# STATE OF ILLINOIS

# DEPARTMENT OF TRANSPORTATION

**DIVISION OF HIGHWAYS** 

# FOR INDEX OF SHEETS, SEE SHEET NO. 2

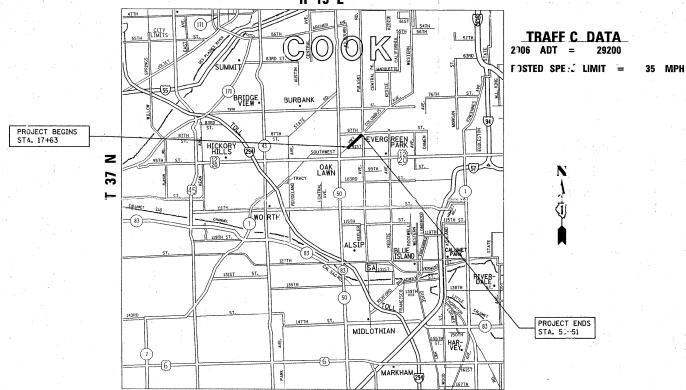
THE PROJECT IS LOCATED IN THE CITY OF HOMETOWN

# PROPOSED HIGHWAY PLANS

FAU ROUTE 3578: ILL 7 (SOUTHWEST HIGHWAY)
87th STREET TO 0.1 MILES NE OF KILBOURN AVE
SECTION: 3178A-RS
RESURFACING (3P)

COOK COUNTY C-91-101-11

R 13 E



**WORTH TOWNSHIP** 

PROJECT ENGINEER KARI SMITH (847) 705-4437 PROJECT MANAGER KEN ENG (847) 705-4247

ENGINEERING SCALES. REDUCED SIZED PLANS WILL NOT CONFORM TO STANDARD SCALES. IN MAKING MEASUREMENTS ON REDUCED PLANS. THE ABOVE SCALES MAY BE USED.

JOINT UTILITY LOCATION INFORMATION FOR EXCAVATION

CONTRACT NO.60M34

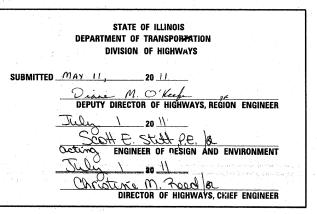
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X18+1=19

D-91-101-11





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#### **HIGHWAY STANDARDS**

#### STANDARD NO. DESCRIPTION

000001-06STANDARD SYMBOLS, ABBREVIATIONS AND PATTERNS

442201-03 CLASS C AND D PATCHES

606001-04 CONCRETE CURB TYPE B AND COMBINATION CONCRETE CURB AND GUTTER

701011-02 OFF ROAD MOVING OPERATIONS, 2L, 2W, DAY ONLY

701201-04 LANE CLOSURE, 2L, 2W, DAY ONLY, FOR SPEEDS >= 45 MPH

-701311-03 LANE CLOSURE, 2L, 2W, MOVING OPERATIONS DAY ONLY

101501-06-URBAN LANE CLOSURE, 2L. 2W. UNDIVIDED

701606-07 URBAN LANE CLOSURE, MULTILANE, 2W, WITH MOUNTABLE MEDIAN 701801-04 LANE CLOSURE, MULTILANE 1W OR 2W CROSSWALK OR SIDEWALK CLOSURE 701901-01 TRAFFIC CONTROL DEVICES

701101-02 701427 701701-07

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# STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION

# INDEX OF SHEETS, LIST OF STANDARDS & GENERAL NOTES SOUTHWEST HIGHWAY (ILL 7)

SHEET NO. OF SHEETS STA.

SCALE:

| F.A.U. | SECTION | COUNTY | SHEET |

BEFORE STARTING ANY EXCAVATION, THE CONTRACTOR SHALL CALL "J.U.L.I.E." AT (800) 892-0123 OR 811 FOR FIELD LOCATIONS OF BURIED ELECTRIC, TELEPHONE AND GAS UTILITIES. 48 HOUR NOTIFICATION IS REQUIRED.

**GENERAL NOTES** 

THE CONTRACTOR SHALL COORDINATE CONSTRUCTION ACTIVITIES WITH UTILITY COMPANIES, AND THE CITY OF HOMETOWN.

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

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.

ALL DAMAGE TO EXISTING PAVEMENT MARKINGS OR RAISED REFLECTIVE PAVEMENT MARKERS OUTSIDE THE REMOVAL LINE SHOWN ON THE PLANS SHALL BE REPLACED AT NO ADDITIONAL COST TO THE DEPARTMENT.

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 PAVEMENT PATCHING LOCATIONS WILL BE DETERMINED IN THE FIELD BY THE ENGINEER.

LOCATION OF COMBINATION CONCRETE CURB AND GUTTER REMOVAL AND REPLACEMENT [OR COMBINATION CURB AND GUTTER (THE TYPE SPECIFIED ON THE PLANS)], WILL BE DETERMINED IN THE FIELD BY THE ENGINEER.

DRAINAGE ADJUSTMENT OR RECONSTRUCTION LOCATIONS WILL BE DETERMINED IN THE FIELD BY THE ENGINEER.

IT SHALL BE THE CONTRACTOR'S RESPONSIBILITY TO VERIFY ALL DIMENSIONS AND CONDITIONS EXISTING IN THE FIELD PRIOR TO CONSTRUCTION AND ORDERING OF MATERIALS.

FRAMES AND GRATES ADJUSTMENT OF PRIVATE UTILITIES WITHIN THE LIMITS OF THE IMPROVEMENTS SHALL BE DONE BY THEIR RESPECTIVE OWNERS AND ARE NOT PART OF THIS CONTENCT.

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 MS. PATRICE HARRIS, AREA TRAFFIC FIELD ENGINEER, AT (708) 597-9800 A MINIMUM OF TWO (2) WEEKS PRIOR TO THE PLACEMENT OF PERMANENT PAVEMENT MARKINGS.

THESE PLANS HAVE BEEN PREPARED FROM NOTES RECEIVED FROM THE BUREAU OF CONSTRUCTION.

THE CONTRACTOR SHALL BE REQUIRED TO PROVIDE ACCESS TO ABUTTING PROPERTY AT ALL TIMES DURING THE CONSTRUCTION OF THIS PROJECT.

FOR FRAMES AND LIDS ADJUSTMENT WITHOUT MILLING, REUSE EXISTING FRAME AND LID UNLESS OTHERWISE SPECIFIED IN THE PLANS,

DO NOT SCALE PLANS FOR CONSTRUCTION DIMENSIONS.

DOUBLE LANE MARKERS ARE TO BE USED AS SHOWN ON THE DISTRICT ONE DETAIL "TYPICAL APPLICATIONS"

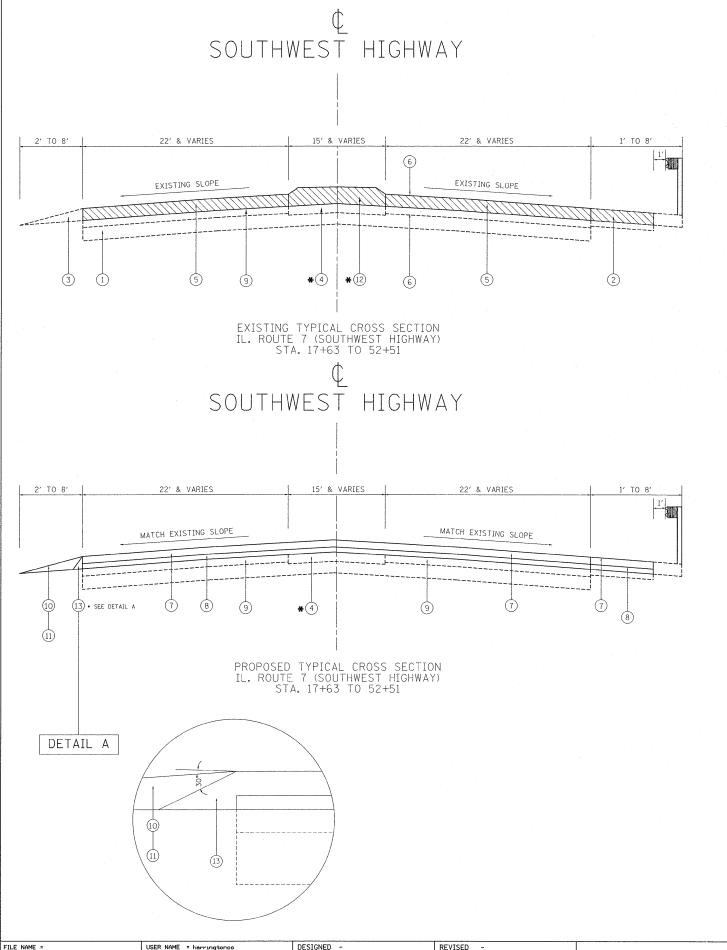
WHEN THE MILLED PAVEMENT IS OPEN TO TRAFFIC THE MAXIMUM GRADE DIFFERENTIAL BETWEEN PASSES OF THE MILLING MACHINE SHALL NOT EXCEED 11/2 INCHES (40 mm) WHERE THE SPEED LIMIT IS 40 MPH (80 km/h) OR LESS AND 1 INCH (25 mm) WHERE THE SPEED LIMIT IS GREATER THAN 40 MPH (80 km/h). WITH WRITTEN APPROVAL OF THE ENGINEER, A MAXIMUM GRADE DIFFERENTIAL OF 3 INCHES (75 mm) MAY BE ALLOWED IF THE EDGE OF THE MILLING IS SLOPED A MINIMUM 1:3 (V:H).

BUTT JOINTS WILL BE INSTALLED AT THE ENDS OF ALL RESURFACING (WHERE RESURFACING MEETS EXISTING PAVEMENT) ACCORDING TO THE "BUTT JOINT AND HOT-MIX ASPHALT TAPER DETAILS" SHEET INCLUDED IN THE PLANS, UNLESS OTHERWISE SPECIFIED.

TO STA.

THE RESIDENT ENGINEER SHALL DETERMINE IF LOOPS WERE INSTALLED FOR SOUTHWEST HIGHWAY AT PULASKI ROAD. A NOMINAL QUANTITY HAS BEEN GIVEN TO SUPPLEMENT IF LOOPS ARE NECESSARY.

	SUMMARY OF QUANTITIES	2,	URBAN 100% STATE		CONSTRUCT	ION TYPE	CODE			SUMMA	ARY OF QUANTITIES		URBAN 100% STATE		. (	CONSTRUCT	ION TYPE	CODE	<del></del>
CODE NO	ITEM	UNIT	TOTAL QUANTITIES	0005					CODE NO		ITEM	UNIT	TOTAL						
21101615	TOPSOIL FURNISH AND PLACE, 4"	SQ YD	23	23					70300240	TEMPORARY P	AVEMENT MARKING	FOOT	373	373					
25200110	SODDING, SALT TOLERANT	SQ YD	23	23					70300260		AVEMENT MARKING	FOOT	294	294		4A 1			
40600200	BITUMINOUS MATERIALS (PRIME COAT)	TON	18	18		en e de la company de la compa			10300200	- LINE 12"	AVENUENT WARRING	1 001	234	257					
40600300	AGGREGATE (PRIME COAT)	TON	84	84					70300280	TEMPORARY P.	AVEMENT MARKING	FOOT	62	62					
40600400	MIXTURE FOR CRACKS, JOINTS, AND FLANGEWAYS	TON	32	32					70301000		AVEMENT MARKING REMOVAL	SQ FT	1980	1980					
40600895	CONSTRUCTING TEST STRIP	EACH	1	1			+ 1.		<b>X</b> 78000100		IC PAVEMENT MARKING	SQ FT	72.8	72.8	3				
40600982	HOT-MIX ASPHALT SURFACE REMOVAL - BUTT JOINT	SQ YD	207	207					<b>★</b> 78000200		IC PAVEMENT MARKING	FOOT	17458	17458					
40601005	HOT-MIX ASPHALT REPLACEMENT OVER PATCHES	TON	154	154			·		<b>¥</b> 78000400	- LINE 4" THERMOPLAST	IC PAVEMENT MARKING	FOOT	373	373					
40603595	POLYMERIZED HOT-MIX ASPHALT SURFACE COURSE, MIX "F", N90	TON	2143	2143					<del>X</del> 78000600	- LINE 6" THERMOPLAST	IC PAVEMENT MARKING	FOOT	294	294					
42001300	PROTECTIVE COAT	SQ YD	46	46						- LINE 12"									1
42400200	PORTLAND CEMENT CONCRETE SIDEWALK 5	SO FT	53	53					<b>*</b> 78000650	THERMOPLAST	IC PAVEMENT MARKING	FOOT	62	62					
44000159	HOT-MIX ASPHALT SURFACE REMOVAL. 2-1/2"	SQ YD	21075	21075					<b>★</b> 78100100	RAISED REFL	ECTIVE PAVEMENT MARKER	EACH	361	361					
									<b>★</b> 88600600	DETECTOR LO	OP REPLACEMENT	FOOT	620	620					
44000600	SIDEWALK REMOVAL	SQ FT	53	53					X2020110	GRADING AND	SHAPING SHOULDERS	UNIT	24.4	24.4	4				
44002212	HOT-MIX ASPHALT REMOVAL OVER PATCHES, 3"	SQ YD	914	914					X4060826	POLYMERIZED METHOD), IL	LEVELING BINDER (MACHINE -4.75, N50	TON	902	902			1 st 1 1 1		
44003510	MEDIAN REMOVAL PARTIAL DEPTH	SO FT	7105	7105					X5539700	STORM SEWER	S TO BE CLEANED	FOOT	200	200					
44201753	CLASS D PATCHES, TYPE II, 9 INCH	SQ YD	365	365					X6030310	FRAMES AND (SPECIAL)	LIDS TO BE ADJUSTED	EACH	4	4					
44201757	CLASS D PATCHES, TYPE III, 9 INCH	SQ YD	184	184					Z0004562		CONCRETE CURB AND GUTTER	FOOT	180	180					
44201759	CLASS D PATCHES, TYPE IV, 9 INCH	SQ YD	365	365						REMOVAL AND	REPLACEMENT								
48102100	AGGREGATE WEDGE SHOULDER, TYPE B	TON	91	91					Z0018500	DRAINAGE ST	RUCTURES TO BE CLEANED	EACH	13	13					
60300105	FRAMES AND GRATES TO BE ADJUSTED	EACH	4	4					Z0030850	TEMPORARY I	NFORMATION SIGNING	SQ FT	51.4	51.4	4				
67000400	ENGINEER'S FIELD OFFICE, TYPE A	CAL MO	6	6															
67100100	MOBILIZATION	L SUM	1	1				1.											
70100450	TRAFFIC CONTROL AND PROTECTION,  *STANDARD 701201	L SUM		-	<del>-</del>						* Specialty Hems								
70102620	TRAFFIC CONTROL AND PROTECTION, —STANDARD 701501	L SUM	1																
70102625	TRAFFIC CONTROL AND PROTECTION, STANDARD 701606	L SUM	1	1			-												
70102635	TRAFFIC CONTROL AND PROTECTION, STANDARD 701701	L SUM	1	1															
70102640	TRAFFIC CONTROL AND PROTECTION, STANDARD 701801	L SUM	1	1															
70300100	SHORT TERM PAVEMENT MARKING	FOOT	6000	6000															
70300210	TEMPORARY PAVEMENT MARKING LETTERS AND SYMBOLS	SQ FT	72.8	72.8											1973				
70300220	TEMPORARY PAVEMENT MARKING	FOOT	17458	17458											\$ t				
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#### **LEGEND**

- . EXISTING P.C.C PAVEMENT, ±9"
- 2. EXISTING HMA SHOULDER
- B. EXISTING AGGREGATE SHOULDER
- 4. EXISTING CORRUGATED MEDIAN
- 5. PROPOSED HMA SURFACE REMOVAL, 2 1/2"
- EXISTING HMA PAVEMENT, ±3"
- 7. PROPOSED POLYMERIZED HMA SURFACE COURSE, MIX "F", N90 (1 3/4")
- 8. PROPOSED POLYMERIZED LEVELING BINDER (MACHINE METHOD), IL-4.75, N50 (3/4")
- P. EXISTING HMA SURFACE AFTER MILLING,  $\pm \frac{1}{2}$
- 10. PROPOSED AGGREGATE WEDGE SHOULDER, TYPE B
- 11. PROPOSED GRADING AND SHAPING SHOULDERS
- 12. PROPOSED MEDIAN REMOVAL PARTIAL DEPTH (TO BE MILLED FLUSH WITH ADJACENT ROADWAY)
- 13. SAFETY EDGE

#### **HOT-MIX ASPHALT MIXTURE REQUIREMENTS**

	1
MIXTURE TYPE	AIR VOIDS
PAVEMENT RESURFACING & HMA SHOULDERS  POLYMERIZED HOT-MIX ASPHALT SURFACE COURSE, MIX "F", N90, (IL-9.5 mm)  POLYMERIZED LEVELING BINDER (MACHINE METHOD), IL-4.75, N50	4% © 90 GYR. 4% © 50 GYR.
PATCHING CLASS D PATCHES (HMA BINDER IL-19 mm), 9"	4% ⊚ 70 GYR.
HMA REPLACEMENT OVER PATCHES (HMA BINDER IL 19 mm)	4% ⊚ 70 GYR.

#### NOTES:

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

THE "AC TYPE" FOR POLYMERIZED HMA MIXES SHALL BE "SBS/SBR PG 70-22" AND FOR NON-POLYMERIZED HMA THE "AC TYPE" SHALL BE "PG 64-22" UNLESS MODIFIED BY DISTRICT ONE SPECIAL PROVISIONS. FOR "PERCENT OF RAP" SEE DISTRICT ONE SPECIAL PROVISIONS.

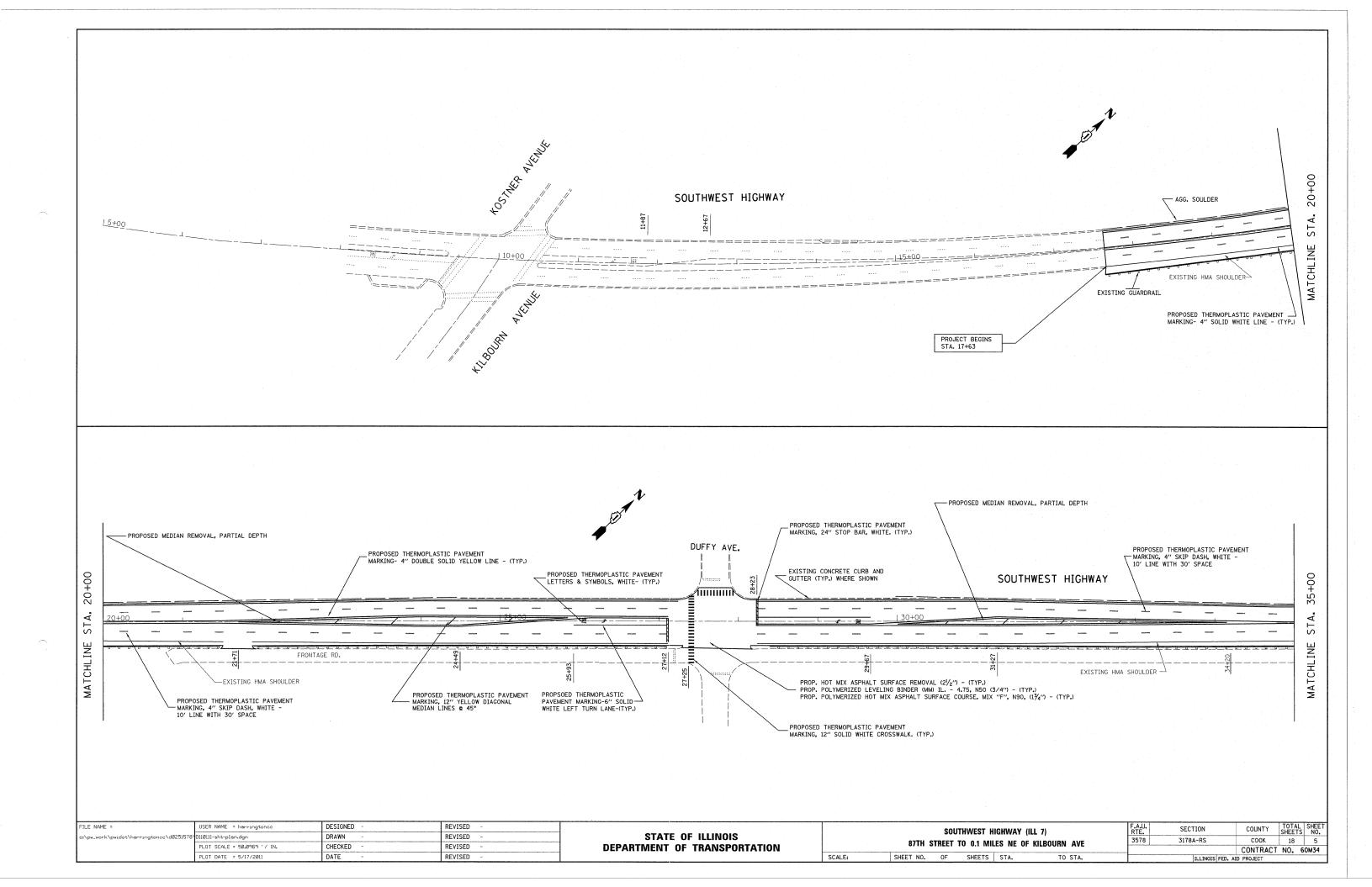
THE CONTRACTOR SHALL PATCH BEFORE MILLING.

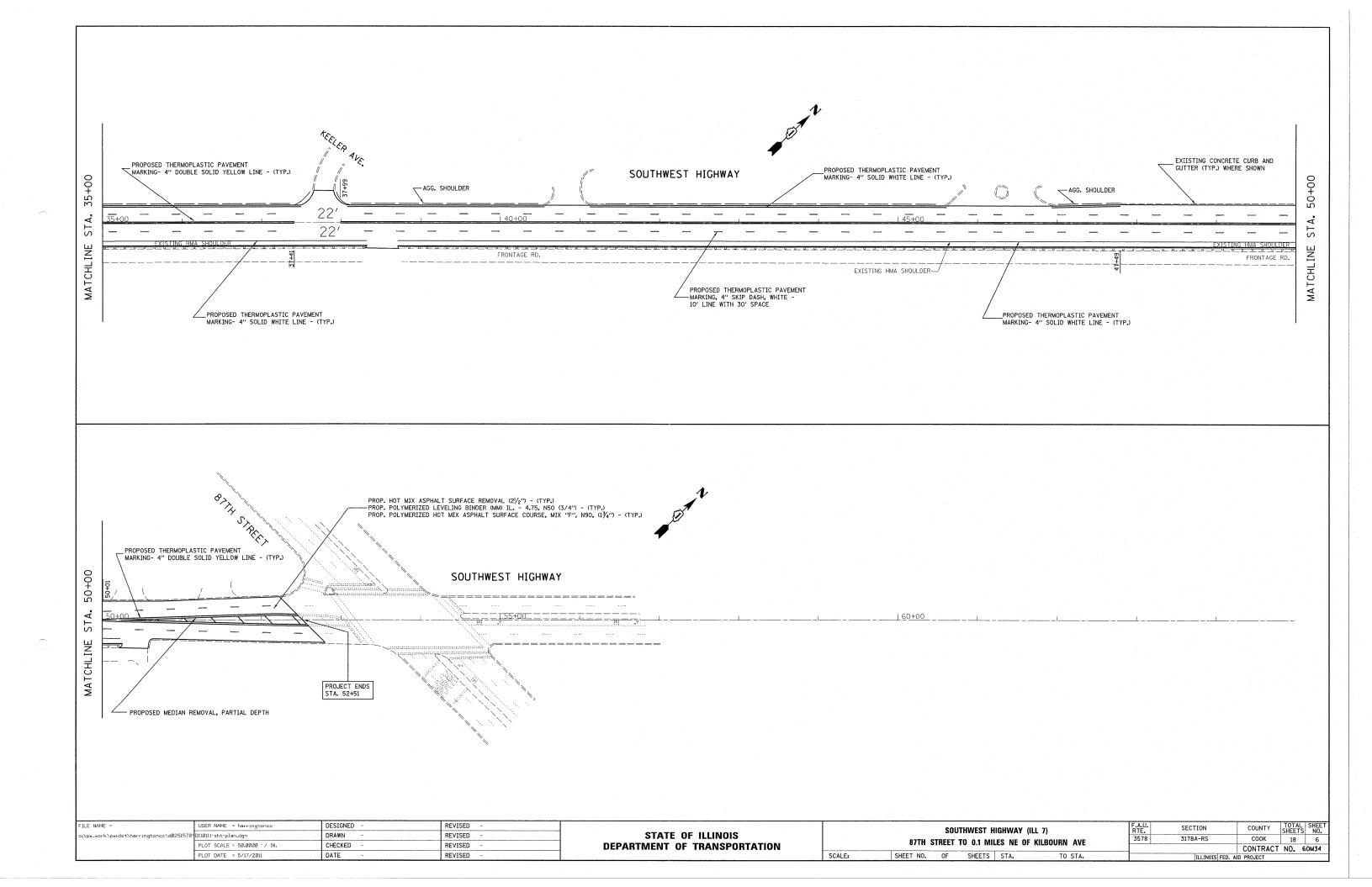
EXISTING CURB AND GUTTER ARE AT STA. 24+49 TO STA. 30+00 AND STA. 47+85 TO 52+51 AS SHOWN ON THE ROADWAY AND PAVEMENT MARKING PLANS.

# \* LOCATIONS

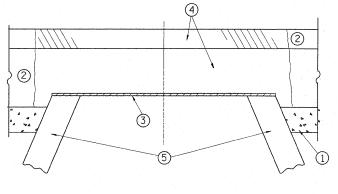
± STA. 21+71 TO ± STA. 25+93 ± STA. 30+00 TO ± STA. 34+20 ± STA. 50+00 TO ± STA. 52+51

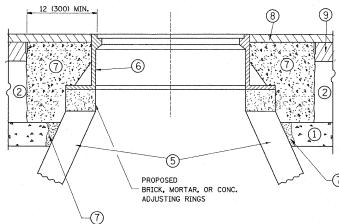
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DEPARTMENT OF TRANSPORTATION	SCALE:	SHEET NO.	OF OF	SHEETS	STA.	TO STA.		ILLINOIS FED. A	CONTRACT	NO. 6	0м34





TRAFFIC SIGNAL LEGEND WORK SHALL MEET THE REQUIREMENTS OF THE SPECIAL PROVISION, "TRAFFIC SIGNAL PROPOSED EXISTING SPECIFICATIONS FOR DETECTOR LOOP REPLACEMENT AND/OR INSTALLATION ON ROADWAY THE BUGINEER SHALL DETERMINE IF 100 PS 10 SIGNAL HEAD WITH BACKPLATE GRINDING, RESURFACING AND PATCHING OPERATIONS". SPECIAL ATTENTION MUST BE  $\rightarrow$ WELE INSTALLED FOR SW. HWY. AT PULASKI RD SIGNAL HEAD GALVANIZED STEEL CONDUIT IN TRENCH OR PUSHED MADE TO THE SECTIONS "INSPECTION OF CONSTRUCTION" AND "DETECTOR LOOP REPLACEMENT" FOR INSTALLATION AND INSPECTION REQUIREMENTS. LOOP REPLACEMENT DETECTOR LOOP WORK THAT DOES NOT MEET THE CONTRACT REQUIREMENTS SHALL NOT BE PAID. WORK VEHICLE DETECTOR, NON COMPENSATED MAGNETIC TYPE \_\_\_\_ NECESSARY TO COMPLETE THE LOOP REPLACEMENT WORK MAY BE ASSIGNED BY THE "E" RACEWAY FOR MAGNETIC DETECTOR, TYPE I OR TYPE II ENGINEER TO IDOT'S ELECTRICAL MAINTENANCE CONTRACTOR (EMC); ALL RELATED COSTS WILL BE THE RESPONSIBILITY OF THE CONTRACTOR. TRAFFIC SIGNAL LEGEND X E E CONTROLLER HEDIC arrival and Mar statut SERVICE INSTALLATION ---COMM. NEWS LEFT -STUBBLE HEAD WITH BACKPLATE LUMBIATED ! TURN -[] SIGNAL HEAD PEDESTRIAN LAHE 1 SICKE FOST WELST ARM ASSEMBLY AND POLE. STEEL WART THE TREE TREE AND LOTE WITHIN THE Si. HOOPOLE A STATE OF THE PARTY OF THE PAR 8 HEAVY DUTY HARDHOLE group de E. E. BURGHE SEATON IO POST A.S. COMOUT TO TRENCH IT I OF PASHED IN À. 聯 PEDESTRUM FUENCUTTON DETECTOR 87TH STREET DETECTOR LOOP o t O CAST INCH JUNCTION BOX COUNTY TENCH 27 UNIT DUET 100 EMERICALLY VENEZUE EXCERN DETECTOR o d CONTINUATION SEACON SITUL HEND OFFICELLY PROGRAMICS -MICHOWAYE VEHICLE SENSOR TELEPHONE CONNECTION TLLUMENATED SIGN. FIRES OF THE ILLUMINATED SIGN. FIRST OPTIC CONCLUT SPLICE MOCO FOLE -L4" POST MOTEL PACEFAIR FOR MACHETTE DETECTOR. SOUTH MEST LEFT ON CHEEN AREON CHLT TYPE & GE TYPE II. 0 -VENULE DETECTOR. (L) (2) RATERDAD CONTROL CASINET E \*-STA. 52+51 REPLACE ALL DETECTOR LOOPS AS SHOWN (WITHIN THE RESURFACING LIMITS) ITEM QUANTITY UNIT CODE THIS PLAN IS FOR THE SOLE PURPOSE OF DETECTOR LOOP, REPLACEMENT FOOT DETECTOR LOOP REPLACEMENTS ONLY 86600600 620 COUNTY SECTION DISTRICT ONE - DETECTOR LOOP REPLACEMENT
SOUTHWEST HWY, & BITH SHEET
SHEET NO. OF SHEETS STA. TO STA. USER NAME = nguyensm COOK- 18 7 FILE NAME = DESIGNED -REVISED -3578 3178A-RS STATE OF ILLINOIS DRAWN REVISED CONTRACT NO. 60M34 er.dgn DEPARTMENT OF TRANSPORTATION CHECKED -REVISED PLOT SCALE = 100.0000 '/ IN. PLOT DATE = 11/19/2010 DATE -REVISED





EXISTING BROKEN FRAMES AND LIDS SHALL BE REMOVED AND DISPOSED OF BY THE CONTRACTOR AND SHALL BE REPLACED AS DIRECTED BY THE ENGINEER. REPLACEMENT FRAMES AND LIDS WILL BE PAID FOR IN ACCORDANCE WITH ARTICLE 109.04 OF THE STANDARD SPECIFICATIONS UNLESS A SEPARATE PAY ITEM HAS BEEN PROVIDED.

IF THE EXISTING LIDS ARE OPEN, THE FRAME WILL BE ADJUSTED TO THE ELEVATION OF THE MILLED PAVEMENT SURFACE PRIOR TO THE MILLING OPERATION. THE FRAME WILL NOT BE REMOVED AND COVERED BY THE METAL PLATE.

CITY OF CHICAGO CASTINGS ARE THE PROPERTY OF THE CITY AND THE CONTRACTOR SHALL NOTIFY THE CITY FOR REMOVAL AND DISPOSITION OF THE CASTINGS.

THE METAL PLATE USED TO COVER THE STRUCTURE SHALL REMAIN THE PROPERTY OF THE CONTRACTOR.

WHEN STRUCTURES ARE TO BE ADJUSTED OR RECONSTRUCTED, THE LOWERING AND RAISING OF THE FRAMES AND LIDS WILL NOT BE PAID FOR SEPARATELY BUT WILL BE INCLUDED IN THE COST OF THE CORRESPONDING PAY ITEM.

#### CONSTRUCTION PROCEDURES

#### STAGE 1 (BEFORE PAVEMENT MILLING)

- A) REMOVE A MINIMUM OF 12 (300) OF THE PAVEMENT FROM
- AROUND THE STRUCTURE.
  B) REMOVE THE EXISTING FRAME AND LID FROM THE STRUCTURE.
- C) COVER THE STRUCTURE OPENING WITH A 36 (900) DIAMETER METAL PLATE.
- D) BACKFILL WITH CRUSHED STONE AND A MINIMUM 11/2 (40) THICK HMA SURFACE MIX APPROVED BY THE ENGINEER.

#### STAGE 2 (AFTER PAVEMENT MILLING)

- A) REMOVE THE HMA SURFACE MIX AND CRUSHED STONE.
- B) INSTALL THE FRAME AND LID; ADJUST THE FRAME TO ITS FINAL SURFACE ELEVATION.
- C) THE SURROUNDING SPACE SHALL BE FILLED WITH CLASS PP-1\*
  CONCRETE TO THE ELEVATION OF THE SURFACE OF THE EXISTING BASE COURSE OR THE BINDER COURSE.
- \*UNLESS OTHERWISE SPECIFIED IN THE PLANS.

THE PROCEDURE EXPLAINED ABOVE SHALL CONFORM TO THE APPLICABLE PORTIONS OF SECTIONS 353, 406, 602, AND 603 OF THE STANDARD SPECIFICATIONS.

#### LEGEND

- 1 SUB-BASE GRANULAR MATERIAL
- (6) FRAME AND LID (SEE NOTES)
- 2 EXISTING PAVEMENT
- (7) CLASS PP-1\* CONCRETE
- 3 36 (900) DIAMETER METAL PLATE
- (8) PROPOSED HMA SURFACE COURSE
- PROPOSED CRUSHED STONE AND HMA SURFACE MIX (5) EXISTING STRUCTURE
- 9 PROPOSED HMA BINDER COURSE

#### LOCATION OF STRUCTURES:

THE CONTRACTOR WILL BE REQUIRED TO KEEP A RECORD OF THE LOCATIONS OF THE BURIED STRUCTURES ACCORDING TO THE STATION AND DISTANCE LEFT OR RIGHT OF THE CENTERLINE OF PAVEMENT. UPON COMPLETION OF THE WORK, THE CONTRACTOR WILL DELIVER THE RECORD TO THE ENGINEER.

BASIS OF PAYMENT: THIS WORK WILL BE PAID FOR AT THE CONTRACT UNIT PRICE PER EACH FOR "FRAMES AND LIDS TO BE ADJUSTED, SPECIAL" NEW FRAMES AND LIDS, WHEN SPECIFIED, WILL BE PAID FOR SEPARATELY.

## DETAILS FOR FRAMES AND LIDS ADJUSTMENT WITH MILLING

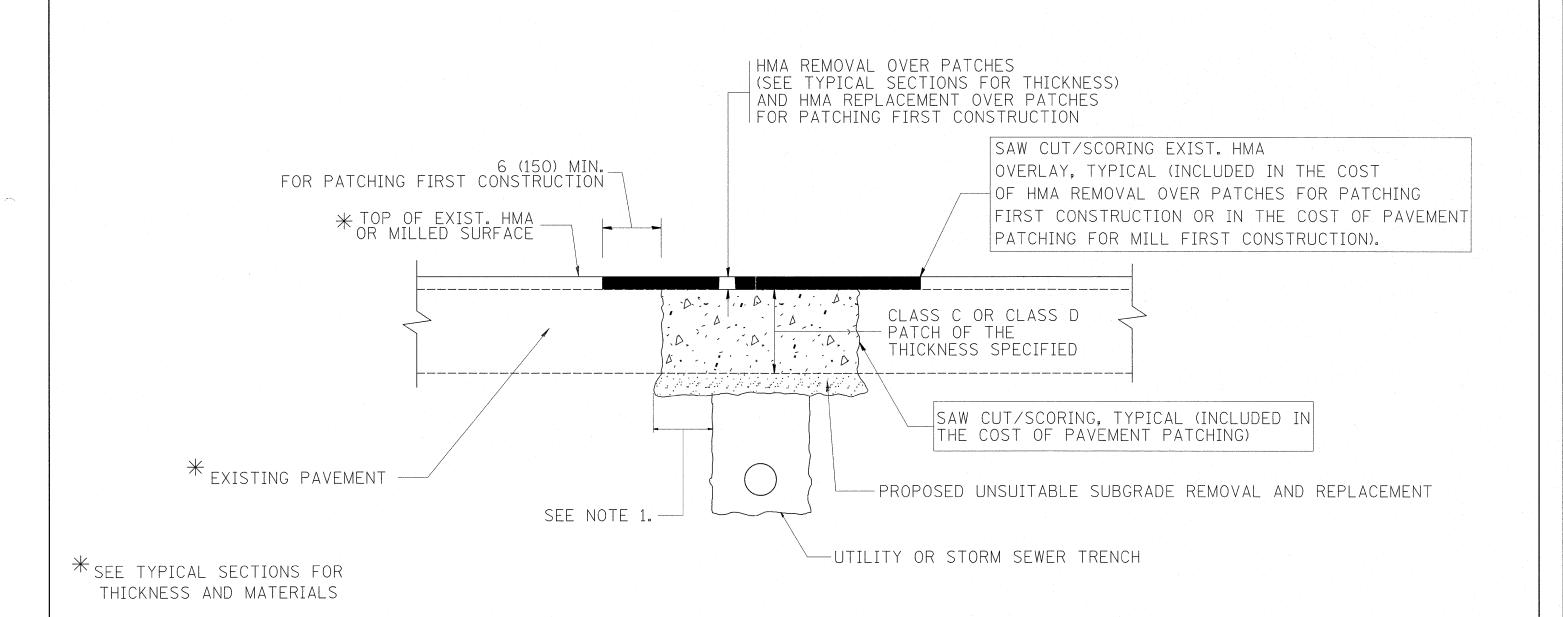
ALL DIMENSIONS ARE IN INCHES (MILLIMETERS) UNLESS OTHERWISE SHOWN

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STATE OF ILLINOIS **DEPARTMENT OF TRANSPORTATION** 

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	FRAMES	AND	LIDS	ADJUSTN	VIENT WITH	MILLING	
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COUNTY TOTAL SHEET NO. SECTION 3178A-RS Cook BD600-03 (BD-8) CONTRACT NO. 60M34 FED. ROAD DIST. NO. 1 | ILLINOIS | FED. AID PROJECT



### NOTES:

- 1. THE WIDTH OF THE FULL DEPTH PATCH OVER A TRENCH SHALL BE 12 (300) WIDER ON EACH SIDE OF THE TRENCH.
- 2. FOR METHOD OF MEASUREMENT AND BASIS OF PAYMENT, SEE RECURRING SPECIAL PROVISION "PATCHING WITH HOT-MIX ASPHALT OVERLAY REMOVAL".

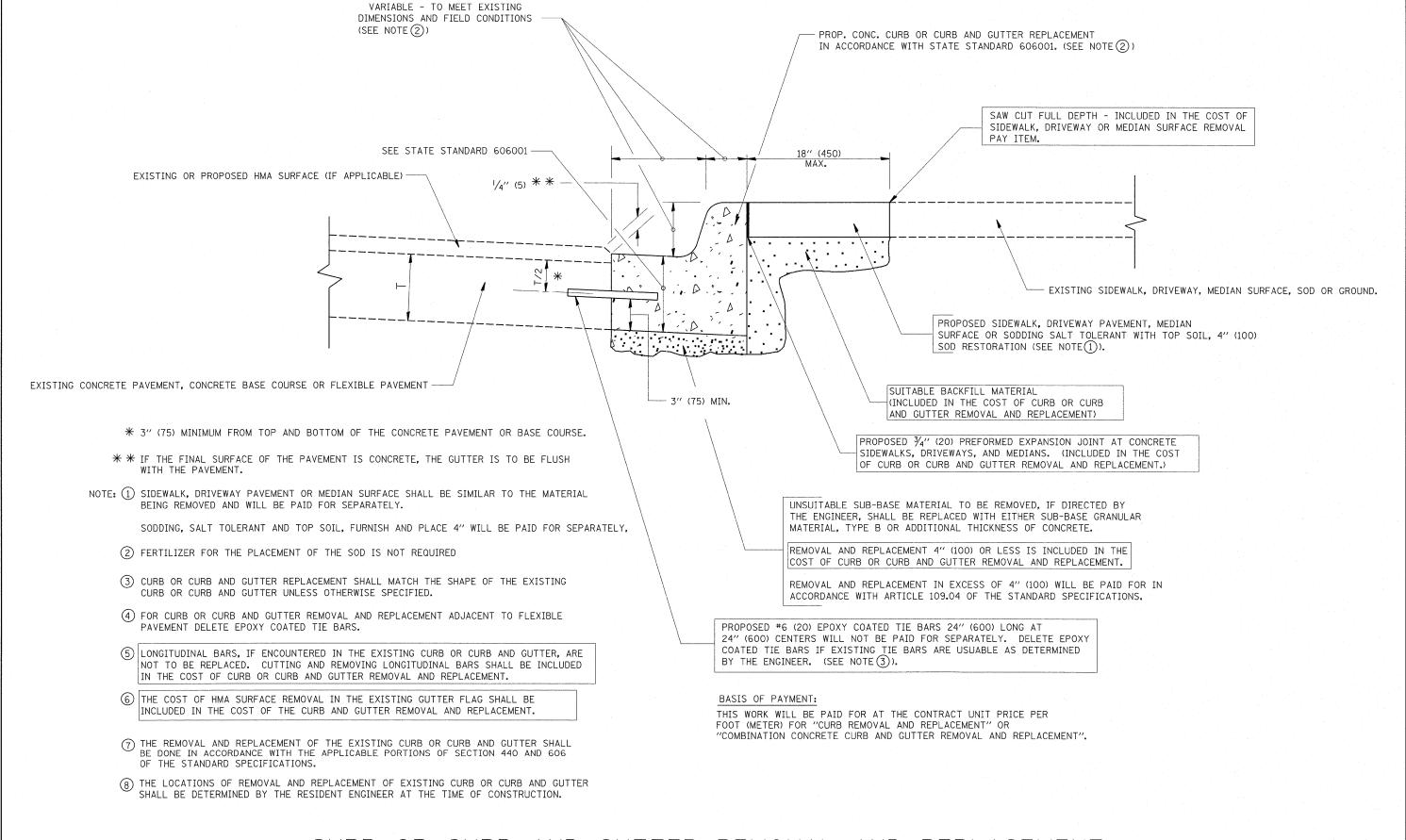
## SEQUENCE OF CONSTRUCTION (PATCHING FIRST)

- 1. REMOVE THE EXISTING HMA MATERIAL OVER THE AREA TO BE PATCHED.
- 2. REMOVE AND REPLACE WITH CLASS C OR D PATCH.
- 3. REPLACE HMA MATERIAL OVER THE AREA TO BE PATCHED.

### SEQUENCE OF CONSTRUCTION (MILLING FIRST)

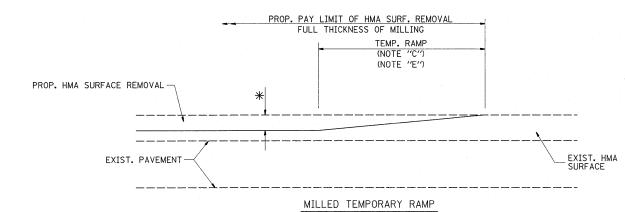
- 1. MILL HMA FIRST IF THERE IS AT LEAST 41/2 INCHES OR MORE OF HMA MATERIAL ON TOP OF THE EXISTING PAVEMENT OR IF THE PAVEMENT IS FULL DEPTH HMA. A MINIMUM OF 2 INCHES OF HMA MATERIAL SHALL BE IN PLACE AFTER MILLING.
- 2. REMOVE AND REPLACE WITH FULL DEPTH CLASS D PATCHES TO TOP OF MILLED SURFACE.

FILE NAME =	USER NAME = harringtonec	DESIGNED - R. SHAH	REVISED -	A. ABBAS 04-27-98			PAVEMENT PATCHING FOR	F.A.U.	SECTION	COUNTY	SHEETS	HEET
c:\pw_work\pwidot\harringtoncc\d0251578\	DistStd.dgn	DRAWN -	REVISED -	R. BORO 01-01-07	STATE OF ILLINOIS			3578	3178A-RS	Cook	18	9
·	PLOT SCALE = 50.0000 '/ IN.	CHECKED -	REVISED ~	R. BORO 09-04-07	DEPARTMENT OF TRANSPORTATION		HMA SURFACED PAVEMENT		BD400-04 (BD-22)	CONTRACT	[ NO. 60	м34
	PLOT DATE = 5/16/2011	DATE - 10-25-94	REVISED ~	K. ENG 10-27-08		SCALE: NONE	SHEET NO. 1 OF 1 SHEETS STA. TO STA.	FED. F		. AID PROJECT		



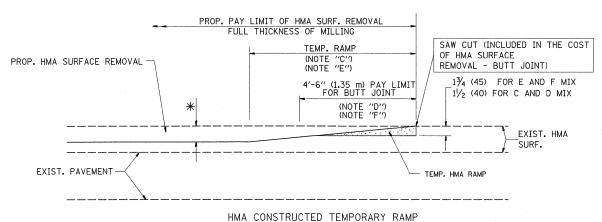
# CURB OR CURB AND GUTTER REMOVAL AND REPLACEMENT

FILE NAME =	USER NAME = harringtonce	DESIGNED - A. HOUSEH	REVISED -	R. SHAH 10-03-96			CURB OR CURB AND GUTTER	F.A.U.	SECTION	COUNTY	TOTAL SHEET
c:\pw_work\pwidot\harringtoncc\d0251578\	DistStd.dgn	DRAWN -	REVISED -	A. ABBAS 03-21-97	STATE OF ILLINOIS			3578	3178A-RS	Cook	18 10
	PLOT SCALE = 50.0000 '/ IN.	CHECKED -	REVISED -	M. GOMEZ 01-22-01	DEPARTMENT OF TRANSPORTATION		REMOVAL AND REPLACEMENT	13310	RD600_06 (RD_24)	CONTRACT	NO. 60M34
	PLOT DATE = 5/16/2011	DATE - 03-11-94	REVISED -	R. BORO 12-15-09		SCALE: NONE	SHEET NO. 1 OF 1 SHEETS STA. TO STA.	FED. 1	DD000 00 (DD 24)	AID PROJECT	NO. COMS4



(FOR BUTT JOINT AND HMA TAPER SEE DETAIL BELOW)

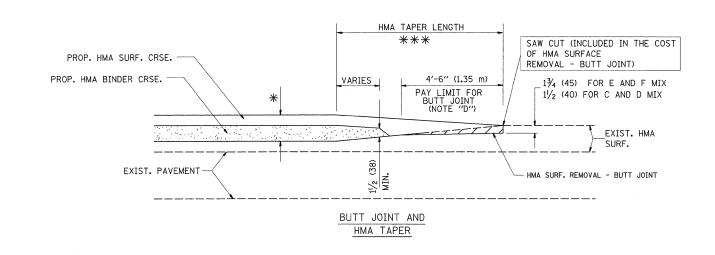
#### OPTION 1



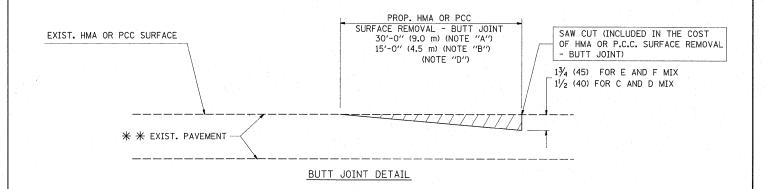
(FOR BUTT JOINT AND HMA TAPER SEE DETAIL BELOW)

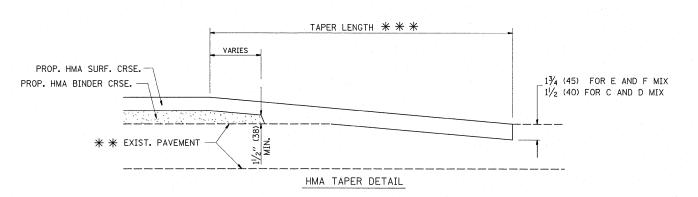
### OPTION 2

# TYPICAL TEMPORARY RAMP



# TYPICAL BUTT JOINT AND HMA TAPER FOR MILLING AND RESURFACING





# TYPICAL BUTT JOINT AND HMA TAPER FOR RESURFACING ONLY

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

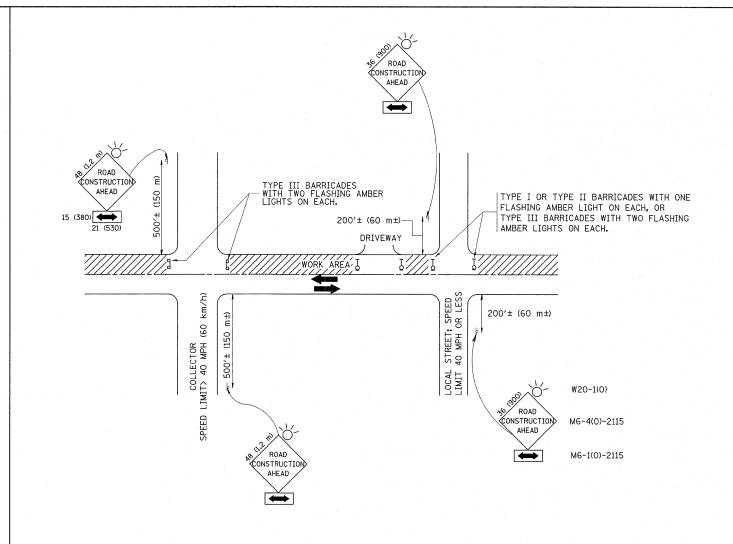
### NOTES

- 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".

FILE NAME =	USER NAME = harringtonco	DESIGNED - M. DE YONG	REVISED - R. SHAH 10-25-94		BUTT JOINT AND	F.A.U. SECTION	COUNTY TOTAL SHEET
c:\pw_work\pwidot\harring	tonoc\d0251578\DistStd.dgn	DRAWN -	REVISED - A. ABBAS 03-21-97	STATE OF ILLINOIS	HMA TAPER DETAILS	3578 3178A-RS	Cook 18 11
	PLOT SCALE = 50.0000 '/ IN.	CHECKED -	REVISED - M. GOMEZ 04-06-01	DEPARTMENT OF TRANSPORTATION		BD400-05 BD32	CONTRACT NO. 60M34
	PLOT DATE = 5/16/2011	DATE - 06-13-90	REVISED - R. BORO 01-01-07		SCALE: NONE SHEET NO. 1 OF 1 SHEETS STA. TO STA.	FED. ROAD DIST, NO. 1 ILLINOIS FED. A	ID PROJECT



TRAFFIC CONTROL AND PROTECTION FOR SIDE ROADS, INTERSECTIONS, AND DRIVEWAYS

### NOTES:

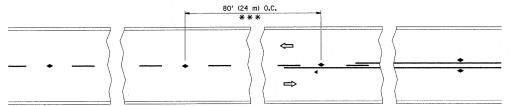
- A. FOR NO LANE RESTRICTION ON THE SIDE ROAD OR DRIVEWAYS
- 1. SIDE ROAD WITH A SPEED LIMIT OF 40 MPH (60 km/h) OR LESS AS SHOWN ON THE DRAWING AND AS DIRECTED BY THE ENGINEER:
- 0) ONE ROAD CONSTRUCTION AHEAD SIGN 36  $\times$  36 (900 $\times$ 900) WITH A FLASHER AND FLAG MOUNTED ON IT APPROXIMATELY 200' (60 m) IN ADVANCE OF THE MAIN ROUTE.
- b) THE CLOSED PORTION OF THE MAIN ROUTE SHALL BE PROTECTED BY BLOCKING WITH TYPE I, TYPE II OR TYPE III BARRICADES, 1/3 OF THE CROSS SECTION OF THE CLOSED PORTION.
- 2. SIDE ROAD WITH A SPEED LIMIT GREATER THAN 40 MPH (60 km/h) AS SHOWN ON THE DRAWING AND AS DIRECTED BY THE ENGINEER:
- a) ONE ROAD CONSTRUCTION AHEAD SIGN 48  $\times$  48 (1.2 m  $\times$  1.2 m) WITH A FLASHER MOUNTED ON IT APPROXIMATELY 500' (150 m) IN ADVANCE OF THE MAIN ROUTE.
- b) THE CLOSED PORTION OF THE MAIN ROUTE SHALL BE PROTECTED BY BLOCKING WITH TYPE III BARRICADES, 1/2 OF THE CROSS SECTION OF THE CLOSED PORTION.
- 3. WHEN THE SIDE ROAD LIES BETWEEN THE BEGINNING OF THE MAINLINE SIGNING AND THE WORK ZONE, A SINGLE HEADED ARROW (MG-1) SHALL BE USED IN LIEU OF THE DOUBLE HEADED ARROW (MG-4).

- B. FOR A LANE CLOSURE ON A SIDE ROAD OR DRIVEWAY:
- USE APPLICABLE PORTIONS OF THE TYPICAL APPLICATION OF TRAFFIC CONTROL DEVICES (STD. 701501, STD. 701606 OR THE APPROPRIATE STANDARD). THE SPACING OF SIGNS AND BARRICADES SHALL BE ADJUSTED FOR FIELD CONDITIONS AS DIRECTED BY THE ENGINEER. THE DIRECTIONAL ARROW SHALL BE COVERED OR REMOVED WHEN NO LONGER CONSISTENT WITH THE SIDE ROAD LANE CLOSURE.
- C. ADVANCE WARNING SIGNS ARE TO BE OMITTED ON DRIVEWAY UNLESS OTHERWISE NOTED.
- D. THE TRAFFIC CONTROL AND PROTECTION FOR SIDE ROADS, INTERSECTIONS, AND DRIVEWAYS SHALL BE INCIDENTAL TO THE COST OF SPECIFIED TRAFFIC CONTROL STANDARDS OR ITEMS.

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

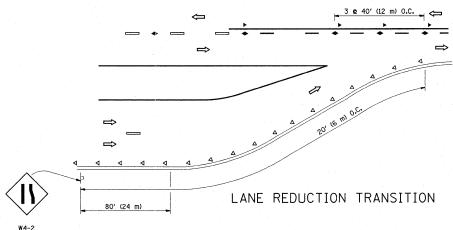
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

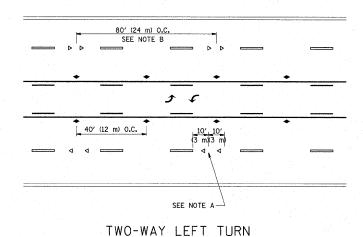
	TRAFFIC SIDE ROADS			ROTECTION , AND DRIV		
SCALE: NONE	SHEET NO. 1	OF 1	SHEETS	STA.	TO	STA.

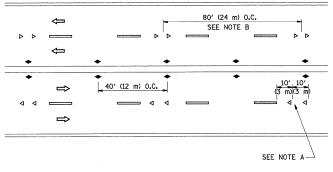


\*\*\* REDUCE TO 40' (12 m) O.C. ON CURVES WITH POSTED OR ADVISORY SPEED 45 M.P.H. (70 km/h) OR LESS.

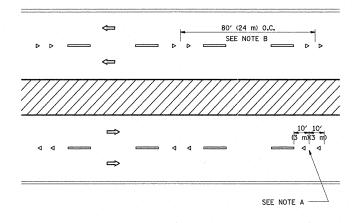
TWO-LANE/TWO-WAY







MULTI-LANE/UNDIVIDED



MULTI-LANE/DIVIDED

### GENERAL NOTES

- 1. MARKERS USED WITH DASHED LINES SHALL BE CENTERED IN THE GAP BETWEEN SEGMENTS.
- 2. MARKERS USED ADJACENT TO SOLID LINES SHALL BE OFFSET 2 TO 3 (50 TO 75) TOWARD TRAFFIC AS SHOWN.
- 3. MARKERS THROUGH TANGENTS LESS THAN 500' (150 m) IN LENGTH BETWEEN CURVES SHALL BE INSTALLED AT THE LESSER OF THE TWO CURVE SPACINGS.

# LANE MARKER NOTES

- A. USE DOUBLE LANE LINE MARKERS SPACED AS SHOWN.
- B. REDUCE TO 40' (12 m) O.C. ON CURVES WHERE ADVISORY SPEEDS ARE 10 M.P.H (20 km/h) LOWER THAN POSTED SPEEDS.

### SYMBOLS

- ---- YELLOW STRIPE
- WHITE STRIPE
- ◆ ONE-WAY AMBER MARKER
- ONE-WAY CRYSTAL MARKER (₩/O)
- ◆ TWO-WAY AMBER MARKER

#### DESIGN NOTES

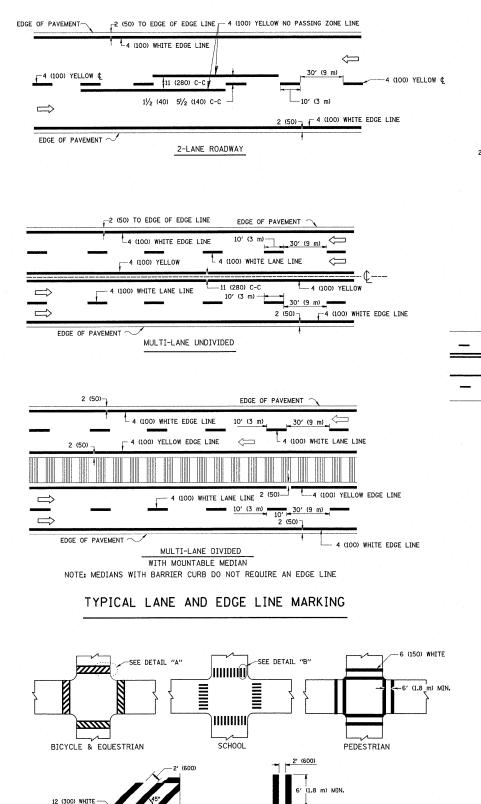
- 1. DOUBLE LANE LINE MARKERS SHALL BE USED UNLESS SPECIFIED OTHERWISE.
- 2. EXCEPT AS SHOWN ON THE LANE REDUCTION TRANSITION AND FREEWAY EXIT RAMP DETAIL, MARKERS ARE NOT TO BE SPECIFIED ON RIGHT EDGE LINES.
- 3. THE EXACT MARKER LIMITS, SPACING, AND COLOR SHALL BE INCLUDED IN THE PLANS WHEN STANDARD SPECIFICATIONS ARE NOT BEING USED.
- 4. MARKERS SHOULD NOT BE USED ALONGSIDE CURBS EXCEPT FOR EXTREMELY SHORT SECTIONS OF CURBS WHERE NOT MORE THAN TWO MARKERS WOULD BE INVOLVED.

# 

LEFT TURN

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

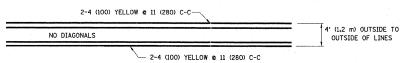
ı	FILE NAME =	USER NAME = harringtonco	DESIGNED -	REVISED -T. RAMMACHER 09-19-94		TYPICAL APPLIC	PATIONS		F.A.U. RTE.	SECTION	COUNTY	TOTAL S	HEET NO.
	c:\pw_work\pwidot\harringtoncc\dØ251578	DistStd.dgn	DRAWN ~	REVISED -T. RAMMACHER 03-12-99	DAICED	REFLECTIVE PAVEMENT MARK		DECICTANT\	3578	3178A-RS	Cook	18	13
		PLOT SCALE = 50.0000 '/ IN.	CHECKED -	REVISED -T. RAMMACHER 01-06-00			ENS (SINONA-LEGAN			TC-11	CONTRACT	NO.60M	34
- 1		PLOT DATE = 5/16/2011	DATE -	REVISED - C. JUCIUS 09-09-09	SCALE: NONE	SHEET NO. 1 OF 1 SHEETS	STA.	TO STA.	FED. ROAD D	IST. NO. 1 ILLINOIS FED. A	ID PROJECT	-	



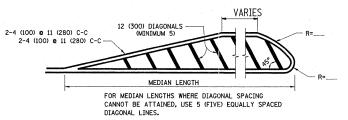
# TYPICAL CROSSWALK MARKING

6 (150) WHITE

DETAIL "A"

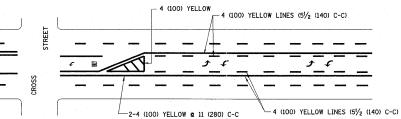


#### 4' (1.2 m) WIDE MEDIANS ONLY



DIAGONAL LINE SPACING: 50' (15 m) C-C (LESS THAN 30MPH (50 km/h))
75' (25 m) C-C 30MPH (50 km/h) TO 45MPH (70 km/h))
150' (45 m) C-C (MORE THAN 45MPH (70 km/h))

#### MEDIANS OVER 4' (1.2 m) WIDE

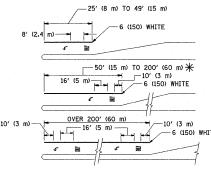


A MINIMUM OF TWO PAIRS OF TURN ARROWS SHALL BE USED, WHITE IN COLOR. ADDITIONAL PAIRS SHALL BE PLACED AT 200' (60 m) TO 300' (90 m) INTERVALS.



MEDIAN WITH TWO-WAY LEFT TURN LANE

### TYPICAL PAINTED MEDIAN MARKING

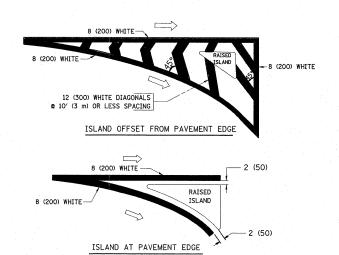


FULL SIZE LETTERS 8' (2.4 m) AND ARROWS SHALL BE USED.  $\P$  AREA = 15.6 SO. FT. (1.5 m<sup>2</sup> )  $\Pi$  AREA = 20.8 SO. FT. (1.9 m<sup>2</sup>)

\* TURN LANES IN EXCESS OF 400' (120 m) IN LENGTH MAY HAVE AN ADDITIONAL SET OF ARROW - "ONLY" INSTALLED MIDWAY BETWEEN THE OTHER TWO SETS OF ARROW - "ONLY".

TYPICAL LEFT (OR RIGHT) TURN LANE

#### TYPICAL TURN LANE MARKING



#### TYPICAL ISLAND MARKING

TYPE OF MARKING	WIDTH OF LINE	PATTERN	COLOR	SPACING / REMARKS
CENTERLINE ON 2 LANE PAVEMENT	4 (100)	SKIP-DASH	YELLOW	10' (3 m) LINE WITH 30' (9 m) SPACE
CENTERLINE ON MULTI-LANE UNDIVIDED PAVEMENT	2 @ 4 (100)	SOLID	YELLOW	11 (280) C-C
NO PASSING ZONE LINES: FOR ONE DIRECTION FOR BOTH DIRECTIONS	4 (100) 2 @ 4 (100)	SOLID SOLID	YELLOW YELLOW	5½ (140) C-C FROM SKIP-DASH CENTERLINE 11 (280) C-C OMIT SKIP-DASH CENTERLINE BETWEEN
LANE LINES	4 (100) 5 (125) ON FREEWAYS	SKIP-DASH SKIP-DASH	WHITE WHITE	10' (3 m) LINE WITH 30' (9 m) SPACE
DOTTED LINES (EXTENSIONS OF CENTER, LANE OR TURN LANE MARKINGS)	SAME AS LINE BEING EXTENDED	SKIP-DASH	SAME AS LINE BEING EXTENDED	2' (600) LINE WITH 6' (1.8 m) SPACE
EDGE LINES	4 (100)	SOLID	YELLOW-LEFT WHITE-RIGHT	OUTLINE MOUNTABLE MEDIANS IN YELLOW; EDGE LINES ARE NOT USED NEXT TO BARRIER CURB
TURN LANE MARKINGS	6 (150) LINE; FULL SIZE LETTERS & SYMBOLS (8' (2.4m))	SOLID	WHITE	SEE TYPICAL TURN LANE MARKING DETAIL
TWO WAY LEFT TURN MARKING	2 <b>2</b> 4 (100) EACH DIRECTION 8' (2.4m) LEFT ARROW	SKIP-DASH AND SOLID IN PAIRS	WHITE	10' (3 m) LINE WITH 30' (9 m) SPACE FOR SKIP-DASH, 5½ (140) C-C BETWEEN SOLID LINE AND SKIP-DASH LINE SEE TYPICAL TWO-WAY LEFT TURN MARKING DETAIL
CROSSWALK LINES (PEDESTRIAN) A. DIAGONALS (BIKE & EQUESTRIAN) B. LONGITUDINAL BARS (SCHOOL)	2 <b>e</b> 6 (150) 12 (300) <b>e</b> 45° 12 (300) <b>e</b> 90°	SOLID SOLID SOLID	WHITE WHITE WHITE	NOT LESS THAN 6' (1.8 m) APART 2' (500) APART 2' (600) APART SEE TYPICAL CROSSWALK MARKING DETAILS.
STOP LINES	24 (600)	SOLID	WHITE	PLACE 4' (1.2 m) IN ADVANCE OF AND PARALLEL TO CROSSWALK, IF PRESENT. OTHERWISE, PLACE AT DESIRED STOPPING POINT. PARALLEL TO CROSSROAD CENTERLINE, WHERE POSSIBLE
PAINTED MEDIANS	2 @ 4 (100) WITH 12 (300) DIAGONALS @ 45° NO DIAGONALS USED FOR 4' (1.2 m) WIDE MEDIANS	SOLID	YELLOW: TWO WAY TRAFFIC WHITE: ONE WAY TRAFFIC	11 (280) C-C FOR THE DOUBLE LINE SEE TYPICAL PAINTED MEDIAN MARKING.
GORE MARKING AND CHANNELIZING LINES	8 (200) WITH 12 (300) DIAGONALS @ 45°	SOLID	WHITE	DIAGONALS: 15' (4,5 m) C-C (LESS THAN 30MPH (50 km/h)) 20' (6 m) C-C 30MPH (50 km/h) TO 45MPH (70 km/h)) 30' (9 m) C-C (OVER 45MPH (70 km/h))
RAILROAD CROSSING	24 (600) TRANSVERSE LINES; "RR" IS 6' (1.8 m) LETTERS; 16 (400) LINE FOR "X"	SOLID	WHITE	SEE STATE STANDARD 780001 AREA OF: "R"=3.6 SO. FT. (0.33 m <sup>2</sup> ) EACH "X"=54.0 SO. FT. (5.0 m <sup>2</sup> )
SHOULDER DIAGONALS	12 (300) & 45°	SOLID	WHITE - RIGHT YELLOW - LEFT	50' (15 m) C-C (LESS THAN 30MPH (50 km/h)) 75' (25 m) C-C (30 MPH (50 km/h) TO 45MPH (70 km/h)) 150' (45 m) C-C (0YER 45MPH (70 km/h))

FOR FURTHER DETAILS ON PAVEMENT MARKING REFER TO STANDARD SPECIFICATIONS FOR ROAD AND BRIDGE CONSTRUCTION AND STATE STANDARD 780001.

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

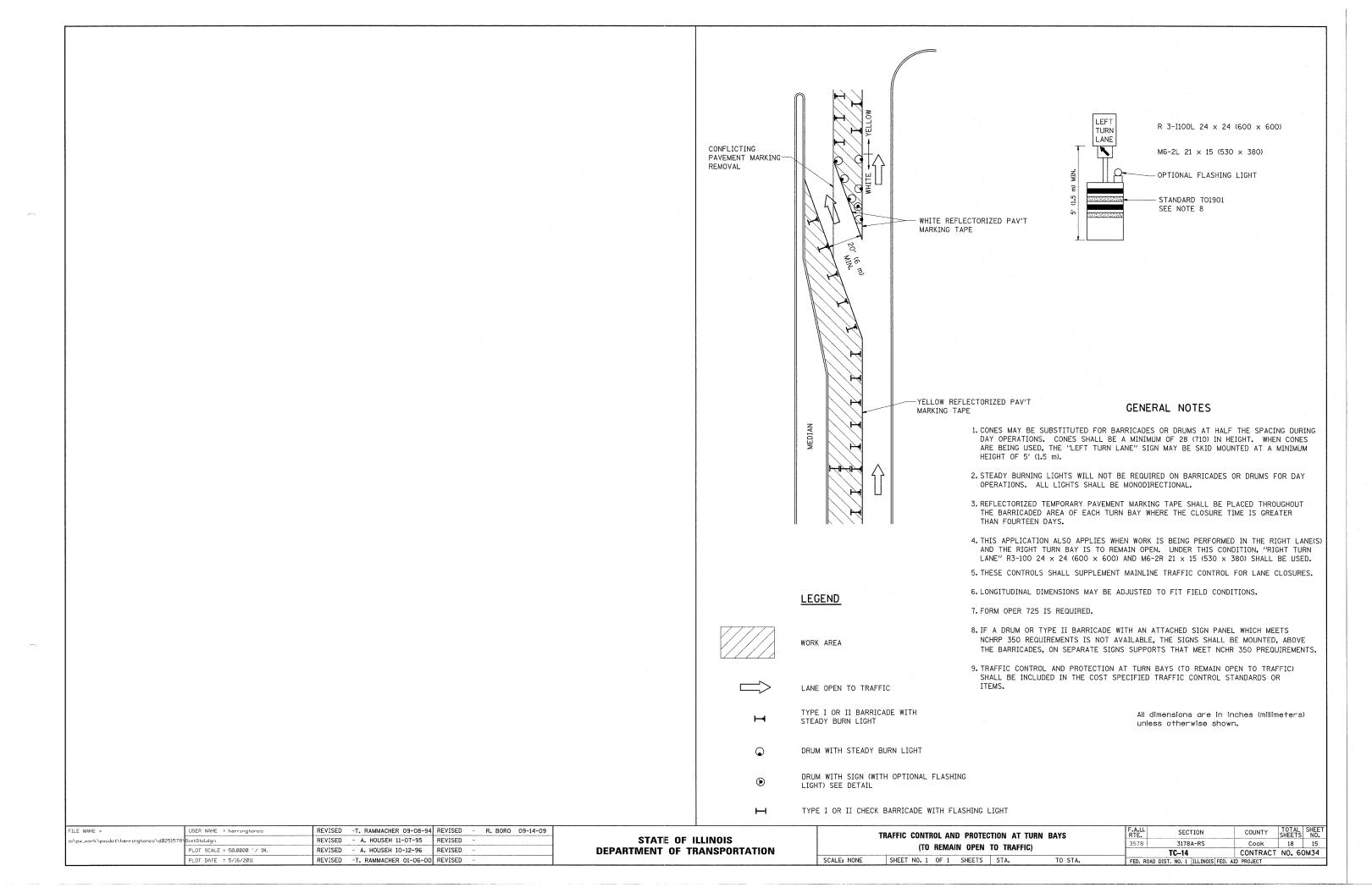
FILE NAME =	USER NAME = harringtonco	DESIGNED	-	EVERS	REVISED	-T. RAMMACHEF	10-27-9
c:\pw_work\pwidot\harringtoncc\d0251578\	DistStd.dgn	DRAWN	-		REVISED	-C. JUCIUS	09-09-0
	PLOT SCALE = 50.0000 '/ IN.	CHECKED	-		REVISED		
	PLOT DATE = 5/16/2011	DATE	-	03-19-90	REVISED	-	

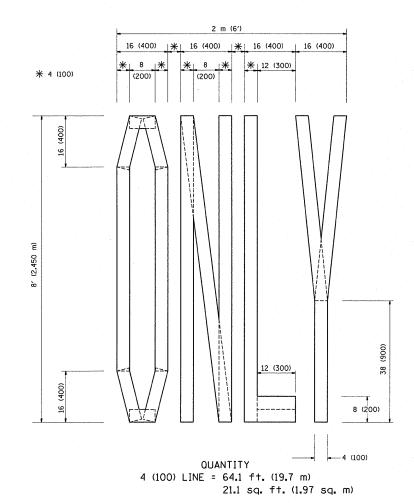
12 (300) WHITE

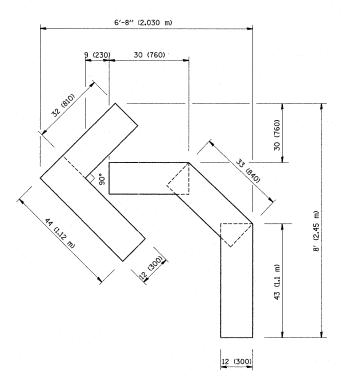
DETAIL "B"

# STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION

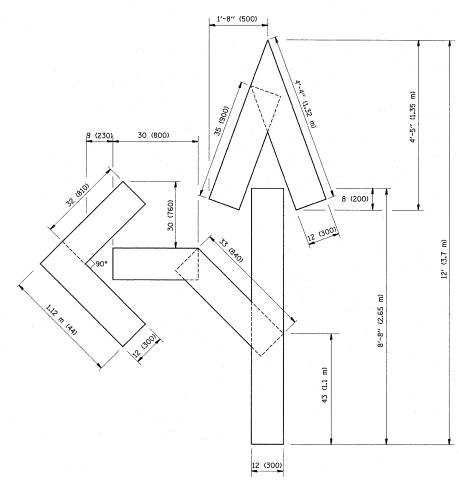
DISTRICT ONE			RTE.	SECTION	COUNTY	SHEETS	NO.	
			3578	3178A-RS	Cook	18	14	
ITFICAL PAVENIENT MARKINGS				TC-13	CONTRACT	NO. 6	0м34	
SCALE: NONE	SHEET NO. 1 OF 1 SHEETS STA.	TO STA.	FED. RO	AD DIST. NO. 1   ILLINOIS FED. AI	D PROJECT			







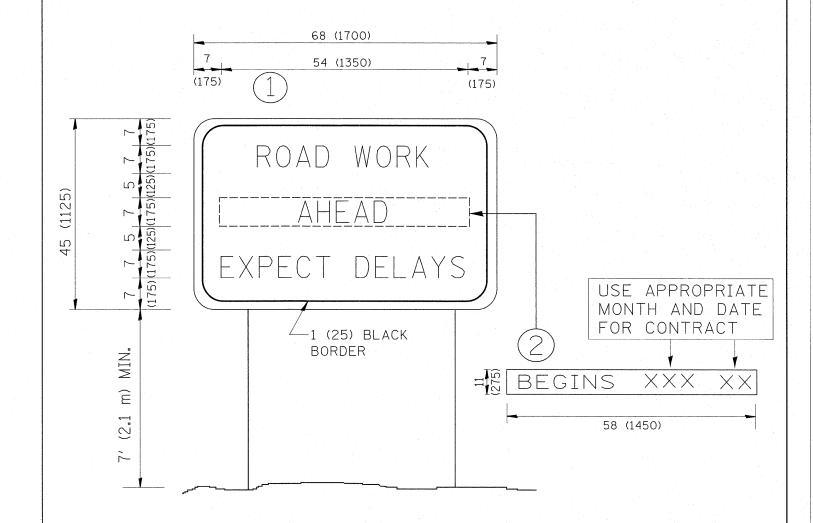
QUANTITY 4 (100) LINE = 45.5 ft. (13.9 m) 15.2 sq. ft. (1.39 sq. m)



OUANTITY 4 (100) LINE = 82.5 ft. (25.3 m) 27.5 sq. ft. (2.53 sq. m)

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

FILE NAME =	USER NAME = harringtonce	DESIGNED -	REVISED -T. RAMMACHER 06-05-96			PAVEMENT MARKING LETTERS AND SYMBOLS	F.A.U.	SECTION	COUNTY	TOTAL SH	EET
с:\pw_work\pwidot\harringtoncc\d0251578\	DistStd.dgn	DRAWN -	REVISED -T. RAMMACHER 11-04-97	STATE OF ILLINOIS			3578	3178A-RS	Cook	19	16
	PLOT SCALE = 50.0000 1/ IN.	CHECKED -	REVISED -T. RAMMACHER 03-02-98	DEPARTMENT OF TRANSPORTATION	FOR TRAFFIC STAGING			TC-16	CONTRACT	NO. 60M	<u>.</u>
	PLOT DATE = 5/16/2011	DATE - 09-18-94	REVISED -E. GOMEZ 08-28-00		SCALE: NONE	SHEET NO. 1 OF 1 SHEETS STA. TO STA.	FED. ROAD		ID PROJECT	1101 001113	



# NOTES:

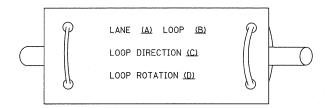
- 1. USE BLACK LETTERING ON ORANGE BACKGROUND.
- 2. ERECT SIGNS IN ADVANCE OF THE LOCATION FOR THE "ROAD CONSTRUCTION AHEAD" SIGN AT LOCATIONS AS DIRECTED BY THE ENGINEER.
- 3. ERECT SIGN (1) WITH INSTALLED PANEL (2) ONE WEEK PRIOR TO THE START OF CONSTRUCTION.
- 4. REMOVE PANEL 2 SOON AFTER THE START OF CONSTRUCTION.
- 5. SEE SPECIAL PROVISION FOR "TEMPORARY INFORMATION SIGNING" FOR ADDITIONAL INFORMATION.
- 6. ONE SIGN ASSEMBLY EQUALS 25.70 SQ. FT. (2.3 SQ. M.)
- 7. SHALL BE PAID FOR AS TEMPORARY INFORMATION SIGNING.

	PLOT SCALE = 50.0000 / IN. PLOT DATE = 5/16/2011	DATE -	REVISED - T. RAMMACHER 02-02-99 REVISED - C. JUCIUS 01-31-07	DEPARTMENT OF TRANSPORTATION	SCALE: NONE	SHEET NO. 1 OF 1 SHEETS STA.	TO STA.	FED. ROAD DIST.	NO. 1 TH INOIS FED.	CONTRACT AID PROJECT	NO.60M34
c:\pw_work\pwidot\harringtoncc\d@	1251578\DistStd.dgn	DRAWN -	REVISED - R. MIRS 12-11-97	STATE OF ILLINOIS		INFORMATION SIGN		3578	3178A-RS	Cook	18 17
FILE NAME =	USER NAME = harringtonce	DESIGNED -	REVISED - R. MIRS 09-15-97			ARTERIAL ROAD		RTE.	SECTION	COUNTY	TOTAL SHEET SHEETS NO.

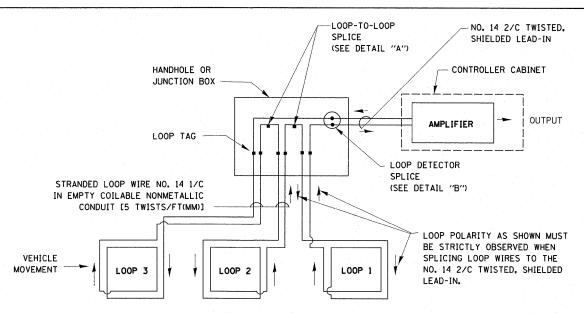
### LOOP DETECTOR NOTES

- 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

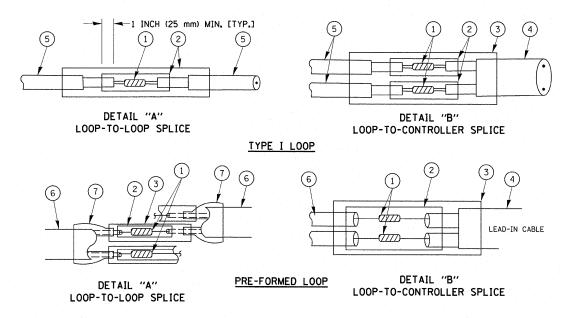


- A. LANE 1 IS THE LANE CLOSEST TO THE CENTERLINE OF THE ROADWAY
- B. LOOP \*1 IS THE LOOP IN THE LANE CLOSEST TO THE INTERSECTION.
- C. LABEL LOOP CABLE "IN" OR LOOP CABLE "OUT".
- D. LABEL LOOP CABLE CLOCKWISE OR LOOP CABLE COUNTERCLOCKWISE.



#### 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.



#### LOOP DETECTOR SPLICE

- (1) WESTERN UNION SPLICE SOLDERED WITH ROSIN CORE FLUX. ALL EXPOSED SURFACES OF THE SOLDER SHALL BE SMOOTH.
- (2) WCSMW 30/100 HEAT SHRINK TUBE, MINIMUM LENGTH 3" (75 mm), UNDERWATER GRADE.
- (3) WCS 200/750 HEAT SHRINK TUBE, MINIMUM LENGHT 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

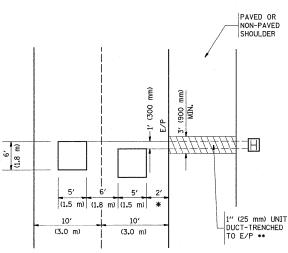
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STATE OF ILLINOIS	
STATE OF ILLINOIS	
DEPARTMENT OF TRANSPORTATION	

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	STANDARD	TRAFFI	C SIGNAL	DESIGN	DETAILS		3578	3178A-RS	Cook	18	18
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### LOOPS NEXT TO SHOULDERS

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



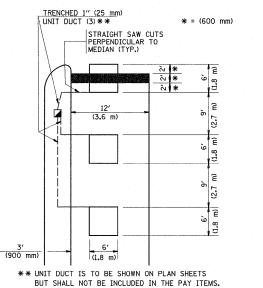
\* = (600 mm)

\* \* 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.

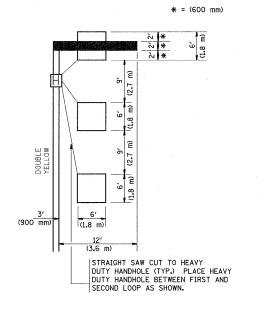


NOTE: DUAL LEFT TURNS NOT SHOWN REFER TO

PLAN SHEET FOR DETECTOR LOOP REPLACEMENT

LEFT TURN LANES WITHOUT MEDIANS
VOLUME DENSITY ("FAR OUT" DETECTION)
ON SAME APPROACH

(PROTECTED / PERMITTED LEFT TURN PHASING)

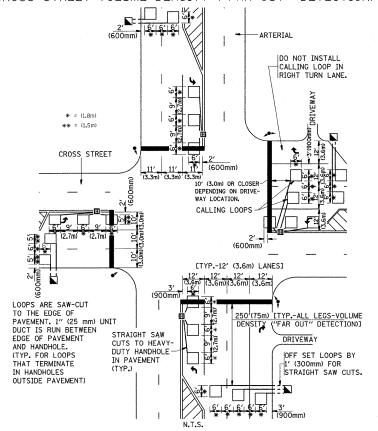


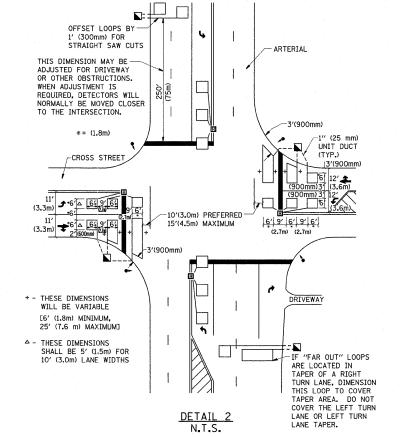
NOTE: DUAL LEFT TURNS NOT SHOWN REFER TO PLAN SHEET FOR DETECTOR LOOP REPLACEMENT

SCAL

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

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





#### 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 SEPARATLY, THIS ITEM IS INCIDENTAL TO THE PAY ITEM FOR DETECTOR LOOPS.
- \* ONE DIMENSION OF <u>ALL</u> 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 (1.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  $\underline{\mathsf{ALL}}$  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.

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DETAIL 1

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

DISTRICT 1 - DETECTOR LOOP INSTALLATION					SECTION	COUNTY	TOTAL	SHEET NO.
					3178A-RS	Cook	18	18A
DETAILS FOR ROADWAY RESURFACING					TS-07	CONTRACT	NO.60	м34
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