STATE OF ILLINOIS

**DEPARTMENT OF TRANSPORTATION** 

**DIVISION OF HIGHWAYS** 

FOR INDEX OF SHEETS, SEE SHEET NO. 2

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IMPROVEMENT IS LOCATED IN THE CITY
OF CHICAGO HEIGHTS AND THE VILLAGES OF
OLYMPIA FIELDS AND FLOSSMOOR

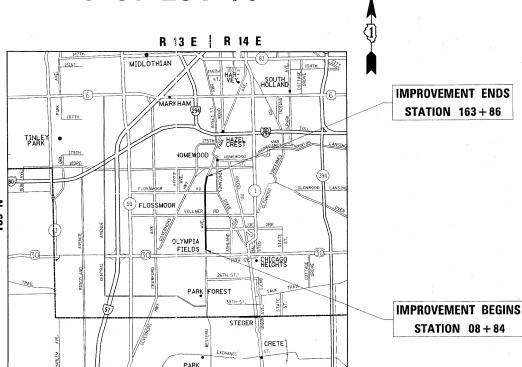
# PROPOSED HIGHWAY PLANS

FAU 2845: WESTERN AVENUE US 30 (LINCOLN HIGHWAY) TO HUTCHINSON ROAD

SECTION: (34&75) RS-4 RESURFACING (3P)

**COOK COUNTY** 

C-91-234-06



GROSS AND NET LENGTH OF PROJECT = 15, 39.00 FEET = 2.94 MILES

RICH TOWNSHIP ! BLOM TOWNSHIP

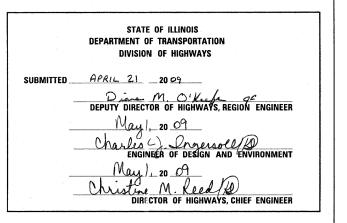
 F.A.U. RTE.
 SECTION
 COUNTY
 TOTAL SHEET NO.

 2845
 (34&75) RS-4
 COOK
 2 8
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 FED. ROAD DIST. NO. 1
 ILLINOIS
 CONTRACT
 NO. 60B05

#### D-91-234-06



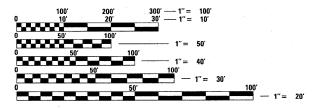


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## TRAFFIC DATA

US 30 (LINCOLN HIGHWAY) TO VOLLMER ROAD 2006 ADT = 18,400 POSTED SPEED LIM!T = 40 MPH

VOLLMER ROAD TO HUTCHINSON ROAD 2006 ADT = 6,500 POSTED SPEED LIMIT = 35 MPH



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: JENPAI P. CHANG (847) 705 – 4432 PROJECT MANAGER: KEN ENG

CONTRACT NO. 60B05

#### INDEX OF SHEETS

DECODIDATION

SHEET NO.	<u>DESCRIPTIO</u> N
1.	TITLE SHEET
2	INDEX OF SHEETS, STATE STANDARDS & GENERAL NOTES.
3	SUMMARY OF QUANTITIES
4-7	EXISTING AND PROPOSED TYPICAL SECTIONS
8-13	ROADWAY AND PAVEMENT MARKING PLANS
14-16	DETECTOR LOOP REPLACEMENT PLANS
17	DETAILS FOR FRAMES AND LIDS ADJUSTMENT WITH MILLING
18	PAVEMENT PATCHING FOR HMA SURFACED PAVEMENT
19	CURB OR CURB AND GUTTER REMOVAL AND REPLACEMENT
20	BUTT JOINT AND HMA TAPER DETAILS
21	TRAFFIC CONTROL AND PROTECTION FOR SIDE ROADS, INTERSECTIONS AND DRIVEWAYS
22	TYPICAL APPLICATIONS: RAISED REFLECTIVE PAVEMENT MARKERS (SNOW-PLOW RESISTANT)
23	DISTRICT ONE TYPICAL PAVEMENT MARKINGS
24	TRAFFIC CONTROL AND PROTECTION OF TURN BAYS (TO REMAIN OPEN TO TRAFFIC)
25	PAVEMENT MARKING LETTERS AND SYMBOLS FOR TRAFFIC STAGING
26 .	TEMPORARY INFORMATION SIGNING
27	DISTRICT ONE STANDARD TRAFFIC SIGNAL DESIGN
28	DISTRICT 1 DETECTOR LOOP INSTALLATION DETAILS FOR ROADWAY RESURFACING

#### GENERAL NOTES

BEFORE STARTING ANY EXCAVATION, THE CONTRACTOR SHALL CALL "JULIE" AT (800) 892-0123 FOR FIELD LOCATIONS OF BURIED ELECTRIC, TELEPHONE, AND GAS FACILITIES. (48 HOUR NOTIFICATION REQUIRED)

THE CONTRACTOR SHALL COORDINATE CONSTRUCTION ACTIVITIES WITH UTILITY COMPANIES AND THE CITY OF CHICAGO HEIGHTS AND VILLAGES OF FLOSSMOOR AND OLYMPIA FIELDS.

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

BUTT JOINTS WILL BE INSTALLED AT THE ENDS OF RESURFACING (WHERE RESURFACING MEETS EXISTING PAVEMENT) IN ACCORDANCE WITH THE "BUTT JOINT AND HMA TAPER DETAILS" SHEET INCLUDED IN THE PLANS UNLESS OTHERWISE SPECIFIED.

THE RESIDENT ENGINEER SHALL CONTACT MS. PATRICE HARRIS, AREA TRAFFIC FIELD ENGINEER, AT (708) 597-9800 A MINIMUM OF 72 HOURS PRIOR TO PLACEMENT OF FINAL PAVEMENT MARKINGS.

3 METERS (10 FEET) TRANSITION SHALL BE USED TO MATCH PROPOSED CURB AND GUTTER TO EXISTING CURB AND GUTTERS IN THE FIELD, UNLESS OTHERWISE SHOWN. THE TRANSITION SHALL BE PAID FOR AT THE CONTRACT UNIT PRICE FOR THE PROPOSED ITEMS OF WORK SPECIFIED.

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

#### STATE STANDARDS

STANDARD NO.

<u>DESCRIPTION</u>

000001-05 TYPICAL SYMBOLS, ABBREVIATIONS AND PATTERNS

442201-03 CLASS C AND D PATCHES

482001-02 FRAME AND GRATE, TYPE 23

604086-02 BITUMINOUS SHOULDER ADJACENT TO FLEXIBLE PAVEMENT

606001-04CONCRETE CURB AND COMBINATION CONCRETE CURB AND GUTTER

701301-03 LANE CLOSURE, 2L, 2W, SHORT TIME OPERATIONS

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

701501-05 URBAN LANE CLOSURE, 2L, 2W, UNDIVIDED

701606-06URBAN LANE CLOSURE, MULTILANE 2W WITH MOUNTABLE MEDIAN

701701-06 URBAN LANE CLOSURE, MULTILANE INTERSECTION

701801-04 LANE CLOSURE, MULTILANE 1W OR 2W CROSSWALK OR SIDEWALK CLOSURE

701901-01 TRAFFIC CONTROL DEVICES

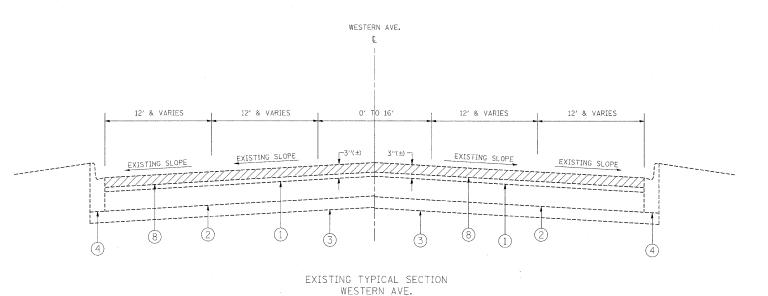
886001-01 DETECTOR LOOP INSTALLATION

886006-01 TYPICAL LAYOUT FOR DETECTION LOOPS

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·	PLOT DATE = 4/23/2009	DATE -	REVISED -		SCALE:	SHEET NO.	OF	SHEE	TS STA.	TO STA.		***************************************	ILLINOIS FED. A	ID PROJECT	71 1101 00003

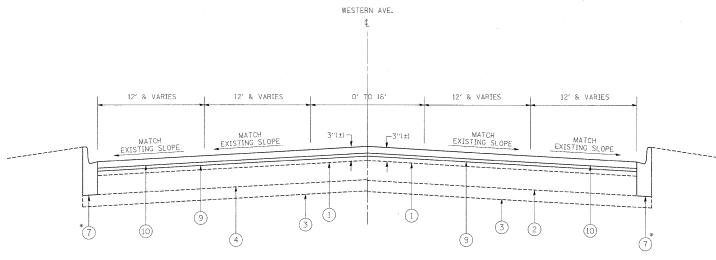
PLOT DATE = 4/23/2009

REVISED



STA. 08+36 TO STA. 13+34

STA. 53+48 TO STA. 59+75 STA. 135+00 TO STA. 140+74



PROPOSED TYPICAL SECTION WESTERN AVE.

STA. 08+36 TO STA. 13+34 STA. 53+48 TO STA. 59+75 STA. 135+00 TO STA. 140+74

#### LEGEND

- 1) EXISTING HMA SURFACE COURSE, 3"(±)
- 2 EXISTING PCC BASE COURSE, 10"(±)
- 3) EXISTING SUB-BASE GRANULAR MATERIAL, TYPE B, 4"

EXISTING COMBINATION CONC. CURB & GUTTER
TYPE B-6.24 EXISTS FROM STA. 8+36 TO STA. 13+34
TYPE B-6.12 EXISTS FROM STA.53+48 TO STA.59+75
AND STA.135+00 TO STA.140+74

- (5) EXISTING HMA SHOULDER
- 6 EXISTING AGGREGATE SHOULDER
- (7) PROPOSED COMB. CONC. C&G REMOVAL AND REPLACEMENT
- (8) PROPOSED HMA SURFACE REMOVAL, 2 1/4"
- 9) PROPOSED POLYMERIZED LEVELING BINDER (MM), IL-4.75, N50, 3/4 "
- (10) PROPOSED HMA SURFACE COURSE, MIX "D", N70, 1 1/2 "
- (11) PROPOSED AGGREGATE WEDGE SHOULDER, TYPE B
- (12) PROPOSED GRADING AND SHAPING OF SHOULDERS
- \* LOCATIONS TO BE DETERMINED IN THE FIELD BY THE ENGINEER
- " THE CONTRACTOR SHALL PATCH FIRST BEFORE MILLING".

## HOT-MIX ASPHALT MIXTURE REQUIREMENTS THE FOLLOWING MIXTURE REQUIREMENTS ARE APPLICABLE FOR THIS PROJECT

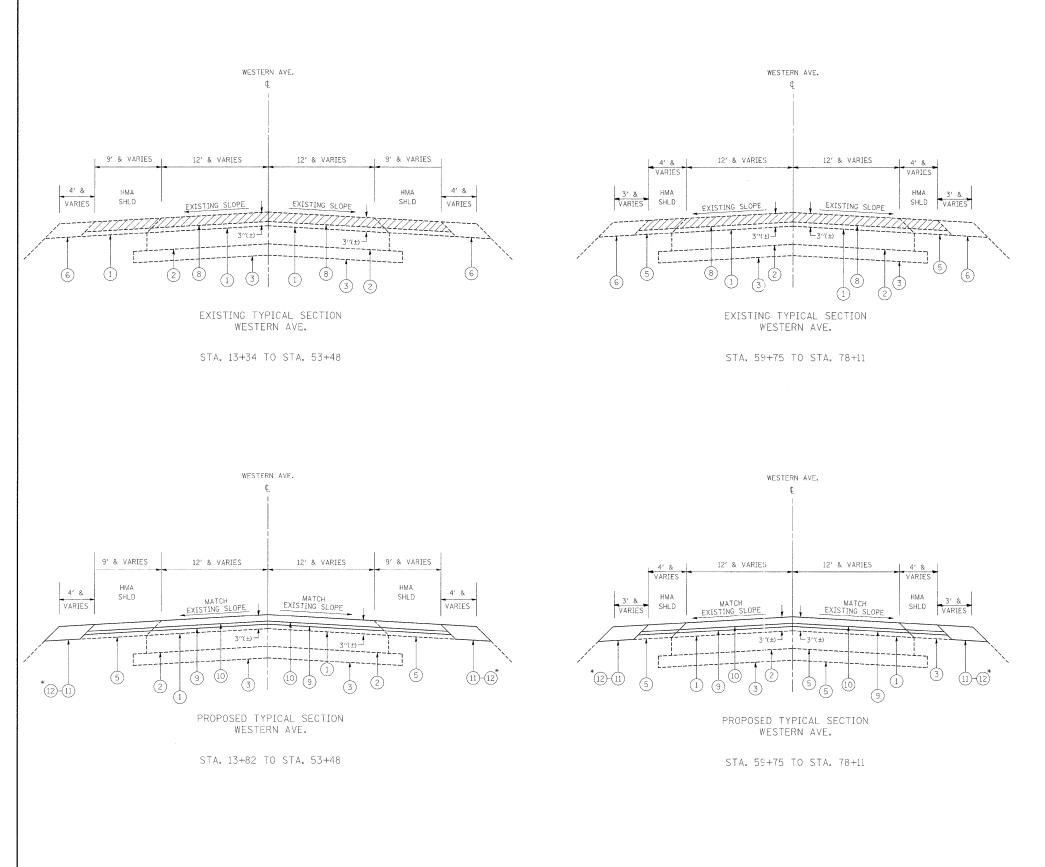
MIXTURE USE	AC/PG	AIR VOIDS (%)				
MAINLINE RESURFACING						
HMA SURFACE COURSE MIX "D", N7O (IL 9,5 mm)	PG 64-22	4% @ 70 Gyr.				
POLY. LEVELING BINDER (MM) IL-4.75, N50	SBS/SBR PG 76-28/-22	4% @ 50 Gyr.				
PATCHING						
CLASS D PATCH (HMA BINDER IL-19 mm)	PG 64-22 / 58-22*	4% <b>©</b> 70 Gyr.				
SHOULDER RESURFACING						
HMA SURFACE COURSE MIX "D", N70 (IL 9.5 mm)	PG 64-22	4% @ 70 Gyr.				
POLY. LEVELING BINDER (MM) IL-4.75, N50	SBS/SBR PG 76-28/-22	4% @ 50 Gyr.				

NOTE:

THE UNIT WEIGHT USED TO CALCULATE ALL HMA SURFACE MIXTURE QUANTITIES IS 112 POUNDS PER SQUARE YARD

\* WHEN RAP EXCEEDS 20% THE NEW ASPHALT BINDER IN THE MIX SHALL BE PG 58-22

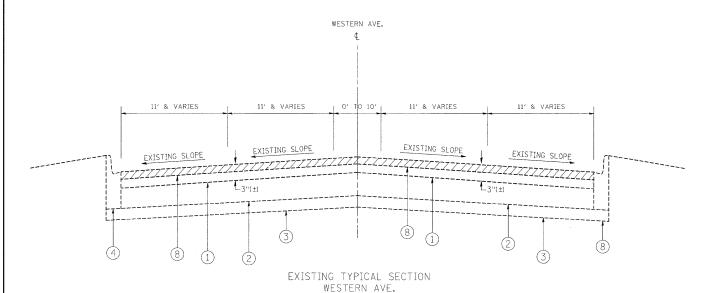
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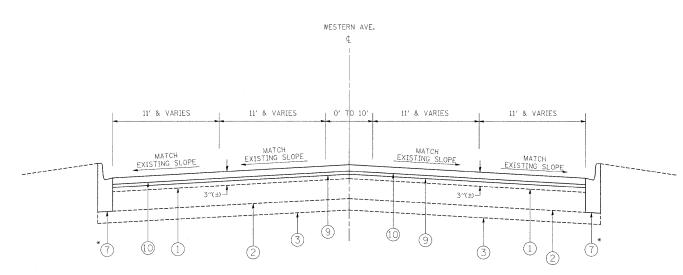
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FILE NAME = DESIGNED USER NAME = galbannb REVISED SECTION **FAU 2845: WESTERN AVENUE** STATE OF ILLINOIS DRAWN REVISED 2845 (34&75) RS-4 COOK 28 5 **EXISTING AND PROPOSED TYPICAL SECTION** PLOT SCALE = 50:0.0000 ':' / IN. CHECKED REVISED **DEPARTMENT OF TRANSPORTATION** CONTRACT NO. 60B05 SCALE: SHEET NO. OF SHEETS STA. PLOT DATE = 4/23/2009 DATE REVISED



STA. 53+48 TO STA. 59+75 STA. 78+11 TO STA. 88+06



PROPOSED TYPICAL SECTION WESTERN AVE.

STA. 53+48 TO STA. 59+75 STA. 78+11 TO STA. 88+06

#### LEGEND

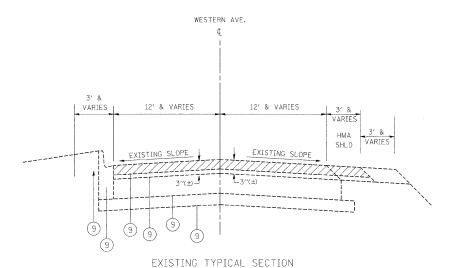
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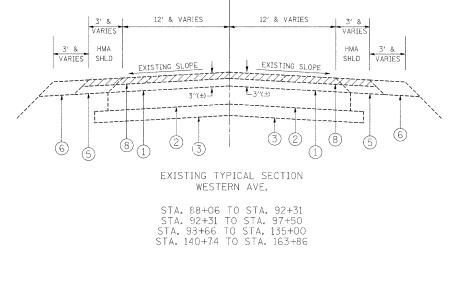
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CONTRACT NO. 60B05

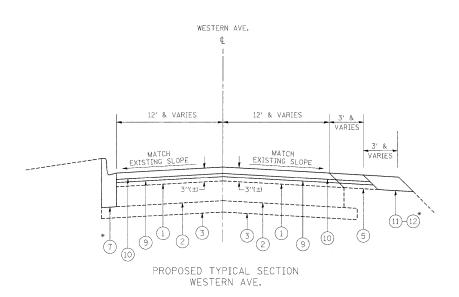


STA. 112+17 TO STA 134+85

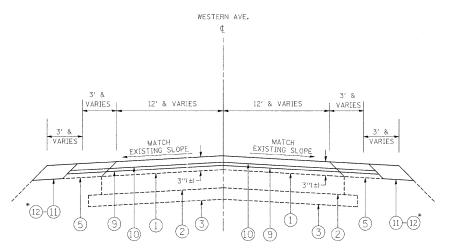
WESTERN AVE.



WESTERN AVE.



STA. 112+17 TO STA 134+85



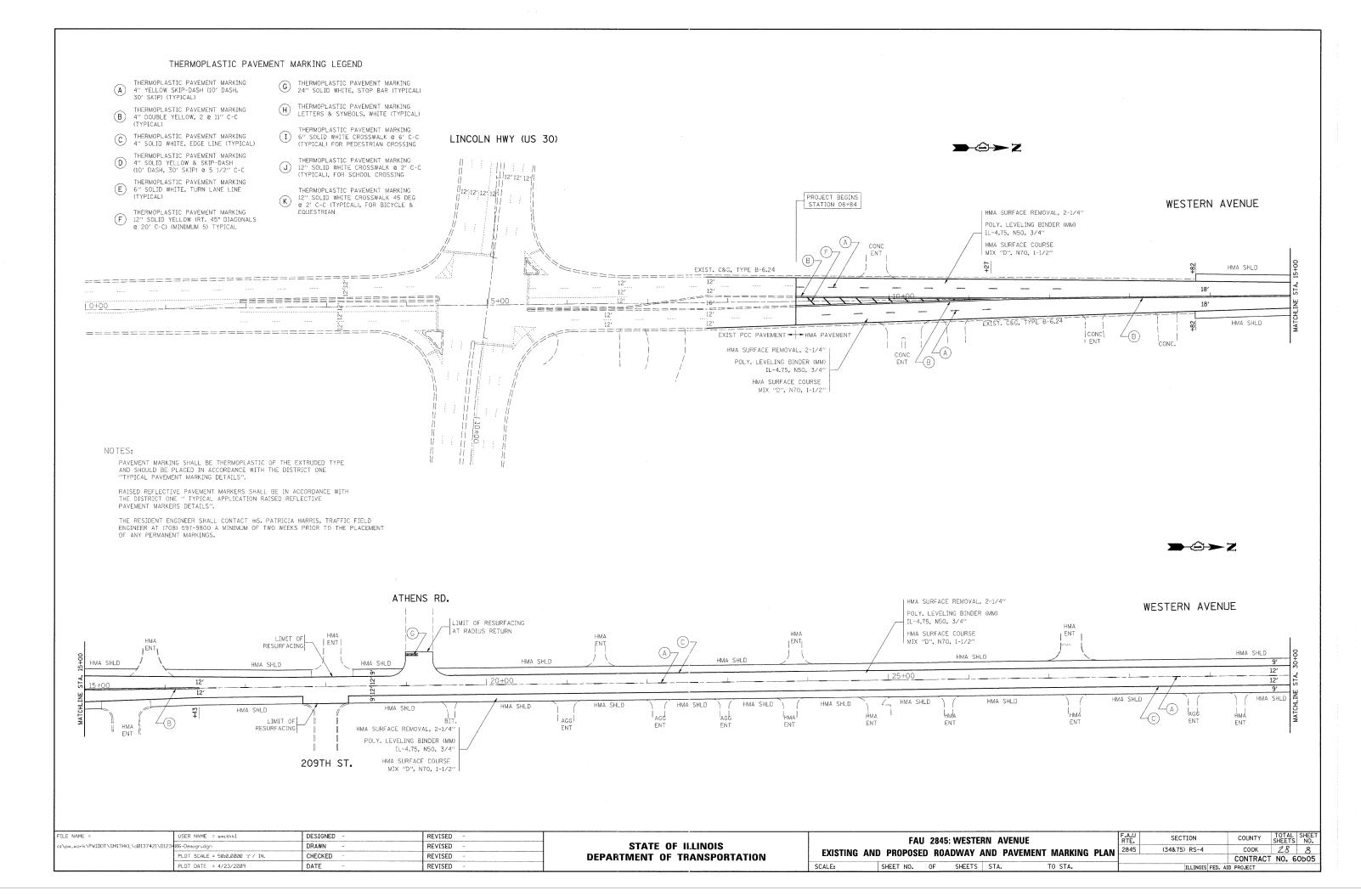
PROPOSED TYPICAL SECTION WESTERN AVE.

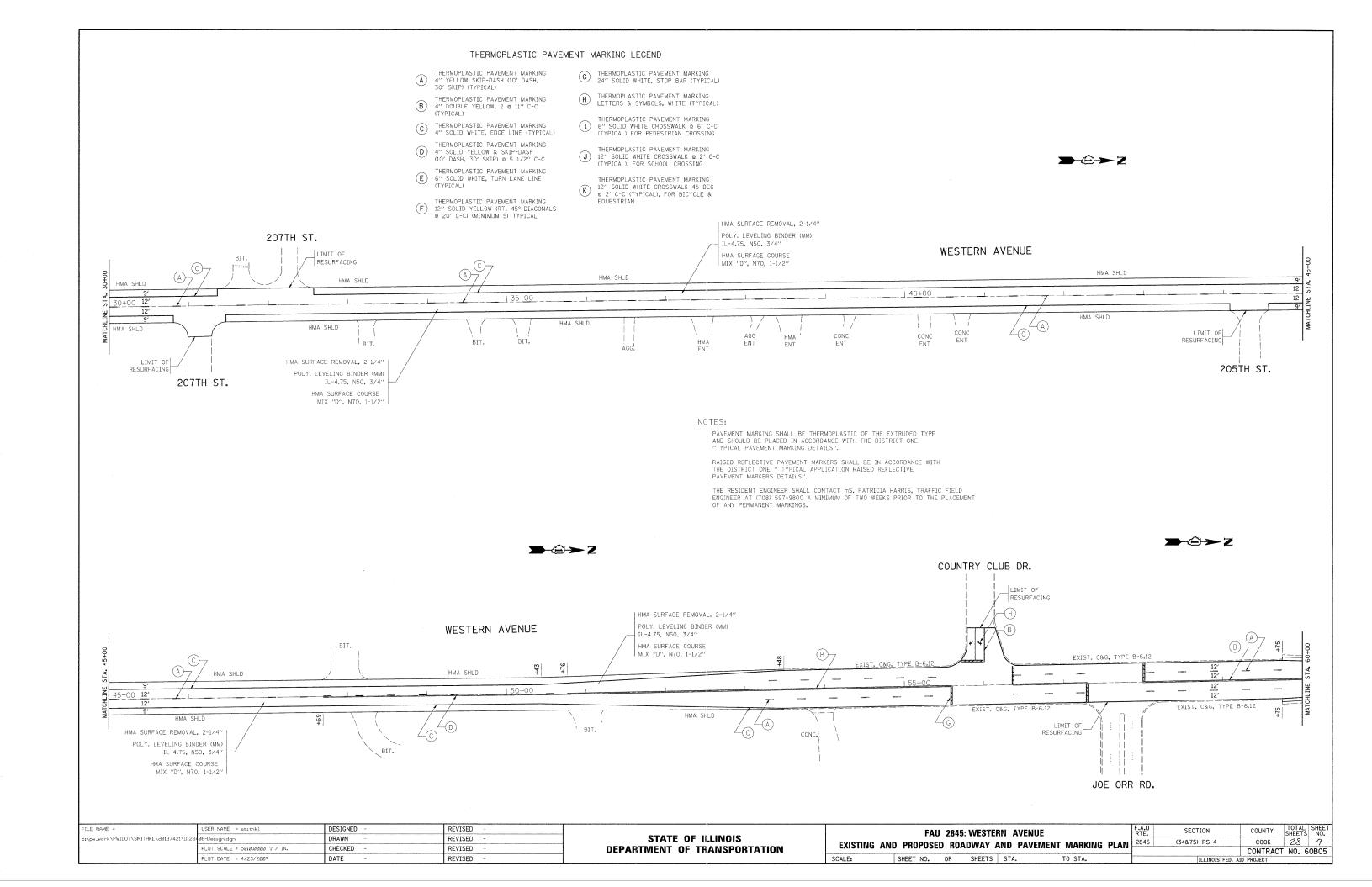
STA. 88+06 TO STA. 92+31 STA. 92+31 TO STA. 97+50 STA. 93+66 TO STA. 135+00 STA. 140+74 TO STA. 163+86

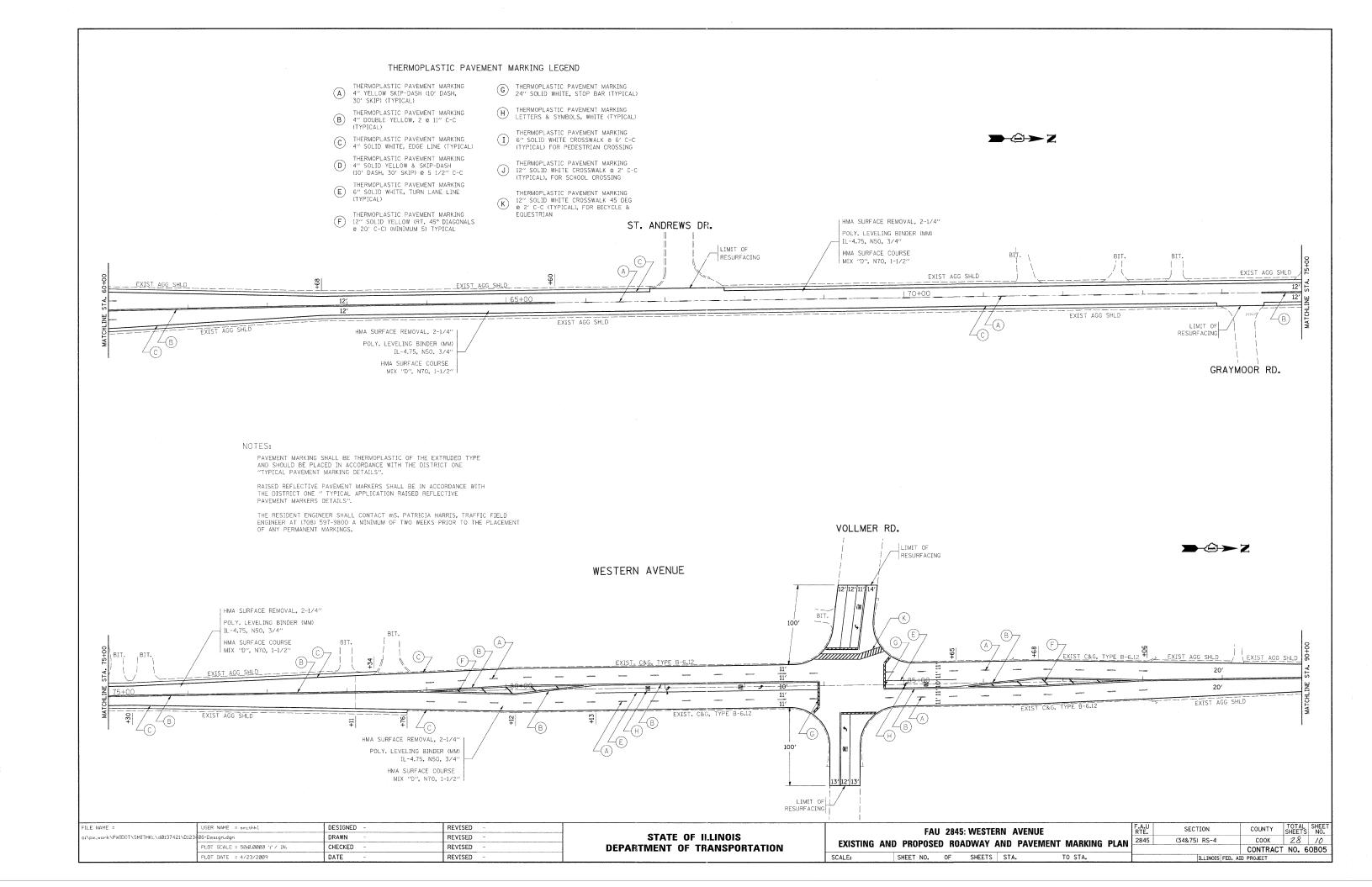
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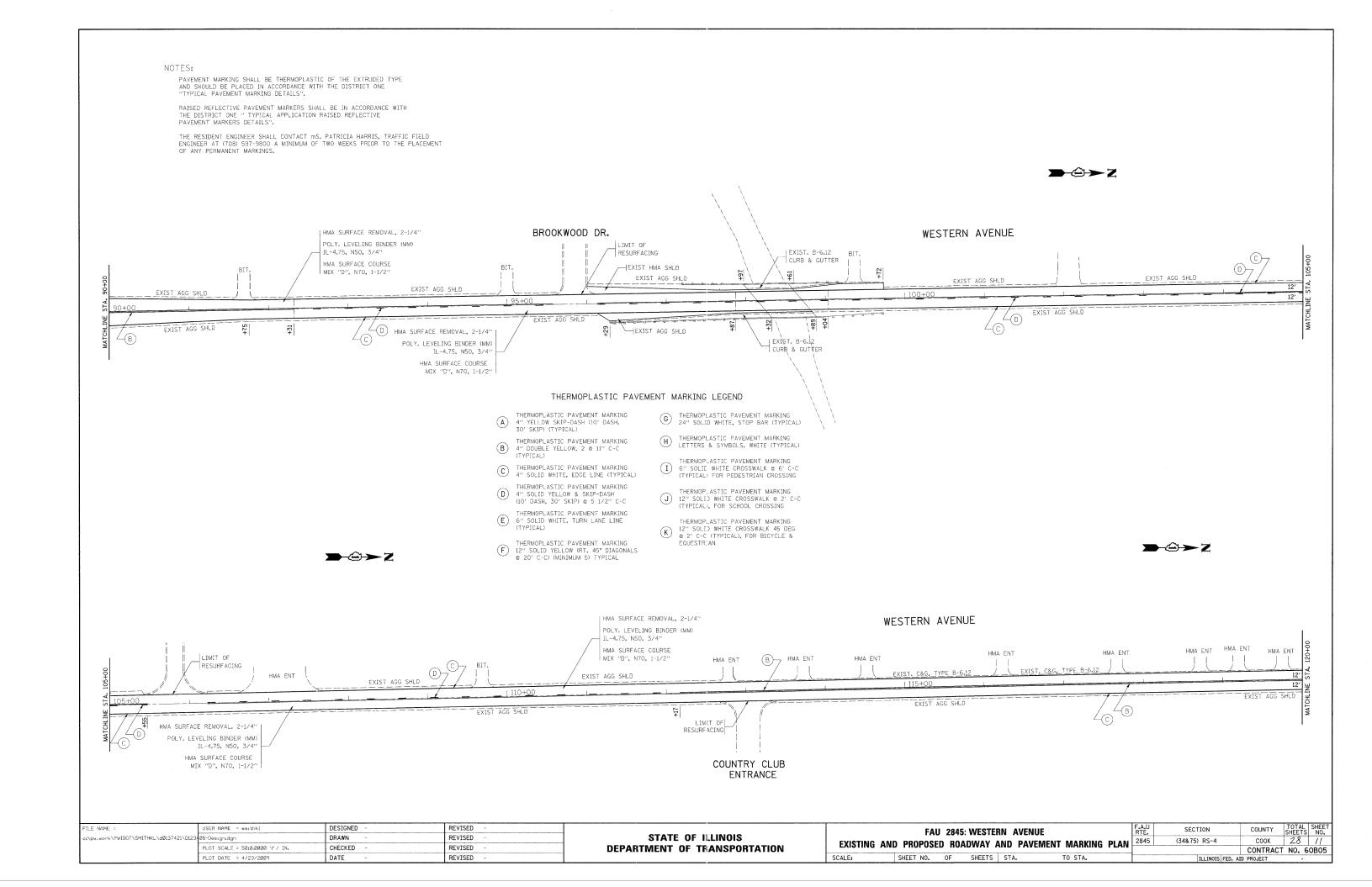
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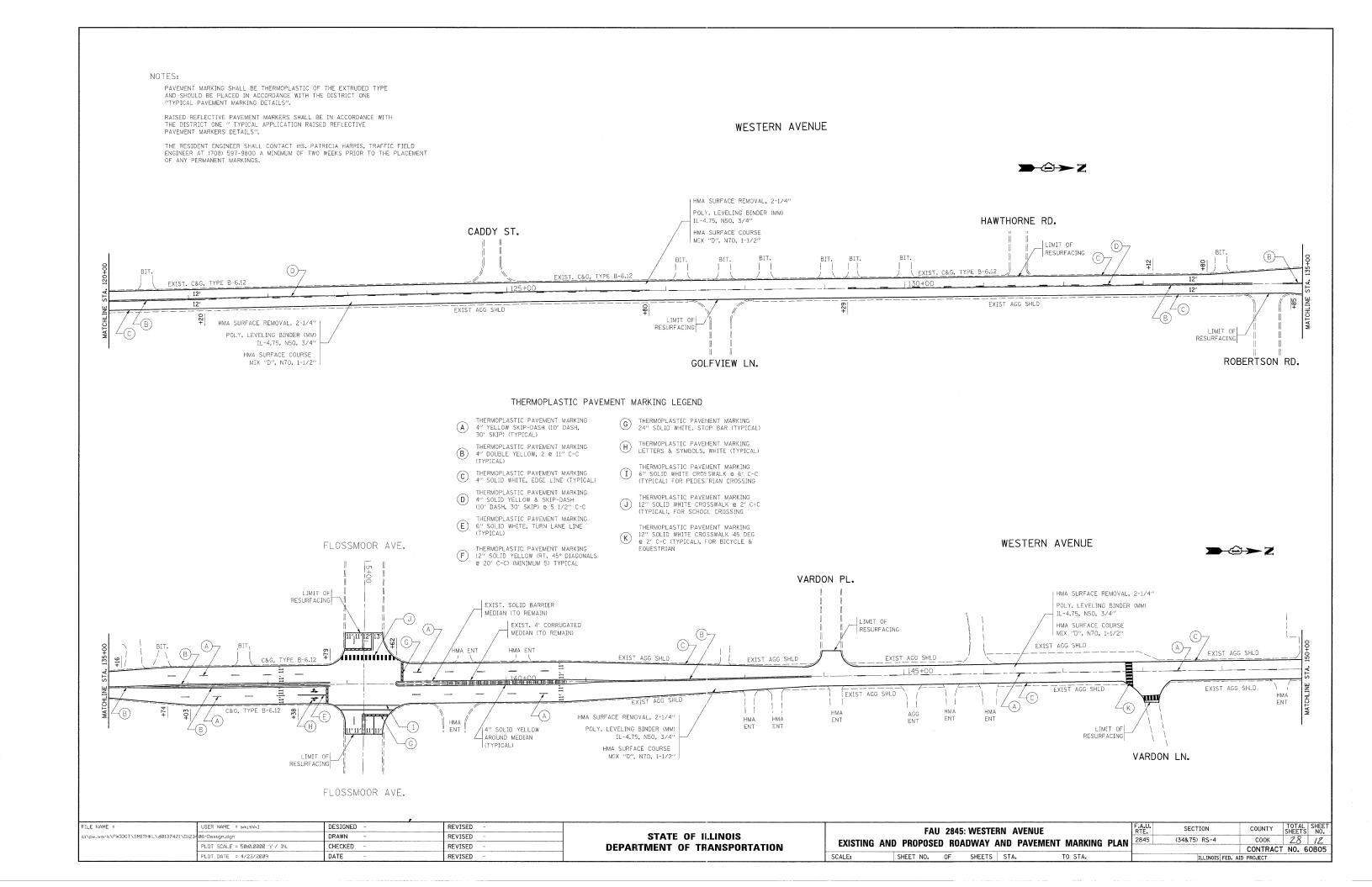
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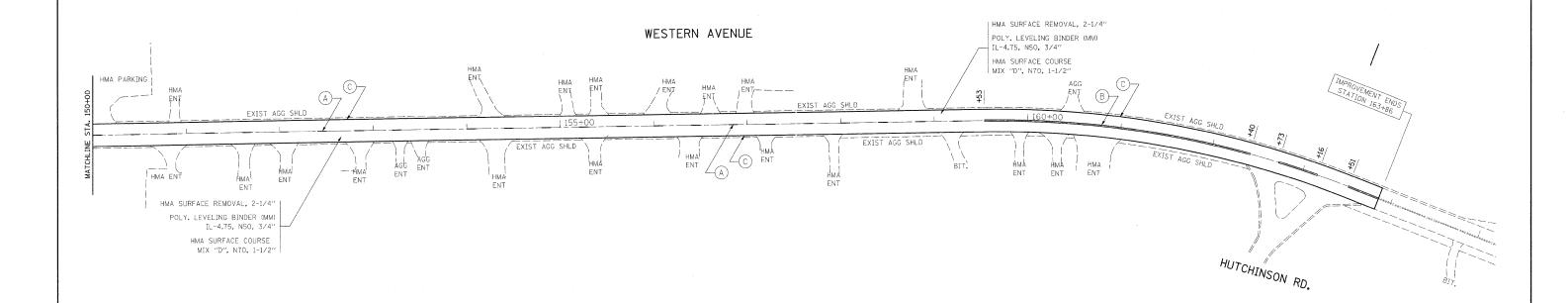












#### THERMOPLASTIC PAVEMENT MARKING LEGEND

- (A) THERMOPLASTIC PAVEMENT MARKING 4" YELLOW SKIP-DASH (10' DASH, 30' SKIP) (TYPICAL)
- (B) THERMOPLASTIC PAVEMENT MARKING 4" DOUBLE YELLOW, 2 @ 11" C-C (TYPICAL)
- C THERMOPLASTIC PAVEMENT MARKING
  4" SOLID WHITE, EDGE LINE (TYPICAL)
- (D) THERMOPLASTIC PAVEMENT MARKING 4" SOLID YELLOW & SKIP-DASH (10' DASH, 30' SKIP) @ 5 1/2" C-C
- THERMOPLASTIC PAVEMENT MARKING 6" SOLID WHITE, TURN LANE LINE (TYPICAL)
- (F) THERMOPLASTIC PAVEMENT MARKING 12" SOLID YELLOW (RT. 45° DIAGONALS & 20' C-C) (MINIMUM 5) TYPICAL

- G THERMOPLASTIC PAVEMENT MARKING 24" SOLID WHITE, STOP BAR (TYPICAL)
- H THERMOPLASTIC PAVEMENT MARKING LETTERS & SYMBOLS, WHITE (TYPICAL)
- THERMOPLASTIC PAVEMENT MARKING 6" SOLID WHITE CROSSWALK @ 6" C-C (TYPICAL) FOR PEDESTRIAN CROSSING
- THERMOPLASTIC PAVEMENT MARKING
  12" SOLID WHITE CROSSWALK @ 2' C-C
  (TYPICAL), FOR SCHOOL CROSSING
- THERMOPLASTIC PAVEMENT MARKING
  12" SOLID WHITE CROSSWALK 45 DEG
  2" C-C (TYPICAL), FOR BICYCLE &
  EQUESTRIAN

#### NOTES:

PAVEMENT MARKING SHALL BE THERMOPLASTIC OF THE EXTRUDED TYPE AND SHOULD BE PLACED IN ACCORDANCE WITH THE DISTRICT ONE "TYPICAL PAVEMENT MARKING DETAILS".

RAISED REFLECTIVE PAVEMENT MARKERS SHALL BE IN ACCORDANCE WITH THE DISTRICT ONE " TYPICAL APPLICATION RAISED REFLECTIVE PAVEMENT MARKERS DETAILS".

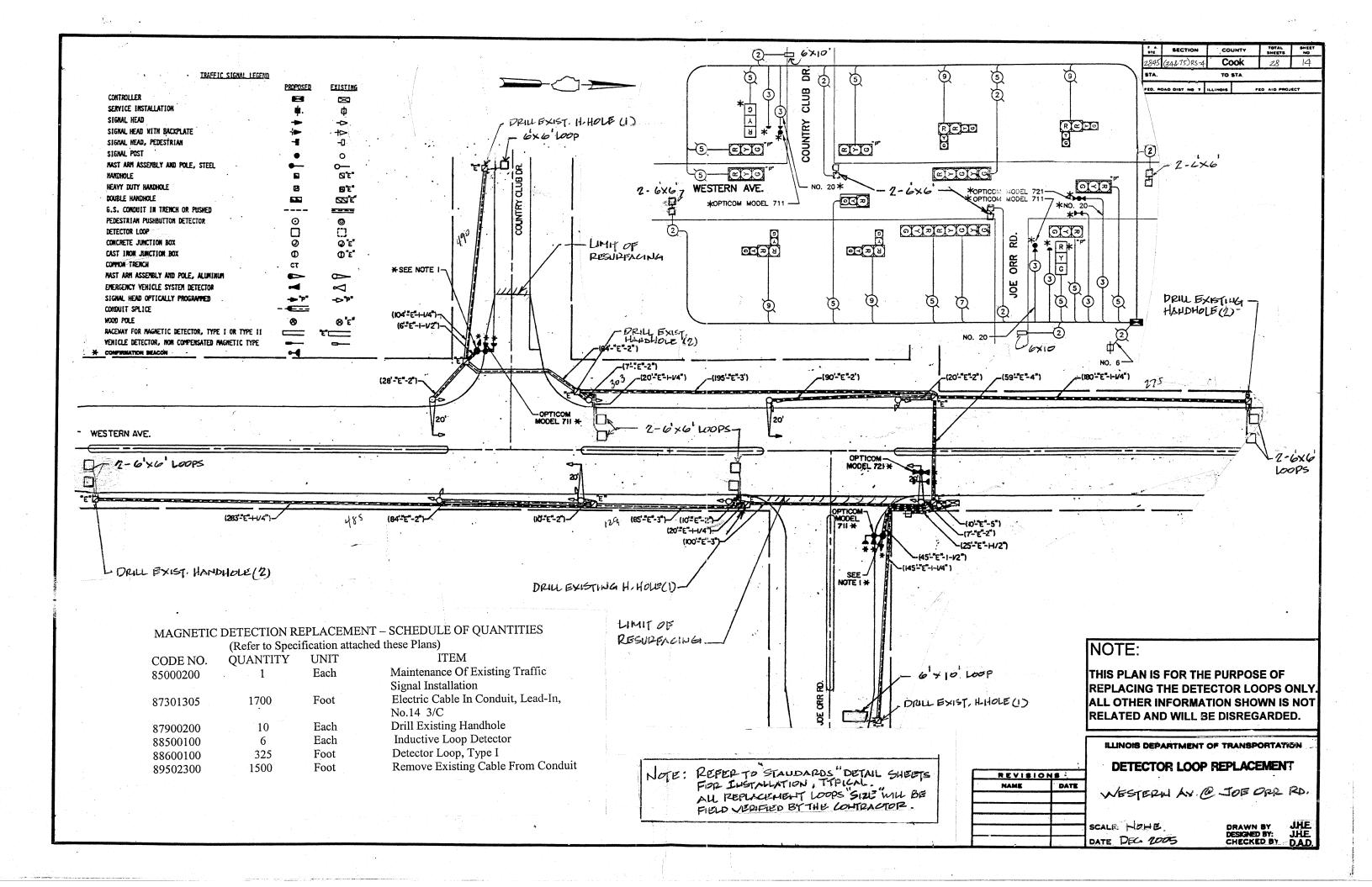
THE RESIDENT ENGINEER SHALL CONTACT MS. PATRICIA HARRIS, TRAFFIC FIELD ENGINEER AT (708) 597-9800 A MINIMUM OF TWO WEEKS PRIOR TO THE PLACEMENT OF ANY PERMANENT MARKINGS.

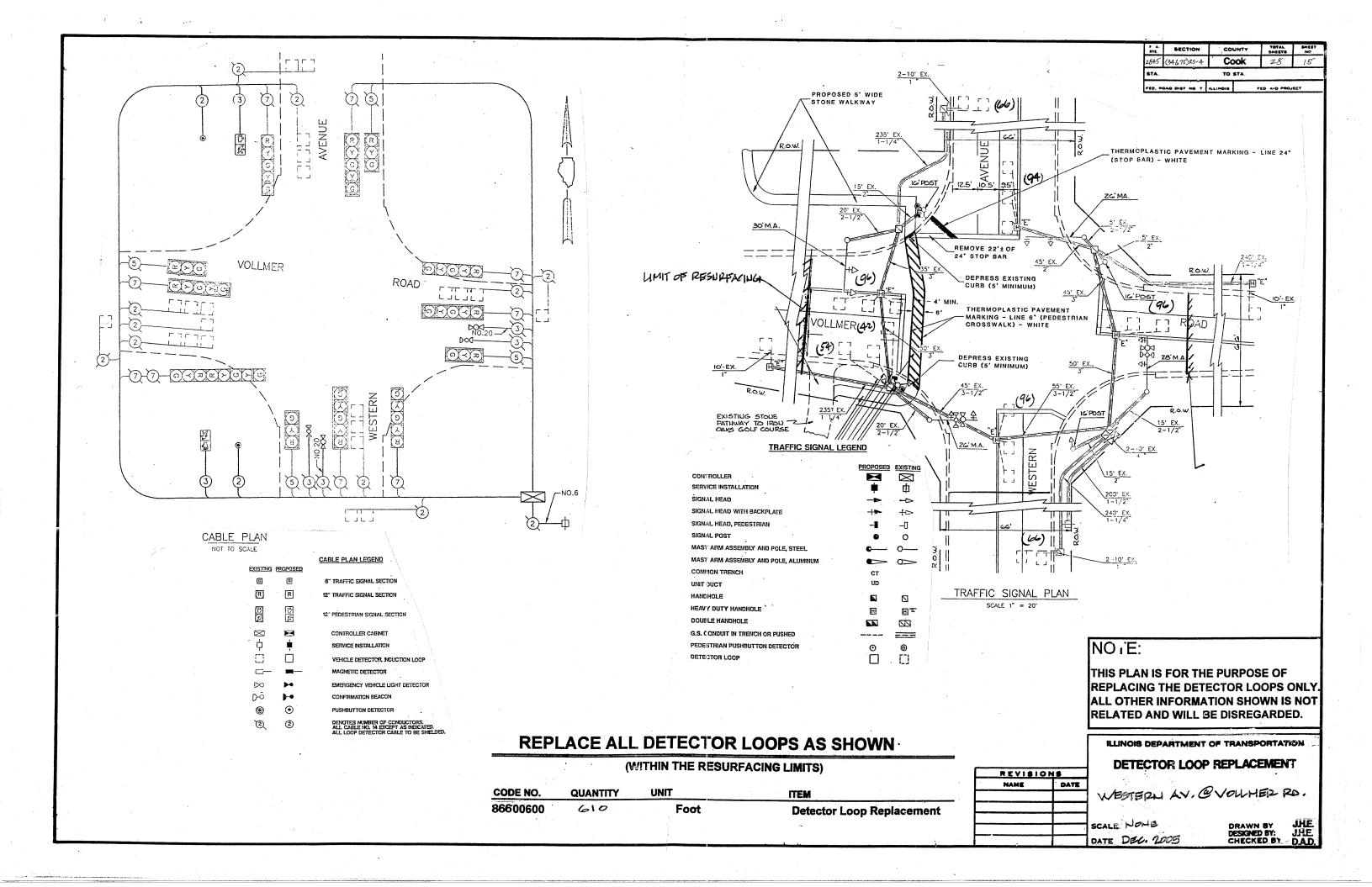
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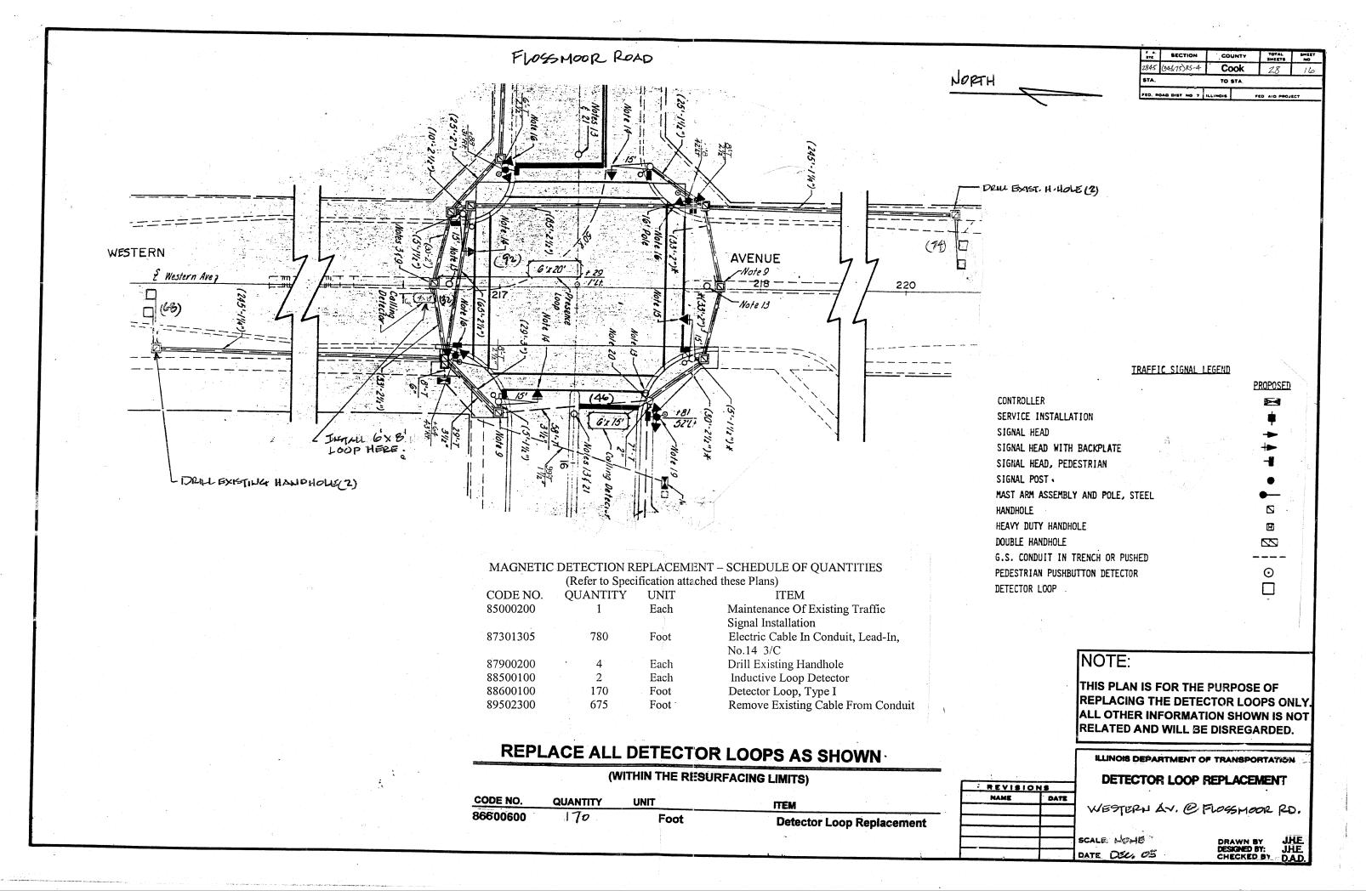
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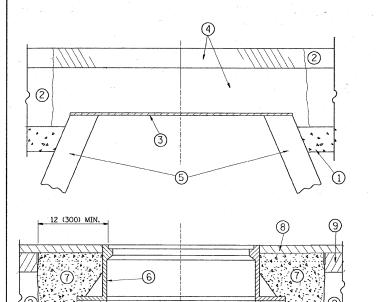
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EXISTING AND	PROPOSED	ROADWAY	AND PAVEMENT	MARKING PLAN	28
SCALE:	SHEET NO.	OF SHEETS	STA.	TO STA.	

A.U.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.					
845	(34&75) RS-4	COOK	28	13					
CONTRACT NO. 60B05									
ILLINOIS FED. AID PROJECT									









PROPOSED

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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 PAYEMENT 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.

BRICK, MORTAR, OR CONC. ADJUSTING RINGS

#### 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 SI CONCRETE, OR HMA SURFACE COURSE OR HMA BINDER COURSE TO THE ELEVATION OF THE SURFACE OF THE EXISTING BASE COURSE OR THE BINDER COURSE.

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

PROPOSED SAND FILL

- 6 FRAME AND LID (SEE NOTES)
- 2 EXISTING PAVEMENT
- CLASS SI CONCRETE, HMA SURFACE COURSE OR HMA BINDER COURSE
- 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

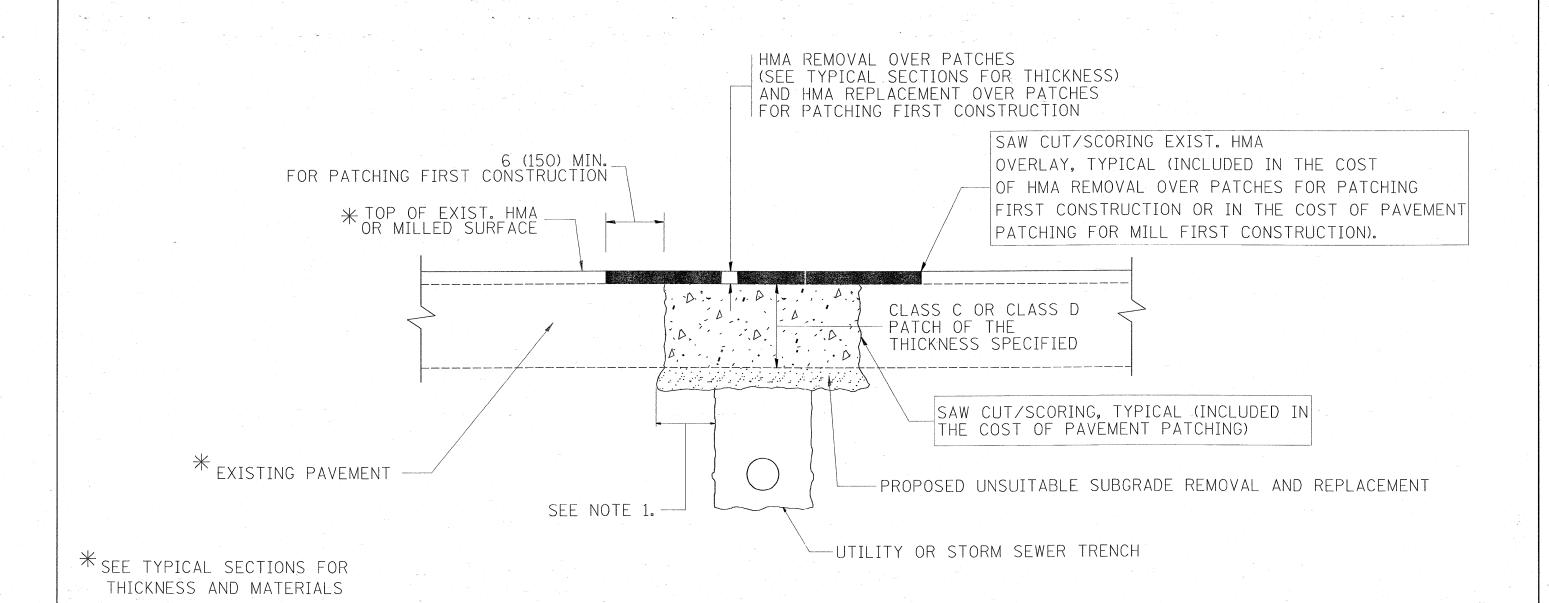
ALL DIMENSIONS ARE IN INCHES (MILLIMETERS) UNLESS OTHERWISE SHOWN

FILE NAME =	USER NAME = smithkl	DESIGNED - R. SHAH	REVISED	- R. SHAH 03-10-95
c:\pw_work\PWIDOT\SMITHKL\dØ137421\DistS	td.dgn	DRAWN -	REVISED	- A. ABBAS 03-21-97
	PLOT SCALE = 50.0000 '/ IN.	CHECKED -	REVISED	- R. WIEDEMAN 05-14-04
	PLOT DATE = 4/23/2009	DATE - 10-25-94	REVISED	- R. BORO 01-01-07

STATE OF ILLINOIS **DEPARTMENT OF TRANSPORTATION** 

**DETAILS FOR** FRAMES AND LIDS ADJUSTMENT WITH MILLING SCALE: NONE SHEET NO. 1 OF 1 SHEETS STA.

TOTAL SHEET NO. SECTION COUNTY (34&75) RS-4 COOK 2845 BD600-03 (BD-8) CONTRACT NO. 60B05 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)

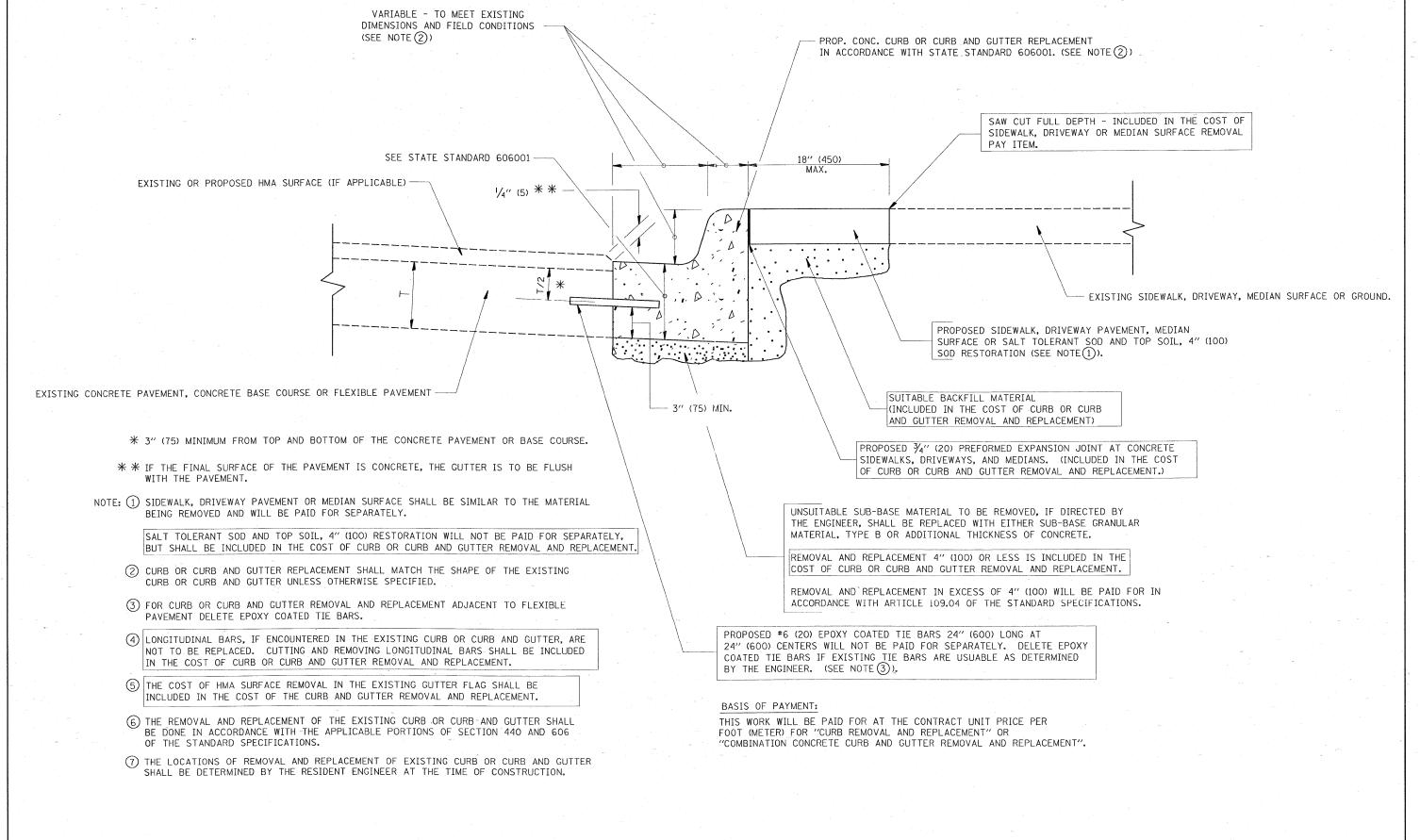
- 1. REMOVE THE EXISTING HMA MATERIAL OVER THE AREA TO BE PATCHED.
- 2. REMOVE AND REPLACE WITH CLASS C OR D PATCH.
- 3. REPLACE HMA MATERIAL OVER THE AREA TO BE PATCHED.

### SEQUENCE OF CONSTRUCTION (MILLING FIRST)

- 1. MILL HMA FIRST IF THERE IS AT LEAST  $4\frac{1}{2}$  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.

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

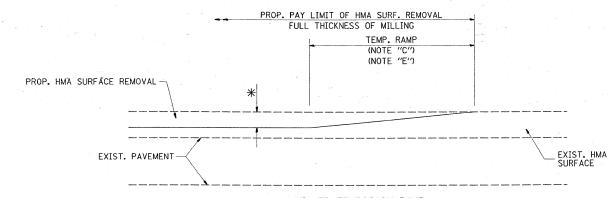
FILE NAME =	USER NAME = smithkl	DESIGNED - R. SHAH	REVISED - A. ABBAS 04-27-98		PAVEMENT PATCHING FOR	F.A.U. SECTION COUNTY TOTAL SHEET NO.
c:\pw_work\PWIDOT\SMITHKL\c	dØ137421\DistStd.dgn	DRAWN -	REVISED - R. BORO 01-01-07	STATE OF ILLINOIS	HMA SURFACED PAVEMENT	2845 (34&75) RS-4 COOK 28 /8
·	PLOT SCALE = 50.0000 '/ IN.	CHECKED -	REVISED - R. BORO 09-04-07	DEPARTMENT OF TRANSPORTATION		BD400-04 (BD-22) CONTRACT NO. 60B05
	PLOT DATE = 4/23/2009	DATE - 10-25-94	REVISED - K. ENG 10-27-08		SCALE; NONE SHEET NO. 1 OF 1 SHEETS STA. TO STA.	FED. ROAD DIST. NO. 1 ILLINOIS FED. AID PROJECT



# CURB OR CURB AND GUTTER REMOVAL AND REPLACEMENT

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

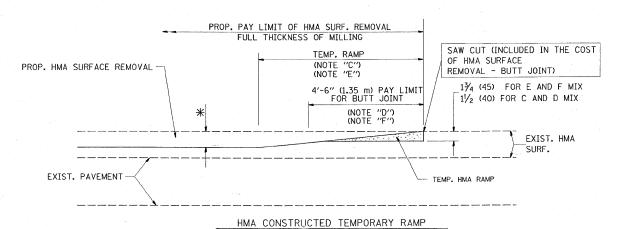
FILE NAME =	USER NAME = smithkl	DESIGNED - A. HOUSEH DRAWN -	REVISED - R. SHAH 10-03-96  REVISED - A. ABBAS 03-21-97	STATE OF ILLINOIS		CURB OR CURB AND GUTTER		F.A.U. RTE.	SECTION (34&75) RS-4	COUNTY TOTAL SHEETS NO.
o:/pw_work/PWIDUI/SMITHKL/dWI3/42I/Dista	PLOT SCALE = 50.0000 '/ IN.	CHECKED -	REVISED - M. GOMEZ 01-22-01	DEPARTMENT OF TRANSPORTATION		REMOVAL AND REPLACEMENT		2845 BDf	600-06 (BD-24)	CONTRACT NO. 60B05
	PLOT DATE = 4/23/2009	DATE - 03-11-94	REVISED - R. BORO 01-01-07		SCALE: NONE SH	HEET NO. 1 OF 1 SHEETS STA.	TO STA.	FED. ROAD D	JIST. NO. 1 ILLINOIS FED.	AID PROJECT



#### MILLED TEMPORARY RAMP

(FOR BUTT JOINT AND HMA TAPER SEE DETAIL BELOW)

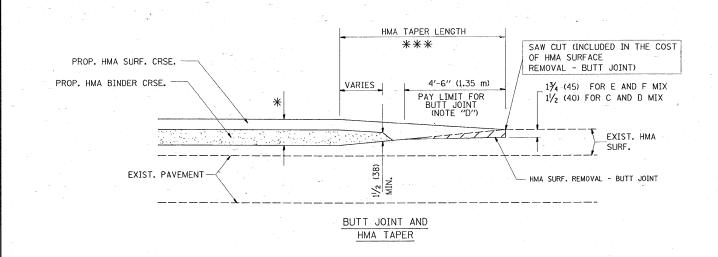
#### OPTION 1



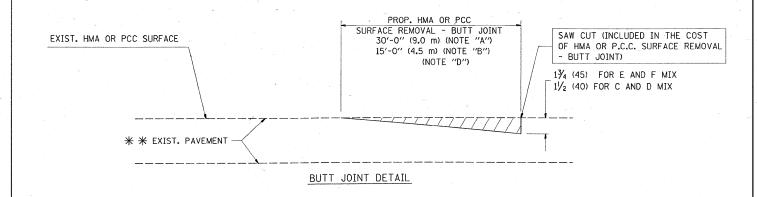
(FOR BUTT JOINT AND HMA TAPER SEE DETAIL BELOW)

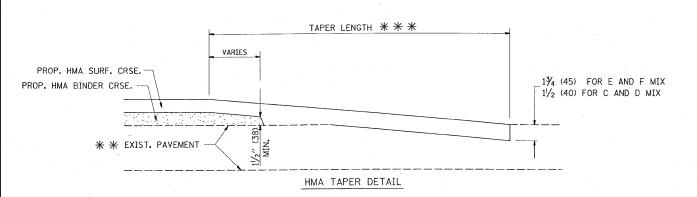
#### OPTION 2

#### 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".

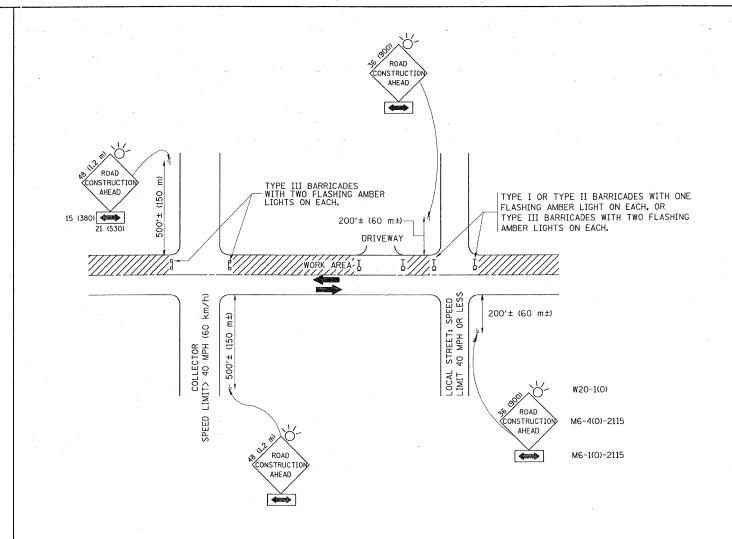
SCALE:

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

FILE NAME =	USER NAME = smrthkI	DESIGNED - M. DE YONG	REVISED	-	R. SHAH 10-25-94
c:\pw_work\PWIDOT\SMITHKL\dØ137421\DistS	td.dgn	DRAWN -	REVISED	-	A. ABBAS 03-21-97
	PLOT SCALE = 50.0000 '/ IN.	CHECKED -	REVISED	-	M. GOMEZ 04-06-01
	PLOT DATE = 4/23/2009	DATE - 06-13-90	REVISED	-	R. BORO 01-01-07

#### STATE OF ILLINOIS **DEPARTMENT OF TRANSPORTATION**

						F.A.U. RTE.	SECTION	COUNTY	TOTAL	SHEET NO.
HMA TAPER DETAILS					2845	(34&75) RS-4	COOK	28	20	
		HIVIA	IAPEN DE	IAILO			BD400-05 BD32	CONTRACT	NO. 6	0B05
NONE	SHEET NO. 1	OF 1	SHEETS	STA.	TO STA.	FED. R	DAD DIST. NO. 1 ILLINOIS FED. A	D PROJECT		



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

#### NOTES:

- A. FOR NO LANE RESTRICTION ON THE SIDE ROAD OR DRIVEWAYS
- 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:
- O) ONE **ROAD CONSTRUCTION AHEAD** SIGN 36 x 36 (900x900) 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:
- d) ONE ROAD CONSTRUCTION AHEAD SIGN 48 x 48 (1.2 m x 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.

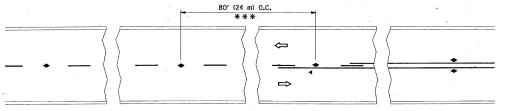
- C. ADVANCE WARNING SIGNS ARE TO BE OMITTED ON DRIVEWAY UNLESS OTHERWISE NOTED.
- D. THE TRAFFIC CONTROL AND PROTECTION FOR SIDE ROADS, INTERSECTIONS, AND DRIVEWAYS SHALL BE INCIDENTAL TO THE COST OF SPECIFIED TRAFFIC CONTROL STANDARDS OR ITEMS.

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

FILE NAME =	USER NAME = smithkl	DESIGNED - LHA	REVISED - J. OBERLE 10-18-95
c:\pw_work\PWIDOT\SMITHKL\dØ137421\DistS	td.dgn	DRAWN -	REVISED - A. HOUSEH 03-06-96
	PLOT SCALE = 50.00000 '/ IN.	CHECKED -	REVISED - A. HOUSEH 10-15-96
	PLOT DATE = 4/23/2009	DATE - 06-89	REVISED -T. RAMMACHER 01-06-00

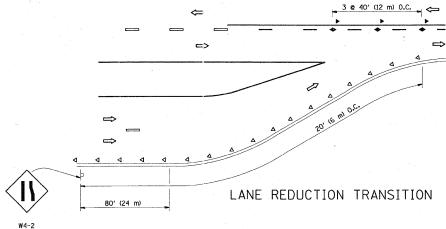
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

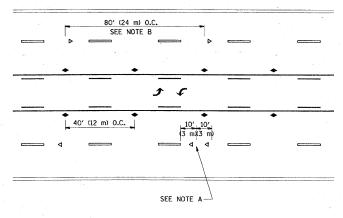
	TRAFFIC CONTROL AND PROTECTION FOR	
	SIDE ROADS, INTERSECTIONS, AND DRIVEWAY	'S
 SCALE: NONE	SHEET NO. 1 OF 1 SHEETS STA.	TO STA.



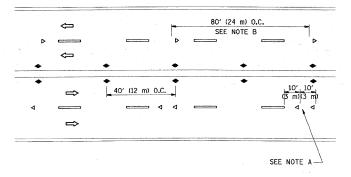
\*\*\* REDUCE TO 40' (12 m) O.C. ON CURVES WITH POSTED OR ADVISORY SPEED 45 M.P.H. (70 km/h) OR LESS.

#### TWO-LANE/TWO-WAY

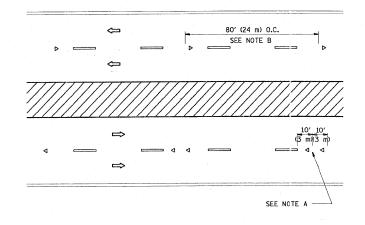




TWO-WAY LEFT TURN



MULTI-LANE/UNDIVIDED



MULTI-LANE/DIVIDED

#### GENERAL NOTES

- 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 TANCENTS LESS THAN 500' (150 m) IN LENGTH BETWEEN CURVES SHALL BE INSTALLED AT THE LESSER OF THE TWO CURVE SPACINGS.

#### LANE MARKER NOTES

- 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.
- A. USE DOUBLE LANE LINE MARKERS SPACED AS SHOWN.

#### SYMBOLS

YELLOW STRIPE

WHITE STRIPE

- ONE-WAY AMBER MARKER
- ONE-WAY CRYSTAL MARKER (W/O)
- TWO-WAY AMBER MARKER

#### DESIGN NOTES

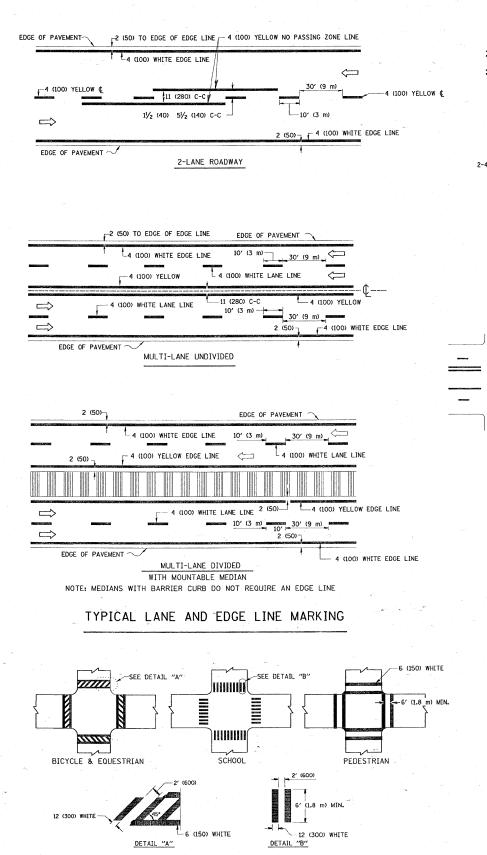
- 1. DOUBLE LANE LINE MARKERS SHALL BE USED UNLESS SPECIFIED OTHERWISE.
- 2. EXCEPT AS SHOWN ON THE LANE REDUCTION TRANSITION AND FREEWAY EXIT RAMP DETAIL, MARKERS ARE NOT TO BE SPECIFIED ON RIGHT EDGE LINES.
- 3. THE EXACT MARKER LIMITS, SPACING, AND COLOR SHOULD BE INCLUDED IN THE PLANS.
- 4. MARKERS 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.

FILE NAME =	USER NAME = smithkl	DESIGNED -	REVISED - T. RAMMACHER 09-19-94		TYPICAL APPLICATIONS	F.A.U. SECTION	COUNTY TOTAL SHEET NO.
c:\pw_work\PWIDOT\SMITHKL\dØ137421\Dist	td.dgn	DRAWN ~	REVISED - T. RAMMACHER 03-12-99	STATE OF ILLINOIS	RAISED REFLECTIVE PAVEMENT MARKERS (SNOW-PLOW RESISTANT)	2845 (34&75) RS-4	COOK 28 Z2
	PLOT SCALE = 50.0000 '/ IN.	CHECKED -	REVISED -T. RAMMACHER 01-06-00	DEPARTMENT OF TRANSPORTATION		TC-11	CONTRACT NO. 60B05
	PLOT DATE = 4/23/2009	DATE -	REVISED -		SCALE: NONE SHEET NO. 1 OF 1 SHEETS STA. TO STA.	FED. ROAD DIST. NO. 1 ILLINOIS FED. AI	ID PROJECT



TYPICAL CROSSWALK MARKING

JSER NAME = smithkl

PLOT SCALE = 50.0000 1/ IN.

PLOT DATE = 4/23/2009

DESIGNED - E

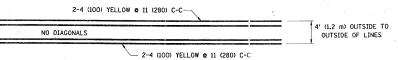
03-19-90

DRAWN

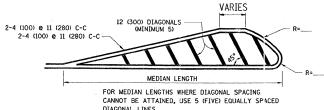
CHECKED DATE

FILE NAME :

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

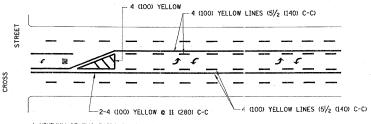


DIAGONAL LINE SPACING: 50' (15 m) C-C (LESS THAN 30MPH (50 km/h))

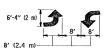
75' (25 m) C-C 30MPH (50 km/h) TO 45MPH (70 km/h))

150' (45 m) C-C (MORE THAN 45MPH (70 km/h))

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

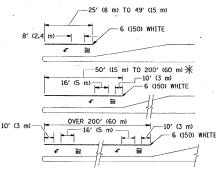


A MINIMUM OF TWO PAIRS OF TURN ARROWS SHALL BE USED, WHITE IN COLOR. ADDITIONAL PAIRS SHALL BE PLACED AT 200' (60 m) TO 300' (90 m) INTERVALS.



MEDIAN WITH TWO-WAY LEFT TURN LANE

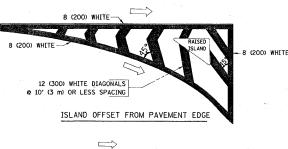
#### TYPICAL PAINTED MEDIAN MARKING

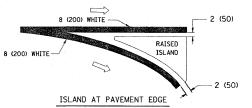


\* TURN LANES IN EXCESS OF 400' (120 m) IN LENGTH MAY HAVE AN ADDITIONAL SET OF ARROW - "ONLY" INSTALLED MIDWAY BETWEEN THE OTHER TWO SETS OF ARROW - "ONLY".

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 UNDIVEDED 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 @ 4 (100) EACH DIRECTION	SKIP-DASH AND SOLID	YELLOW	10' (3 m) LINE WITH 30' (9 m) SPACE FOR SKIP-DASH; 5½ (140) C-C BETWEEN SOLID LINE AND SKIP-DASH LINE
	8' (2.4m) LEFT ARROW	IN PAIRS	WHITE	SEE TYPICAL TWO-WAY LEFT TURN MARKING DETAIL
CROSSWALK LINES (PEDESTRIAN) A. DIAGONALS (BIKE & EQUESTRIAN) B. LONGITUDINAL BARS (SCHOOL)	2 & 6 (150) 12 (300) & 45° 12 (300) & 90°	SOLID SOLID SOLID	WHITE WHITE WHITE	NOT LESS THAN 6' (1.8 m) APART 2' (600) APART 2' (600) APART 5EE TYPICAL CROSSWALK MARKING DETAILS.
STOP LINES	24 (600)	SOLID	WHITE	PLACE 4' (1.2 m) IN ADVANCE OF AND PARALLEL TO CROSSWAIK, IF PRESENT. OTHERWISE, PLACE AT DESIRED STOPPING POINT. PARALLEL TO CROSSROAD CENTERLINE, WHERE POSSIBLE
PAINTED MEDIANS	2 @ 4 (100) WITH 12 (300) DIAGONALS @ 45°	SOLID	YELLOW: TWO WAY TRAFFIC	11, (280) C-C FOR THE DOUBLE LINE SEE TYPICAL PAINTED MEDIAN MARKING.
	NO DIAGONALS USED FOR 4' (1.2 m) WIDE MEDIANS		WHITE: ONE WAY TRAFFIC	SEE TH LOAD TAINTED MEDIAN MAINTING
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 SQ. FT. (0.33 m²) EACH "X""-54.0 SQ. FT. (5.0 m²)
SHOULDER DIAGONALS	12 (300) <b>@</b> 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 (OVER 45MPH (70 km/h))

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

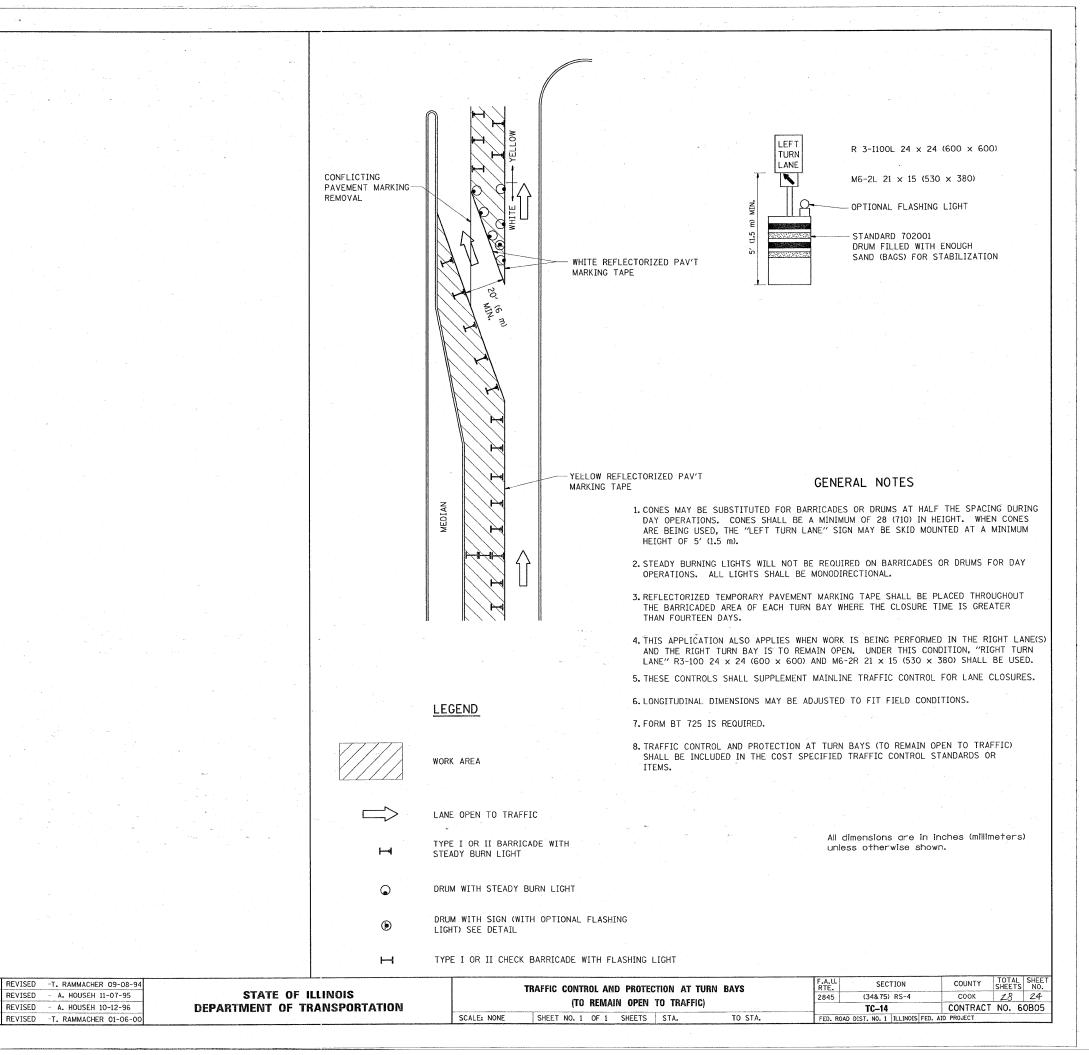
All dimensions are in inches (millimeters) unless otherwise shown.

EVERS	REVISED	-T. RAMMACHER 10-27-94	
	REVISED	-A. HOUSEH 10-09-96	
	REVISED	-A. HOUSEH 10-17-96	

REVISED - T. RAMMACHER 01-06-00

	STATE	OF	ILLINOIS	
	OFFICE	O.	155119010	
REPARTA	MERIT C	T T	RANSPO	RTATION
AFI LABIER		<i>9</i> 9 8	IIVIIIOI O	11211010

1	DISTRICT ONE	F.A.U. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
ı		2845	(34&75) RS-4	COOK	28	23
ı	TYPICAL PAVEINENT WARKINGS		TC-13	CONTRACT	NO. (	60B05
ı	SCALE: NONE SHEET NO. 1 OF 1 SHEETS STA. TO STA.	FED. RO	OAD DIST. NO. 1 ILLINOIS FED. AI	D PROJECT		



DESIGNED

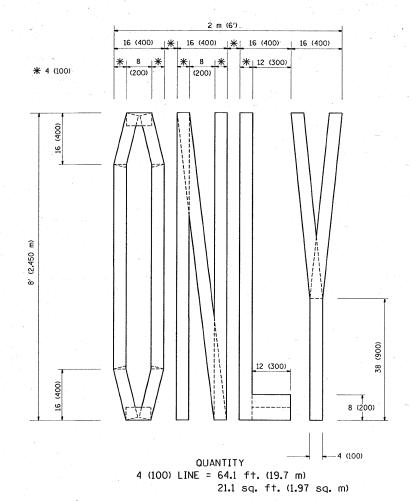
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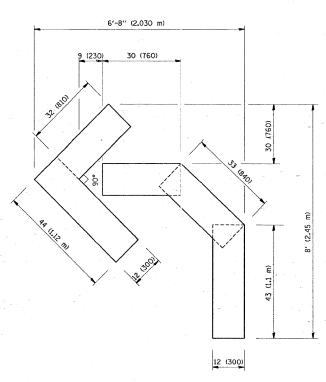
DATE

PLOT SCALE = 50.0000 ′/ IN.

TILE NAME =

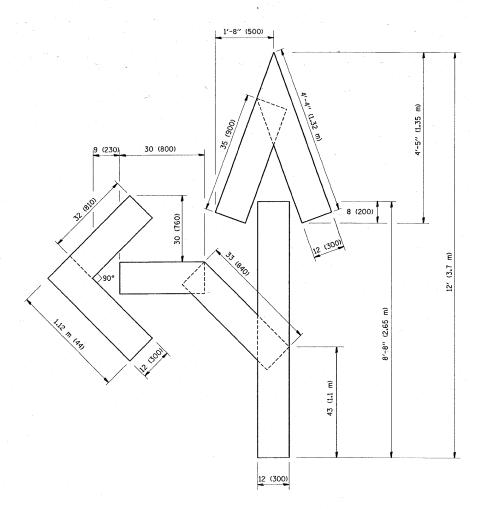
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(IUANTITY 4 (100) LINE = 45.5 ft. (13.9 m) 15.2 sq. ft. (1.39 sq. m)

SCALE: NONE



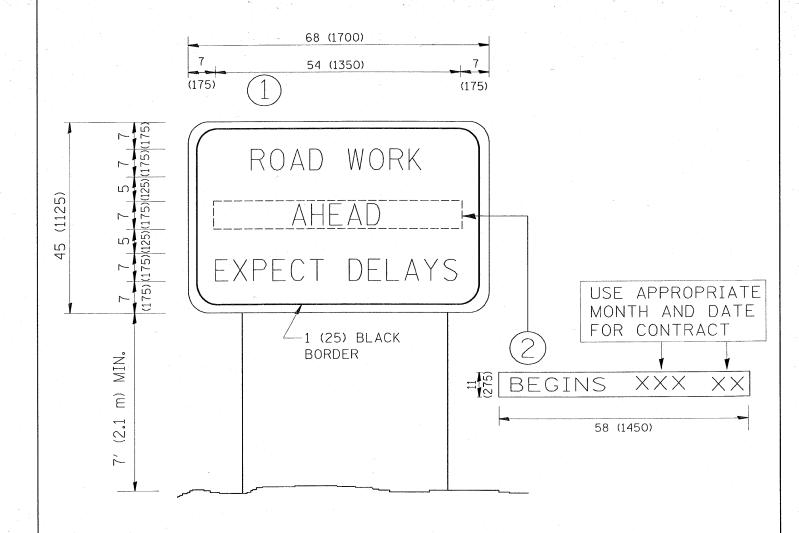
QUANTITY 4 (100) LINE = 82.5 ft. (25.3 m) 27.5 sq. ft. (2.53 sq. m)

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

FILE NAME =	USER NAME = smithkl	DESIGNED -		REVISED	-T. RAMMACHER 06-05-96
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** 2	PLOT SCALE = 50.0000 '/ IN.	CHECKED -		REVISED	-T. RAMMACHER 03-02-98
* + *	PLOT DATE = 4/23/2009	DATE -	09-18-94	REVISED	-E. GOMEZ 08-28-00

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PAVEMENT MARKING LETTERS AND SYMBOLS	F.A.U. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
FOR TRAFFIC STAGING	2845	(34&75) RS-4	COOK	28	25
FUN INAFFIC STABING		TC-16	CONTRACT	NO. 6	0B05
SHEET NO. 1 OF 1 SHEETS STA. TO STA.	FED. R	DAD DIST, NO. 1 ILLINOIS FED. AT	D PROJECT		



### 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 () 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.

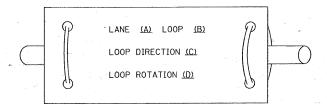
ALL DIMENSIONS ARE IN INCHES (MILLIMETERS)
UNLESS OTHERWISE SHOWN.

ı	F(LE NAME =	USER NAME = smithkl	DESIGNED -	REVISED - R. MIRS 09-15-97			ARTERIAL ROA	n ·	F.A.U. RTE.	SECTION	COUNTY S	TOTAL SHEET SHEETS NO.
ı	c:\pw_work\PWIDOT\SM[THKL\dØ137421\DistS	td.dgn	DRAWN -	REVISED - R. MIRS 12-11-97	STATE OF ILLINOIS		INFORMATION S		2845	(34&75) RS-4	соок	28 26
		PLOT SCALE = 50.0000 ' / IN.	CHECKED -	REVISED -T. RAMMACHER 02-02-99	DEPARTMENT OF TRANSPORTATION	COME NONE	SHEET NO. 1 OF 1 SHEETS			TC-22	CONTRACT N	NO. 60B05
		PLOT DATE = 4/23/2009	DATE -	REVISED - C. JUCIUS 01-31-07		SCALE: NONE   S	SHEET NO. 1 OF 1 SHEETS	31A. IU 31A.	FED. ROAD L	DIST. NO. 1 ILLINOIS FED.	AID PROJECT	

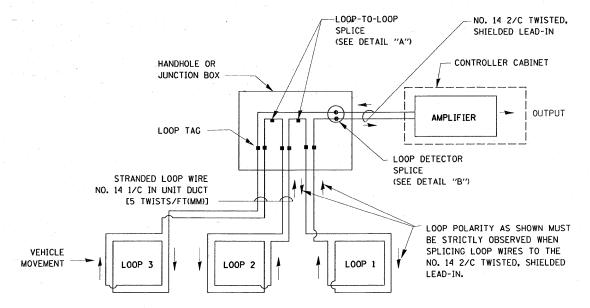
#### LOOP DETECTOR NOTES

- EACH PAIR OF LOOP WIRES SHALL BE PLACED IN A SEPARATE UNIT DUCT FROM THE EDGE OF PAVEMENT TO THE HANDHOLE. SPACING BETWEEN THE HOLES DRILLED IN THE PAVEMENT SHALL NOT BE LESS THAN 6" (150 mm). UNIT DUCT 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

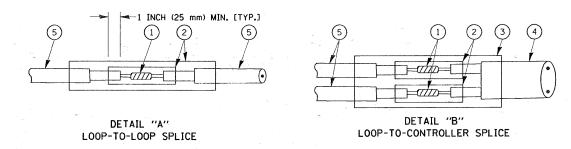


- A. LANE 1 IS THE LANE CLOSEST TO THE CENTERLINE OF THE ROADWAY
- B. LOOP \*1 IS THE LOOP IN THE LANE CLOSEST TO THE INTERSECTION.
- C. LABEL LOOP CABLE "IN" OR LOOP CABLE "OUT".
- D. LABEL LOOP CABLE CLOCKWISE OR LOOP CABLE COUNTERCLOCKWISE.



#### 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.

SCALE: NONE

(5) LOOP CONDUCTOR WITH FLEXIBLE PLASTIC TUBE.

USER NAME = smithkl	DESIGNED - D.A.D.	REVISED - 11-12-01
:\PWIDOT\SMITHKL\dØ13742!\OıstStd.dgn	DRAWN - R.W.P.	REVISED - BUR. TRAFFIC 01-01-02
PLOT SCALE = 50.0000 '/ IN.	CHECKED - D.A.Z.	REVISED -
PLOT DATE = 4/23/2009	DATE - 05-30-00	REVISED -

	STATI	E OF	ILLINOIS	
DEPARTI	MENT	OF '	TRANSPOR	TATION

DISTRICT ONE	F.A.U. RTE.	SECTION	COUNTY
	2845	(34&75) RS-4	COOK
STANDARD TRAFFIC SIGNAL DESIGN DETAILS		TS-05	CONTRA
SHEET NO. 1 OF 4 SHEETS STA. TO STA.	FED. RO	DAD DIST. NO. 1   ILLINOIS FED. A	D PROJECT

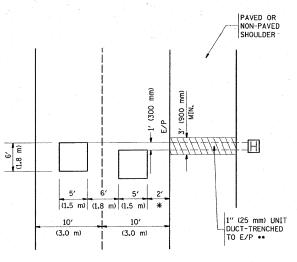
 COUNTY
 TOTAL SHEETS NO.

 COOK
 28
 27

 CONTRACT
 NO. 60805

#### LOOPS NEXT TO SHOULDERS

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



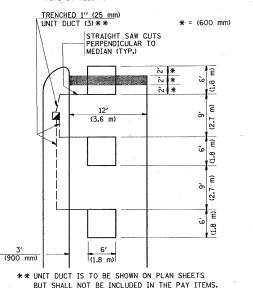
\*\* UNIT DUCT IS TO BE SHOWN ON PLAN SHEETS BUT SHALL NOT BE INCLUDED IN THE PAY ITEMS.

\* = (600 mm)

# LEFT TURN LANES WITH MEDIANS VOLUME DENSITY ("FAR OUT" DETECTION) ON SAME APPROACH

(PROTECTED / PERMITTED LEFT TURN PHASING)

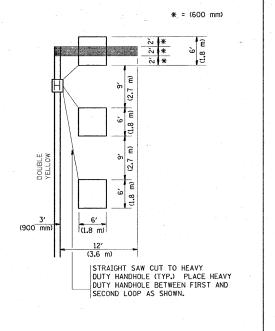
HANDHOLE LOCATION MAY VARY DEPENDING ON GEOMETRICS AND DESIGN OF TRAFFIC SIGNALS. HEAVY-DUTY HANDHOLES TO BE USED WHEN THE MEDIAN IS MOUNTABLE. REFER TO STANDARD 814001 TO ENSURE THAT HANDHOLE FITS IN MEDIAN.



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)

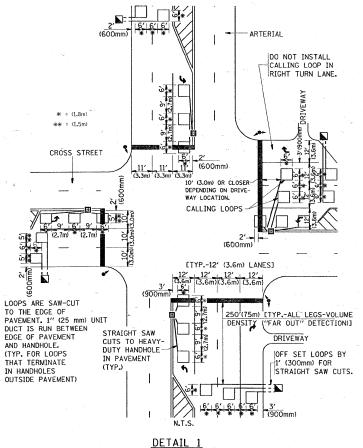


NOTE: DUAL LEFT TURNS NOT SHOWN REFER TO PLAN SHEET FOR DETECTOR LOOP REPLACEMENT

SCALE: NONE

# 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)



N.T.S.

PLOT SCALE = 50.0000 ' / IN

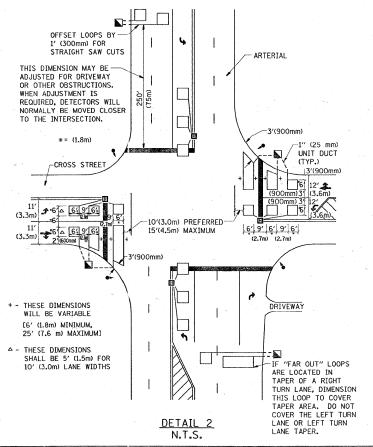
PLOT DATE = 4/23/2009

DESIGNED

R.K.F.

DRAWN CHECKED

DATE



#### 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  $\underline{ALL}$  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.

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STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

DIS	TRICT	۲ <b>1</b> –	DET	ECTOR	LOOP	INSTALLATION		
	DET	AILS	FOR	ROAD	NAY F	ESURFACING		
 SHEET	NO. 1	l OF	1	SHEETS	ST	Α.	TO	STA.

 20.0	TS-07	CONTRACT	NO. 6	0B05
2845	(34&75) RS-4	COOK	78	28
F.A.U.	SECTION	COUNTY	SHEETS	SHEET