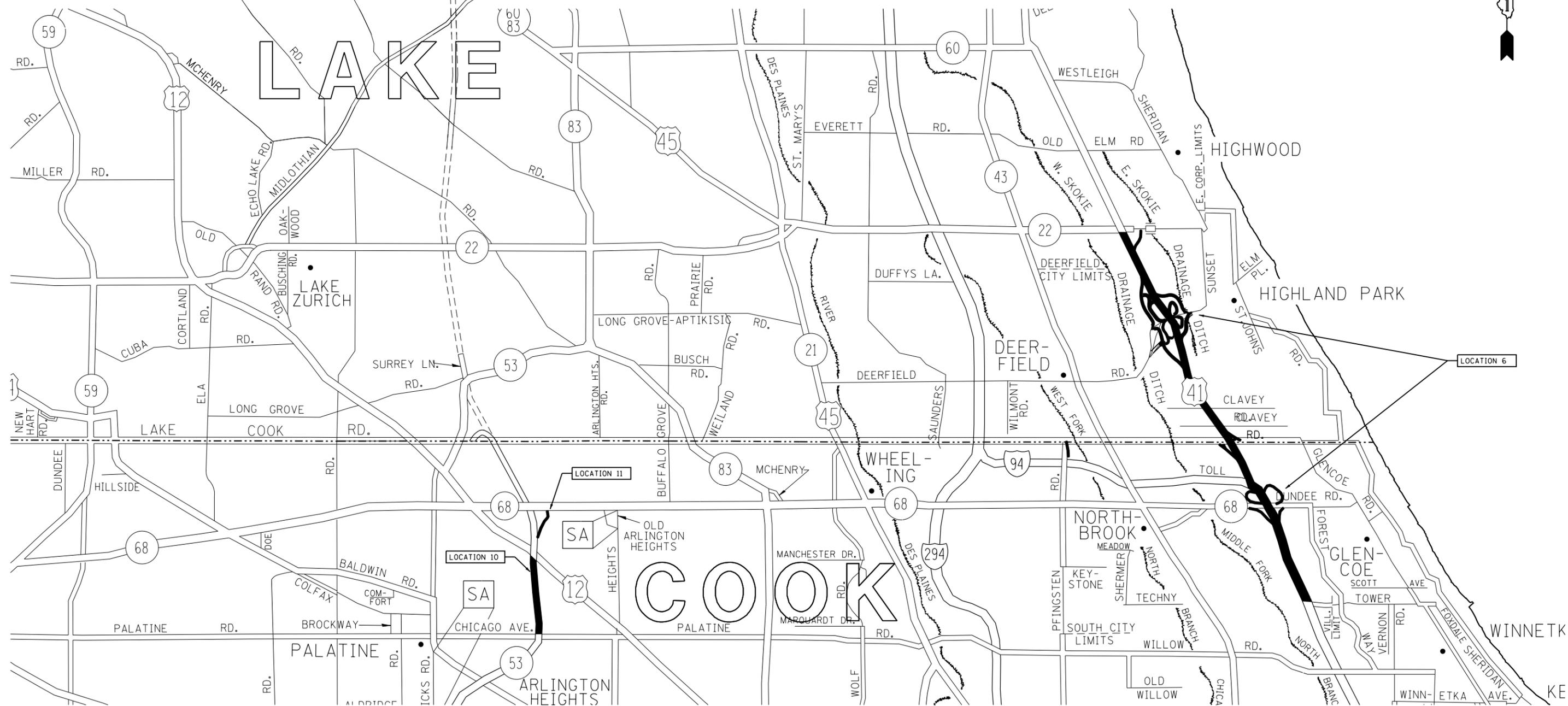
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Default	CHECKED -	REVISED -	VAR.			2014-029RS	VARIOUS*	25	2
	DATE -	REVISED -	SCALE: SHEET OF SHEETS STA. TO STA.			CONTRACT NO. 60Y15			

[ILLINOIS] FED. AID PROJECT

URBAN

URBAN

SUMMARY OF QUANTITIES				CONSTRUCTION TYPE CODE						SUMMARY OF QUANTITIES				CONSTRUCTION TYPE CODE					
CODE NO	ITEM	UNIT	TOTAL QUANTITIES	100% STATE COOK COUNTY 0005	100% STATE DUPAGE COUNTY 0005	100% STATE LAKE COUNTY 0005				CODE NO	ITEM	UNIT	TOTAL QUANTITIES	100% STATE COOK COUNTY 0005	100% STATE DUPAGE COUNTY 0005	100% STATE LAKE COUNTY 0005			
40600400	MIXTURE FOR CRACKS, JOINTS, AND FLANGEWAYS	TON	27	18	2	7				* 78000200	THERMOPLASTIC PAVEMENT MARKING - LINE 4"	FOOT	31841	16411	610	14820			
40600982	HOT-MIX ASPHALT SURFACE REMOVAL-BUTT JOINT	SO YD	509	348	23	138				* 78000400	THERMOPLASTIC PAVEMENT MARKING - LINE 6"	FOOT	2158	1438	150	570			
40603085	HOT-MIX ASPHALT BINDER COURSE, [L-19.0, N70	TON	615	615						* 78000500	THERMOPLASTIC PAVEMENT MARKING - LINE 8"	FOOT	933	598	50	285			
40603340	HOT-MIX ASPHALT SURFACE COURSE, MIX "D", N70	TON	120	120						* 78000600	THERMOPLASTIC PAVEMENT MARKING - LINE 12"	FOOT	730	395	50	285			
40603595	POLYMERIZED HOT-MIX ASPHALT SURFACE COURSE, MIX "F", N90	TON	1720	1118	86	516				* 78000650	THERMOPLASTIC PAVEMENT MARKING - LINE 24"	FOOT	572	237	50	285			
44000157	HOT-MIX ASPHALT SURFACE REMOVAL, 2"	SO YD	12566	7201	761	4604				* 78004220	PREFORMED PLASTIC PAVEMENT MARKING, TYPE B - INLAID - LINE 5"	FOOT	300	200	50	50			
44000165	HOT-MIX ASPHALT SURFACE REMOVAL, 4"	SO YD	4390	4390						* 78100100	RAISED REFLECTIVE PAVEMENT MARKER	EACH	365	184	10	171			
48102100	AGGREGATE WEDGE SHOULDER, TYPE B	TON	53	53						78300200	RAISED REFLECTIVE PAVEMENT MARKER REMOVAL	EACH	365	184	10	171			
60300305	FRAMES AND LIDS TO BE ADJUSTED	EACH	25	10	5	10				* 88600600	DETECTOR LOOP REPLACEMENT	FOOT	1640	685	100	855			
67000400	ENGINEER'S FIELD OFFICE, TYPE A	CAL MO	6	3	2	1				X2020110	GRADING AND SHAPING SHOULDERS	UNITS	29	29					
67100100	MOBILIZATION	L SUM	1	0.5	0.3	0.2				X4060110	BITUMINOUS MATERIALS (PRIME COAT)	POUND	8620	6205	343	2072			
70106800	CHANGEABLE MESSAGE SIGN	CAL MO	1	0.5	0.3	0.2				X7011015	TRAFFIC CONTROL AND PROTECTION (EXPRESSWAYS)	L SUM	1	0.5	0.3	0.2			
70300520	PAVEMENT MARKING TAPE, TYPE III 4"	FOOT	2853	1383	70	1400				* X8730312	ELECTRIC CABLE IN CONDUIT, LEAD-IN, NO. 18 4/C, TWISTED, SHIELDED	FOOT	600	300	100	200			
70301000	WORK ZONE PAVEMENT MARKING REMOVAL	SO FT	951	461	23	467				X7010410	SPEED DISPLAY TRAILER	CAL MD	1	0.33	0.33	0.34			
* 78000100	THERMOPLASTIC PAVEMENT MARKING - LETTERS AND SYMBOLS	SO FT	349	187	36	126				* X8850102	INDUCTION LOOP	FOOT	200	100	40	60			
										20070604	TRAINEES-TRAINING PROGRAM GRADUATE	HOUR	500	167	167	166			



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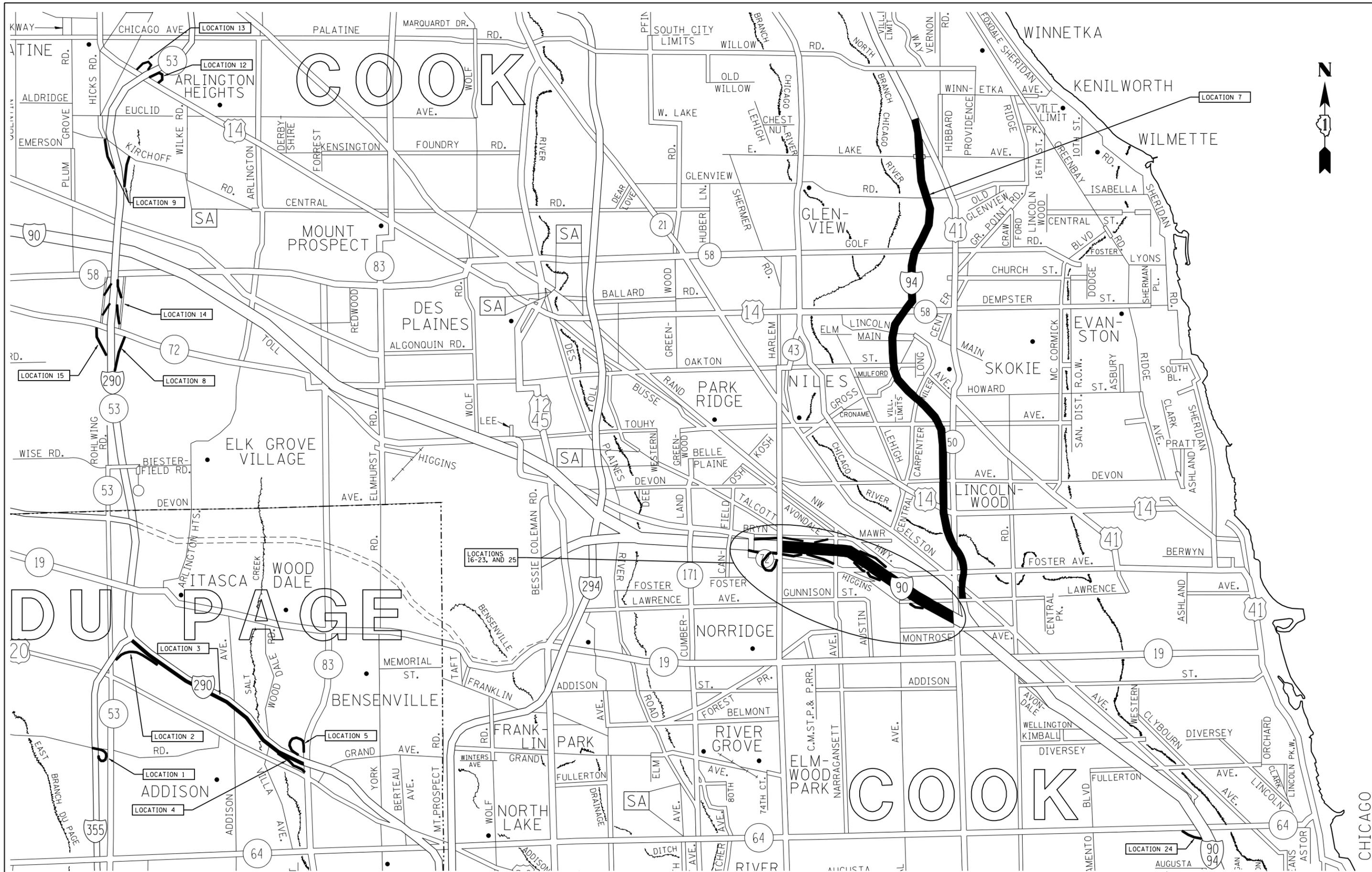
**STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION**

**GENERAL LOCATION MAP
VARIOUS NORTH EXPRESSWAY LOCATIONS**

SCALE: SHEET OF SHEETS STA. TO STA.

*COOK, DUPAGE AND LAKE

F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
VAR.	2014-029RS	VARIOUS*	25	4
			CONTRACT NO. 60Y15	
ILLINOIS FED. AID PROJECT				



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**STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION**

GENERAL LOCATION MAP			
VARIOUS NORTH EXPRESSWAY LOCATIONS			
SCALE:	SHEET	OF SHEETS	STA. TO STA.

*COOK, DUPAGE AND LAKE			
F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS
VAR.	2014-029RS	VARIOUS*	25
			SHEET NO. 5
CONTRACT NO. 60Y15			
ILLINOIS FED. AID PROJECT			

	SUMMARY - NORTHERN EXPRESSWAY ROUTES	COUNTY	CITIES/VILLAGES	TOWNSHIPS	SPEED LIMIT	EXISTING ADT (YEAR)
LOC.1	EB ARMY TRAIL RD. (ENTRANCE RAMP TO NB I-355)	DUPAGE	ADDISON	BLOOMINGDALE	30 MPH	13,800 (2012)
LOC.2	EB I-290 (NB I-355 FEEDER RAMP)	DUPAGE	ADDISON	ADDISON	50 MPH	24,600 (2002)
LOC.3	EB I-290 (I-355 TO IL 83(KINGERY HIGHWAY))	DUPAGE	ADDISON	ADDISON	55 MPH	87,900 (2012)
LOC.4	EB I-290 (SB IL 83(KINGERY HIGHWAY) EXIT RAMP)	DUPAGE	ADDISON	ADDISON	25 MPH	10,400 (2002)
LOC.5	WB I-290 (SB IL 83(KINGERY HIGHWAY) EXIT RAMP)	DUPAGE	ADDISON	ADDISON	25 MPH	4,500 (2002)
LOC.6	I-94(EDENS) (TOWER RD. TO IL 22)	COOK, LAKE	GLENCOE, HIGHLAND PARK, NORTHBROOK	MORAINE, NEW TRIER, NORTHFIELD, WEST DEERFIELD	50 MPH	54,200 (2013)
LOC.7	NB I-94(EDENS) (LAWRENCE AVE. TO SKOKIE BLVD.)	COOK	CHICAGO, LINCOLNWOOD, MORTON GROVE, SKOKIE, WILMETTE	JEFFERSON, NILES, NEW TRIER	55 MPH	149,500 (2013)
LOC.8	NB IL 53 (HIGGINS RD. EXIT RAMP)	COOK	SCHAUMBURG	ELK GOVE, SCHAUMBURG	N/A	23,200 (2010)
LOC.9	IL 53 (KIRCHHOFF RD. RAMPS)	COOK	ROLLING MEADOWS	PALATINE	N/A	5,300 (2010)
LOC.10	NB IL 53 (PALATINE ROAD TO US 12(RAND ROAD))	COOK	UNINCORPORATED	PALATINE	55 MPH	90,000 (2010)
LOC.11	NB IL 53 (DUNDEE RD. EXIT RAMP)	COOK	ARLINGTON HTS	WHEELING	N/A	3,850 (2010)
LOC.12	NB IL 53 (US 14(NORTHWEST HIGHWAY) EXIT RAMP)	COOK	PALATINE	PALATINE	N/A	3,350 (2010)
LOC.13	SB IL 53 (US 14(NORTHWEST HIGHWAY) ENTRANCE RAMP)	COOK	PALATINE	PALATINE	N/A	950 (2010)
LOC.14	IL 53 RAMPS (GOLF RD. TO HIGGINS RD.)	COOK	SCHAUMBURG	ELK GROVE	40 MPH	20,800 (2013)
LOC.15	SB IL 53 (HIGGINS ROAD ENTRANCE RAMP)	COOK	SCHAUMBURG	SCHAUMBURG	N/A	21,700 (2002)
LOC.16	I-90(KENNEDY) (HARLEM AVE. TO CICERO AVE.)	COOK	CHICAGO	JEFFERSON	55 MPH	158,800 (2013)
LOC.17	I-90(KENNEDY) (HARLEM AVE. RAMPS)	COOK	CHICAGO	JEFFERSON	N/A	9,200 (2009)
LOC.18	SB I-90(KENNEDY) (NAGLE AVE. EXIT RAMP)	COOK	CHICAGO	JEFFERSON	N/A	12,200 (2002)
LOC.19	NB I-90(KENNEDY) (NAGLE AVE. ENTRANCE RAMP)	COOK	CHICAGO	JEFFERSON	N/A	2,200 (2002)
LOC.20	SB I-90(KENNEDY) (AUSTIN AVE. EXIT RAMP)	COOK	CHICAGO	JEFFERSON	N/A	9,700 (2002)
LOC.21	SB I-90(KENNEDY) (FOSTER AVE. ENTRANCE RAMP)	COOK	CHICAGO	JEFFERSON	N/A	2,100 (2002)
LOC.22	NB I-90(KENNEDY) (FOSTER AVE. ENTRANCE RAMP)	COOK	CHICAGO	JEFFERSON	N/A	2,100 (2002)
LOC.23	SB I-90(KENNEDY) (LAWRENCE AVE. ENTRANCE RAMP)	COOK	CHICAGO	JEFFERSON	N/A	2,800 (2002)
LOC.24	SB I-90(KENNEDY) (NORTH AVE. ENTRANCE RAMP)	COOK	CHICAGO	WEST CHICAGO	N/A	8,200 (1994)
LOC.25	I-90(KENNEDY) (RAMPS AT SAYRE AVE.)	COOK	CHICAGO	JEFFERSON	N/A	1,700 (2002)

	SUMMARY - NORTHERN EXPRESSWAY ROUTES	HMA 2" MILL & RESURFACE (SY)
LOC.1	EB ARMY TRAIL RD. (ENTRANCE RAMP TO NB I-355)	214
LOC.2	EB I-290 (NB I-355 FEEDER RAMP)	65
LOC.3	EB I-290 (I-355 TO IL 83(KINGERY HIGHWAY))	144
LOC.4	EB I-290 (SB IL 83(KINGERY HIGHWAY) EXIT RAMP)	175
LOC.5	WB I-290 (SB IL 83(KINGERY HIGHWAY) EXIT RAMP)	163
LOC.6	I-94(EDENS) (TOWER RD. TO IL 22)	8,078
LOC.7	NB I-94(EDENS) (LAWRENCE AVE. TO SKOKIE BLVD.)	196
LOC.8	NB IL 53 (HIGGINS RD. EXIT RAMP)	599
LOC.9	IL 53 (KIRCHHOFF RD. RAMPS)	58
LOC.10	NB IL 53 (PALATINE ROAD TO US 12(RAND ROAD))	8
LOC.11	NB IL 53 (DUNDEE RD. EXIT RAMP)	657
LOC.12	NB IL 53 (US 14(NORTHWEST HIGHWAY) EXIT RAMP)	124
LOC.13	SB IL 53 (US 14(NORTHWEST HIGHWAY) ENTRANCE RAMP)	55

	SUMMARY - NORTHERN EXPRESSWAY ROUTES (CONTINUED)	HMA 2" MILL & RESURFACE (SY)
LOC.14	IL 53 RAMPS (GOLF RD. TO HIGGINS RD.)	303
LOC.15	SB IL 53 (HIGGINS ROAD ENTRANCE RAMP)	446
LOC.16	I-90(KENNEDY) (HARLEM AVE. TO CICERO AVE.)	245
LOC.17	I-90(KENNEDY) (HARLEM AVE. RAMPS)	124
LOC.18	SB I-90(KENNEDY) (NAGLE AVE. EXIT RAMP)	178
LOC.19	NB I-90(KENNEDY) (NAGLE AVE. ENTRANCE RAMP)	53
LOC.20	SB I-90(KENNEDY) (AUSTIN AVE. EXIT RAMP)	124
LOC.21	SB I-90(KENNEDY) (FOSTER AVE. ENTRANCE RAMP)	113
LOC.22	NB I-90(KENNEDY) (FOSTER AVE. ENTRANCE RAMP)	318
LOC.23	SB I-90(KENNEDY) (LAWRENCE AVE. ENTRANCE RAMP)	80
LOC.24	SB I-90(KENNEDY) (NORTH AVE. ENTRANCE RAMP)	1
LOC.25	I-90(KENNEDY) (RAMPS AT SAYRE AVE.)	45
NORTHERN EXPRESSWAY TOTAL =		12566
		SY

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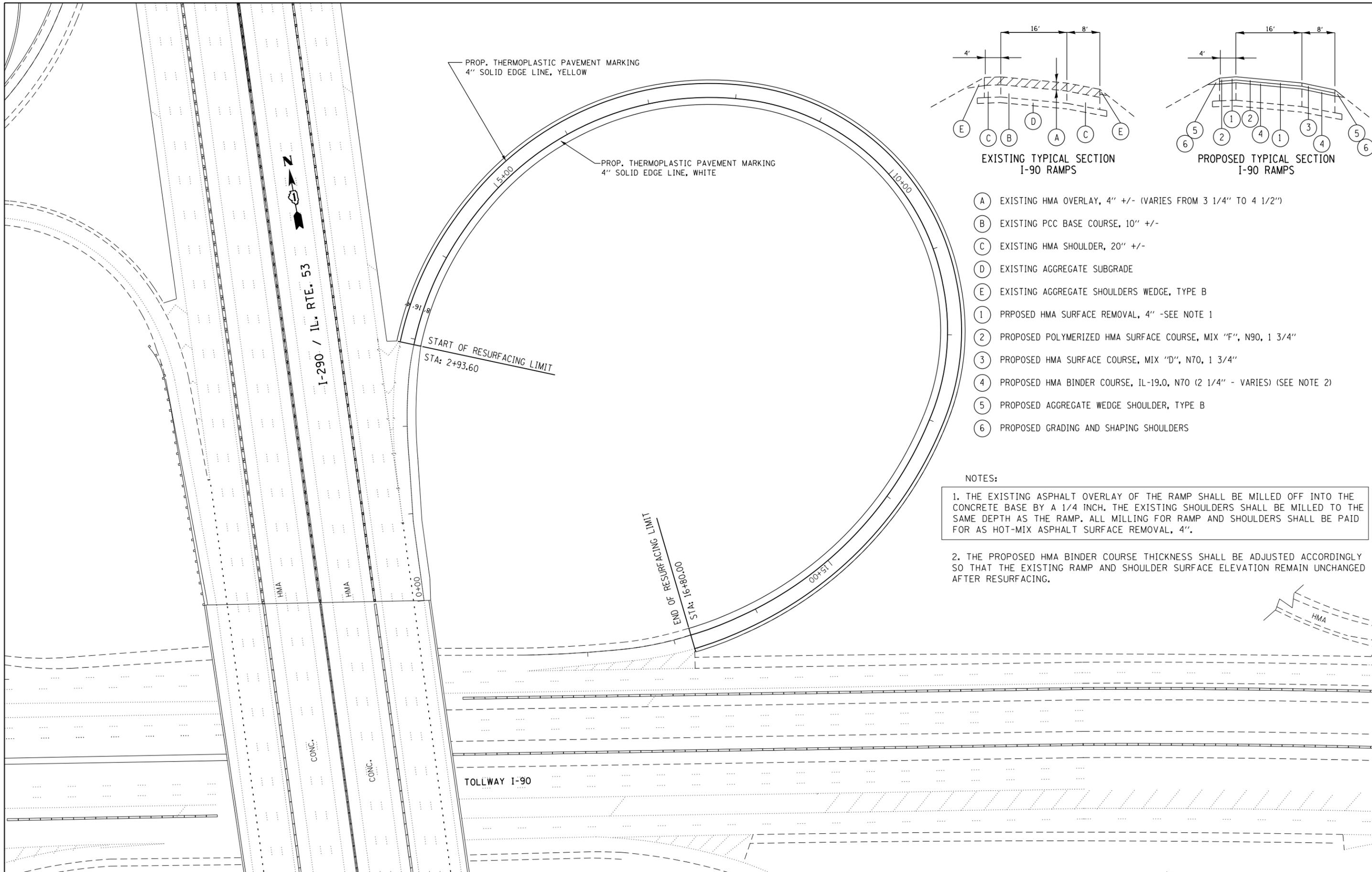
**STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION**

**SUMMARY OF INTERMITTENT RESURFACING SCHEDULE
VARIOUS NORTH EXPRESSWAY LOCATIONS**

SCALE:	SHEET	OF	SHEETS	STA.	TO	STA.
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*COOK, DUPAGE AND LAKE

F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
VAR.	2014-029RS	VARIOUS*	25	7
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- (A) EXISTING HMA OVERLAY, 4" +/- (VARIES FROM 3 1/4" TO 4 1/2")
- (B) EXISTING PCC BASE COURSE, 10" +/-
- (C) EXISTING HMA SHOULDER, 20" +/-
- (D) EXISTING AGGREGATE SUBGRADE
- (E) EXISTING AGGREGATE SHOULDERS WEDGE, TYPE B
- (1) PROPOSED HMA SURFACE REMOVAL, 4" -SEE NOTE 1
- (2) PROPOSED POLYMERIZED HMA SURFACE COURSE, MIX "F", N90, 1 3/4"
- (3) PROPOSED HMA SURFACE COURSE, MIX "D", N70, 1 3/4"
- (4) PROPOSED HMA BINDER COURSE, IL-19.0, N70 (2 1/4" - VARIES) (SEE NOTE 2)
- (5) PROPOSED AGGREGATE WEDGE SHOULDER, TYPE B
- (6) PROPOSED GRADING AND SHAPING SHOULDERS

NOTES:

1. THE EXISTING ASPHALT OVERLAY OF THE RAMP SHALL BE MILLED OFF INTO THE CONCRETE BASE BY A 1/4 INCH. THE EXISTING SHOULDERS SHALL BE MILLED TO THE SAME DEPTH AS THE RAMP. ALL MILLING FOR RAMP AND SHOULDERS SHALL BE PAID FOR AS HOT-MIX ASPHALT SURFACE REMOVAL, 4".

2. THE PROPOSED HMA BINDER COURSE THICKNESS SHALL BE ADJUSTED ACCORDINGLY SO THAT THE EXISTING RAMP AND SHOULDER SURFACE ELEVATION REMAIN UNCHANGED AFTER RESURFACING.

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**STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION**

**NB I-290 TO WB I-90 RAMP RESURFACING PLAN
VARIOUS NORTH EXPRESSWAY LOCATIONS**

SCALE: SHEET OF SHEETS STA. TO STA.

*COOK, DUPAGE AND LAKE			
F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS
VAR.	2014-029RS	VARIOUS*	25
			SHEET NO. 8
			CONTRACT NO. 60Y15
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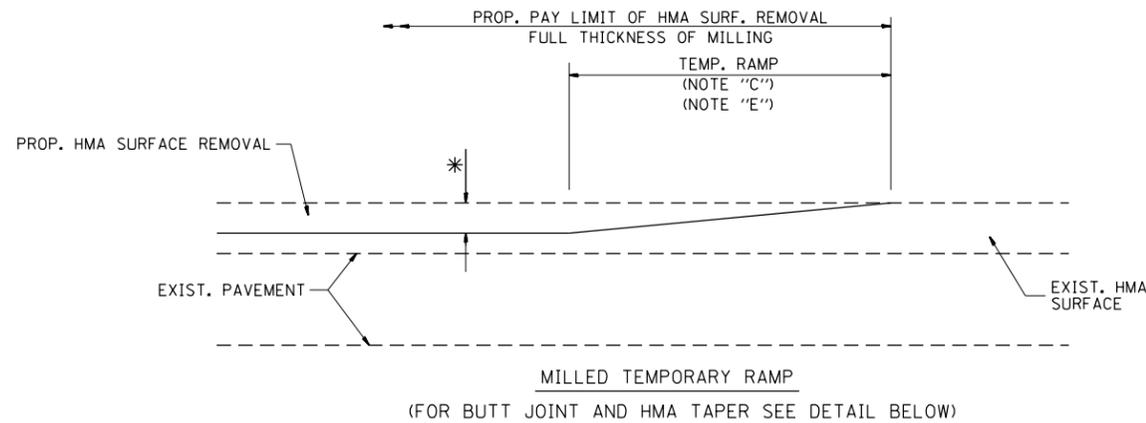
ROUTE: IL 53(Kirchoff Road Ramps)							
CROSS STREET		DIRECTION	LANE	PAVEMENT	PAVEMENT	REPAIR	REPAIR
FROM	TO	(EB/WB)	NO.	PATCH	PATCH	AREA	AREA
		(NB/SB)	(1, 2, 3)	WIDTH	LENGTH	(SQ FT)	(SQ YD)
Kirchoff Road	SB IL 53	SB		15	6	90	10
NB IL 53		NB	1	12	6	72	8
		NB	1	12	6	72	8
		NB	1	12	6	72	8
		NB	2	12	6	72	8
		NB	2	12	6	72	8
	Kirchoff Road	NB	2	12	6	72	8
TOTALS:						42	58
						FT	SY

ROUTE: NB IL 53 (US 14(Northwest Highway) Exit Ramp)							
CROSS STREET		DIRECTION	LANE	PAVEMENT	PAVEMENT	REPAIR	REPAIR
FROM	TO	(EB/WB)	NO.	PATCH	PATCH	AREA	AREA
		(NB/SB)	(1, 2, 3)	WIDTH	LENGTH	(SQ FT)	(SQ YD)
N PCC/HMA Jt. RR Bridge		NB	1	18	3	54	6
		NB	1	18	6	108	12
		NB	1	18	18	324	36
		NB	1	18	8	144	16
		NB	2	3	60	180	20
		NB	1	12	3	36	4
		NB	2	12	12	144	16
	US 14(Northwest Highway)	NB	2	16	8	128	14
TOTALS:						118	124
						FT	SY

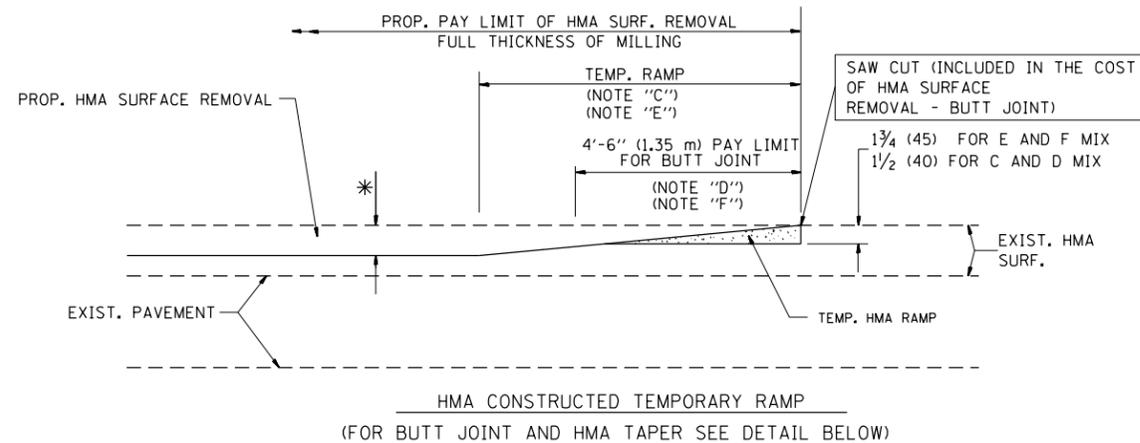
ROUTE: NB IL 53 (Palatine Road to US 12(Rand Road))							
CROSS STREET		DIRECTION	LANE	PAVEMENT	PAVEMENT	REPAIR	REPAIR
FROM	TO	(EB/WB)	NO.	PATCH	PATCH	AREA	AREA
		(NB/SB)	(1, 2, 3)	WIDTH	LENGTH	(SQ FT)	(SQ YD)
Palatine Road	US 12(Rand Road)	NB	3	12	6	72	8
TOTALS:						6	8
						FT	SY

ROUTE: NB IL 53 (Dundee Road Exit Ramp)							
CROSS STREET		DIRECTION	LANE	PAVEMENT	PAVEMENT	REPAIR	REPAIR
FROM	TO	(EB/WB)	NO.	PATCH	PATCH	AREA	AREA
		(NB/SB)	(1, 2, 3)	WIDTH	LENGTH	(SQ FT)	(SQ YD)
NB IL 53		NB	3,SHLDR	4	3	12	1
		NB	3,RAMP	3	96	288	32
		NB	RAMP	12	20	240	27
		NB	3,RAMP	3	100	300	33
		NB	LT1	3	40	120	13
		NB	LT1,RT1	3	275	825	92
		NB	RT2	3	160	480	53
		NB	RT2	4	60	240	27
		NB	RT1	12	38	456	51
		NB	RT2	10	12	120	13
		NB	RT1	4	45	180	20
		NB	RT1	12	3	36	4
		NB	RT2	4	50	200	22
		NB	LT2	3	100	300	33
		NB	RT2	3	50	150	17
		NB	LT2	3	170	510	57
		NB	RT1,RT2	3	185	555	62
		NB	LT2,RT1	3	120	360	40
		NB	RT1	4	50	200	22
		NB	RT1	14	20	280	31
	Dundee Road	NB	LT1	8	8	64	7
TOTALS:						1605	657
						FT	SY

ROUTE: SB IL 53 (US 14(Northwest Highway) Entrance Ramp)							
CROSS STREET		DIRECTION	LANE	PAVEMENT	PAVEMENT	REPAIR	REPAIR
FROM	TO	(EB/WB)	NO.	PATCH	PATCH	AREA	AREA
		(NB/SB)	(1, 2, 3)	WIDTH	LENGTH	(SQ FT)	(SQ YD)
US 14(Northwest Highway)		SB	1	16	6	96	11
		SB	1	16	3	48	5
		SB	1	3	6	18	2
		SB	1	16	3	48	5
		SB	1	16	5	80	9
		SB	1	16	6	96	11
		SB	1	16	4	64	7
	N PCC/HMA Jt. RR Bridge	SB	1	16	3	48	5
TOTALS:						36	55
						FT	SY

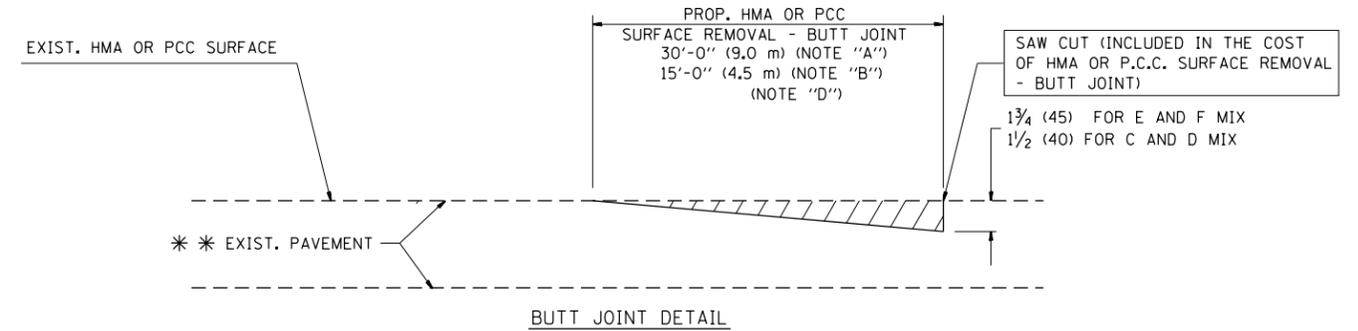


OPTION 1

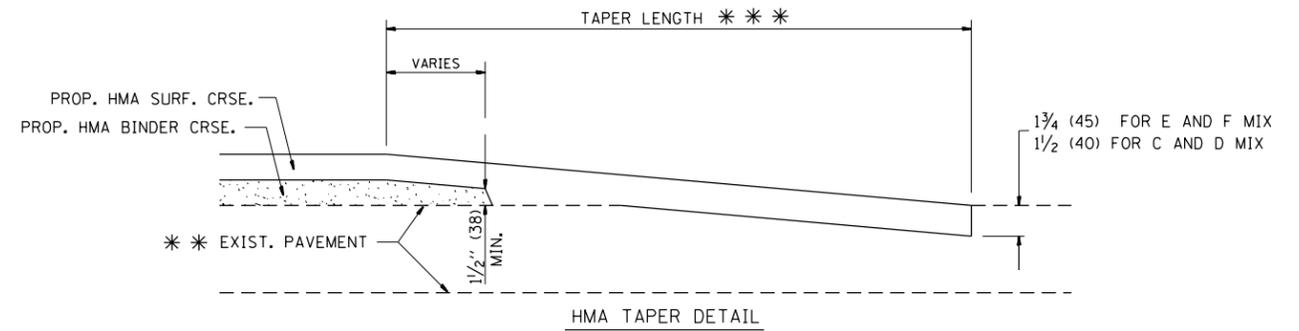


OPTION 2

TYPICAL TEMPORARY RAMP



BUTT JOINT DETAIL



HMA TAPER DETAIL

TYPICAL BUTT JOINT AND HMA TAPER FOR RESURFACING ONLY

*** PC CONCRETE, HMA OR HMA RESURFACED PAVEMENT.

NOTES

- A: MAINLINE ROADWAYS AND MAJOR SIDE ROADS.
 - B: MINOR SIDE ROADS.
 - C: THE TEMP. RAMP SHALL BE CONSTRUCTED IMMEDIATELY UPON REMOVAL OF THE EXISTING HMA SURFACE.
 - D: THE BUTT JOINT SHALL BE CONSTRUCTED IMMEDIATELY PRIOR TO PLACING THE PROPOSED HMA COURSES.
 - E: TAPER THE TEMP. RAMP AT A RATE OF 3'-0" (900 mm) PER 1 INCH (25 mm) OF MILLING THICKNESS.
 - F: INSTALLATION AND REMOVAL OF THE 4'-6" (1.35 m) TEMP. RAMP IS INCLUDED IN COST OF HMA SURFACE REMOVAL - BUTT JOINT
 - G: SEE ARTICLE 406.08 AND 406.14 OF THE STANDARD SPECIFICATIONS FOR "HMA AND/OR PCC SURFACE REMOVAL, BUTT JOINT".
- * SEE TYPICAL SECTIONS FOR MILLING THICKNESS.
- *** 20'-0" (6.1 m) PER 1 (25) RESURFACING (NOTE "A")
10'-0" (3.0 m) PER 1 (25) RESURFACING (NOTE "B")

BASIS OF PAYMENT:

THE BUTT JOINT WILL BE PAID FOR AT THE CONTRACT UNIT PRICE PER SQUARE YARD (SQUARE METER) FOR "HOT-MIX ASPHALT SURFACE REMOVAL - BUTT JOINT" OR FOR "PORTLAND CEMENT CONCRETE SURFACE REMOVAL - BUTT JOINT".

ALL DIMENSIONS ARE IN INCHES (MILLIMETERS) UNLESS OTHERWISE SHOWN.

*COOK, DUPAGE, AND LAKE

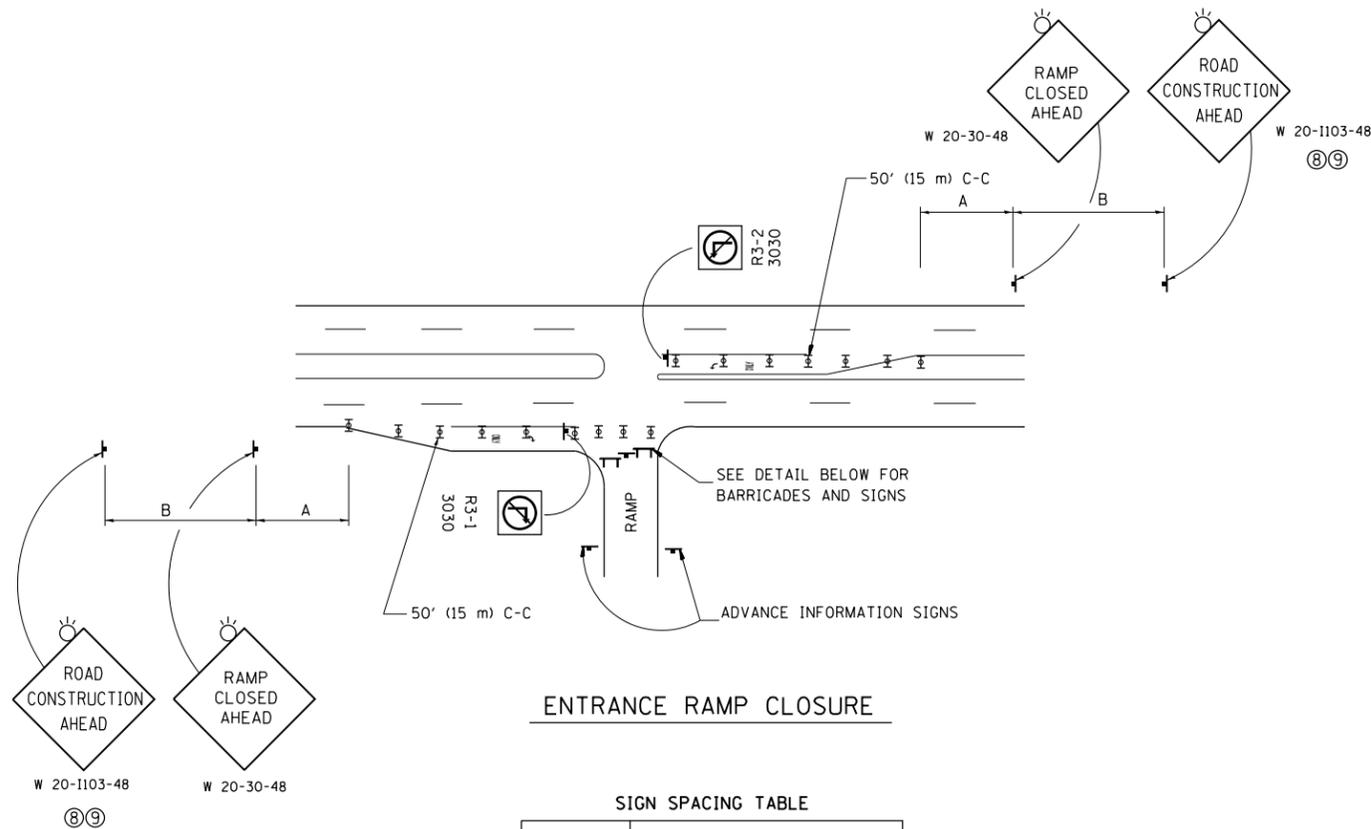
F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
VAR.	2014-029RS	VARIOUS*	25	17
BD400-05 BD32			CONTRACT NO. 60Y15	
FED. ROAD DIST. NO. 1 ILLINOIS FED. AID PROJECT				

FILE NAME =	USER NAME = PencePL	DESIGNED - M. DE YONG	REVISED - R. SHAH 10-25-94
et:\pw\work\p\dot\pencepl\d0382486\60Y15-DistStd.dgn		DRAWN -	REVISED - A. ABBAS 03-21-97
	PLOT SCALE = 100.0000' / in.	CHECKED -	REVISED - M. GOMEZ 04-06-01
	PLOT DATE = 4/11/2014	DATE - 06-13-90	REVISED - R. BORO 01-01-07

**STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION**

**BUTT JOINT AND
HMA TAPER DETAILS**

SCALE: NONE SHEET NO. 1 OF 1 SHEETS STA. TO STA.

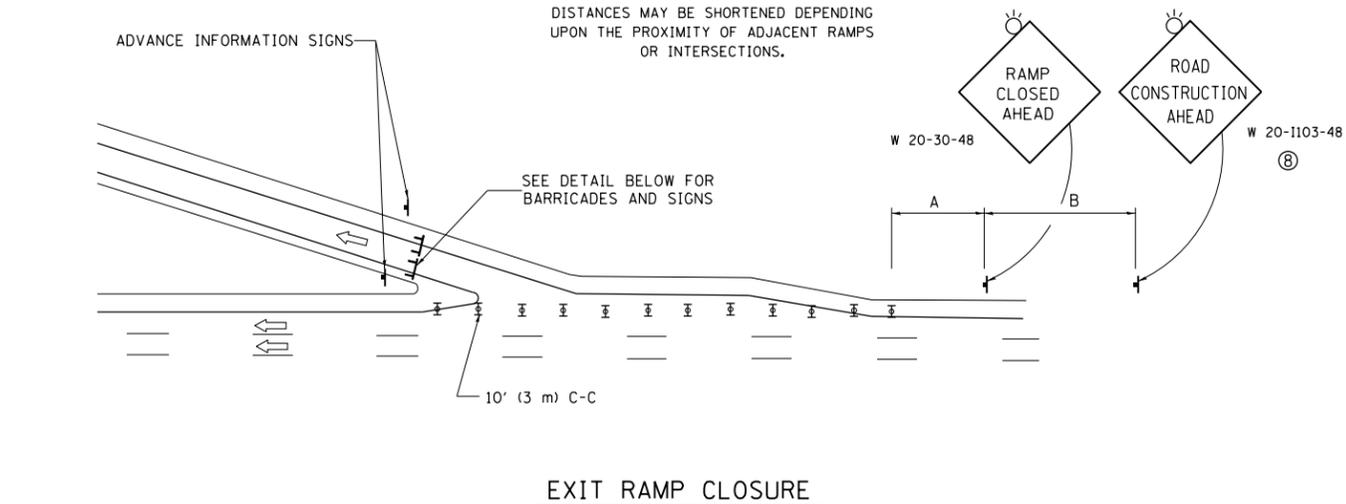


ENTRANCE RAMP CLOSURE

SIGN SPACING TABLE

FACILITY	DISTANCE BETWEEN SIGNS	
	A	B
EXPRESSWAY >24 HOURS	1000' (300 m)	1500' (450 m)
EXPRESSWAY <24 HOURS	500' (150 m)	500' (150 m)
ARTERIAL 55 MPH	500' (150 m)	500' (150 m)
ARTERIAL 50-45 MPH	350' (100 m)	350' (100 m)
ARTERIAL <45 MPH	200' (60 m)	200' (60 m)

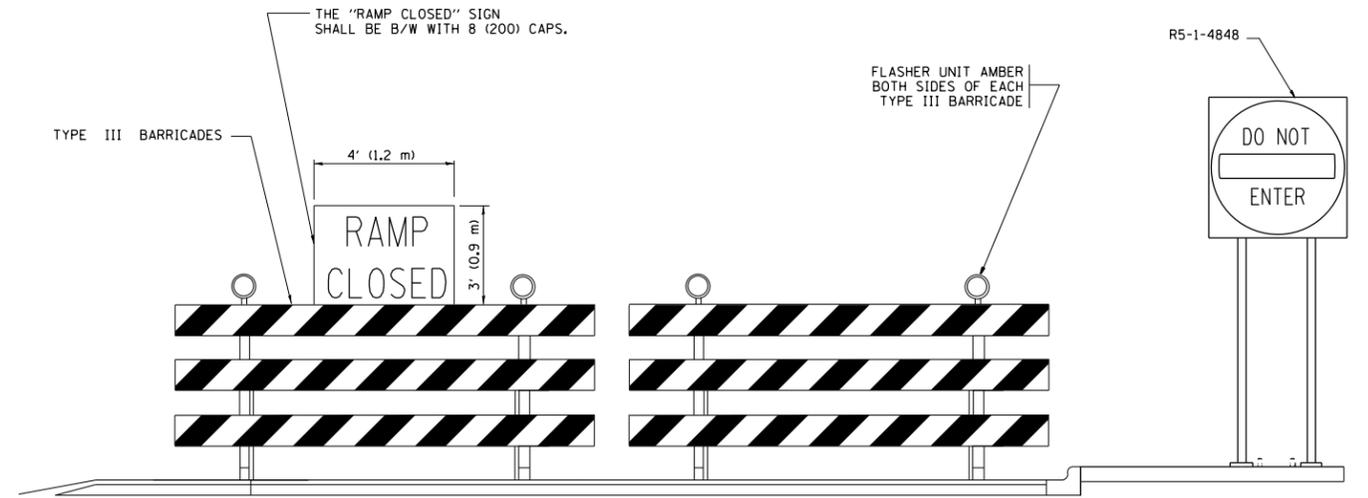
DISTANCES MAY BE SHORTENED DEPENDING UPON THE PROXIMITY OF ADJACENT RAMPS OR INTERSECTIONS.



EXIT RAMP CLOSURE

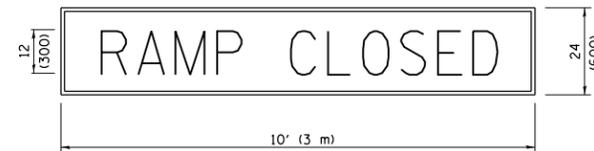
SYMBOLS

- ⊥ TYPE II BARRICADE OR DRUM WITH STEADY BURN MONO-DIRECTIONAL LIGHT
- ⊓ TYPE III BARRICADE WITH 2 FLASHING LIGHTS



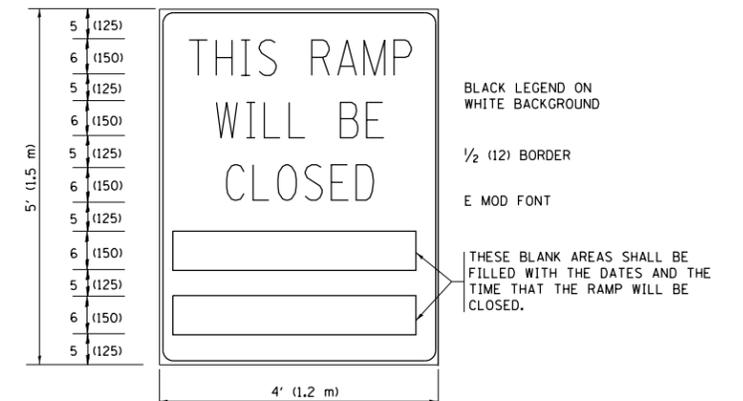
DETAIL FOR REQUIRED BARRICADES & SIGNS

RAMP CLOSURE ADVANCE WARNING SIGN



BLACK LEGEND ON ORANGE BACKGROUND MOUNTED DIAGONALLY
E MOD FONT
1 (25) BORDER
THESE SIGNS ARE REQUIRED ON ALL THE EXIT GUIDE SIGNS FOR EXIT RAMPS THAT WILL BE CLOSED FOR MORE THAN FOUR (4) CONSECUTIVE DAYS.

RAMP CLOSURE ADVANCE INFORMATION SIGN



BLACK LEGEND ON WHITE BACKGROUND
1/2 (12) BORDER
E MOD FONT

THESE BLANK AREAS SHALL BE FILLED WITH THE DATES AND THE TIME THAT THE RAMP WILL BE CLOSED.

THESE SIGNS ARE REQUIRED ON BOTH SIDES OF THE RAMP, MINIMUM OF 1 WEEK IN ADVANCE OF THE CLOSURE.

THESE SIGNS SHALL BE FABRICATED AND PAID FOR ACCORDING TO THE TEMPORARY INFORMATION SIGNING SPECIAL PROVISION

GENERAL NOTES:

- ① CONES MAY BE SUBSTITUTED FOR DRUMS OR TYPE II BARRICADES DURING DAY OPERATIONS. CONES SHALL BE A MINIMUM OF 28 (700) HIGH.
- ② STEADY BURN LIGHTS WILL NOT BE REQUIRED FOR DAY OPERATIONS.
- ③ A FLAGGER SHALL BE POSITIONED AT EACH CLOSED RAMP THAT IS OPEN TO CONSTRUCTION VEHICLES, PRECEDED BY A W20-7 FLAGGER WARNING SIGN.
- ④ ALL ROUTE MARKERS AND TRAILBLAZER ASSEMBLIES WHICH DIRECT MOTORISTS TO A CLOSED ENTRANCE RAMP SHALL BE COVERED WHEN THE RAMP IS CLOSED FOR MORE THAN FOUR (4) DAYS.
- ⑤ THE SIGNING AND BARRICADING WHICH IS REQUIRED BY THIS DETAIL SHALL BE INCLUDED IN THE COST OF TRAFFIC CONTROL AND PROTECTION (EXPRESSWAYS).
- ⑥ AUTHORIZATION FROM THE DISTRICT'S BUREAU OF TRAFFIC IS REQUIRED FOR ALL RAMP CLOSURES.
- ⑦ THE RAMP CLOSURE ADVANCE INFORMATION SIGNS SHALL BE ERECTED IF THE CLOSURE TIME EXCEEDS TWENTY-FOUR (24) HOURS. ADDITIONAL ADVANCE WARNING SIGNS ON EXIT GUIDE SIGNING WILL BE REQUIRED FOR EXIT RAMP CLOSURES THAT EXCEED FOUR (4) DAYS IN LENGTH.
- ⑧ ROAD CONSTRUCTION AHEAD SIGNS MAY BE OMITTED WHEN THIS DETAIL IS USED IN CONJUNCTION WITH OTHER TRAFFIC CONTROL THAT ALREADY INCLUDES A ROAD CONSTRUCTION AHEAD SIGN.
- ⑨ ARTERIAL ROAD CONSTRUCTION AHEAD SIGNS SHALL BE INSTALLED ON THE LEFT SIDE OF TRAFFIC IF THE MEDIAN IS MORE THAN 10 FT WIDE.

ALL DIMENSIONS ARE IN INCHES (MILLIMETERS) UNLESS OTHERWISE SHOWN.
*COOK, DUPAGE, AND LAKE

FILE NAME =	USER NAME = PencePL	DESIGNED - DWS	REVISED - JAF 02-06
et:\pw\work\p\midot\pencepl\d0382486\60Y15-DistStd.dgn		DRAWN -	REVISED - SPB 01-07
	PLOT SCALE = 100.0000' / 1"	CHECKED -	REVISED - SPB 12-09
	PLOT DATE = 4/11/2014	DATE - 02-83	REVISED - MD 06-13

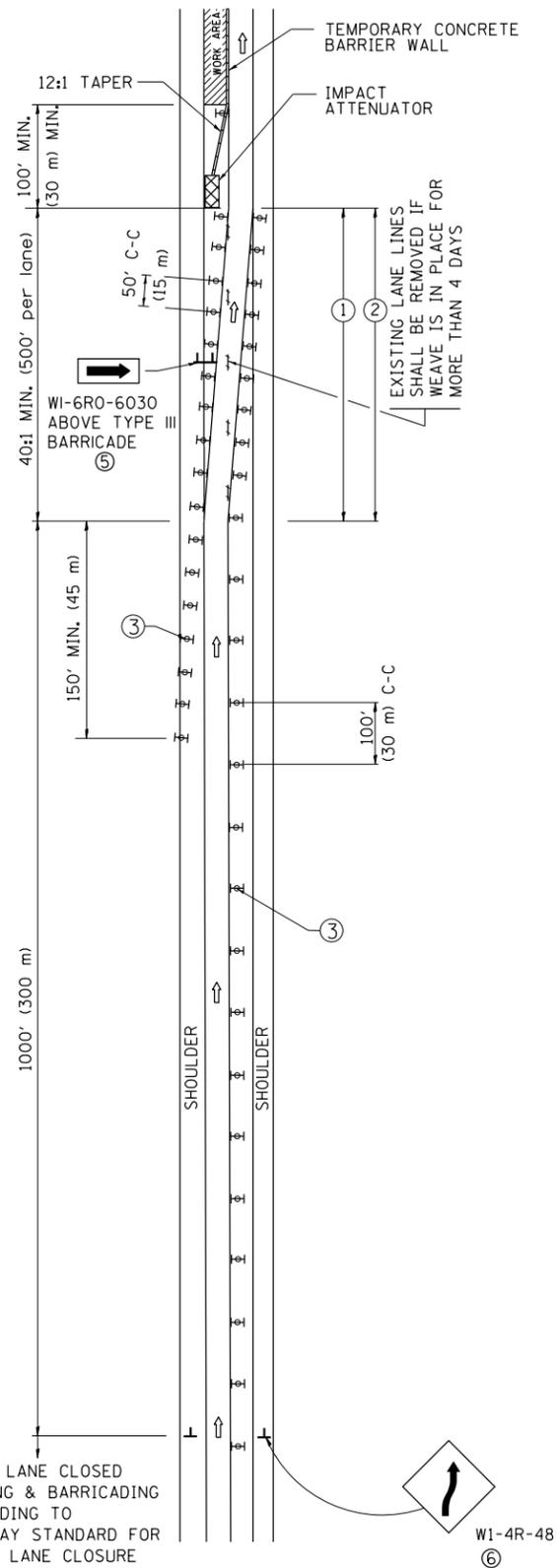
**STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION**

**ENTRANCE AND EXIT RAMP
CLOSURE DETAILS**

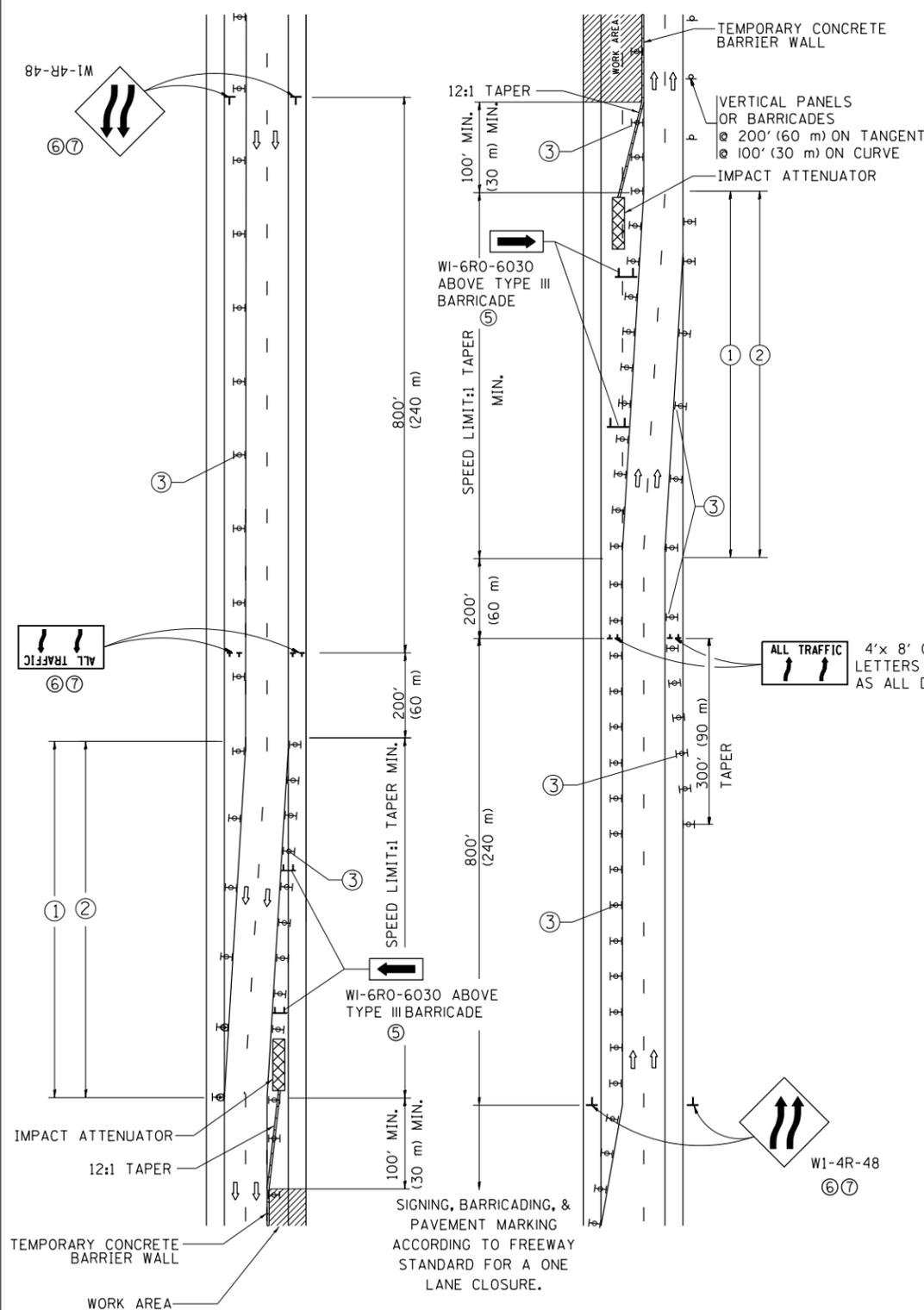
SCALE: NONE SHEET NO. 1 OF 1 SHEETS STA. TO STA.

F.A. RTÉ.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
VAR.	2014-029RS	VARIOUS*	25	18
TC-08		CONTRACT NO. 60Y15		
FED. ROAD DIST. NO. 1 ILLINOIS FED. AID PROJECT				

SINGLE LANE WEAVE



MULTI-LANE WEAVE



GENERAL NOTES

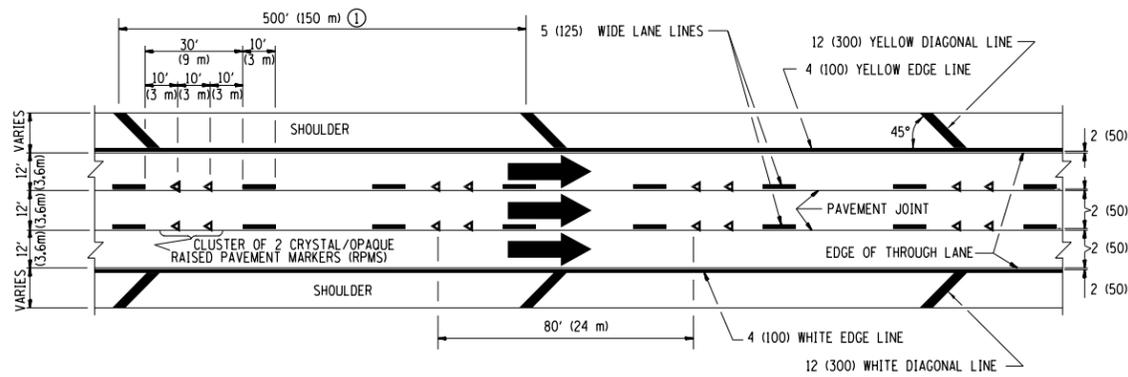
- ① EXISTING CONFLICTING PAVEMENT MARKING LINES SHALL BE REMOVED. PAVEMENT MARKING REMOVAL SHALL NOT BE REQUIRED FOR SINGLE LANE WEAVES UNDER 4 DAYS IN DURATION.
- ② CONTINUOUS REFLECTIVE TEMPORARY PAVEMENT MARKING TAPE SHALL BE PLACED THROUGHOUT THE TAPER AND FOR 300' (90 m) ALONG SIDE THE WORK AREA WHERE THE CLOSURE TIME IS GREATER THAN FOURTEEN DAYS. THE LEFT EDGE LINE SHALL BE YELLOW AND THE RIGHT EDGE LINE SHALL BE WHITE. FOR MULTI-LANE WEAVES LANE LINES SHALL BE 5 INCH, 10'-30' (3 m-9 m) SKIP DASH, WHITE.
- ③ PLASTIC DRUMS WITH STEADY BURN LIGHTS AT 50' (15 m) C-C SPACING IN TAPERS AND 100' (30 m) C-C SPACING IN TANGENTS.
- ④ ALL SIGNS SHALL BE POST MOUNTED IF THE CLOSURE TIME EXCEEDS FOUR DAYS.
- ⑤ TYPE III BARRICADES MAY BE OMITTED FOR SINGLE-LANE WEAVES UNDER 24-HOURS IN DURATION. W1-6 SIGNS WILL STILL BE REQUIRED. IF THE WIDTH OF OFFSET IS LESS THAN 6' THEN THE TYPE III BARRICADE WITH ATTACHED ARROW SIGN PANEL CAN BE ELIMINATED IN THE TAPER AREAS.
- ⑥ WHEN THE LENGTH OF THE SHIFTED SEGMENT (DISTANCE BETWEEN WEAVE POINTS) IS LESS THAN 1500', DOUBLE REVERSE CURVE SIGNS (W24-1) SHOULD BE USED INSTEAD OF THE REVERSE CURVE (W1-4) SIGNS. ARROWS ON THE 4'X8' "ALL TRAFFIC" SIGNS SHALL BE THE SAME SHAPE.
- ⑦ THE NUMBER OF ARROWS ON THESE SIGNS SHALL MATCH THE NUMBER OF LANES OPEN TO TRAFFIC.

SYMBOLS

- DIRECTION OF TRAFFIC
- WORK AREA
- SIGN ON PORTABLE OR PERMANENT SUPPORT
- TYPE II BARRICADE OR DRUM WITH MONO-DIRECTIONAL STEADY BURNING LIGHT
- TEMPORARY CONCRETE BARRIER WALL
- IMPACT ATTENUATOR
- W1-4R-48
- W24-1-48

ALL DIMENSIONS ARE IN INCHES (MILLIMETERS) UNLESS OTHERWISE SHOWN

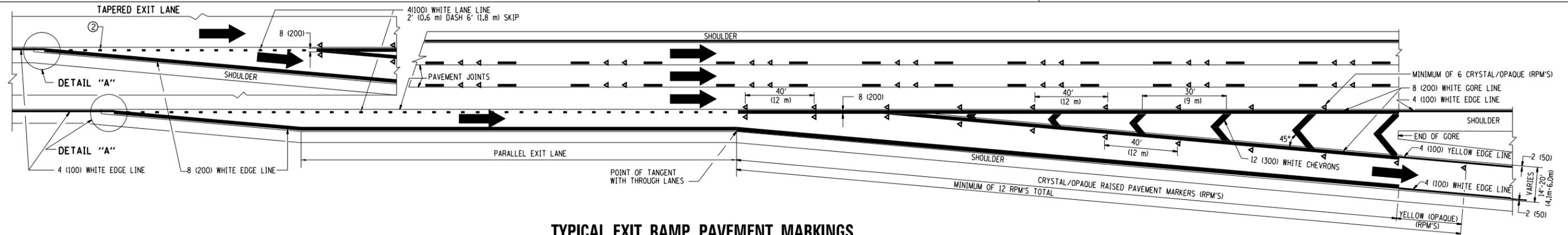
FILE NAME =	USER NAME = PencePL	DESIGNED - DWS	REVISED - JAF 02-06	STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION	TRAFFIC CONTROL DETAILS FOR FREEWAY SINGLE & MULTI-LANE WEAVE			F.A. -	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
et:\pw\work\p1\dot\pencepl\d0382486\60Y15-DistStd.dgn		DRAWN -	REVISED - SPB 01-07		VAR.	2014-029RS	VARIOUS*	25	19			
PLOT SCALE = 100.0000' / 1"		CHECKED -	REVISED - SPB 12-09		TC-09			CONTRACT NO. 60Y15				
PLOT DATE = 4/11/2014		DATE - 02-87	REVISED - MD 06-13		SCALE: NONE	SHEET NO. 1 OF 1 SHEETS	STA.	TO STA.	FED. ROAD DIST. NO. 1 ILLINOIS FED. AID PROJECT			



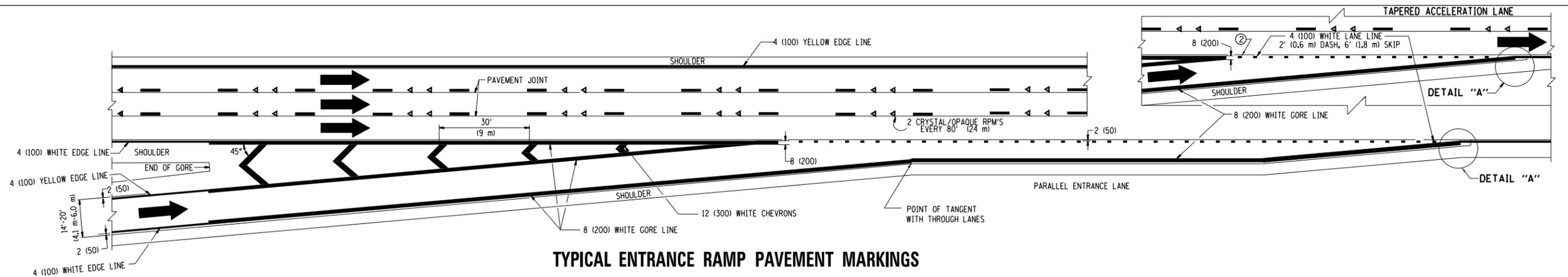
TYPICAL EDGE LINES & LANE LINES

PAVEMENT MARKING MATERIALS

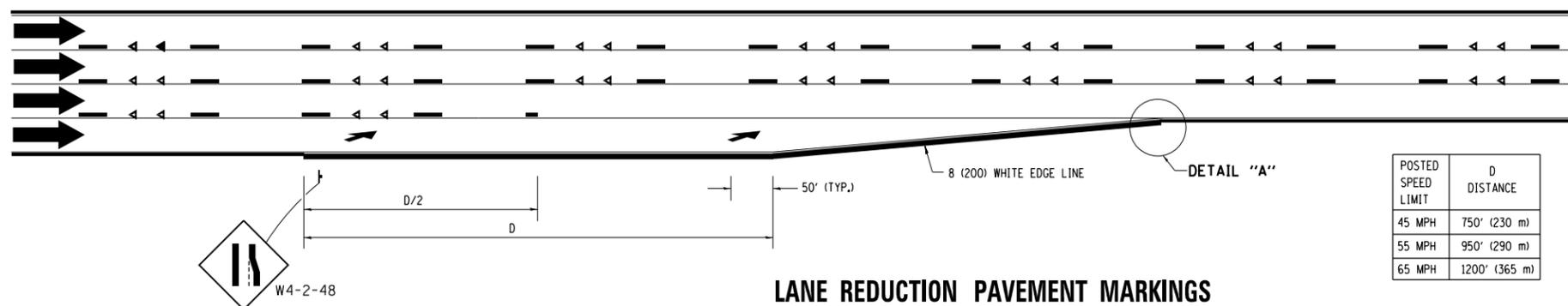
1. THERMO PLASTIC PAVEMENT MARKING LINE SHALL BE USED FOR THE EDGE LINES, GORE LINES, AND DIAGONAL LINES ON BITUMINOUS PAVEMENT ONLY.
2. PREFORMED PLASTIC TYPE B PAVEMENT MARKING LINE; INLAID OR GROOVED IN SHALL BE USED FOR ALL LANE LINES ON HMA PAVEMENT PROJECTS.
3. POLYUREA PAVEMENT MARKING SHALL BE USED FOR ALL MARKINGS ON PCC PROJECTS.



TYPICAL EXIT RAMP PAVEMENT MARKINGS

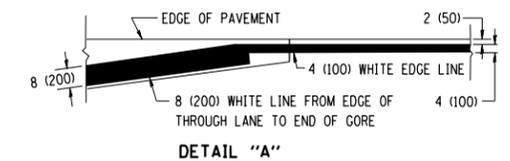


TYPICAL ENTRANCE RAMP PAVEMENT MARKINGS



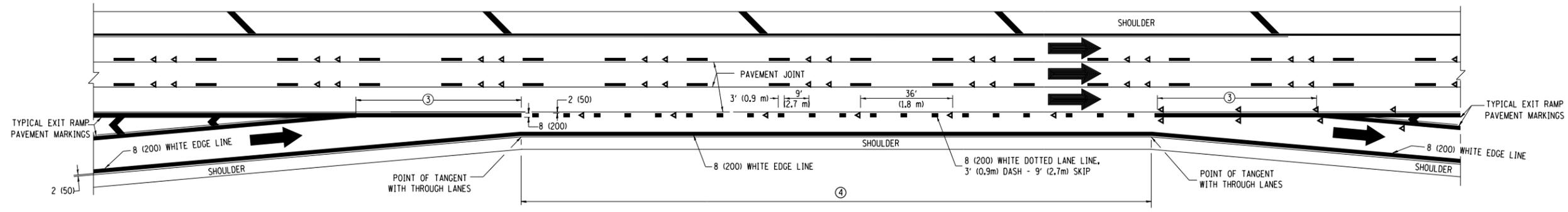
LANE REDUCTION PAVEMENT MARKINGS

POSTED SPEED LIMIT	D DISTANCE
45 MPH	750' (230 m)
55 MPH	950' (290 m)
65 MPH	1200' (365 m)

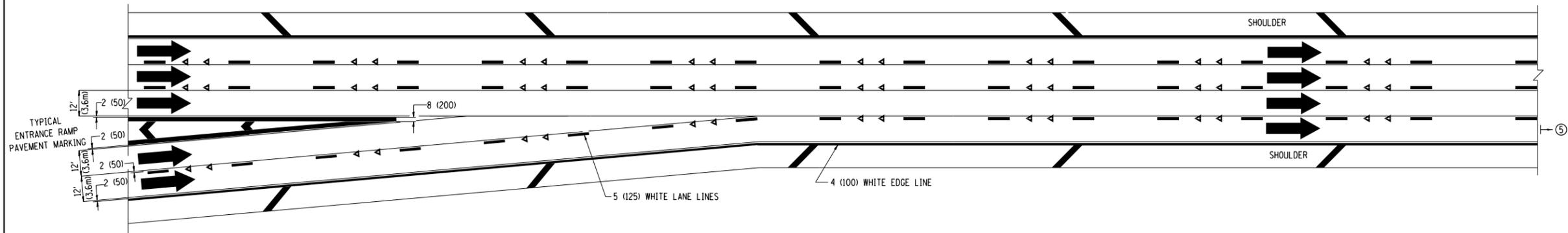


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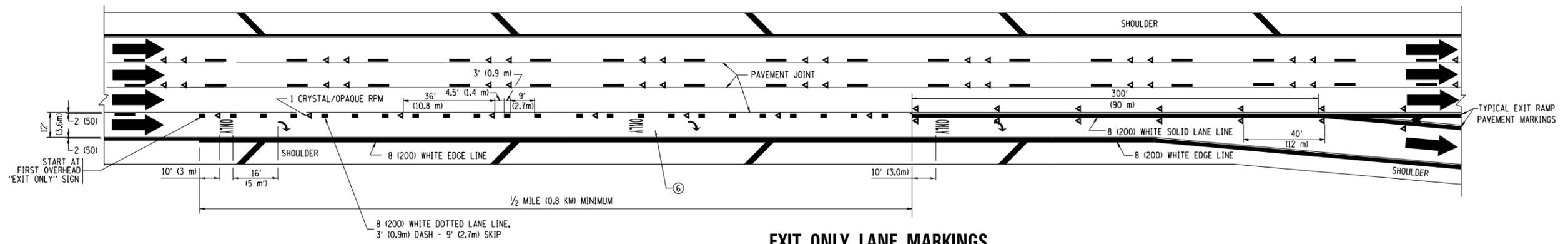
- ① THE DIAGONAL LINES SHALL BE SPACED AT 40' (12 m) C-C ACROSS ALL STRUCTURES WHICH ARE 500' (150 m) OR LESS IN LENGTH. THE DIAGONAL LINES ARE NOT REQUIRED ON SHOULDERS WHICH ARE 6' (1.8 m) OR LESS IN WIDTH.
- ② 4" (2' DASH, 6' SKIP) MARKING ON TAPERED ENTRANCE AND EXIT RAMP SHALL BE OMITTED ON TANGENT SECTIONS.



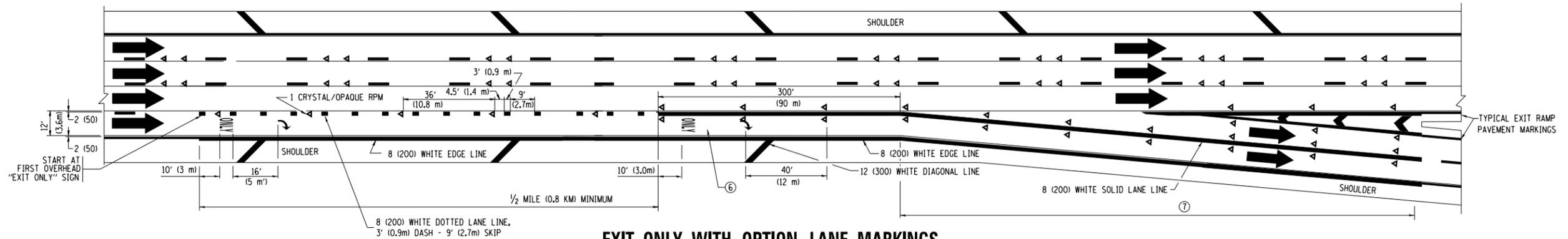
AUXILIARY LANE MARKINGS



TWO LANE ENTRANCE RAMP WITH MERGE MARKINGS



EXIT ONLY LANE MARKINGS



EXIT ONLY WITH OPTION LANE MARKINGS

- NOTES**
- ③ OMIT WHEN LENGTH OF AUXILIARY LANE IS LESS THAN 500' (150 m).
 - ④ 8-INCH WIDE DOTTED LANE LINE MARKINGS SHALL BE USED WHEN THE LENGTH OF THE AUXILIARY LANE IS 2 MILES OR LESS.
 - ⑤ FOR TWO-LANE ENTRANCE RAMP, IF RIGHT LANE ENDS, USE TYPICAL ENTRANCE RAMP PAVEMENT MARKINGS.
 - ⑥ ONLY AND ARROWS EQUALLY SPACED, 500' (150 m) MAXIMUM SPACING. FULL SIZE LETTERS AND ARROW SHALL BE USED.
 - ⑦ CONTINUE 8" SOLID LANE LINE THROUGH EXIT TO END OF PAVED GORE.

FILE NAME =	USER NAME = PencePL	DESIGNED - D.W.S.	REVISED - D.W.S. 07-96
ei:\pw\work\p1dot\pencepl\d0382486\60Y15-DistStd.dgn		DRAWN -	REVISED - J.A.F. 02-06
	PLOT SCALE = 100.0000' / in.	CHECKED -	REVISED - S.P.B. 01-07
	PLOT DATE = 4/11/2014	DATE - 01-90	REVISED - S.P.B. 01-10

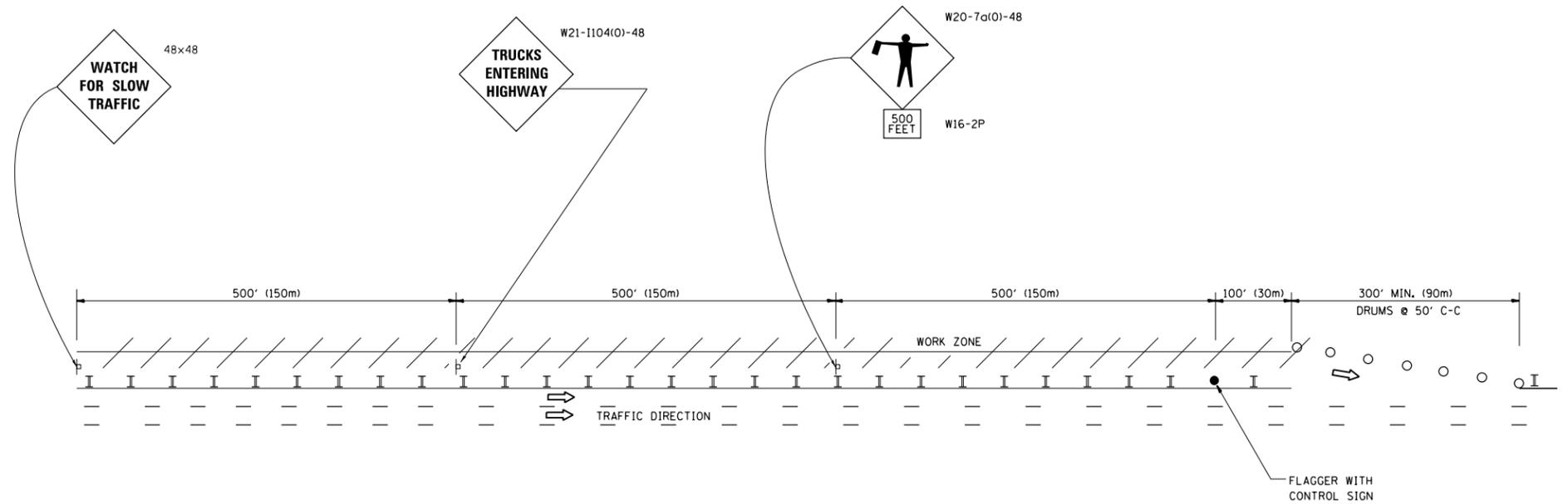
**STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION**

MULTI-LANE FREEWAY PAVEMENT MARKING DETAILS			
SCALE: NONE	SHEET NO. 2 OF 2 SHEETS	STA.	TO STA.

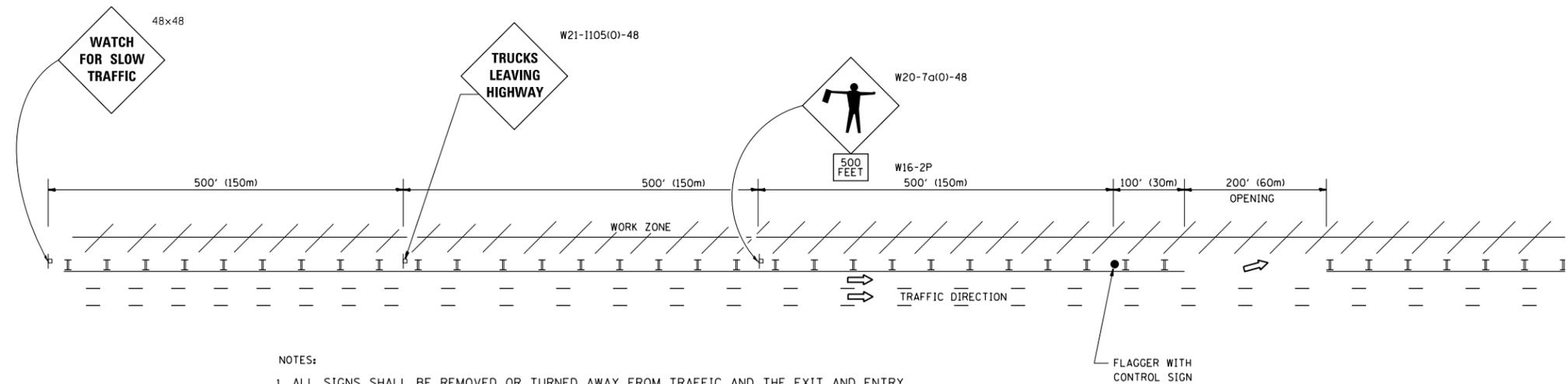
*COOK, DUPAGE, AND LAKE			
F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS
VAR.	2014-029RS	VARIOUS*	25
TC-12		CONTRACT NO. 60Y15	SHEET NO. 21
FED. ROAD DIST. NO. 1 ILLINOIS FED. AID PROJECT			

SIGNING FOR FLAGGING OPERATIONS AT WORK ZONE OPENINGS

WORK ZONE EXIT OPENING



WORK ZONE ENTRY OPENING



NOTES:

1. ALL SIGNS SHALL BE REMOVED OR TURNED AWAY FROM TRAFFIC AND THE EXIT AND ENTRY OPENINGS SHALL BE CLOSED WHEN THE FLAGGING OPERATION CEASES. NON OPERATING EQUIPMENT SHALL COMPLY WITH ARTICLE 701.11
2. WORK ZONE OPENINGS SHALL BE A MINIMUM OF ONE HALF MILE APART AND A MINIMUM OF ONE QUARTER MILE FROM ALL ENTRANCE AND EXIT RAMP.
3. EXITING THE WORK ZONE AT ANY PLACE OTHER THAN AT A WORK ZONE EXIT OPENING WILL BE PROHIBITED.
4. ALL VEHICLES SHALL ENTER THE WORK ZONE AT ENTRY OPENINGS, USING THEIR TURN SIGNALS TO WARN MOTORISTS
5. FLAGGERS SHALL NOT STOP TRAFFIC OR DIRECT TRAFFIC INTO AN ADJACENT LANE.

ALL DIMENSIONS ARE IN INCHES (MILLIMETERS) UNLESS OTHERWISE SHOWN
*COOK, DUPAGE, AND LAKE

FILE NAME =	USER NAME = PencePL	DESIGNED -	REVISED - J.A.F. 02-06
ct:\pw\work\p\dot\pencepl\d0382486\60Y15-DistStd.dgn		DRAWN -	REVISED - S.P.B. 01-07
	PLOT SCALE = 100.0000' / in.	CHECKED -	REVISED - S.P.B. 12-09
	PLOT DATE = 4/11/2014	DATE -	REVISED - M.D. 06-13

**STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION**

**FREEWAY/EXPRESSWAY SIGNING FOR FLAGGING OPERATIONS
AT WORK ZONE OPENINGS ON FREEWAYS/EXPRESSWAYS**

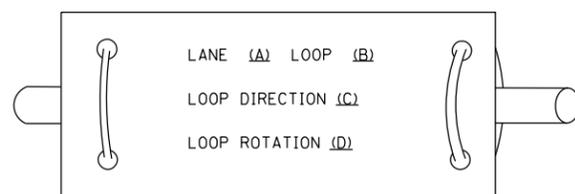
SCALE: NONE SHEET NO. 1 OF 1 SHEETS STA. TO STA.

F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
VAR.	2014-029RS	VARIOUS*	25	23
TC-18			CONTRACT NO. 60Y15	
FED. ROAD DIST. NO. 1 ILLINOIS FED. AID PROJECT				

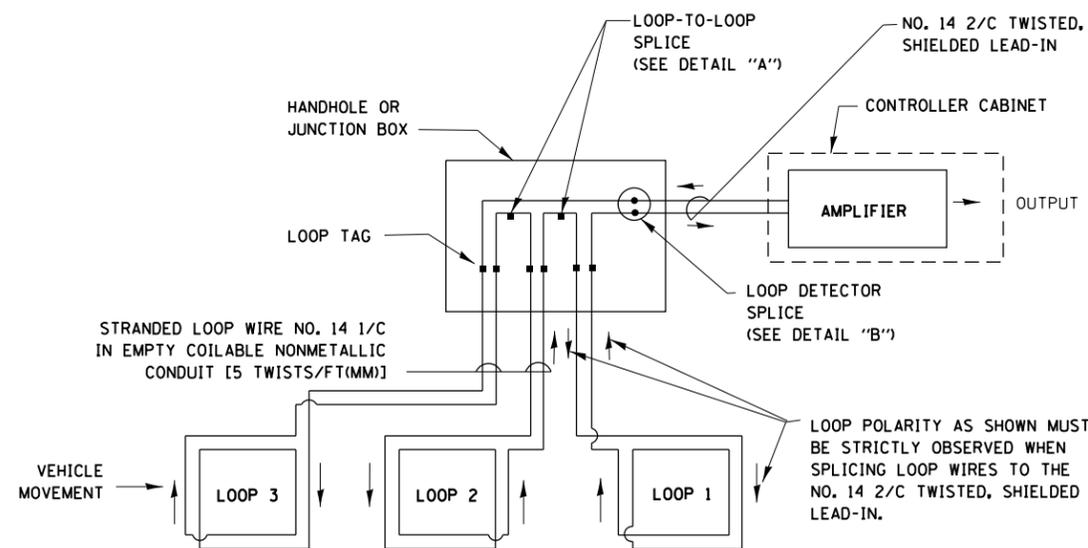
LOOP DETECTOR NOTES

1. EACH PAIR OF LOOP WIRES SHALL BE PLACED IN A SEPARATE EMPTY COILABLE NONMETALLIC CONDUIT FROM THE EDGE OF PAVEMENT TO THE HANDHOLE. SPACING BETWEEN THE HOLES DRILLED IN THE PAVEMENT SHALL NOT BE LESS THAN 6" (150 mm). EMPTY COILABLE NONMETALLIC CONDUIT SHALL BE INCLUDED IN THE COST OF THE LOOP WIRE.
2. THE NUMBER OF LOOP TURNS SHALL BE AS RECOMMENDED BY THE AMPLIFIER MANUFACTURER. ALL ADJACENT SIDES OF THE LOOPS SHALL BE INSTALLED IN SUCH A WAY THAT THE CURRENT FLOW IS IN THE SAME DIRECTION TO REINFORCE ITS MAGNETIC FIELDS FOR SMALL VEHICLE DETECTION.
3. EACH LOOP LEAD-IN SHALL BE IDENTIFIED AND PERMANENTLY TAGGED IN THE HANDHOLE. EACH LEAD-IN CABLE TAG SHALL INDICATE THE LOCATION OF THE LOOP, LOOP ROTATION (CLOCKWISE/COUNTERCLOCKWISE), LOOP LEAD-IN DIRECTION (IN OR OUT), LOOP CABLE NUMBER AND LOCATION IN CABINET, AND NUMBER OF TURNS IN THE DETECTOR LOOPS IN WATER PROOF INK AS INDICATED ON THE DISTRICT 1 STANDARD TRAFFIC SIGNAL DESIGN DETAIL. THE CONTRACTOR SHALL MARK LOOP LOCATIONS ON RECORD DRAWINGS AND PRESENT TO THE ENGINEER AFTER FINAL INSPECTION. LOOPS SHALL BE MARKED BY LANE AND LOOP NUMBER. SEE DETAIL BELOW.
4. ALL LOOP CABLE SHALL BE FASTENED WITH PLASTIC TIE WRAP TO THE HANDHOLE HOOKS.
5. IN ASPHALT PAVEMENT, LOOPS SHOULD BE PLACED IN THE BINDER AND DIVEHOLES MARKED AT THE CURB WITH A SAW-CUT. THE SAW-CUT SHALL BE CUT IN ACCORDANCE WITH LOCAL AND E.P.A. DUST CONTROL REQUIREMENTS. DETECTOR LOOP(S) SHALL NOT BE INSTALLED IN WET CONDITIONS AND THE SAW-CUTS MUST BE FREE OF DEBRIS AND RESIDUE SUCH AS DUST AND WATER WHICH IS TO BE ACHIEVED BY THE USE OF COMPRESSED AIR, WIRE BRUSHING AND HEAT DRYING ACCORDING TO SEALANT MANUFACTURER REQUIREMENTS. THE DETECTOR WIRE SHALL BE HELD IN PLACE BY THE USE OF FORM WEDGES. WEDGES SHALL BE SPACED NO MORE THAN 18" (450 mm) APART.
6. LOOP SPLICES SHALL BE SOLDERED USING A SOLDERING IRON. BLOW TORCHES OR OTHER DEVICES WHICH OXIDIZE COPPER CABLE SHALL NOT BE ALLOWED FOR SOLDERING OPERATIONS. SEE DETAIL BELOW RIGHT.
7. PREFORMED DETECTOR LOOPS SHALL BE USED, AS SHOWN ON THE PLANS, WHERE NEW CONCRETE PAVEMENT IS PROPOSED. THE INSTALLATION OF PREFORMED LOOPS SHALL BE IN ACCORDANCE WITH THE DISTRICT 1 SPECIFICATIONS OR AS DIRECTED BY THE ENGINEER.

LOOP LEAD-IN CABLE TAG

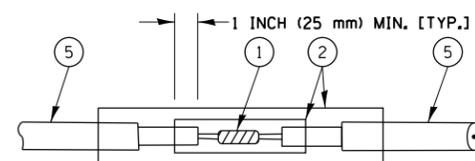


- A. LANE 1 IS THE LANE CLOSEST TO THE CENTERLINE OF THE ROADWAY
- B. LOOP #1 IS THE LOOP IN THE LANE CLOSEST TO THE INTERSECTION.
- C. LABEL LOOP CABLE "IN" OR LOOP CABLE "OUT".
- D. LABEL LOOP CABLE CLOCKWISE OR LOOP CABLE COUNTERCLOCKWISE.

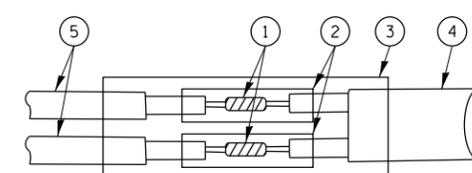


DETECTOR LOOP WIRING SCHEMATIC

- LOOPS SHALL BE SPLICED IN SERIES.
- SAW-CUTS SHALL BE A MINIMUM WIDTH OF 5/16" (8 mm).
- SAW-CUT DEPTHS SHALL BE 3" (75 mm). IF IN CONCRETE, THE SAW-CUT DEPTH SHALL BE TO THE TOP OF THE REINFORCEMENT.
- LOOP CORNERS SHALL BE DRILLED WITH A 2" (50 mm) DIAMETER CORE.

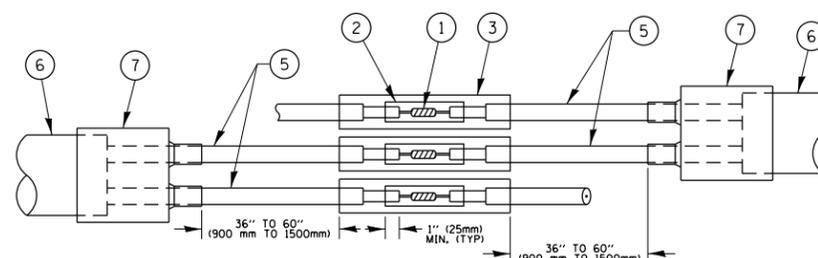


DETAIL "A"
LOOP-TO-LOOP SPLICE

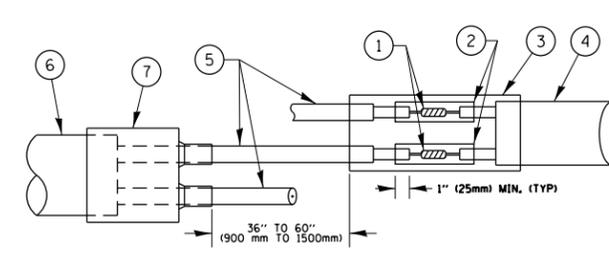


DETAIL "B"
LOOP-TO-CONTROLLER SPLICE

TYPE I LOOP



DETAIL "A"
LOOP-TO-LOOP SPLICE



DETAIL "B"
LOOP-TO-CONTROLLER SPLICE

LOOP DETECTOR SPLICE

- ① WESTERN UNION SPLICE SOLDERED WITH ROSIN CORE FLUX. ALL EXPOSED SURFACES OF THE SOLDER SHALL BE SMOOTH, THE WESTERN UNION SPLICES SHALL BE STAGGERED.
- ② WCSMW 30/100 HEAT SHRINK TUBE, MINIMUM LENGTH 3" (75 mm), UNDERWATER GRADE.
- ③ WCS 200/750 HEAT SHRINK TUBE, MINIMUM LENGTH 6" (150 mm), UNDERWATER GRADE.
- ④ NO. 14 2/C TWISTED, SHIELDED CABLE.
- ⑤ LOOP CONDUCTOR WITH FLEXIBLE PLASTIC TUBE.
- ⑥ PRE-FORMED LOOP
- ⑦ XL POLYOLEFIN 2 CONDUCTOR BREAKOUT SEALS, TYCO CBR-2 OR APPROVED EQUAL

FILE NAME =	USER NAME = PencePL	DESIGNED - DAD	REVISED - DAG 1-1-14
et:\pw\work\p\dot\pencepl\d0382486\60Y15-DistStd.dgn		DRAWN - BCK	REVISED -
PLOT SCALE = 100.0000' / in.		CHECKED - DAD	REVISED -
PLOT DATE = 4/11/2014		DATE - 10-28-09	REVISED -

**STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION**

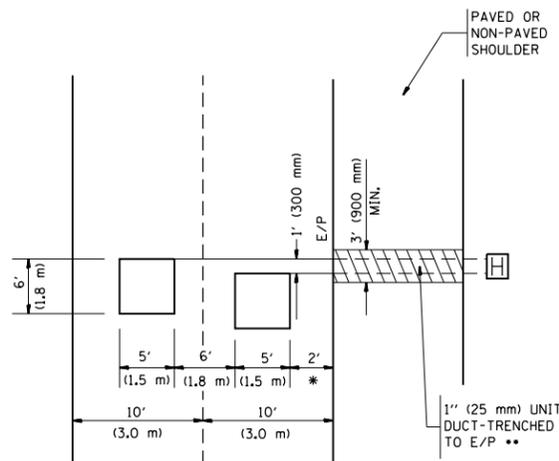
**DISTRICT ONE
STANDARD TRAFFIC SIGNAL DESIGN DETAILS**

SCALE: NONE SHEET NO. 2 OF 7 SHEETS STA. TO STA.

*COOK, DUPAGE, AND LAKE			
F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS
VAR.	2014-029RS	VARIOUS*	25
TS-05		CONTRACT NO.	60Y15
FED. ROAD DIST. NO. 1 ILLINOIS FED. AID PROJECT			

LOOPS NEXT TO SHOULDERS

PROVIDE A PAVEMENT REPLACEMENT NOTE WHICH SHOULD EQUAL 3' (900 mm) X WIDTH OF PAVED SHOULDER.

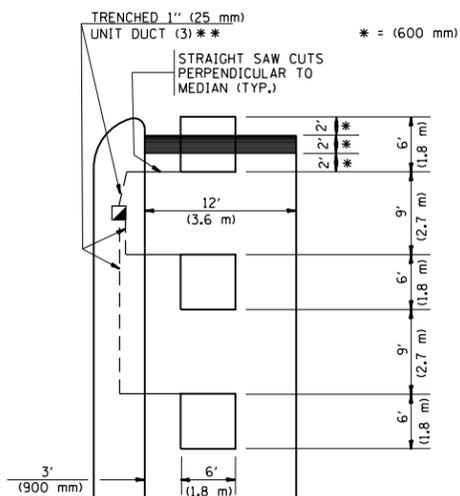


* = (600 mm)

** UNIT DUCT IS TO BE SHOWN ON PLAN SHEETS BUT SHALL NOT BE INCLUDED IN THE PAY ITEMS.

**LEFT TURN LANES WITH MEDIANS
VOLUME DENSITY ("FAR OUT" DETECTION)
ON SAME APPROACH
(PROTECTED / PERMITTED LEFT TURN PHASING)**

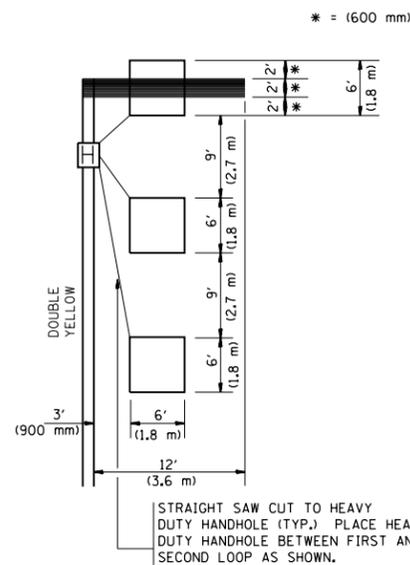
HANDHOLE LOCATION MAY VARY DEPENDING ON GEOMETRICS AND DESIGN OF TRAFFIC SIGNALS. HEAVY-DUTY HANDHOLES TO BE USED WHEN THE MEDIAN IS MOUNTABLE. REFER TO STANDARD 814001 TO ENSURE THAT HANDHOLE FITS IN MEDIAN.



** UNIT DUCT IS TO BE SHOWN ON PLAN SHEETS BUT SHALL NOT BE INCLUDED IN THE PAY ITEMS.

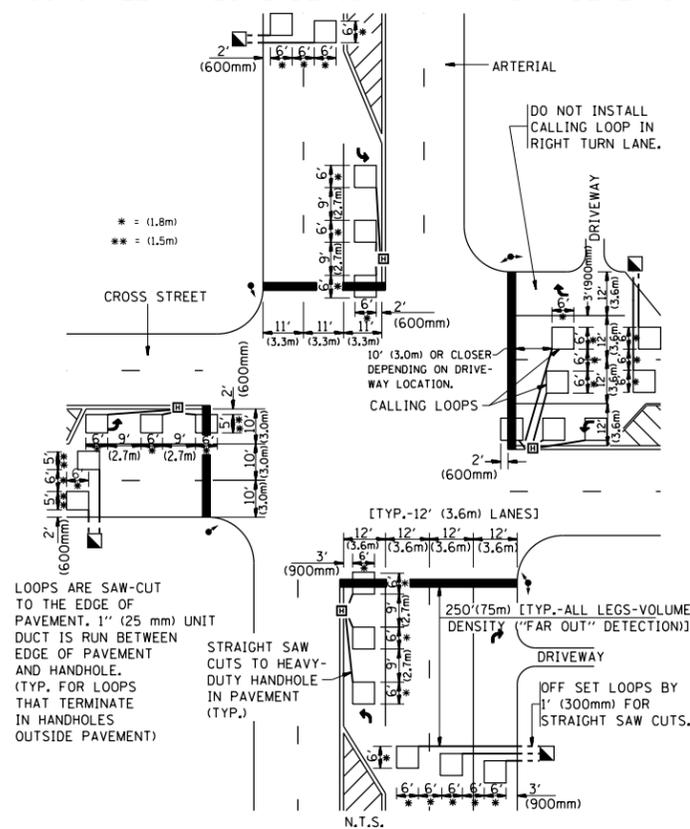
NOTE: DUAL LEFT TURNS NOT SHOWN REFER TO PLAN SHEET FOR DETECTOR LOOP REPLACEMENT

**LEFT TURN LANES WITHOUT MEDIANS
VOLUME DENSITY ("FAR OUT" DETECTION)
ON SAME APPROACH
(PROTECTED / PERMITTED LEFT TURN PHASING)**



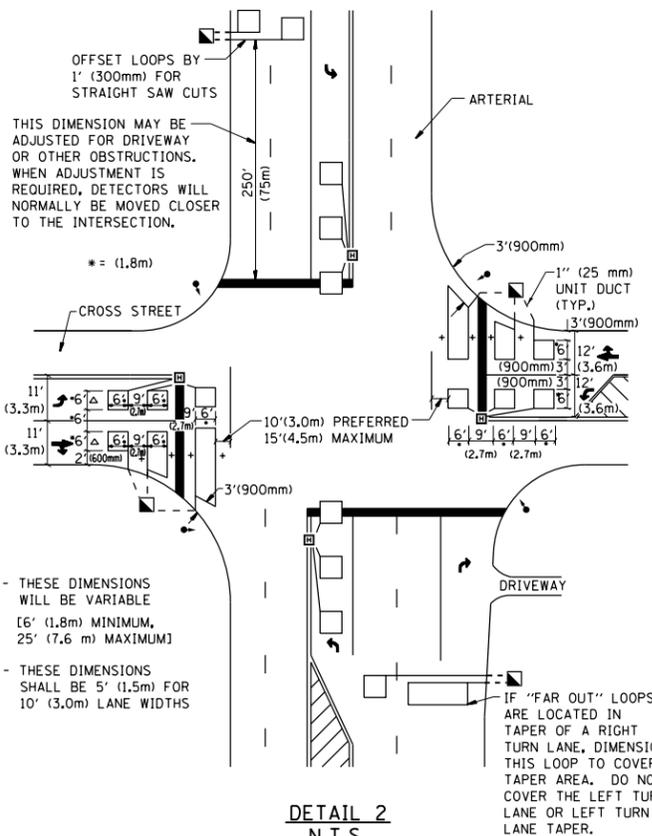
NOTE: DUAL LEFT TURNS NOT SHOWN REFER TO PLAN SHEET FOR DETECTOR LOOP REPLACEMENT

**ARTERIAL-VOLUME DENSITY ("FAR OUT" DETECTION)
CROSS STREET-VOLUME DENSITY ("FAR OUT" DETECTION)**



**DETAIL 1
N.T.S.**

**ARTERIAL-VOLUME DENSITY ("FAR OUT" DETECTION)
CROSS STREET-NON VOLUME DENSITY ("UPTIGHT" PRESENCE DETECTION)**



**DETAIL 2
N.T.S.**

NOTES:

VEHICLES LOOP DETECTORS

- * ALL LEAD IN CABLE SHALL BE TWO CONDUCTOR NO. 14 TWISTED, SHIELDED.
- * EACH DETECTOR LOOP SHALL HAVE ITS OWN SAW CUT FROM THE LOOP TO THE EDGE OF PAVEMENT OR TO A HANDHOLE IN THE PAVEMENT.
- * EACH DETECTOR LOOP SHALL HAVE ITS OWN ONE INCH (25 mm) UNIT DUCT BETWEEN THE EDGE OF PAVEMENT AND THE FIRST HANDHOLE OR JUNCTION BOX. EACH UNIT DUCT RUN SHALL BE SHOWN ON THE PLANS BY THE DESIGNER, BUT SHALL NOT BE PAID FOR SEPARATELY. THIS ITEM IS INCIDENTAL TO THE PAY ITEM FOR DETECTOR LOOPS.
- * ONE DIMENSION OF ALL DETECTOR LOOPS SHALL BE SIX FEET (1.8 m)
- * EACH LANE OF NON-LOCKING, PRESENCE DETECTION AND EACH LANE OF A DOUBLE LEFT TURN LANE REQUIRES A SEPARATE INDUCTIVE LOOP DETECTOR AND LEAD IN CABLE.
- * WHEN NON-LOCKING, PRESENCE DETECTION IS USED, MORE THAN ONE LOOP PER LANE IS REQUIRED BEHIND THE STOP BAR (i.e. 1-1/2, 1-3/4, 2).
- * WHEN SYSTEM LOOPS ARE REQUIRED ON AN APPROACH OF AN INTERSECTION, THE LOOPS USED FOR VOLUME DENSITY AND INTERSECTION TIMING SHALL ALSO BE USED AS SYSTEM DETECTORS. EACH ONE OF THESE TYPE OF LOOPS REQUIRES A SEPARATE TWO CONDUCTOR NO. 14 TWISTED SHIELDED CABLE AND A SEPARATE INDUCTIVE LOOP DETECTOR WHEN NEW CONTROLLERS ARE UTILIZED. THE DESIGNER SHALL LABEL THESE TYPES OF LOOPS AS "INTERSECTION AND SAMPLING (SYSTEM) DETECTORS" ON THE SIGNAL LAYOUT, THE INTERCONNECT PLAN AND THE SYSTEM CABLE PLAN. WHEN AN EXISTING CONTROLLER IS UTILIZED FOR THIS TYPE OF DETECTION, THE PAY ITEM "INDUCTIVE LOOP DETECTOR WITH SYSTEM OUTPUT" SHOULD BE USED.

PLACEMENT OF DETECTORS

THE FOLLOWING FIGURES REPRESENT THE MOST COMMON DETECTOR LOOP LOCATIONS AND SIZES. ADJUSTMENTS WILL BE NECESSARY FOR SPECIFIC GEOMETRIC CONSIDERATIONS.

LOCATIONS AND DEMENSIONS OF DETECTOR LOOPS ARE REQUIRED ON ALL SIGNAL LAYOUT PLAN SHEETS.

"FAR OUT" DETECTION REFERS TO LOCKING, PRESENCE TYPE DETECTION LOCATED IN THRU LANES, RIGHT TURN LANES, AND RIGHT TURN LANE TAPER AREAS (IF APPLICABLE), USUALLY 250' (75 m) IN ADVANCE OF STOP BARS. "UPTIGHT" DETECTION REFERS TO NON-LOCKING PRESENCE TYPE DETECTION LOCATED IN ALL LANES AND 10'-15' (3.0 m-4.5 m) BEHIND THE CROSSING STREET'S EDGE OF PAVEMENT EXTENDED.

NOTE:

ALL DETAILS AND NOTES SHOWN ARE FROM THE I.D.O.T. DISTRICT 1 TRAFFIC SIGNAL DESIGN GUIDELINES DATED JANUARY 1995

THIS DRAWING HAS BEEN PREPARED TO ASSIST THE RESIDENT ENGINEER FOR ALL ROADWAY RESURFACING OR S.M.A.R.T. PROJECTS WHERE THE DIMENSIONS ARE NOT SHOWN ON THE PLANS AND THE FINAL LOCATIONS FOR CROSSWALKS OR STOP BARS ARE NOT DETERMINED.

FILE NAME =	USER NAME = PencePL	DESIGNED -	REVISED -	STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION	DISTRICT 1 - DETECTOR LOOP INSTALLATION DETAILS FOR ROADWAY RESURFACING	SCALE: NONE		SHEET NO. 1 OF 1 SHEETS		STA. TO STA.		*COOK, DUPAGE, AND LAKE	
et:\pw\work\p1dot\pencepl\d0382486\60Y15-DistStd.dgn		DRAWN -	REVISED -			F.A. RTÉ. SECTION		COUNTY		TOTAL SHEETS		SHEET NO.	
		PLOT SCALE = 100.0000' / 1in.	CHECKED - R.K.F.			VAR. 2014-029RS		VARIOUS*		25		25	
		PLOT DATE = 4/11/2014	DATE -			TS-07		CONTRACT NO.		60Y15		FED. ROAD DIST. NO. 1 ILLINOIS FED. AID PROJECT	