## STATE OF ILLINOIS

DEPARTMENT OF TRANSPORTATION

**DIVISION OF HIGHWAYS** 

FOR INDEX OF SHEETS, SEE SHEET NO.

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# PROPOSED HIGHWAY PLANS

F.A.P. ROUTE 870: ILL 53 (BOLINGBROOK DRIVE)

JOLIET RD. TO DUPAGE CO. LINE

SECTION: 534 RS-3

RESURFACING (MAINTENANCE)

WILL COUNTY C-91-169-08

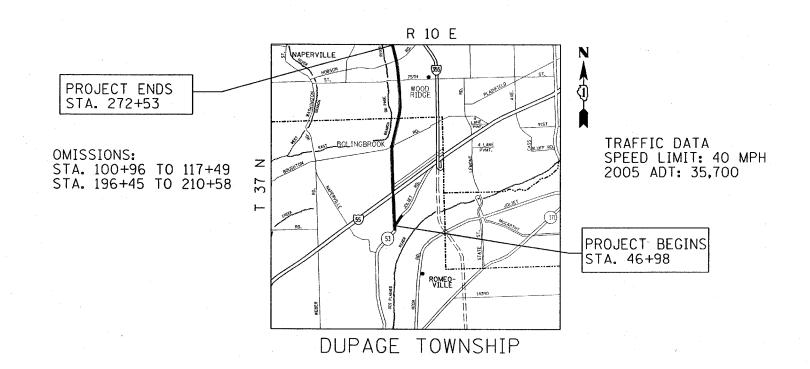
PROJECT IS LOCATED IN THE VILLAGES OF BOLINGBROOK AND ROMEOVILLE

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: ANA ABREU PROJECT MANAGER: KEN ENG

**CONTRACT NO. 60E08** 



GROSS LENGTH OF PROJECT = 22,555 FEET (4.27 MILES)
NET LENGTH OF PROJECT = 19,489 FEET (3.69 MILES)

 
 F.A.P. RTE.
 SECTION
 COUNTY SHEET SHEET NO.

 870
 534 RS-3
 WILL
 41
 1

 FED. ROAD DIST. NO. 1
 ILLINOIS
 CONTRACT NO. 60E08

#### D-91-169-08



# STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION DIVISION OF HIGHWAYS SUBMITTED FEBRUARY 15, 20 08 DEPUTY DIRECTOR OF HIGHWAYS, REGION ENGINEER May 9, 20 08 Live E. Hamfo Jateurin Engineer OF DESIGN AND ENVIRONMENT May 9, 20 08 Chi + W Day 160

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#### STATE STANDARDS

000001- <b>05</b>	STANDARD SYMBOLS, ABBREVIATIONS, AND PATTERNS
442201 - <b>03</b>	CLASS C AND D PATCHES
606001- <i>0</i> <b>3</b>	CONCRETE CURB TYPE B AND COMBINATION CONCRETE CURB & GUTTER
701601 <b>-<i>05</i></b>	URBAN LANE CLOSURE, MULTILANE, 1W OR 2W WITH NONTRAVERSABLE MEDIAN
701606 <i>-0</i> 5	URBAN LANE CLOSURE, MULTILANE, 2W WITH MOUNTABLE MEDIAN
701701 <b>-05</b>	URBAN LANE CLOSURE, MULTILANE INTERSECTION
701901	TRAFFIC CONTROL DEVICES

#### GENERAL NOTES:

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

THE CONTRACTOR SHALL COORDINATE CONSTRUCTION ACTIVITIES WITH UTILITY COMPANIES AND THE VILLAGE OF BOLINGBROOK.

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

BARRICADES: THE CONTRACTOR SHALL PROVIDE AND INSTALL TWO
(2) WEIGHTED SANDBAGS ON EACH TYPE I, TYPE II OR TYPE III BARRICADE
USED- ONE (1) WEIGHTED SAND BAG ACROSS EACH BOTTOM RAIL.

ALL HOT-MIX ASPHALT PAVEMENT PATCHING SHALL BE CLASS D.

BUTT JOINTS WILL BE INSTALLED AT THE ENDS OF ALL RESURFACING (WHERE RESURFACING MEETS EXISTING PAVEMENT), IN ACCORDANCE WITH THE "BUTT JOINT AND HMA TAPER DETAILS" SHEET INCLUDED IN THE PLANS, UNLESS OTHERWISE 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 (40MM) WHERE THE SPEED LIMIT IS 45 MPH (80KM/H) OR LESS AND 1 INCH (25 MM) WHERE THE SPEED LIMIT IS GREATER THAN 45 MPH (80 KM/H), WITH WRITTEN APPROVAL FROM THE 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).

10 FEET (3 METER) 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.

THE RESIDENT ENGINEER SHALL VERIFY THE LOCATIONS OF ALL EXISTING PAVEMENT MARKINGS PRIOR TO MILLING OR RESURFACING.

ALL PAVEMENT MARKINGS SHALL BE PLACED THROUGHOUT THE IMPROVEMENT ACCORDING TO DISTRICT 1 TYPICAL PAVEMENT MARKING.

THE RESIDENT ENGINEER SHALL CONTACT MS. CORA MATHIS, AREA TRAFFIC FIELD ENGINEER AT (815) 485-6475 (OFFICE) OR (847) 715-8428 (CELL), A MINIMUM OF 2 WEEKS PRIOR TO PLACEMENT OF PERMANENT PAVEMENT MARKINGS

RAISED REFLECTIVE PAVEMENT MARKERS SHALL BE PLACED THROUGHOUT THE IMPROVEMENT ACCORDING TO THE DISTRICT STANDARDS AS NOTED IN THE DETAIL.

THE UNIT WEIGHT (CONVERSION FACTOR) QUOTED IS FOR THE ESTIMATING PLAN QUANTITIES ONLY. ACTUAL QUANTITIES TO FULFILL CONTRACT REQUIREMENTS WILL BE DETERMINED BASED ON UNIT WEIGHT OF APPROVED MIX DESIGN, PLAN DIMENSIONS, AND DENSITY LIMITATIONS. MAXIMUM PAYMENT WILL BE COMPUTED BASED ON WEIGHT AVERAGE DENSITIES OF THE IN-PLACE MIXTURE.

THE CONTRACTOR SHALL CONTACT THE DISTRICT ONE ARTERIAL TRAFFIC CONTROL SUPERVISOR A MINIMUM OF 72 HOURS PRIOR TO BEGINNING WORK.

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	PLOT DATE = 2/20/2008	DATE -	REVISED -		SCALE: 1" = 50' SHEET NO. OF SHEETS STA. TO STA.	FED. ROAD DIST. NO. 1 ILLINOIS FED. A	AID PROJECT

F.A.P. RTE.	SECTION		COUNT	Y	TOTAL SHEETS	SHEET NO.
870	534 RS-3		WILL		41	3
FED.	ROAD DIST. NO. 1	ILL	INOÍS		HWAY PRO	

	SUMMARY OF QUANTITIES		100 I.STATE	URBAN	1	CONSTRUC	TION TYPE	CODE	1		SUMMARY OF QUANTITIES		100/STATE	URBAN	:	CONSTRUC	TION TYPE	CODE	
CODE NO	ITEM	UNIT	TOTAL QUANTITIES	1000				8		CODE NO	ITEM	UNIT	TOTAL QUANTITIES	1000		-			
0600200	BITUMINOUS MATERIALS (PRIME COAT)	TON	114	114						70102635	TRAFFIC CONTROL AND PROTECTION. STANDARD 701701	L SUM	1	1					
0600300	AGGREGATE (PRIME COAT)	TON	571	571						70300100	SHORT-TERM PAVEMENT MARKING	FOOT	5466	5466					
10600400	MIXTURE FOR CRACKS, JOINTS, AND FLANGEWAYS	TON	43	43	1 7				!	70300210	TEMPORARY PAVEMENT MARKING	SQ FT	2269	2269					
0600895	CONSTRUCTING TEST STRIP	EACH	2	2							- LETTERS AND SYMBOLS								
0600982	HOT-MIX ASPHALT SURFACE REMOVAL - BUTT JOINT	SO YD	816	816						70300220	TEMPORARY PAVEMENT MARKING - LINE 4"	FOOT	20,465	20,465		-			
10601005	HOT-MIX ASPHALT REPLACEMENT OVER PATCHES	TON	730	730						70300240	TEMPORARY PAVEMENT MARKING - LINE 6"	FOOT	11062	11062					
10603595	POLYMERIZED HOT-MIX ASPHALT SURFACE COURSE, MIX "F", N90	TON	14408	14408						70300250	TEMPORARY PAVEMENT MARKING - LINE 8"	FOOT	585	585					
12001300	PROTECTIVE COAT	SO YD	19	19						70300260	TEMPORARY PAVEMENT MARKING - LINE 12"	FOOT	978	978				-	
44000159	HOT-MIX ASPHALT SURFACE REMOVAL, 2	SO YD	142735	142735	:	~				70300280	TEMPORARY PAVEMENT MARKING - LINE 24"	FOOT	1268	1268					
14001700	COMBINATION CONCRETE CURB AND GUTTER REMOVAL AND REPLACEMENT	FOOT	1800	1800						70301000	WORK ZONE PAVEMENT MARKING REMOVAL	SO FT	607	607			i wangi (Sapi)		
14002224	HOT-MIX ASPHALT REMOVAL OVER PATCHES,	SO YD	2173	2173						¥ 78000100	THERMOPLASTIC PAVEMENT MARKING - LETTERS AND SYMBOLS	SO FT	2269	2269					
44201749	CLASS D PATCHES, TYPE I, 9 INCH	SO YD	30	30				-		<b>#</b> 78000200	THERMOPLASTIC PAVEMENT MARKING - LINE 4"	FOOT	20,465	20,465					
44201753	CLASS D PATCHES, TYPE II, 9 INCH	SO YD	470	470			,			<b>*</b> 78000400	THERMOPLASTIC PAVEMENT MARKING - LINE 6"	· FOOT	11062	11062					
44201757	CLASS D PATCHES, TYPE III, 9 INCH	SO YD	97	97 221				i.		<b>*</b> 78000500	THERMOPLASTIC PAVEMENT MARKING - LINE 8"	FOOT	585	585					
44201761	CLASS D PATCHES, TYPE I, 10 INCH	SO YD	32	32	-					<b>*</b> 78000600	THERMOPLASTIC PAVEMENT MARKING	FOOT	978	978					
44201765	CLASS D PATCHES, TYPE II. 10 INCH	SO YD	606	606		-					- LINE 12"								
44201769	CLASS D PATCHES, TYPE III, 10 INCH	SO YD	292	292						¥ 78000650	THERMOPLASTIC PAVEMENT MARKING - LINE 24"	FOOT	1268	1268					
4201771	CLASS D PATCHES, TYPE IV. 10 INCH	SQ YD	425	425						<b>≱</b> 78100100	RAISED REFLECTIVE PAVEMENT MARKER	EACH	1377	1377					
55039700	STORM SEWERS TO BE CLEANED	FOOT	7000	7000		-	1			78300200	RAISED REFLECTIVE PAVEMENT MARKER	EACH	1600	1600					
60251740	CATCH BASINS TO BE ADJUSTED WITH NEW TYPE 24 FRAME AND GRATE	EACH	30	30			·			<b>*</b> 88600600	DETECTOR LOOP REPLACEMENT	FOOT	7405	7405					
60300310	FRAMES AND LIDS TO BE ADJUSTED (SPECIAL)	EACH	23	23						x0322256	TEMPORARY INFORMATION SIGNING	SO FT	51.4	51.4	٠.				
67000400	ENGINEER'S FIELD OFFICE, TYPE A	CAL MO	6	6						X4067107	POLYMERIZED LEVELING BINDER (MACHINE METHOD). IL-4.75. N50	TON	6175	6175			-		
67100100	MOBILIZATION	L SUM	1	1 .						Z0018400	DRAINAGE STRUCTURES TO BE ADJUSTED	EACH	150	150					
70102625	TRAFFIC CONTROL AND PROTECTION. STANDARD 701606	L SUM	1	1						Z0018500	DRAINAGE STRUCTURES TO BE CLEANED	EACH	340	340					
70102630	TRAFFIC CONTROL AND PROTECTION, STANDARD 701601	L SUM	1	1						Z0018600	DRAINAGE STRUCTURES TO BE RECONSTRUCTED	EACH	60	60					

\* - Specialty Items

REVISIONS

NAME

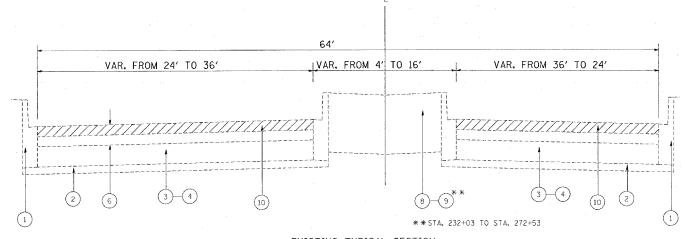
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SUMMARY OF QUANTITIES

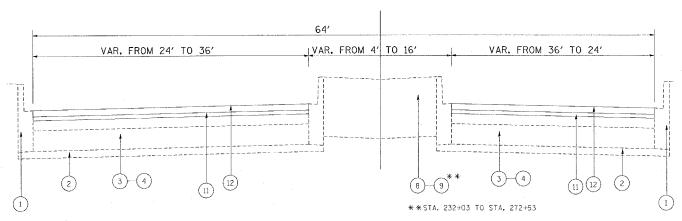
ILL 53 (BOLINGBROOK DRIVE)

JOLIET RD. TO DUPAGE CO. LINE

PLOT DATE: 2/20/2008



# EXISTING TYPICAL SECTION ILL 53 (BOLINGBROOK DRIVE) STA. 46+98 TO STA. 75+00 STA. 87+97 TO STA. 88+91 STA. 142+15 TO STA. 148+67 STA. 151+49 TO STA. 168+31 STA. 172+00 TO STA. 173+94 STA. 177+00 TO STA. 178+07 STA. 181+00 TO STA. 196+45 STA. 210+58 TO STA. 272+53



PROPOSED TYPICAL SECTION ILL 53 (BOLINGBROOK DRIVE)

STA. 46+98 TO STA. 75+00 STA. 87+97 TO STA. 88+91 STA. 142+15 TO STA. 148+67 STA. 151+49 TO STA. 168+31 STA. 172+00 TO STA. 173+94 STA. 177+00 TO STA. 178+07 STA. 181+00 TO STA. 196+45 STA. 210+58 TO STA. 272+53

		HOT-MIX ASPHALT	MIXTURE REQUIREMENTS	•
MIXTURE USES	POLYMERIZED LEVELING BINDER (MACHINE METHOD), IL-4.75, N50	POLYMERIZED HOT-MIX ASPHALT SURFACE, MIX "F", N90 (IL-9.5 MM)	HOT-MIX ASPHALT REPLACEMENT OVER PATCHES (BINDER IL-19MM)	CLASS D PATCHES (HMA BINDER IL-19MM)
AC/PG	SBS/SBR PG 76-28/22	SBS/SBR PG 70-22	PG 64-22 *	PG 64-22 *
DESIGN AIR VOIDS	4.0% @ 50 GYR	4.0% @ 90 GYR	4% € 70 GYR	4% @ 70 GYR

THE UNIT WEIGHT USED TO CALCULATE ALL HOT-MIX ASPHALT SURFACE MIX QUANTITIES IS 112 LBS/SY/IN  $\boldsymbol{*}$  WHEN RAP EXCEEDS 20%, THE NEW ASPHALT BINDER SHALL BE PG 58/22

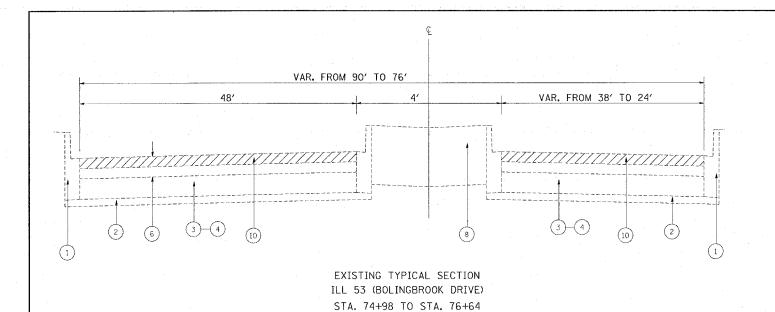
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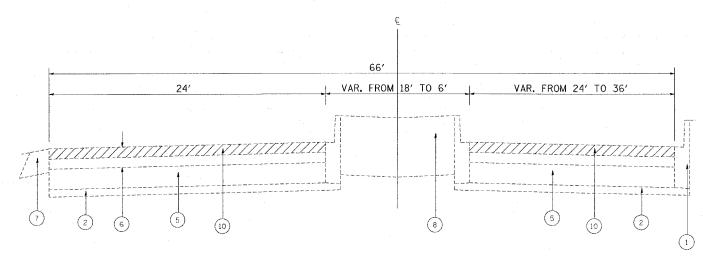
#### STATE OF ILLINOIS **DEPARTMENT OF TRANSPORTATION**

ILL 53 (BOLINGBROOK DRIVE)	F.A.P. RTE.		SEC	TION		COUNTY	TOTAL SHEETS	SHEET NO.
TYPICAL CECTIONS	870		534	RS-3		WILL	41	4
TYPICAL SECTIONS						CONTRACT	NO.	80 <b>3</b> 06
SHEET NO. OF SHEETS STA. 17+49 TO STA. 172+53	FED. R	ROAD DIST.	NO. 1	ILLINOIS FED.	. AID	PROJECT		

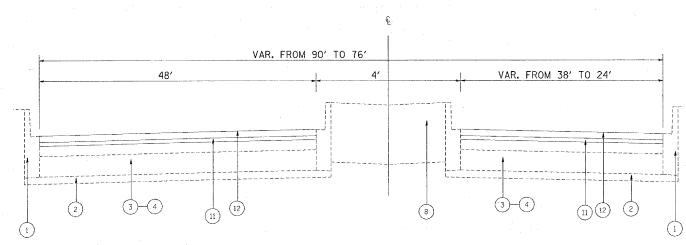
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- EXISTING COMBINATION CONCRETE CURB AND GUTTER
- EXISTING SUB-GRADE
- (3 EXISTING HOT-MIX ASPHALT BASE COURSE 10" (NOTE: BETWEEN STA. 117+49 TO 272+53)
- EXISTING PCC BASE COURSE 9"
  (NOTE: BETWEEN 46+98 TO 100+96)
- EXISTING PCC BASE COURSE 10"
- EXISTING HOT-MIX ASPHALT OVERLAY
- EXISTING HMA SHOULDER 8"
- EXISTING P.C. CONCRETE BARRIER MEDIAN (PLANTED MEDIAN)
- EXISTING ASPHALT MOUNTABLE MEDIAN
- (10)PROSPOSED HOT-MIX ASPHALT SURFACE REMOVAL, 2 1/2"
- PROPOSED POLYMERIZED LEVELING BINDER (MACHINE METHOD), IL-4.75, N50, 3/4"
- PROPOSED POLYMERIZED HOT-MIX ASPHALT SURFACE COURSE, MIX "F", N90, 1 3/4"

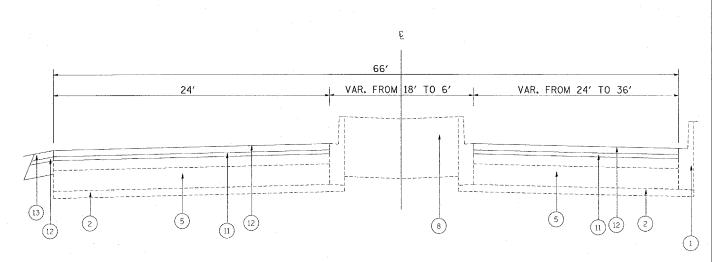




EXISTING TYPICAL SECTION
JOLIET ROAD
STA. 5+34 TO STA. 15+20



PROPOSED TYPICAL SECTION ILL 53 (BOLINGBROOK DRIVE) STA. 74+98 TO STA. 76+64



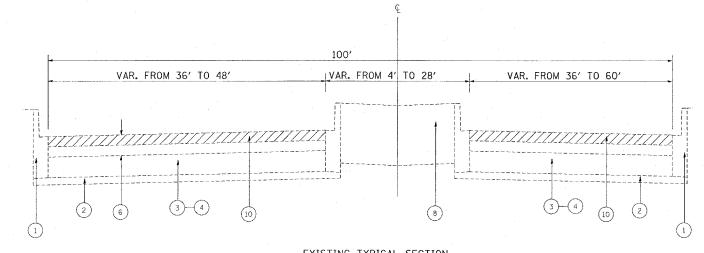
PROPOSED TYPICAL SECTION
JOLIET ROAD
STA. 5+34 TO STA. 15+20

#### LEGEND

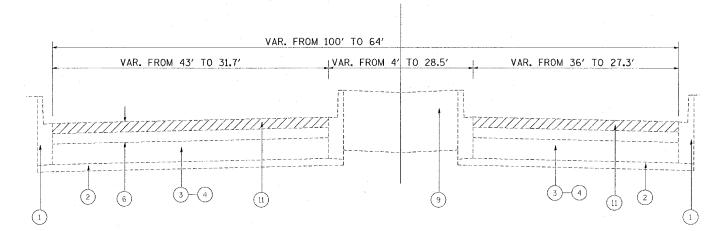
- (1) EXISTING COMBINATION CONCRETE CURB AND GUTTER
- 2 EXISTING SUB-GRADE
- (NOTE: BETWEEN STA. 117+49 TO 272+53)
- 4 EXISTING PCC BASE COURSE 9"
  (NOTE: BETWEEN 46+98 TO 100+96)
- 5 EXISTING PCC BASE COURSE 10"
- 6 EXISTING HOT-MIX ASPHALT OVERLAY
- 7) EXISTING HMA SHOULDER 8"

- 8) EXISTING P.C. CONCRETE BARRIER MEDIAN (PLANTED MEDIAN)
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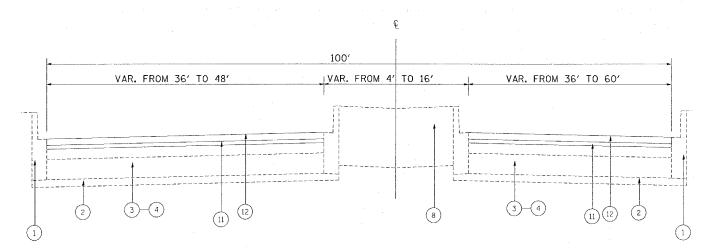
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	PLOT DATE = 2/20/2008	DATE -	REVISED -		SCALE:	SHEET NO. OF SHEETS STA. 17+49	TO STA. 172+53	FED. ROAD DIST. NO. 1   ILLINOIS FED. AID PROJECT



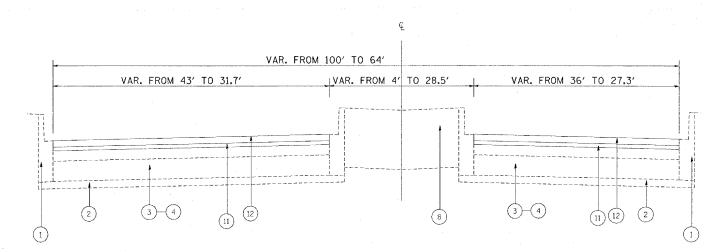
EXISTING TYPICAL SECTION
ILL 53 (BOLINGBROOK DRIVE)
STA. 117+49 TO STA. 137+88



EXISTING TYPICAL SECTION ILL 53 (BOLINGBROOK DRIVE) STA. 137+88 TO STA. 140+66



PROPOSED TYPICAL SECTION ILL 53 (BOLINGBROOK DRIVE) STA. 117+49 TO STA. 137+88



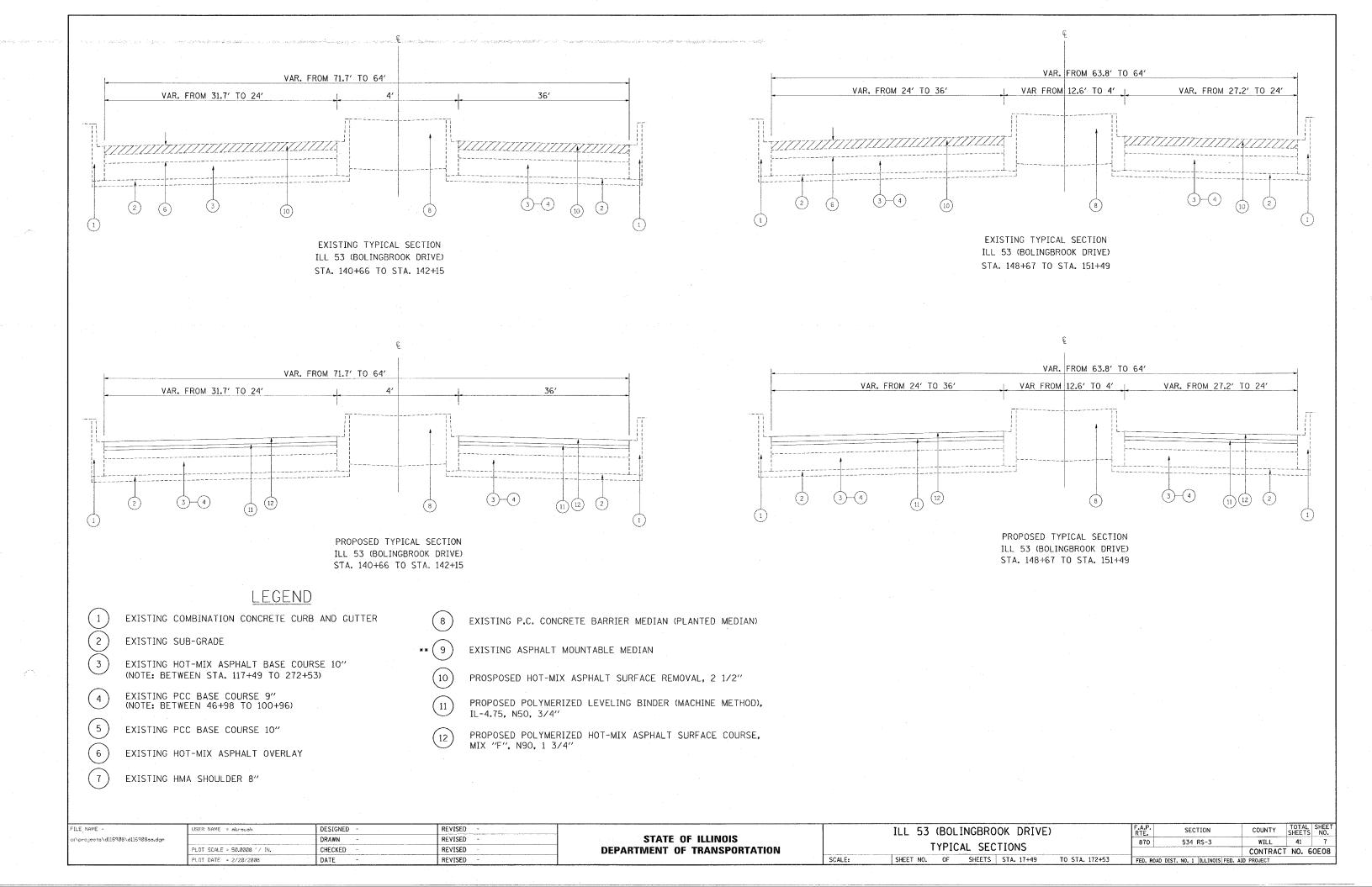
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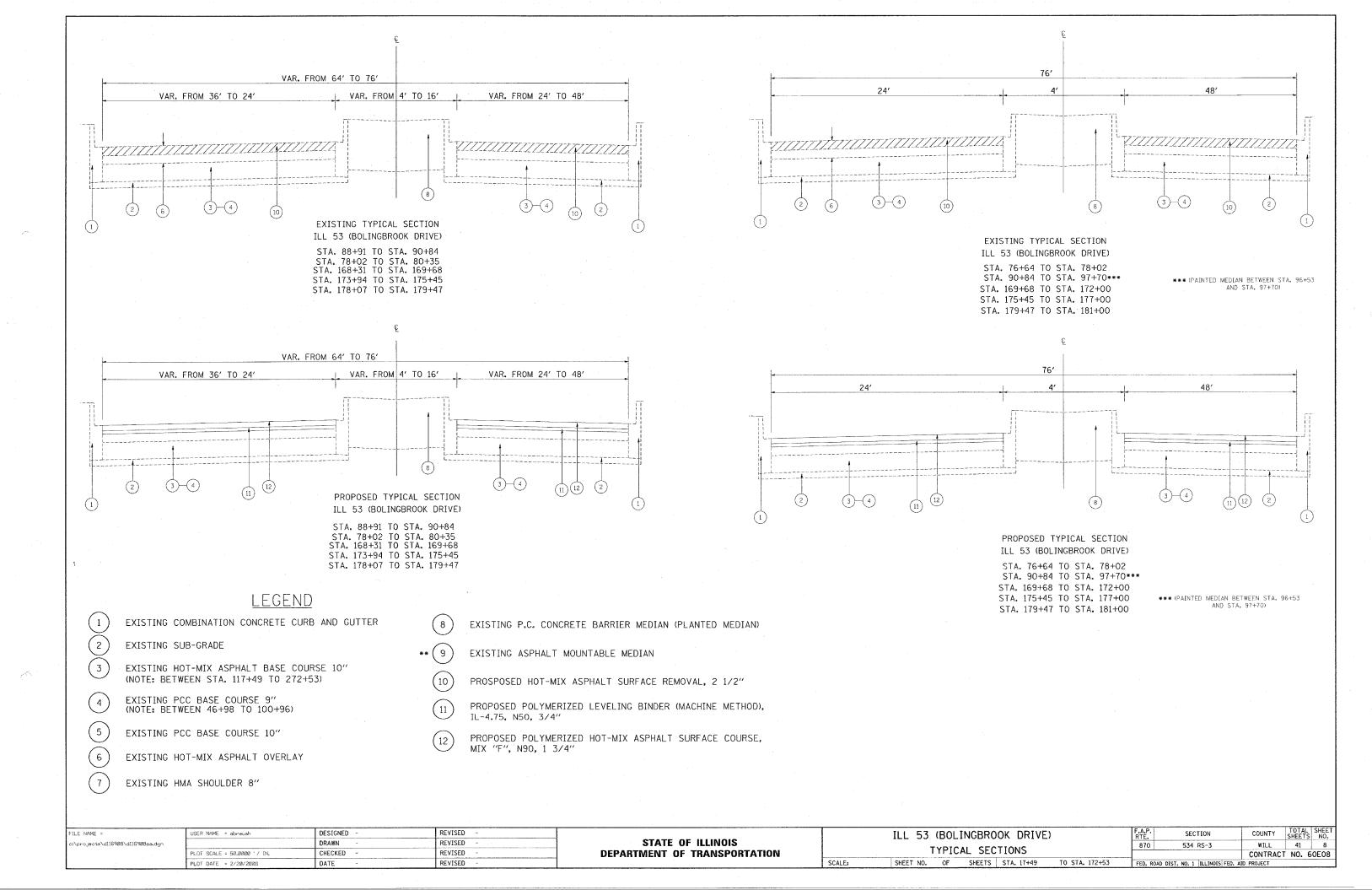
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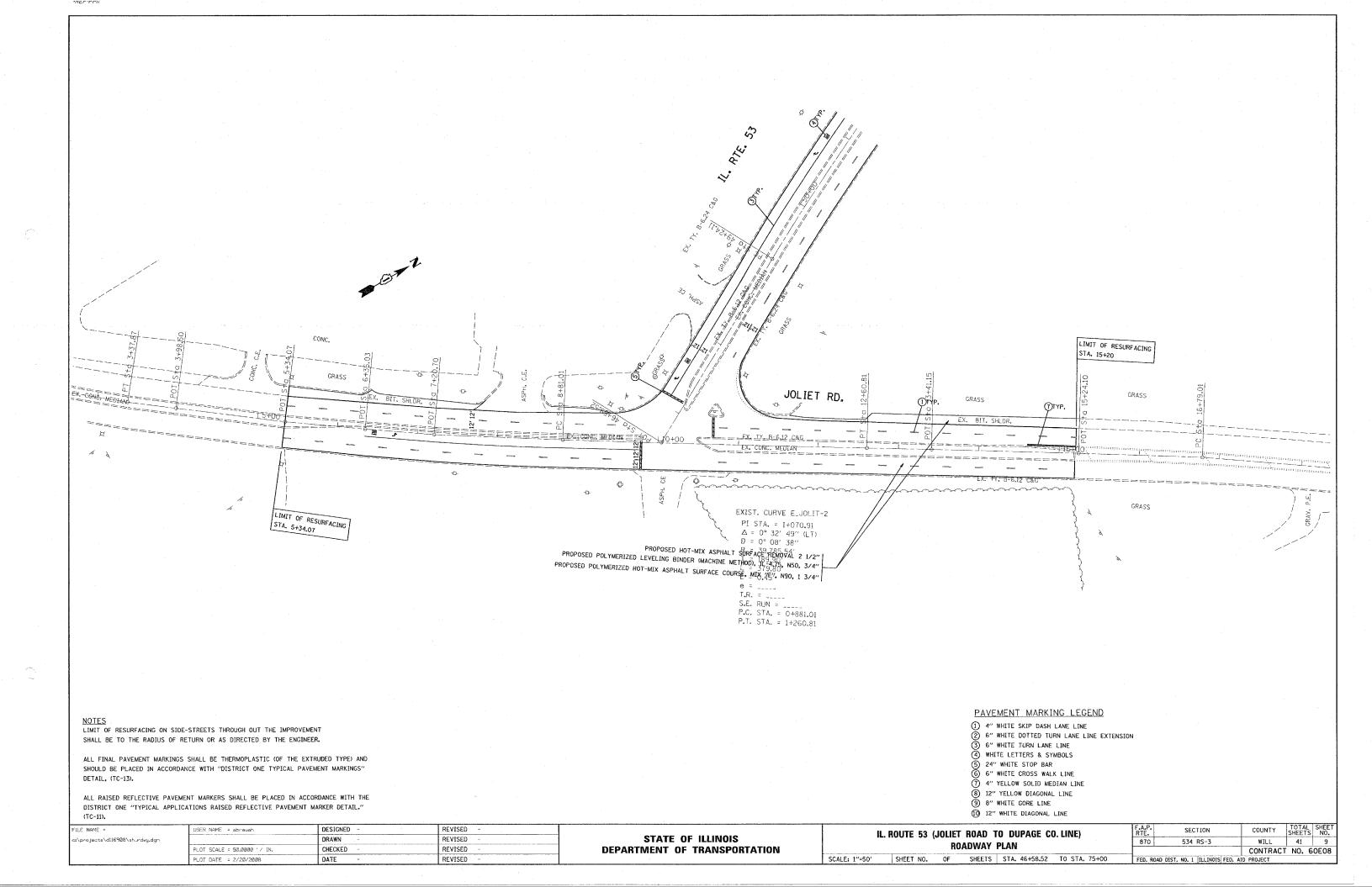
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- (7) EXISTING HMA SHOULDER 8"

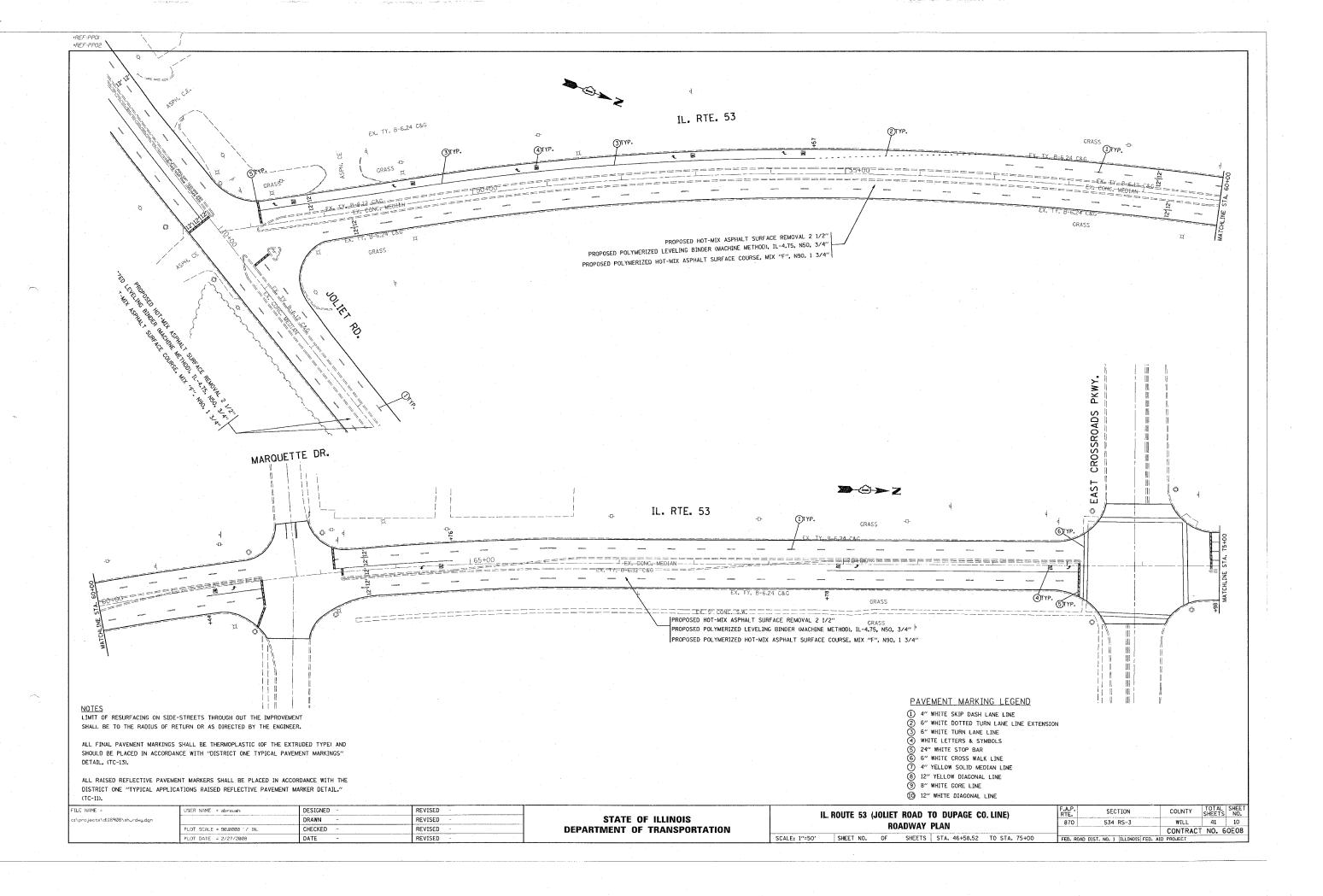
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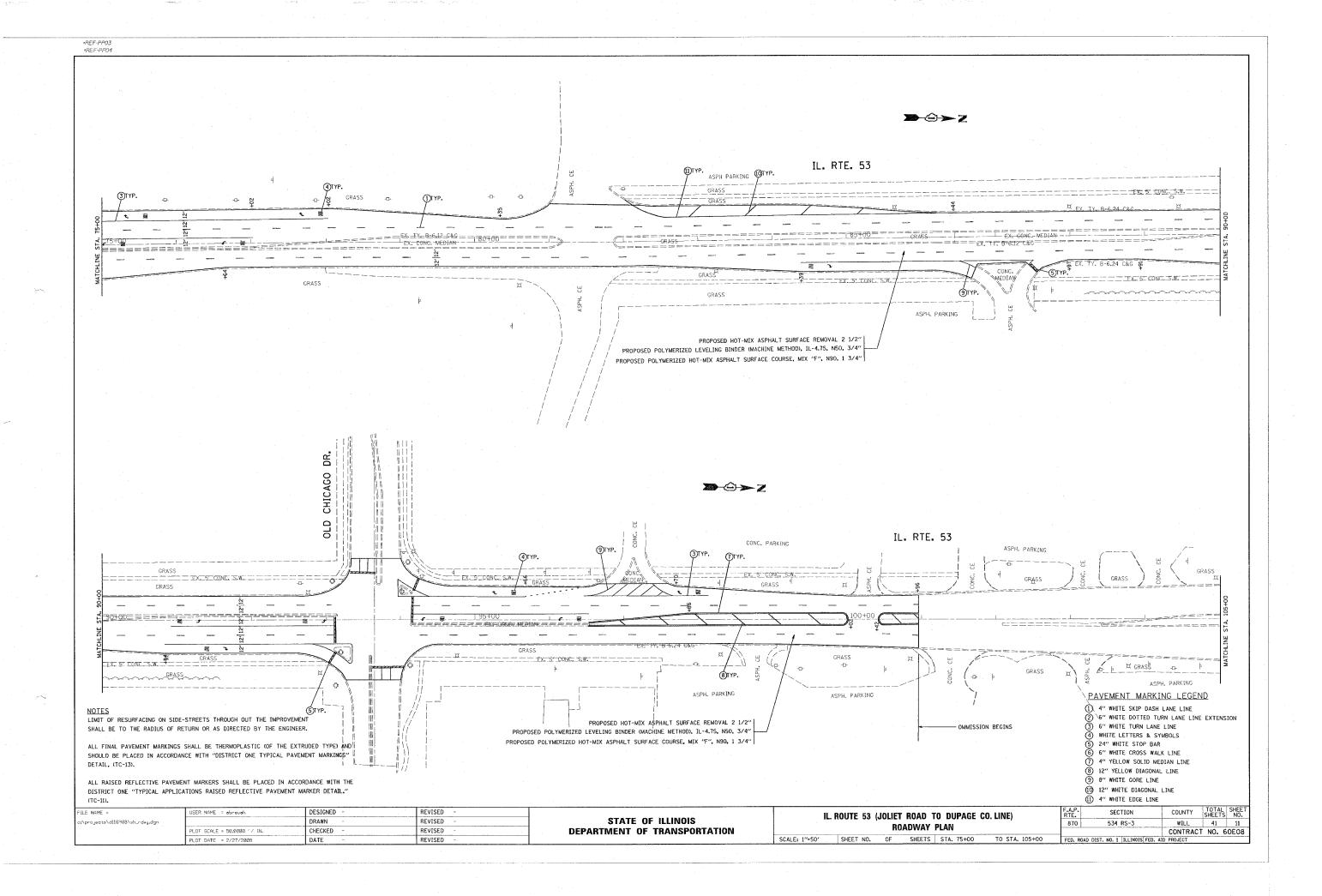
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	PLDT DATE = 2/20/2008	DATE -	REVISED -		SCALE:	SHEET NO. OF SHEETS STA. 17+49 TO STA. 172+53	FED. ROAD DIST. NO. 1   ILLINOIS   FE	D. AID PROJECT

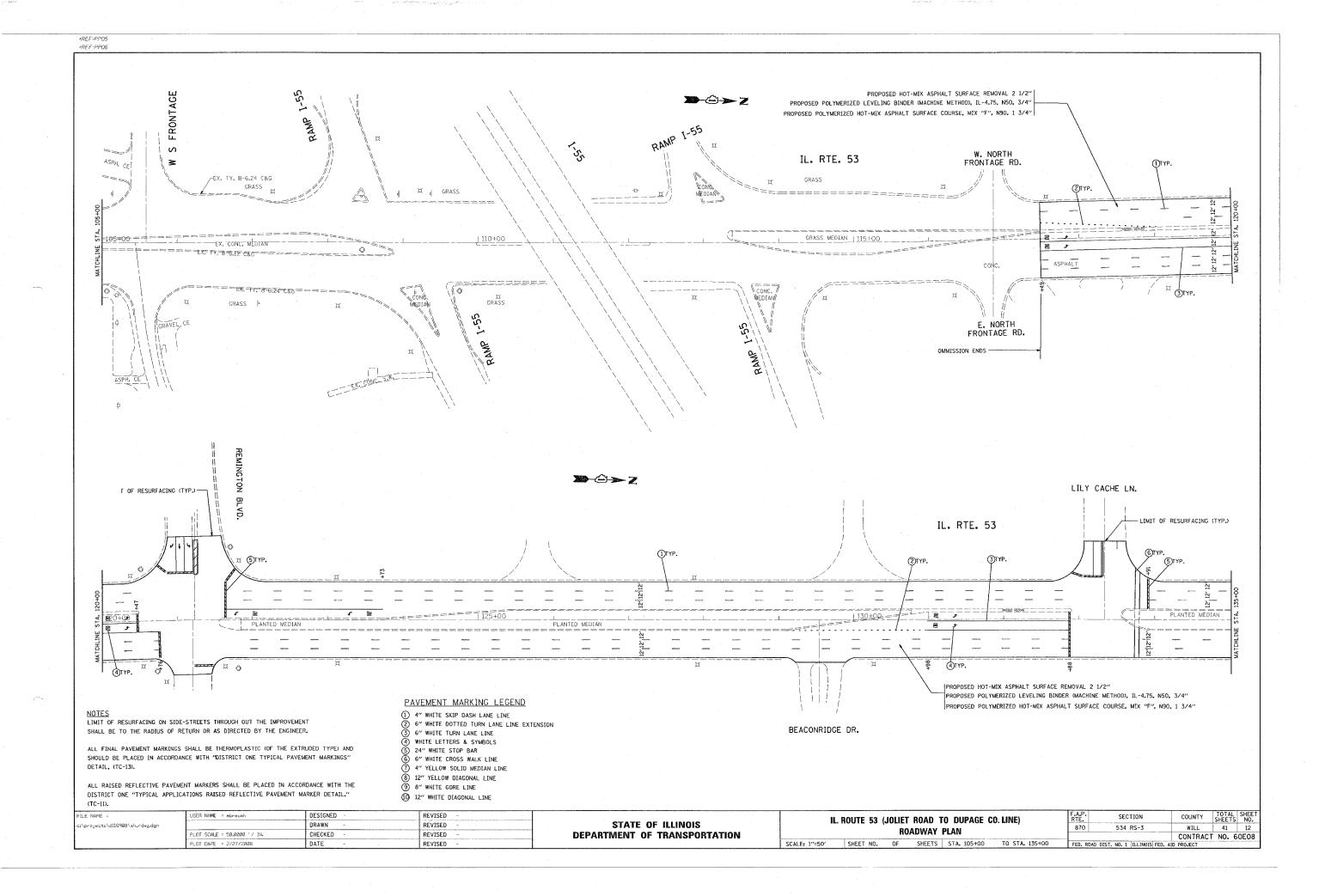


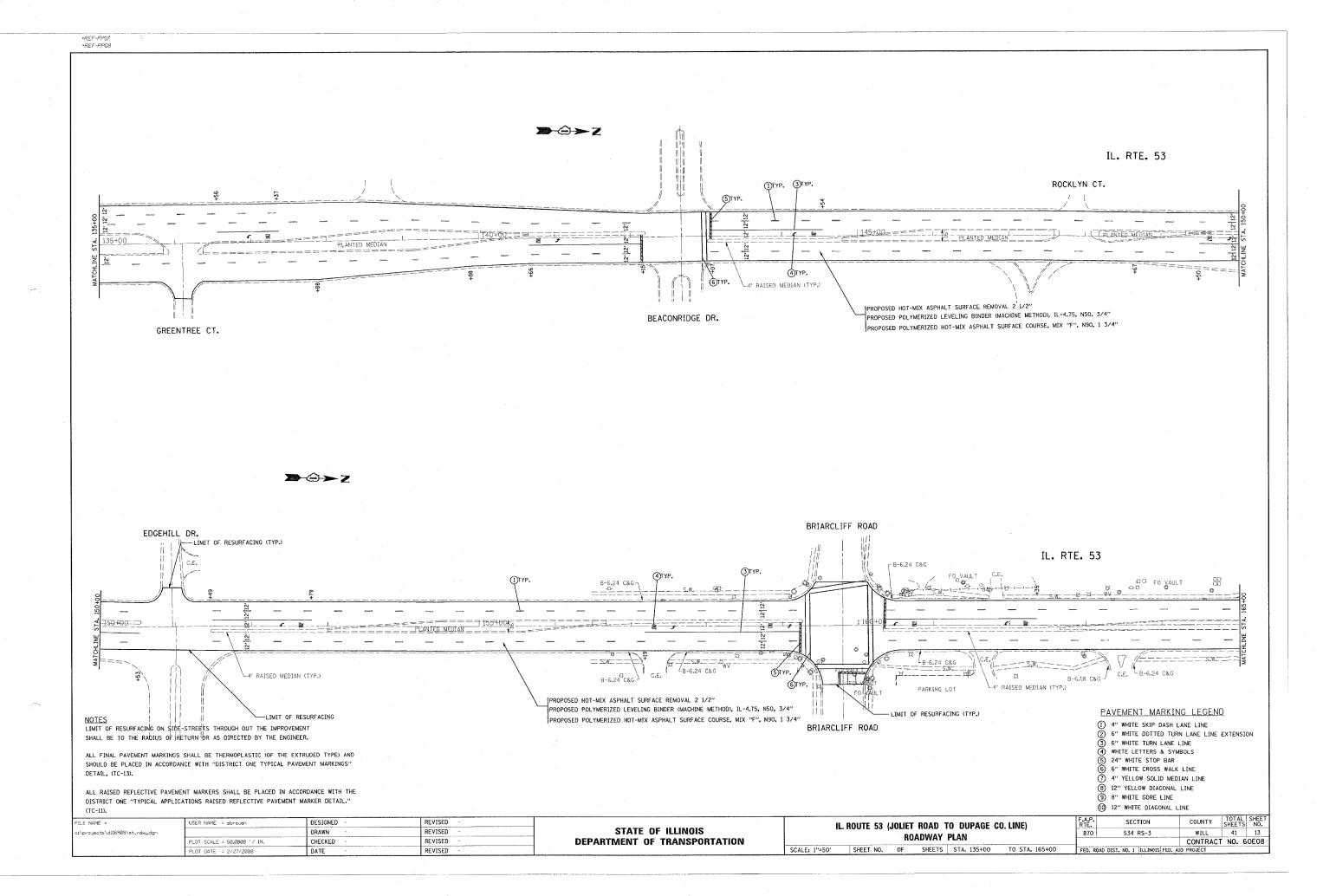


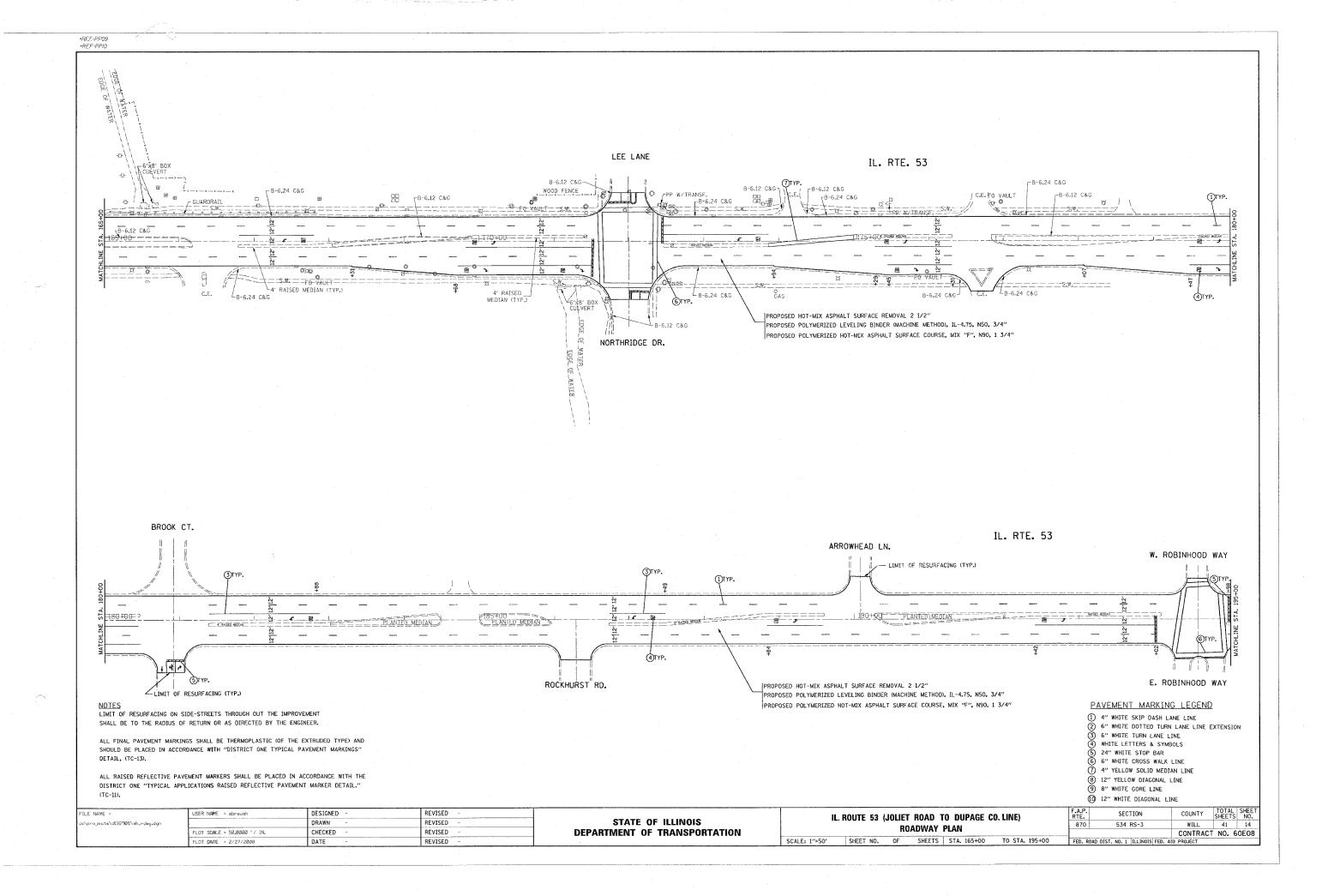


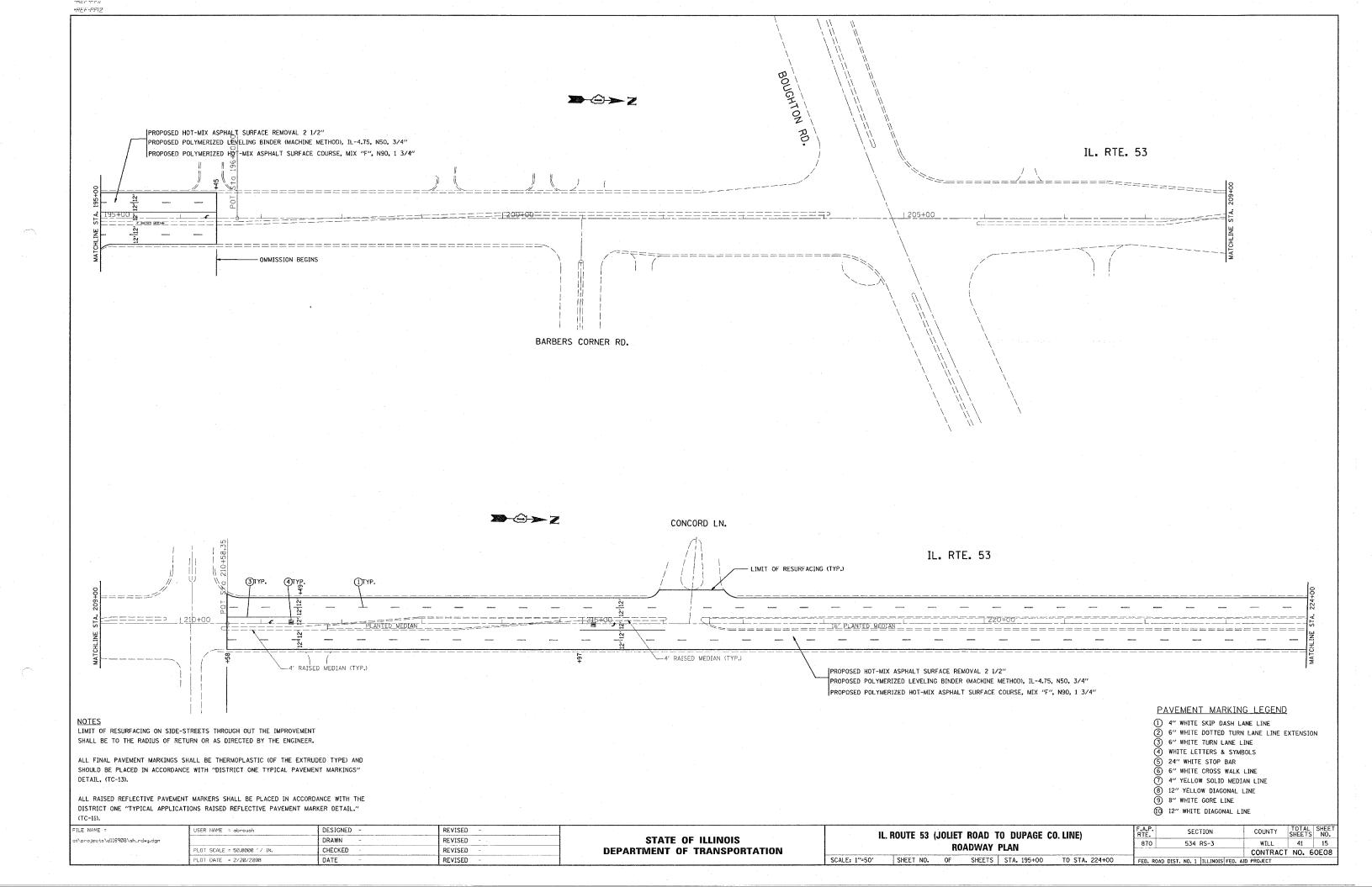


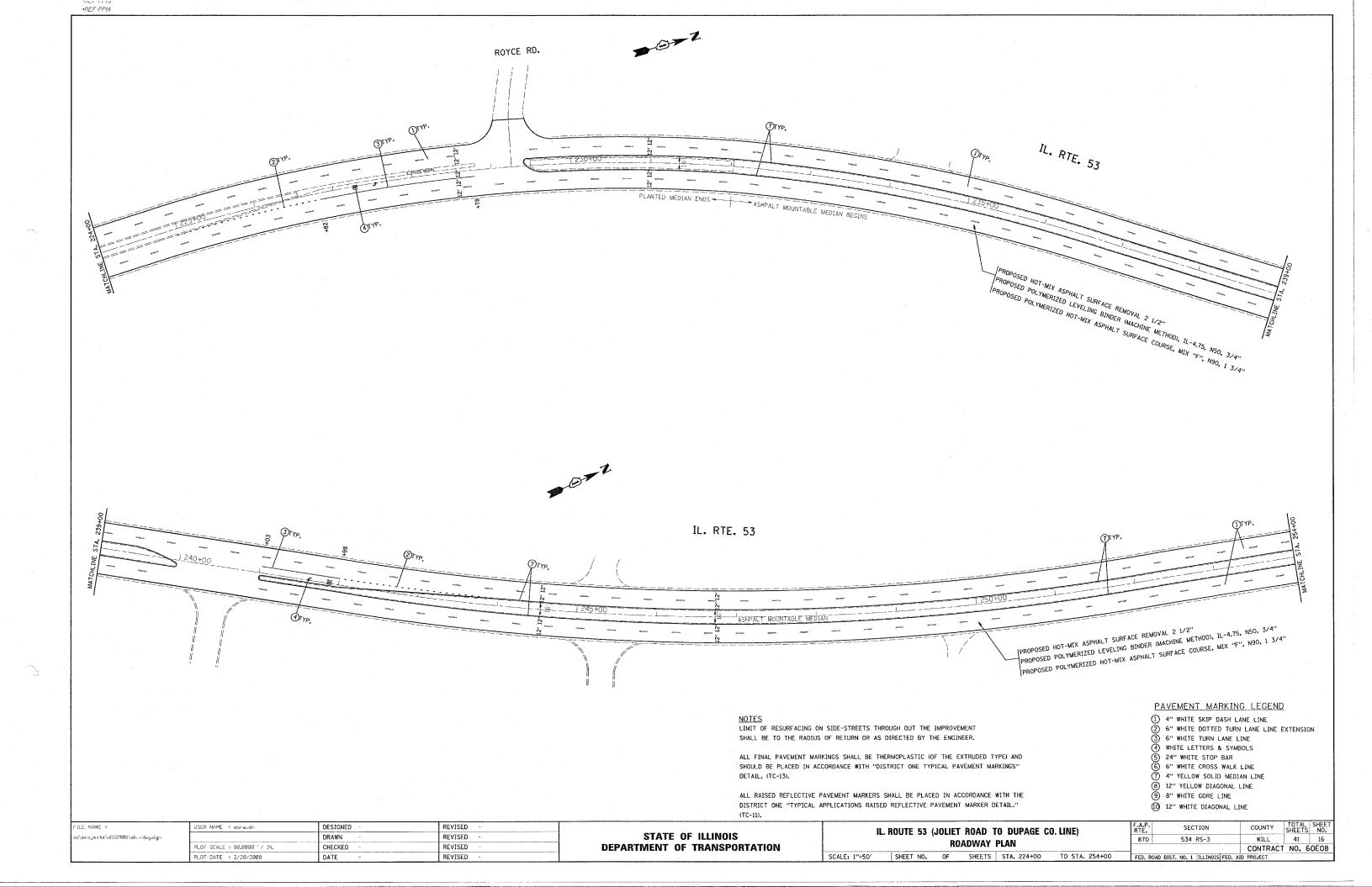


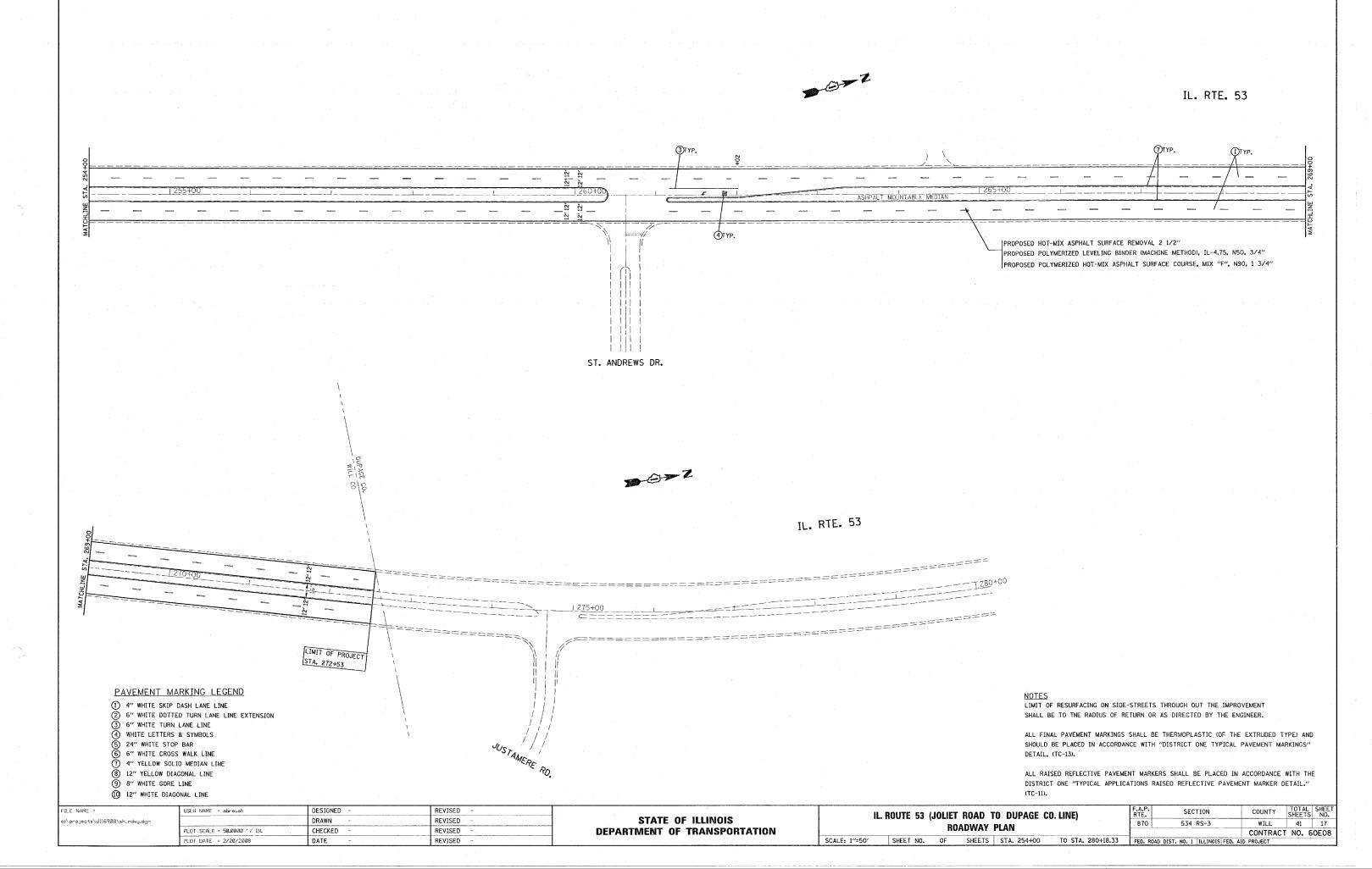


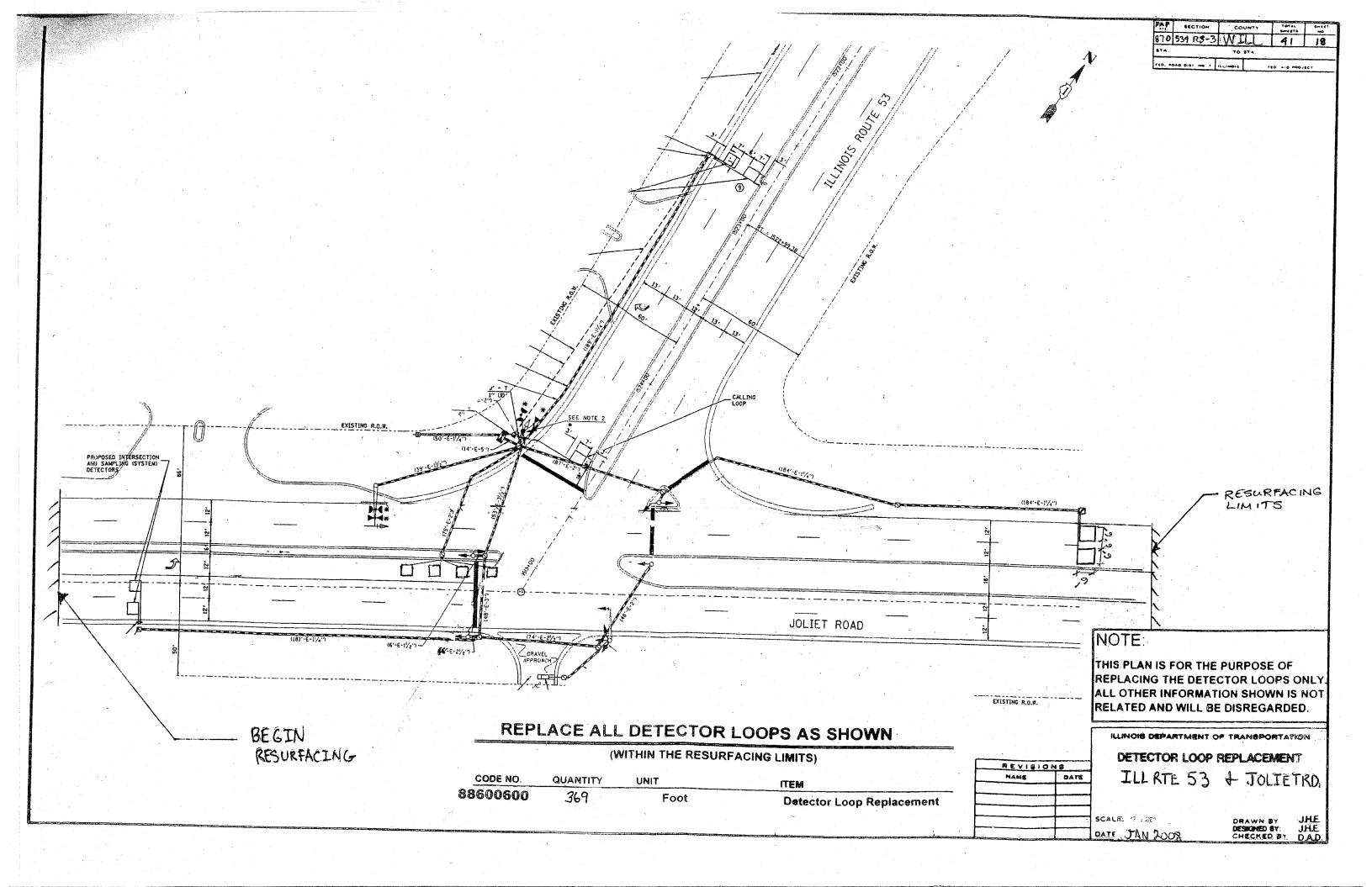


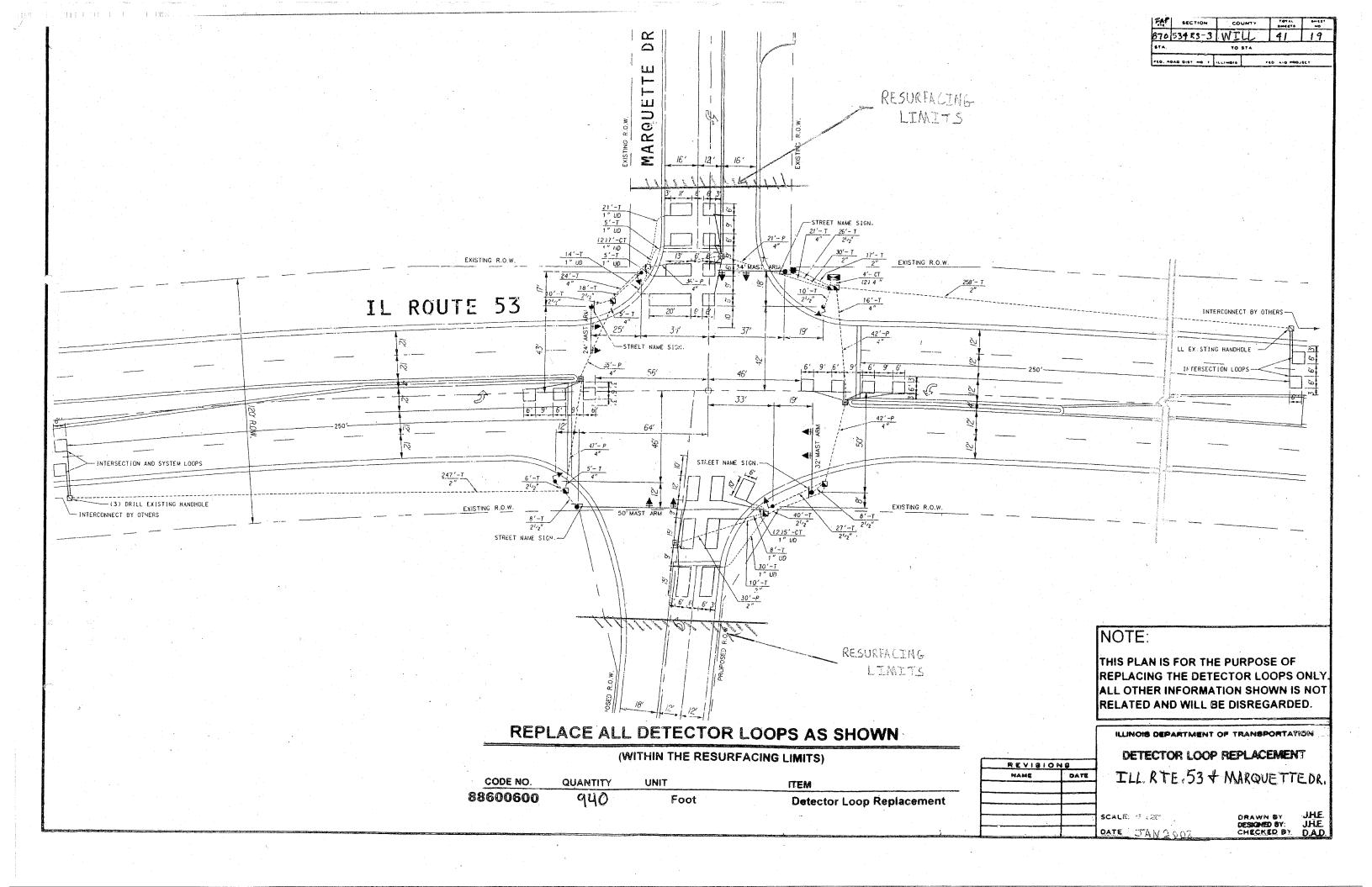


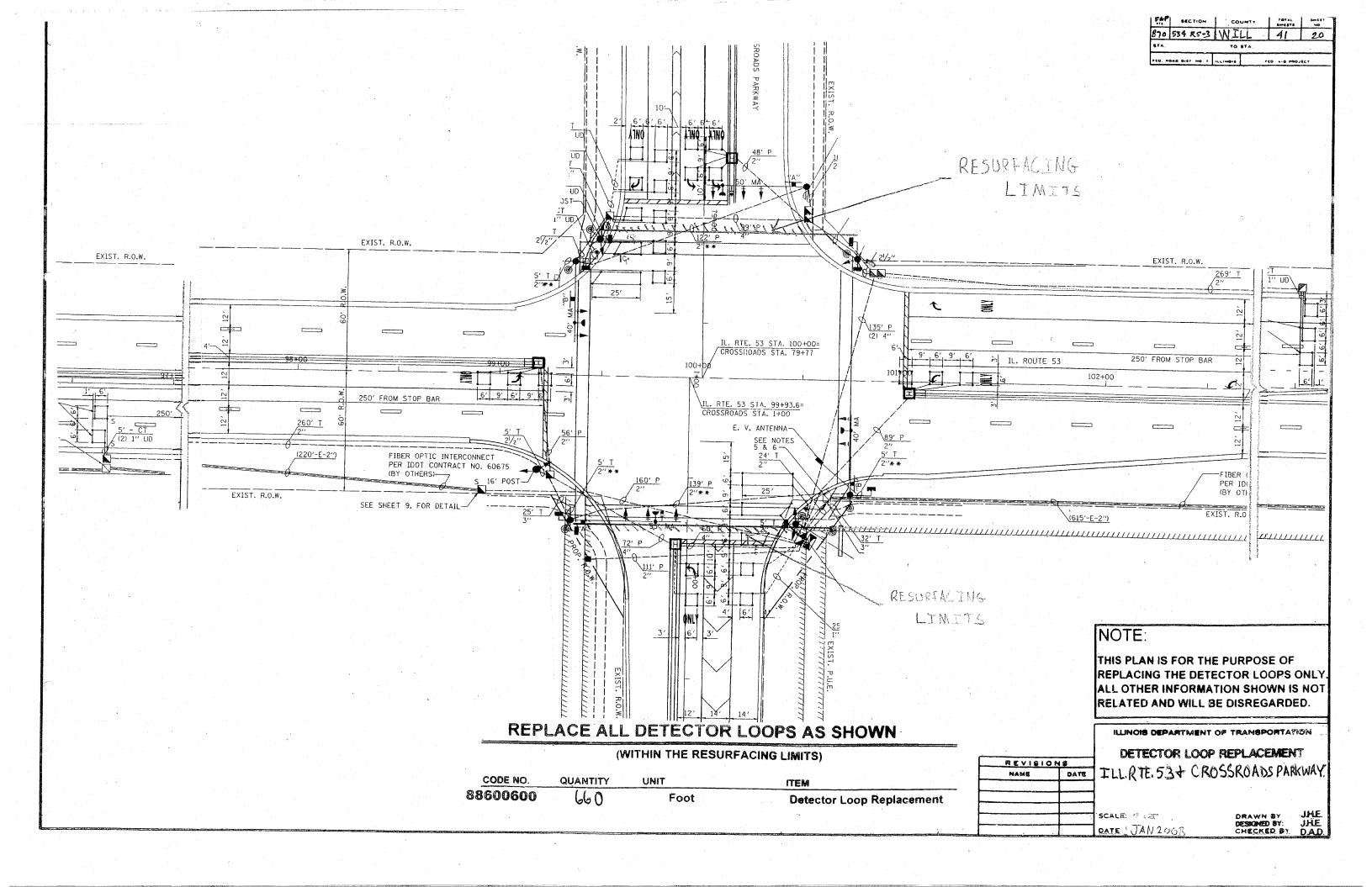


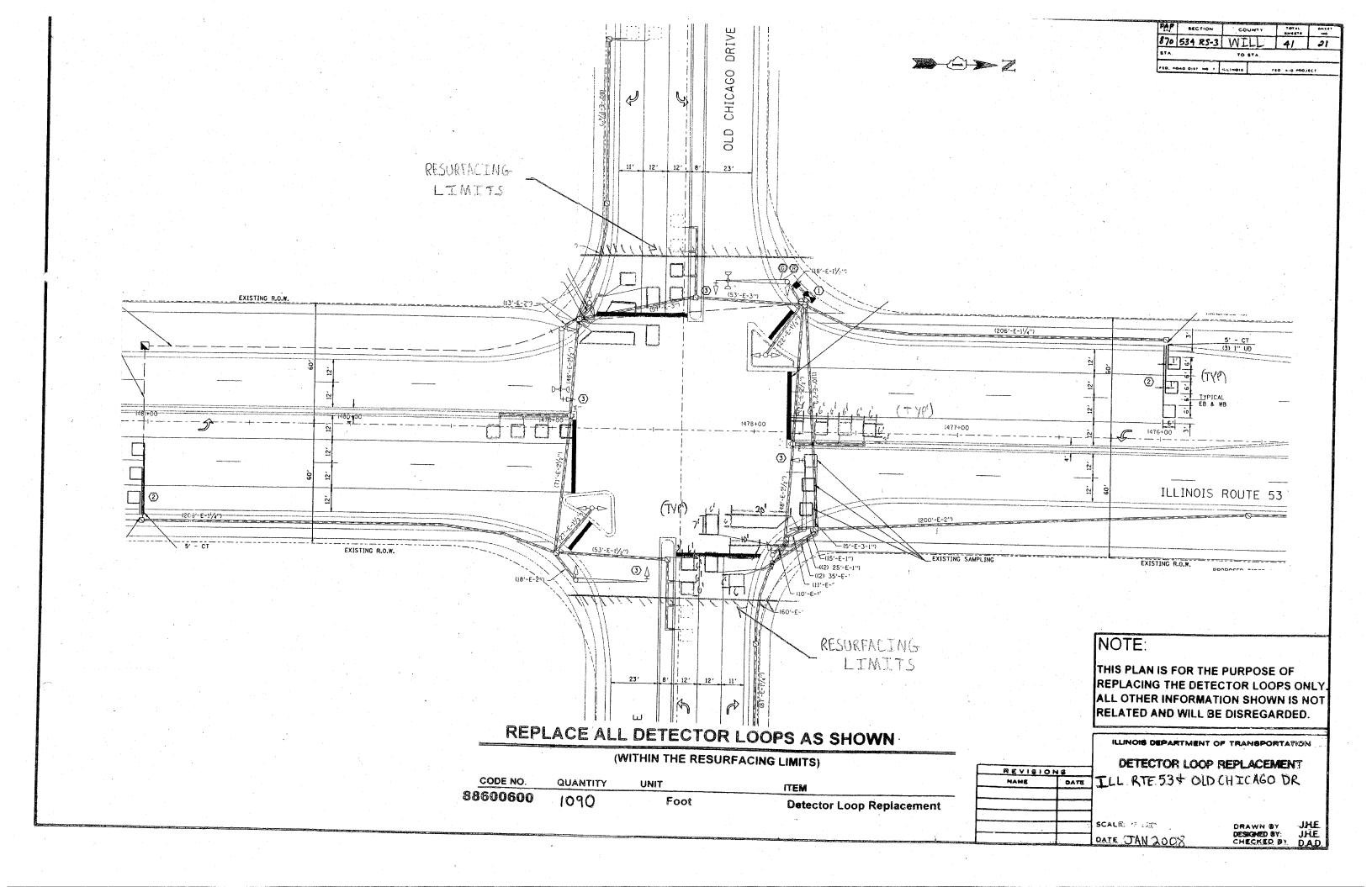


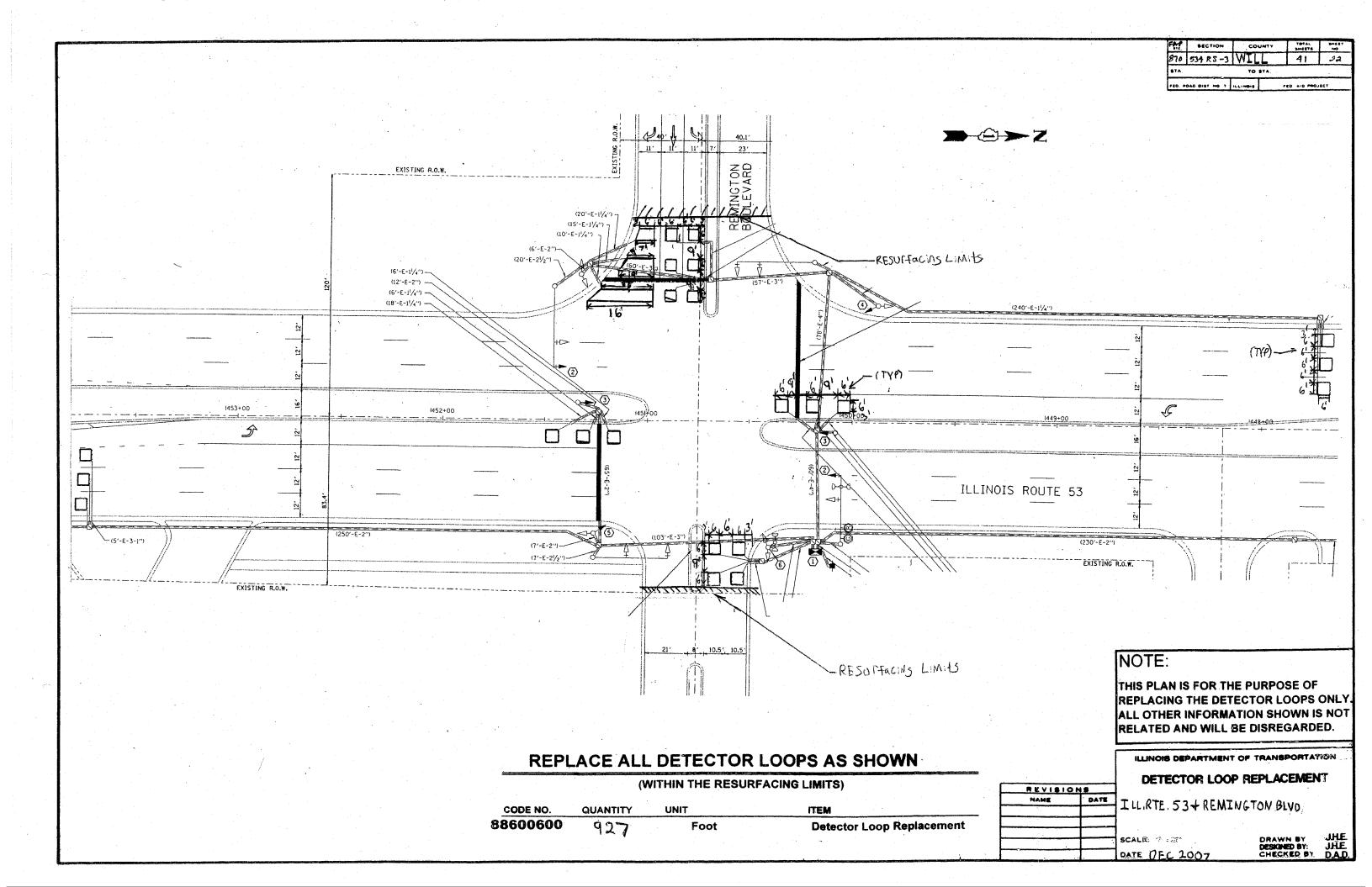


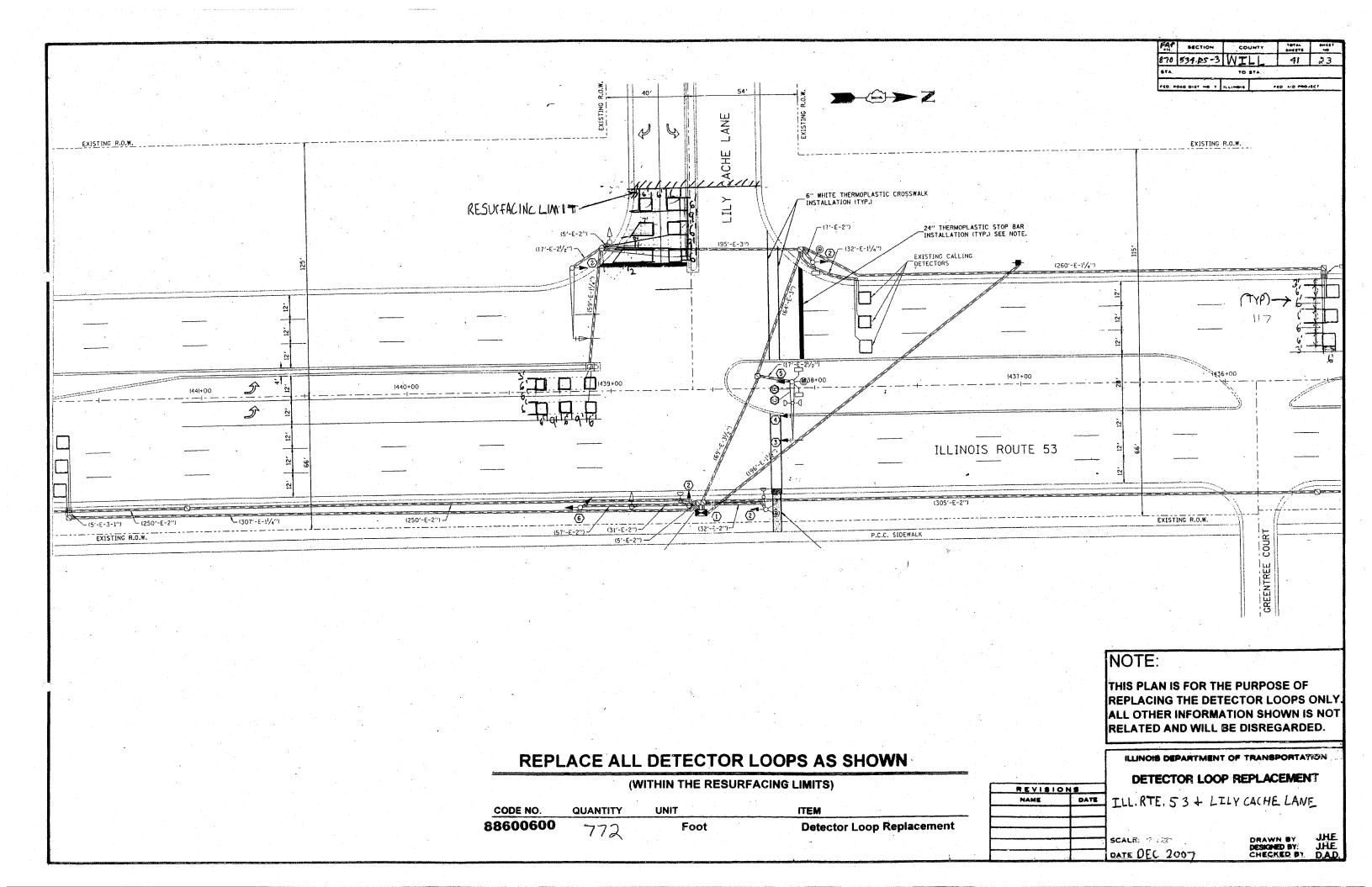


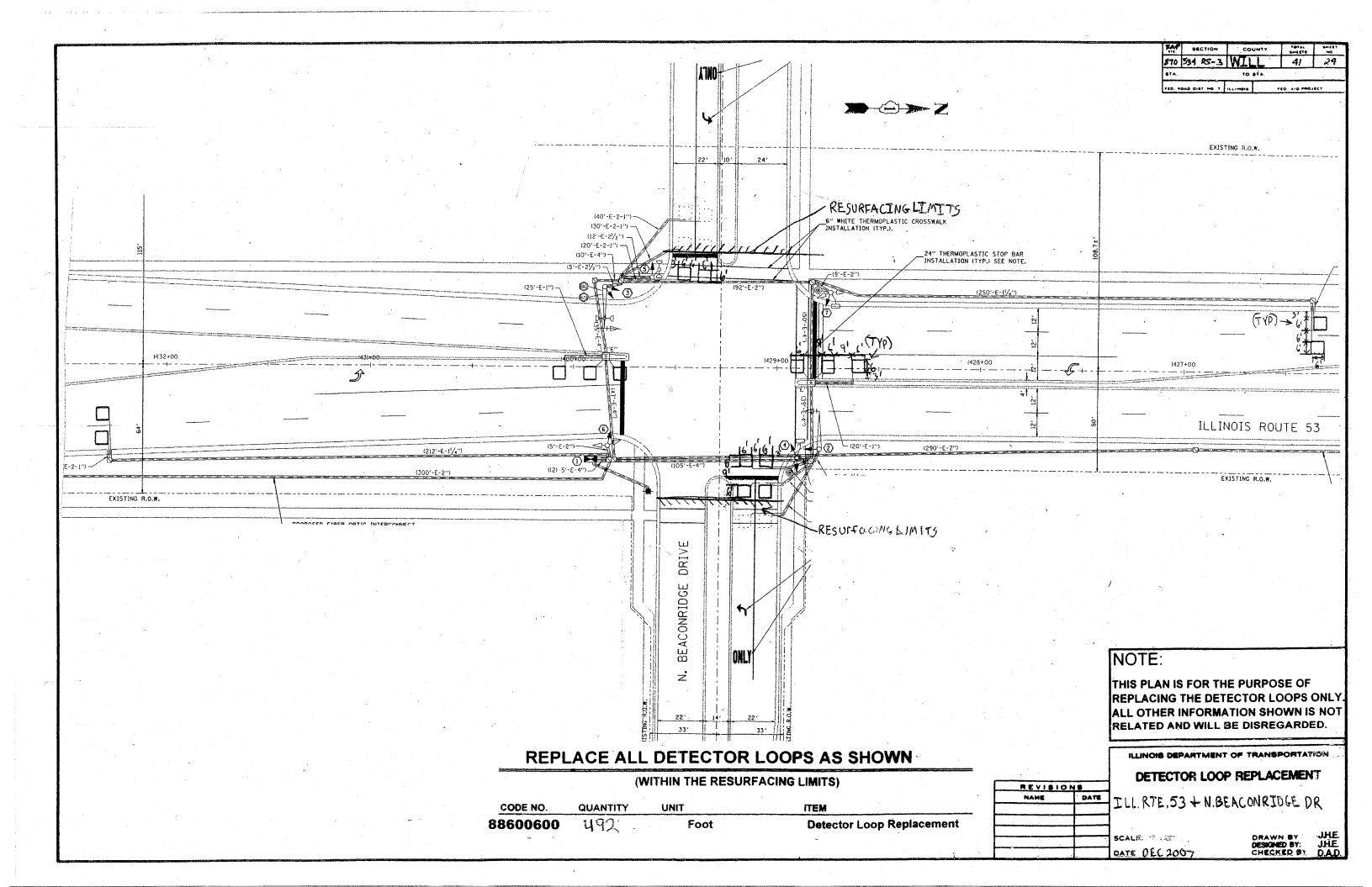


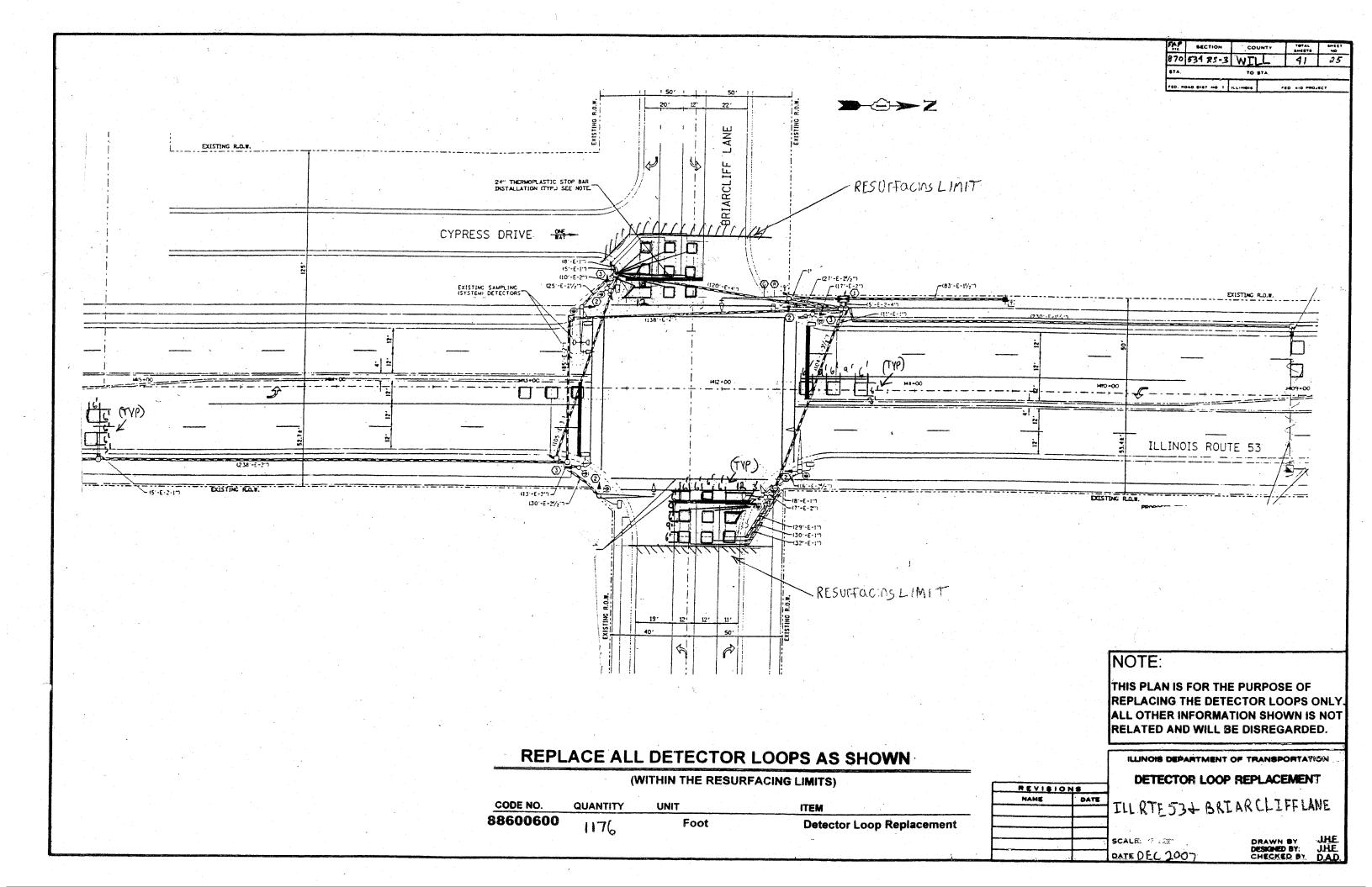


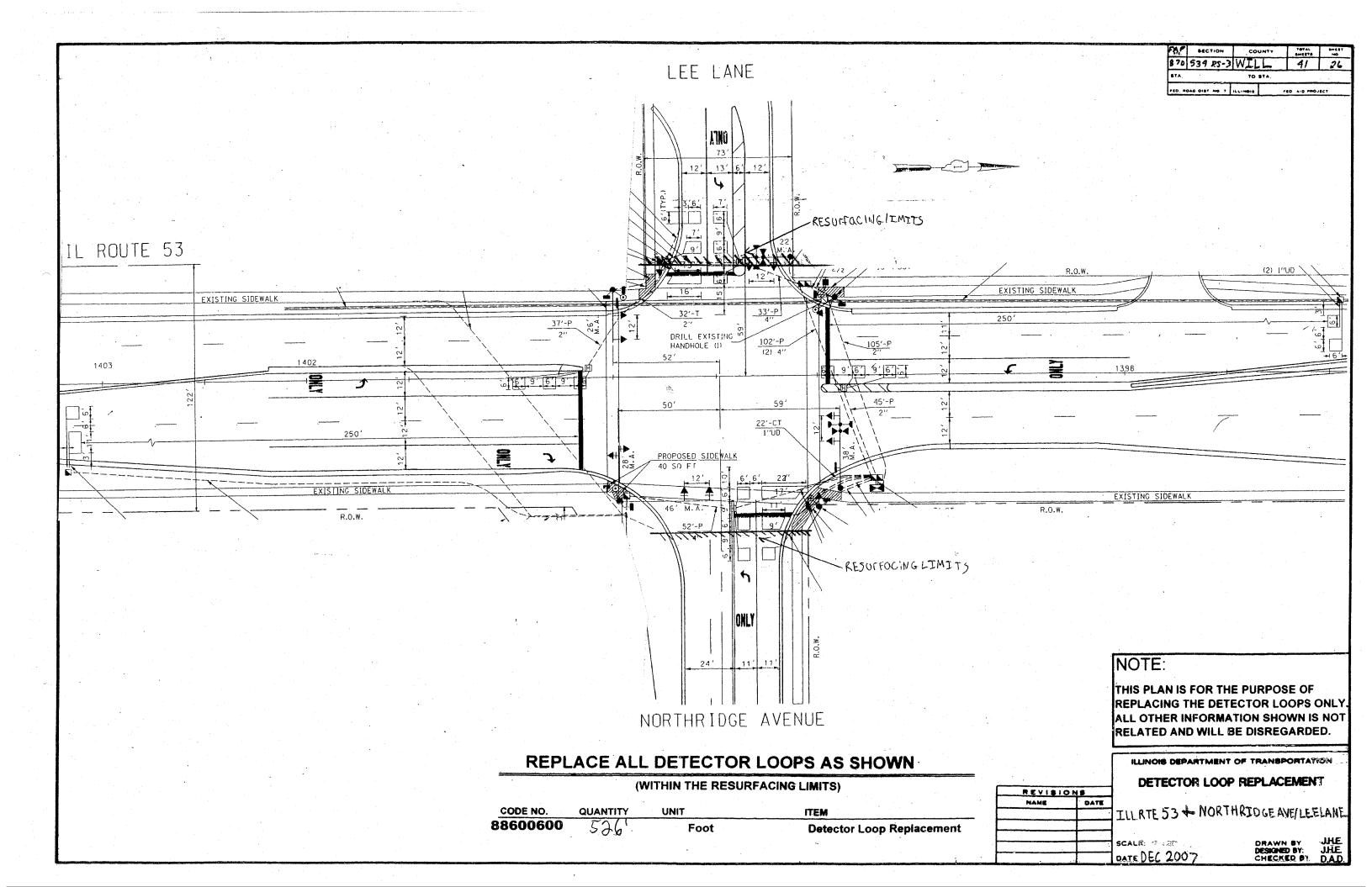


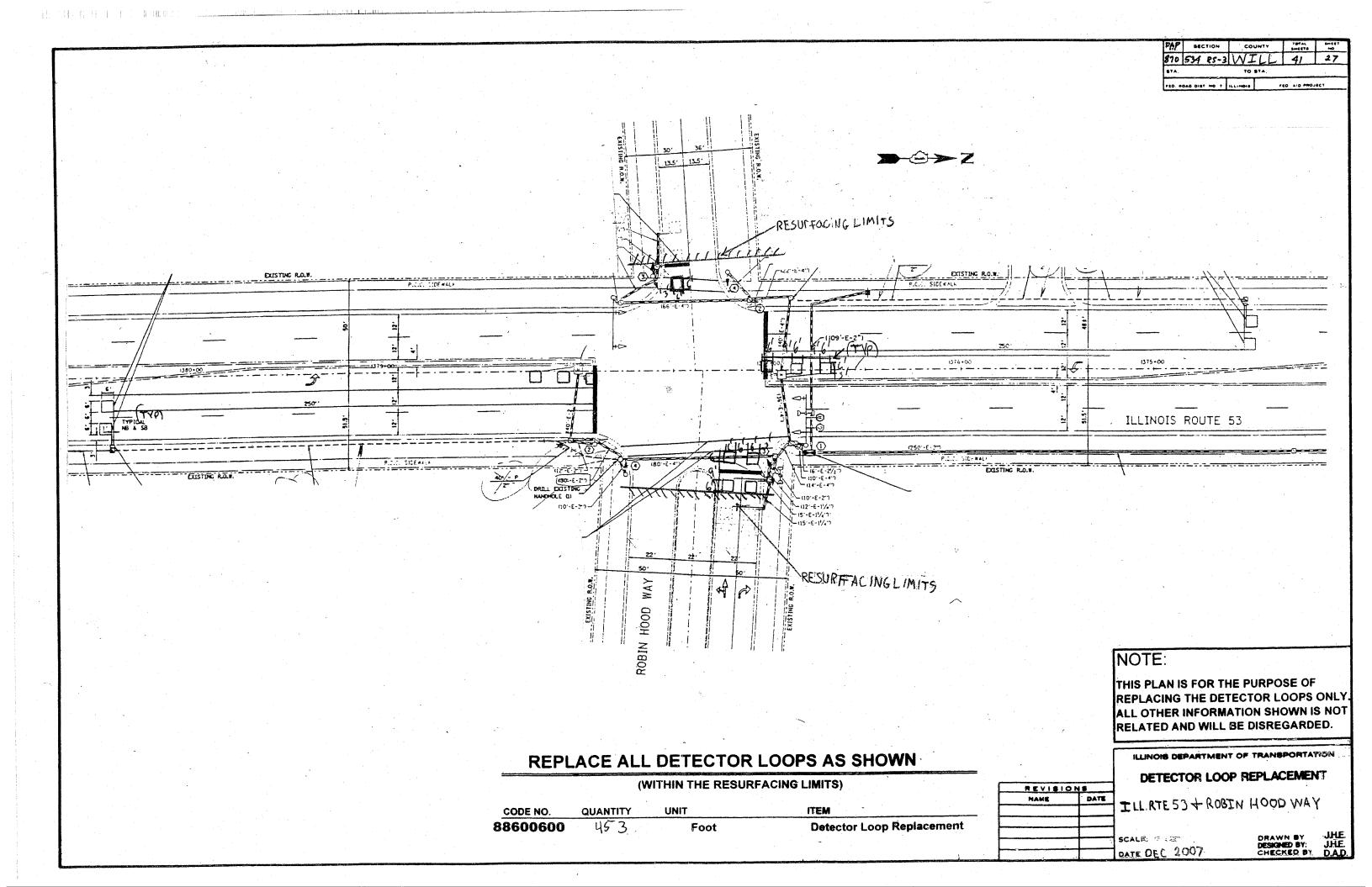


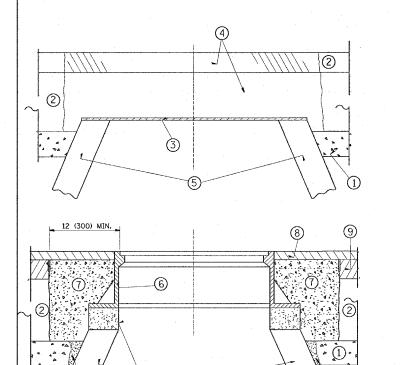












PROPOSED

PROPOSED

SAND FILL

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 CORT OF THE CORRESPONDING PAY ITEM.

NOTES:

BRICK, MORTAR, OR CONC.

#### 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  $1^{1}\!\!/_{2}$  (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
- 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

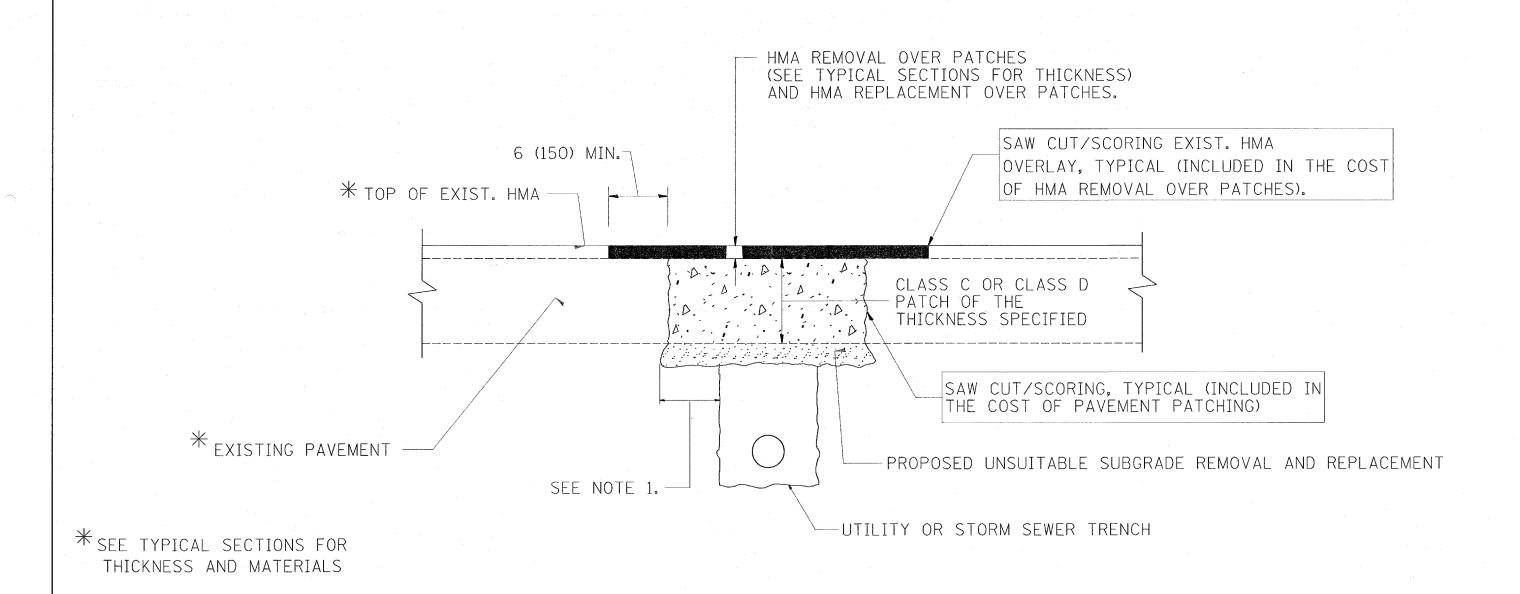
ALL DIMENSIONS ARE IN INCHES (MILLIMETERS) UNLESS OTHERWISE SHOWN

DESIGNED R. SHAH REVISED - R. SHAH 03-10-95 REVISED - A. ABBAS 03-21-97 DRAWN projects/d116908/d116908aa.dgr PLOT SCALE = 50.0000 '/ IN. CHECKED REVISED - R. WIEDEMAN 05-14-04 DATE REVISED - R. BORO 01-01-07 10-25-94

STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION

**DETAILS FOR** FRAMES AND LIDS ADJUSTMENT WITH MILLING SHEET NO. 1 OF 1 SHEETS STA.

COUNTY 534 RS-3 WILL CONTRACT NO. 60E08 BD600-03 (BD-8) FED. ROAD DIST. NO. 1 ILLINOIS FED. AID PROJECT



#### NOTES:

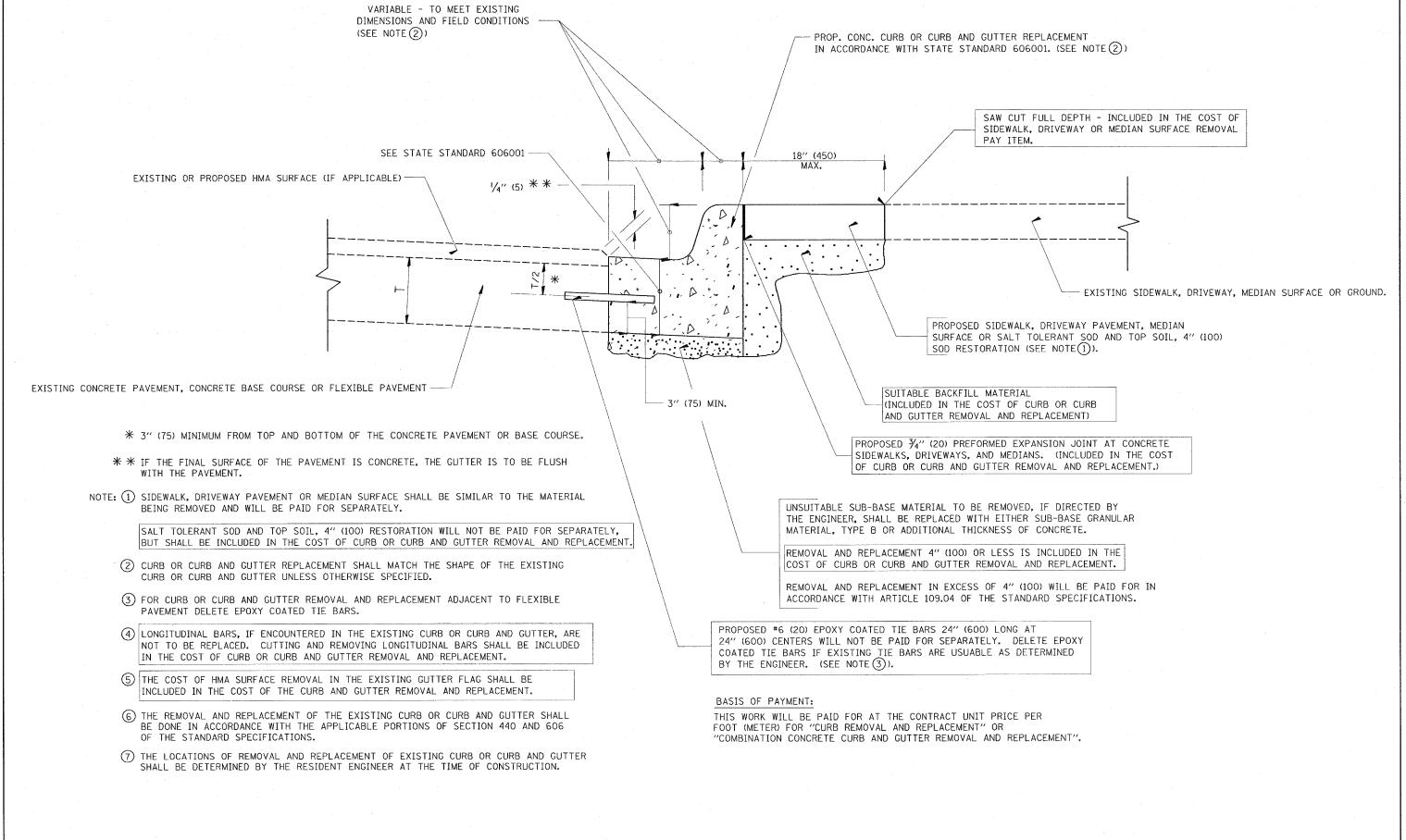
- 1. THE WIDTH OF THE FULL DEPTH PATCH OVER A TRENCH SHALL BE 12 (300) WIDER ON EACH SIDE OF THE TRENCH.
- 2. FOR METHOD OF MEASUREMENT AND BASIS OF PAYMENT, SEE RECURRING SPECIAL PROVISION "PATCHING WITH HOT-MIX ASPHALT OVERLAY REMOVAL".

#### SEQUENCE OF CONSTRUCTION

- 1. REMOVE THE EXISTING HMA MATERIAL OVER THE AREA TO BE PATCHED.
- 2. REMOVE AND REPLACE FULL DEPTH PATCHES
- 3. REPLACE HMA MATERIAL OVER THE AREA TO BE PATCHED.

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

1	FILE NAME =	USER NAME = abrevah	DESIGNED - R. SHAH	REVISED -	A. ABBAS 01-20-98			PAVEMENT PATCHING FOR		F.A.P.	SECTION	COUNTY	TOTAL S	HEET NO.
	c:\projects\d116908\d116908aa.dgn		DRAWN -	REVISED -	A. ABBAS 04-27-98	STATE OF ILLINOIS				870	534 RS-3	WILL	41	29
		PLOT SCALE = 50.0000 // IN.	CHECKED -	REVISED -	R. BORO 01-01-07	DEPARTMENT OF TRANSPORTATION		HMA SURFACED PAVEMENT		BC	040004 (BD22)	CONTRACT	NO. 60	E08
	<u> </u>	PLOT DATE = 2/20/2008	DATE - 10-25-94	REVISED -	R. BORO 09-04-07		SCALE: NONE	SHEET NO. 1 OF 1 SHEETS STA.	TO STA.	FED. ROAD	DIST. NO. 1   ILLINOIS FED. A	AID PROJECT		

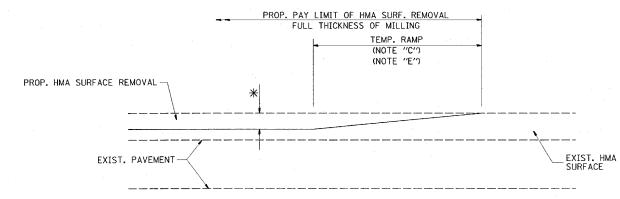


## CURB OR CURB AND GUTTER REMOVAL AND REPLACEMENT

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

FILE NAME =	USER NAME = obrevah	DESIGNED - A. HOUSEH	REVISED - R. SHAH 10-03-96			
c:\projects\d116908\d116908aa.dgn		DRAWN -	REVISED - A. ABBAS 03-21-97	STATE OF ILLINOIS		
	PLOT SCALE = 50.0000 '/ IN.	CHECKED -	REVISED - M. GOMEZ 01-22-01	DEPARTMENT OF TRANSPORTATION		
*	PLOT DATE = 2/20/2008	DATE - 03-11-94	REVISED - R. BORO 01-01-07		SCALE: NONE	SHEE

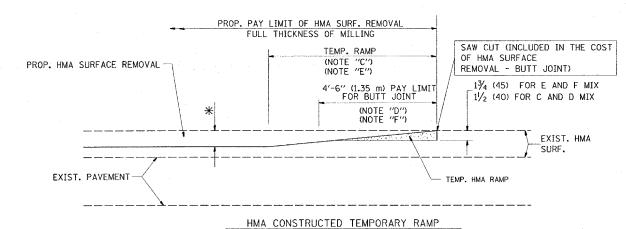
	CURB OR CURB AN	F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.		
REMOVAL AND REPLACEMENT					534 RS-3	WILL	41	30
					BD600-06 (BD-24) CONTRACT NO. 608			
NE	SHEET NO. 1 OF 1 SHEETS	STA.	TO STA.	FED. ROA	D DIST. NO. 1 ILLINOIS FED. A	ID PROJECT		



MILLED TEMPORARY RAMP

(FOR BUTT JOINT AND HMA TAPER SEE DETAIL BELOW)

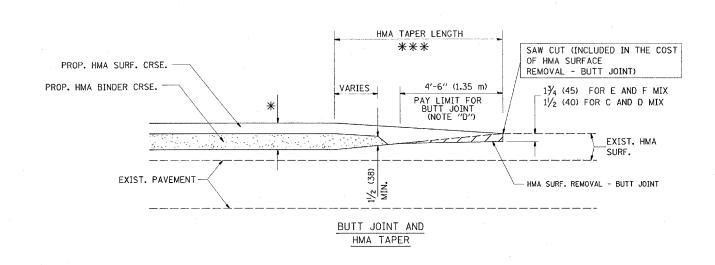
#### OPTION 1



(FOR BUTT JOINT AND HMA TAPER SEE DETAIL BELOW)

#### OPTION 2

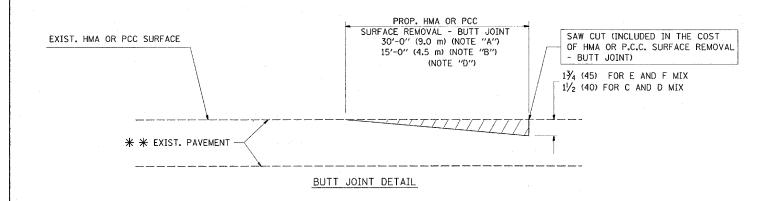
#### TYPICAL TEMPORARY RAMP

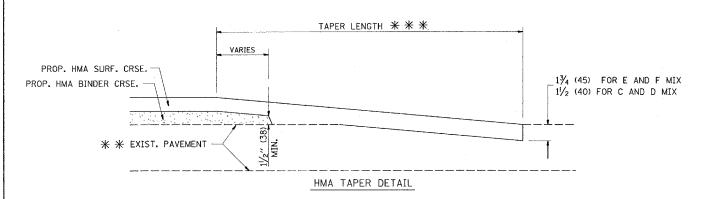


## TYPICAL BUTT JOINT AND HMA TAPER FOR MILLING AND RESURFACING

DESIGNED - M. DE YONG REVISED - R. SHAH 10-25-94 FILE NAME = JSER NAME: = abreuch :\projects\d116908\d116908aa.dgn DRAWN REVISED - A. ABBAS 03-21-97 LOT SCALE = 50.0000 '/ IN. CHECKED REVISED M. GOMEZ 04-06-01 PLOT DATE = 2/20/2008 DATE 06-13-90 REVISED R. BORO 01-01-07

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION





# TYPICAL BUTT JOINT AND HMA TAPER FOR RESURFACING ONLY

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

#### NOTES

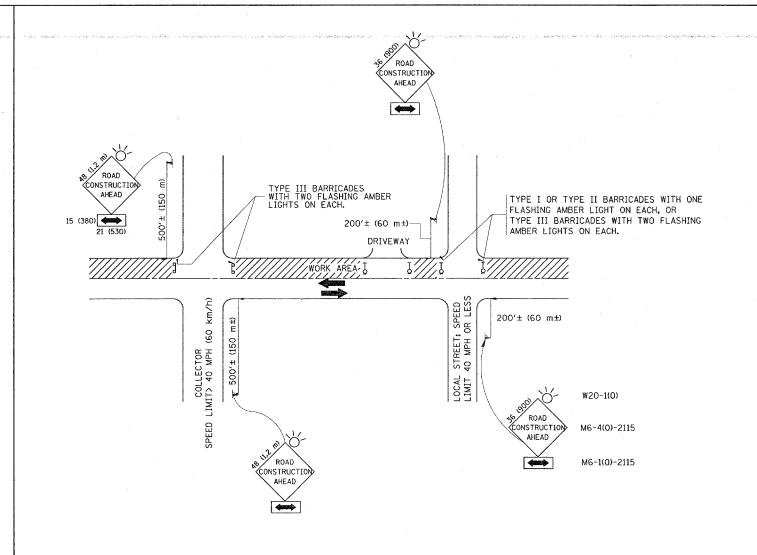
- A: MAINLINE ROADWAYS AND MAJOR SIDE ROADS.
- B: MINOR SIDE ROADS.
- C: THE TEMP, RAMP SHALL BE CONSTRUCTED IMMEDIATELY UPON REMOVAL OF THE EXISTING HMA SURFACE.
- D: THE BUTT JOINT SHALL BE CONSTRUCTED IMMEDIATELY PRIOR TO PLACING THE PROPOSED HMA COURSES.
- E: TAPER THE TEMP. RAMP AT A RATE OF 3'-0" (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.

#### 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: NONE

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



#### 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:
- d) 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:
- a) ONE ROAD CONSTRUCTION AHEAD SIGN 48 × 48 (1.2 m × 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 (M6-1) SHALL BE USED IN LIEU OF THE DOUBLE HEADED ARROW (M6-4).

SCALE: NONE

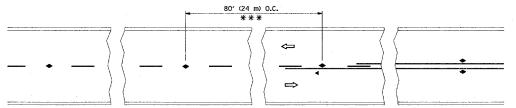
- B. FOR A LANE CLOSURE ON A SIDE ROAD OR DRIVEWAY:
- USE APPLICABLE PORTIONS OF THE TYPICAL APPLICATION OF TRAFFIC CONTROL DEVICES (STD. 701501, STD. 701606 OR THE APPROPRIATE STANDARD). THE SPACING OF SIGNS AND BARRICADES SHALL BE ADJUSTED FOR FIELD CONDITIONS AS DIRECTED BY THE ENGINEER. THE DIRECTIONAL 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.

1 ,			
FILE NAME =	USER NAME = abrevah	DESIGNED - LHA	REVISED - J. OBERLE 10-18-95
c:\projects\d116908\d116908aa.dgn		DRAWN -	REVISED - A. HOUSEH 03-06-96
	PLOT SCALE = 50.00000 '/ IN.	CHECKED -	REVISED - A. HOUSEH 10-15-96
	PLOT DATE = 2/20/2008	DATE 06-89	REVISED -T. RAMMACHER 01-06-00

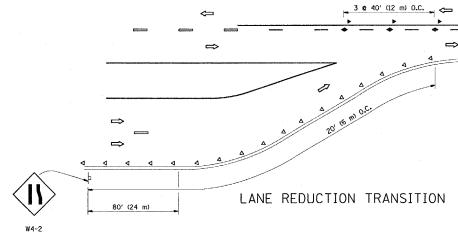
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

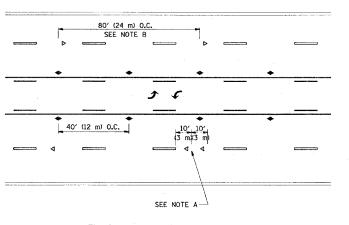
TRA	AFFI	C	CONTR	OL AND	PROTEC	TION	FOR		
SIDE	ROA	D	S, INTE	RSECTION	IS, AND	DRIV	EWAYS		
SHEET	NO.	1	OF 1	SHEETS	STA.			ſΟ	STA.



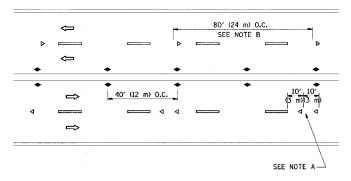
\*\*\* REDUCE TO 40' (12 m) O.C. ON CURVES WITH POSTED OR ADVISORY SPEED 45 M.P.H. (70 km/h) OR LESS.

TWO-LANE/TWO-WAY

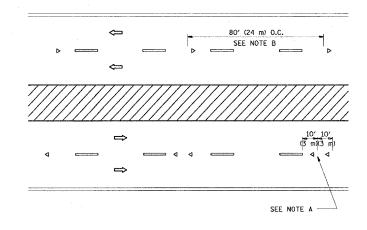




TWO-WAY LEFT TURN



MULTI-LANE/UNDIVIDED



MULTI-LANE/DIVIDED

#### GENERAL NOTES

- 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.
- 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

- 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

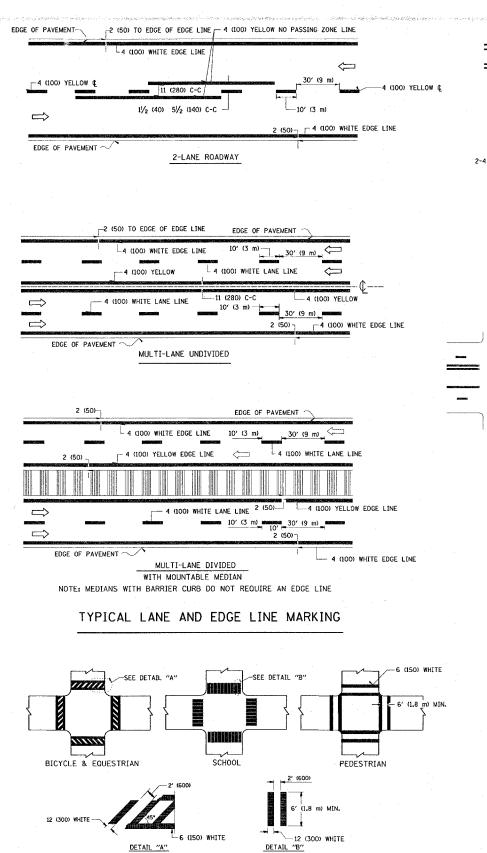
- 1. DOUBLE LANE LINE MARKERS SHALL BE USED UNLESS SPECIFIED OTHERWISE.
- 2. EXCEPT AS SHOWN ON THE LANE REDUCTION TRANSITION AND FREEWAY EXIT RAMP DETAIL, MARKERS ARE NOT TO BE SPECIFIED ON RIGHT EDGE LINES.
- 3. THE EXACT MARKER LIMITS, SPACING, AND COLOR SHOULD BE INCLUDED IN THE PLANS.
- MARKERS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

3 @ 80' (24 m) O.C.	ê 8 8 40' (12 m)	MINIMUM OF 3 W EQUALLY SPACED	Ê ⊙ 	30′ (24 m) O.C.
*	0.C. **  40' (12 m)	# SEE TWO-LANE/TWO-WAY WHERE MARK  ** WHERE THE MEDIAN WIDTH IS 6' (2) IN INC.	O.C. *  KERS CONTINUE	<b>₽</b>

LEFT TURN

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

FILE NAME =	USER NAME = abrewah	DESIGNED -	REVISED - T. RAMMACHER 09-19-94			TYPICAL APPLICATIONS		F.A.P.	SECTION	COUNTY	TOTAL SHEE
c:\projects\dll6908\dll6908aa.dgn		DRAWN -	REVISED - T. RAMMACHER 03-12-99	STATE OF ILLINOIS	RAISED REFLECTIVE PAVEMENT MARKERS (SNOW-PLOW RESISTANT)		870	534 RS-3	WILL	41 3:	
	PLOT SCALE = 50.0000 '/ IN.	CHECKED ~	REVISED T. RAMMACHER 01-06-00	DEPARTMENT OF TRANSPORTATION				TC-11	CONTRACT	NO. 60E0	
	PLGT DATE = 2/20/2008	DATE -	REVISED -		SCALE: NONE	SHEET NO. 1 OF 1 SHEETS STA.	TO STA.	FED. ROAD DI	IST. NO. 1 ILLINOIS FED. A	AID PROJECT	



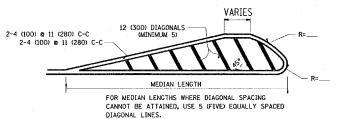
2-4 (100) YELLOW @ 11 (280) C-C

NO DIAGONALS

4' (1.2 m) OUTSIDE TO OUTSIDE OF LINES

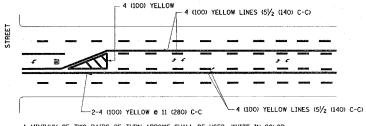
2-4 (100) YELLOW @ 11 (280) C-C

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

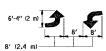


DIAGONAL LINE SPACING: 50' (15 m) C-C (LESS THAN 30MPH (50 km/h))
75' (25 m) C-C 30MPH (50 km/h) TO 45MPH (70 km/h))
150' (45 m) C-C (MORE THAN 45MPH (70 km/h))

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

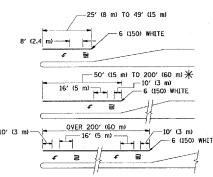


A MINIMUM OF TWO PAIRS OF TURN ARROWS SHALL BE USED, WHITE IN COLOR. ADDITIONAL PAIRS SHALL BE PLACED AT 200' (60 m) TO 300' (90 m) INTERVALS.



MEDIAN WITH TWO-WAY LEFT TURN LANE

#### TYPICAL PAINTED MEDIAN MARKING

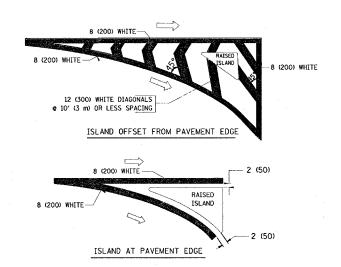


FULL SIZE LETTERS 8' (2.4 m) AND ARROWS SHALL BE USED.  $\P$  AREA = 15.6 SO. FT. (1.5 m² )  $\Pi$  AREA = 20.8 SQ. FT. (1.9 m²)

\*\* 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

			p	
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' (GOO) 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; 51/2 (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 CROSSWALK, IF PRESENT. OTHERWISE, PLACE AT DESIRED STOPPING POINT. PARALLEL TO CROSSROAD CENTERLINE, WHERE POSSIBLE
PAINTED MEDIANS	2 @ 4 (100) WITH 12 (300) DIAGONALS	SOLID	YELLOW: TWO WAY TRAFFIC	11 (280) C-C FOR THE DOUBLE LINE
·	© 45° NO DIAGONALS USED FOR 4' (1,2 m) WIDE MEDIANS		WHITE: ONE WAY TRAFFIC	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 0F: "R"=3.6 SQ. FT. (0.33 m <sup>2</sup> ) EACH "X"=54.0 SQ. 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 (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.

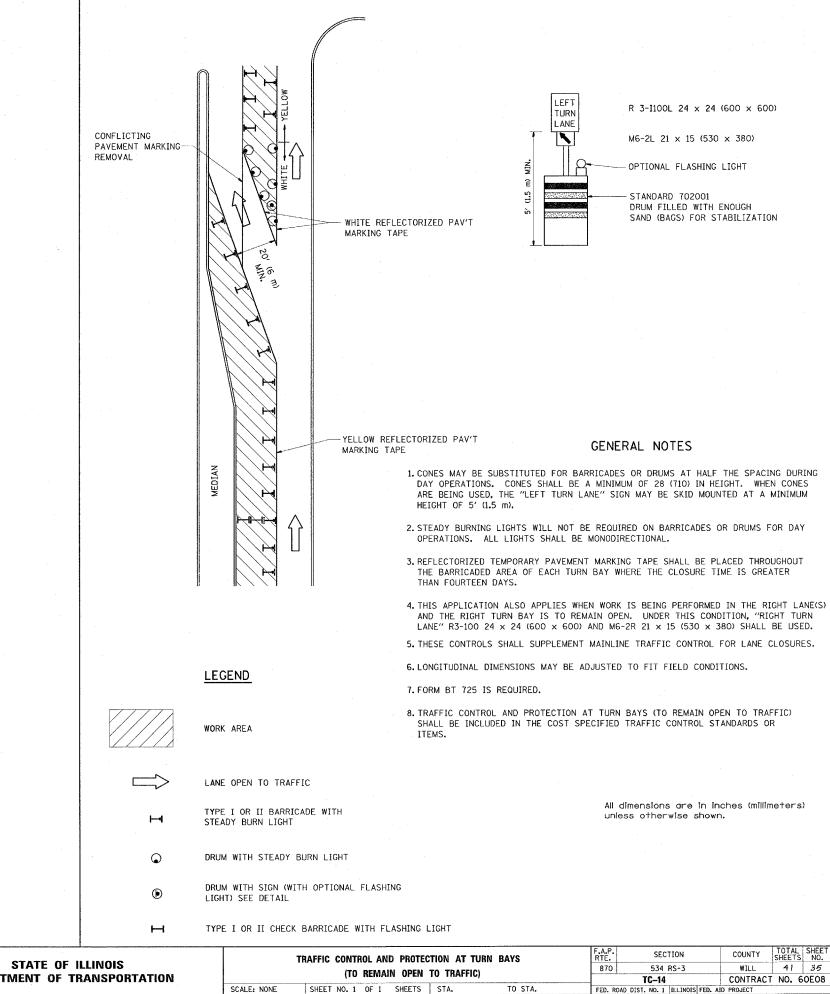
#### THICAL TORN LANE MARKING

FILE NAME =	UŞER NAME = abrewah	DESIGNED - EVERS	REVISED -T. RAMMACHER 10-27-94
o:\projects\d116908\d116908aa.dgn		DRAWN	REVISED -A. HOUSEH 10-09-96
	PLOT SCALE = 50.0000 '/ IN.	CHECKED -	REVISED -A. HOUSEH 10-17-96
	PLOT DATE = 2/20/2008	DATE - 03-19-90	REVISED -T. RAMMACHER 01-06-00

TYPICAL CROSSWALK MARKING

STATE	OF	ILLINOIS
DEPARTMENT	OF	TRANSPORTATION

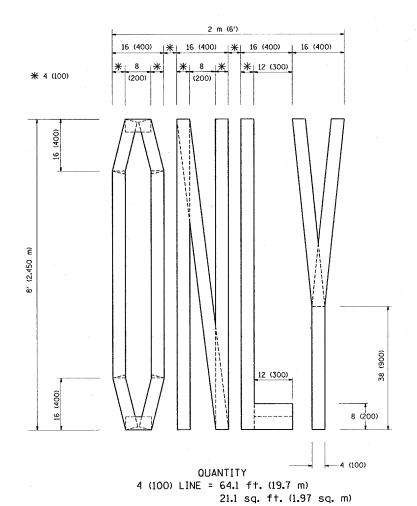
	TYPICAL PAVEMENT MARKINGS						F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
							870	534 RS-3	WILL	41	34
								TC-13	CONTRACT	NO. 6	0E08
							FED. RC	DAD DIST. NO. 1 ILLINOIS FED. A	D PROJECT		

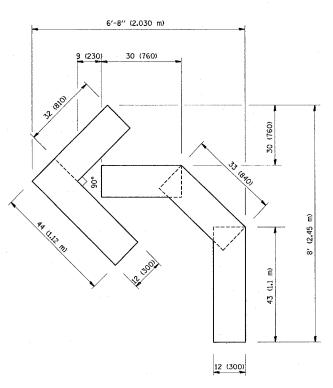


ILE NAME =	USER NAME = abreuah	DESIGNED -	REVISED	-T. RAMMACHER 09-08-94
o:\projects\d116908\d116908ee.dgn		DRAWN -	REVISED	- A. HOUSEH 11-07-95
	PLOT SCALE = 50.0000 '/ IN.	CHECKED -	REVISED	- A. HOUSEH 10-12-96
	PLOT DATE = 2/20/2008	DATE -	REVISED	-T. RAMMACHER 01-06-00

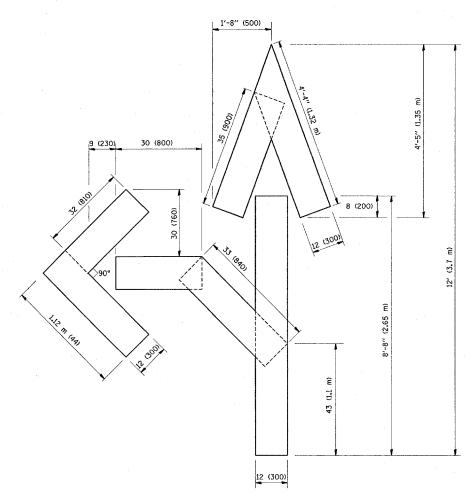
**DEPARTMENT OF TRANSPORTATION** 

T	TRAFFIC CONTROL AND PROTECTION AT TURN BAYS					SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
(TO REMAIN OPEN TO TRAFFIC)				870	534 RS-3	WILL	41	35	
	(IU REWAIN UPEN IU INAFFIC)					TC-14	CONTRACT	NO. 6	80E08
ONE	SHEET NO. 1 OF 1	SHEETS	STA.	TO STA.	FED. R	OAD DIST. NO. 1 ILLINOIS FED. A	ID PROJECT		





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



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.

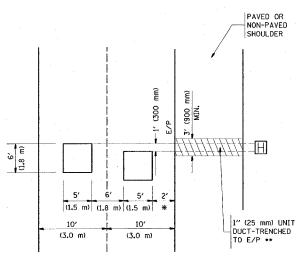
FILE NAME =	USER NAME = abrevah	DESIGNED -	REVISED -T. RAMMACHER 06-05-96
c:\projects\dl16908\dl16908aa.dgn		DRAWN -	REVISED -T. RAMMACHER 11-04-97
	PLOT SCALE = 50.0000 '/ IN.	CHECKED -	REVISED -T. RAMMACHER 03-02-98
	PLOT DATE = 2/20/2008	DATE - 09-18-94	REVISED - E. GOMEZ 08-28-00

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

	PAVEMENT I	VIARKI	NG LETTER	S AND	SYMBOLS	F.A.P. RTE.	SECTION	COUNTY	TOTAL	SHEET NO.
		FOR T	RAFFIC STA	A CIBIC		870	534 RS-3	WILL	41	36
		run II	MAFFIL SI	Omo			TC-16	CONTRACT	NO.	0E08
CALE: NONE		OF 1	SHEETS	STA.	TO STA.	FED. RO	AD DIST. NO. 1   ILLINOIS FED. AT	D PROJECT		

#### LOOPS NEXT TO SHOULDERS

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

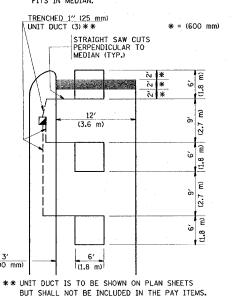


(PROTECTED / PERMITTED LEFT TURN PHASING) HANDHOLE LOCATION MAY VARY DEPENDING ON GEOMETRICS AND DESIGN OF TRAFFIC SIGNALS. HEAVY-DUTY HANDHOLES TO BE USED WHEN THE MEDIAN IS MOUNTABLE, REFER TO STANDARD 814001 TO ENSURE THAT HANDHOLE

LEFT TURN LANES WITH MEDIANS

VOLUME DENSITY ("FAR OUT" DETECTION)

ON SAME APPROACH



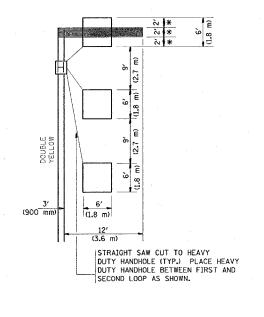
NOTE: DUAL LEFT TURNS NOT SHOWN REFER TO

PLAN SHEET FOR DETECTOR LOOP REPLACEMENT

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

(PROTECTED / PERMITTED LEFT TURN PHASING)

\* = (600 mm)



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

SCALE: NONE

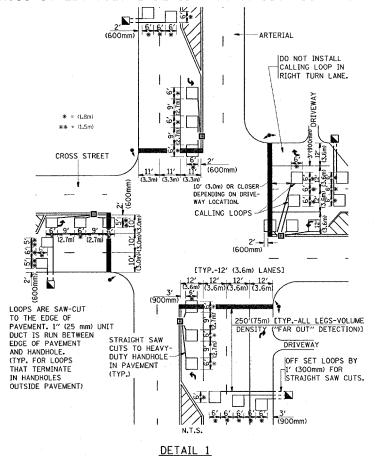
SHEET

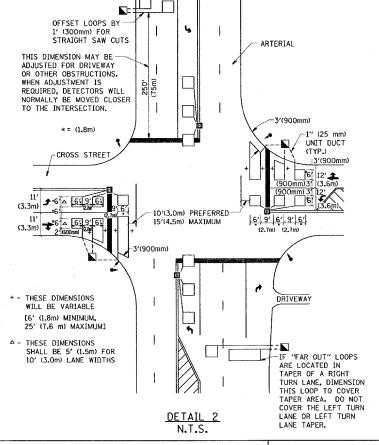
\* \* UNIT DUCT IS TO BE SHOWN ON PLAN SHEETS BUT SHALL NOT BE INCLUDED IN THE PAY ITEMS.

\* = (600 mm

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 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 <u>SEPARATE</u> 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.

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.

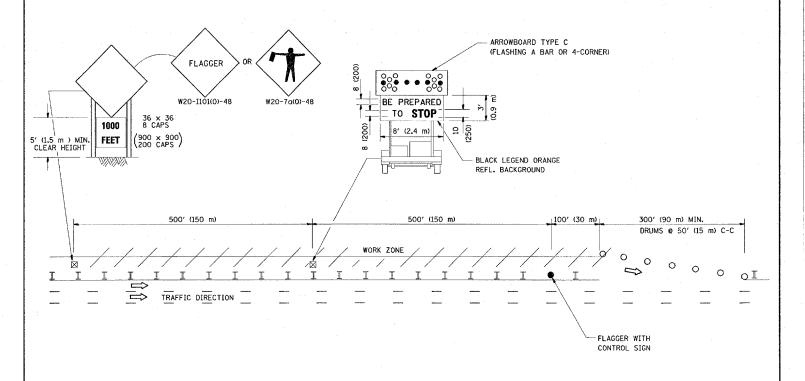
	14010	J.	
LE NAME =	USER NAME = abrevah	DESIGNED -	REVISED -
\projects\d116908\d116908aa.dgn		DRAWN -	REVISED -
	PLOT SCALE = 50.0000 '/ IN.	CHECKED - R.K.F.	REVISED -
•	PLOT DATE = 2/20/2008	DATE -	REVISED -

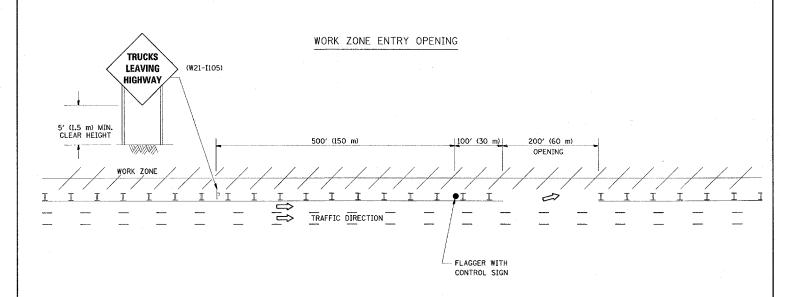
STATE OF ILLINOIS **DEPARTMENT OF TRANSPORTATION** 

DISTRICT 1 - DETECTOR LOOP INSTALLATION	F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
DETAILS FOR ROADWAY RESURFACING	870	534 RS-3	WILL	41	37
DETAILS FOR ROADVIAT RESORTACING		TS-07	CONTRACT	NO. 6	0E08
SHEET NO. 1 OF 1 SHEETS STA. TO STA.	FED. R	OAD DIST, NO. 1 THE INOIS FED. AT	D PROJECT		

#### SIGNING FOR FLAGGING OPERATIONS AT WORK ZONE OPENINGS

#### WORK ZONE EXIT OPENING



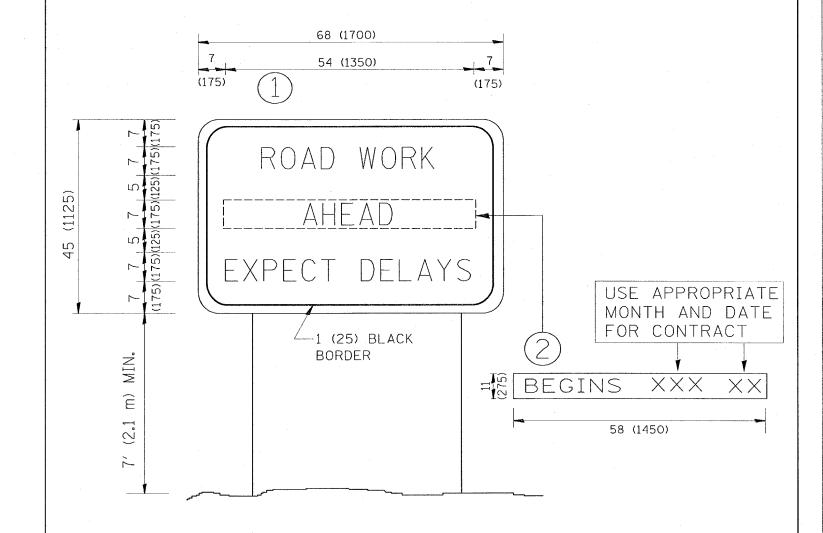


#### NOTES:

- The Arrowboard, the Flagger Ahead trailer mounted sign, and the Trucks Leaving Highway sign shall be removed or turned away from traffic and the exit and entry openings shall be closed when the flagging operation ceases.
- 2. Work Zone Exit Openings should be a minimum of one half mile apart.
- 3. Exiting the work zone at any place other than at a Work Zone Exit Opening will be prohibited.
- 4. All vehicles shall enter the work zone at entry openings, using their turn signals to warn motorists

ALL DIMENSIONS ARE IN INCHES (MILLIMETERS) UNLESS OTHERWISE SHOWN

FILE NAME =	USER NAME = abrevah	DESIGNED -	REVISED -	D.W.S. 08-98			SIGNING FOR FLAGGING OPERATIONS		F.A.P.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
c:\projects\d1169Ø8\d1169Ø8aa.dgn		DRAWN -	REVISED	J.A.F. 04-03	STATE OF ILLINOIS		AT WORK ZONE OPENINGS		870	534 RS-3	WILL	41	38
	PLOT SCALE = 50.0000 '/ IN.	CHECKED -	REVISED -	J.A.F. 02-06	DEPARTMENT OF TRANSPORTATION					TC-18	CONTRA	CT NO. 6	0E08
	PLOT DATE = 2/20/2008	DATE -	REVISED -	S.P.B. 01-07		SCALE: NONE	SHEET NO. 1 OF 1 SHEETS STA.	TO STA.	FED. ROAD	DIST. NO. 1   ILLINOIS FE	D. AID PROJECT		

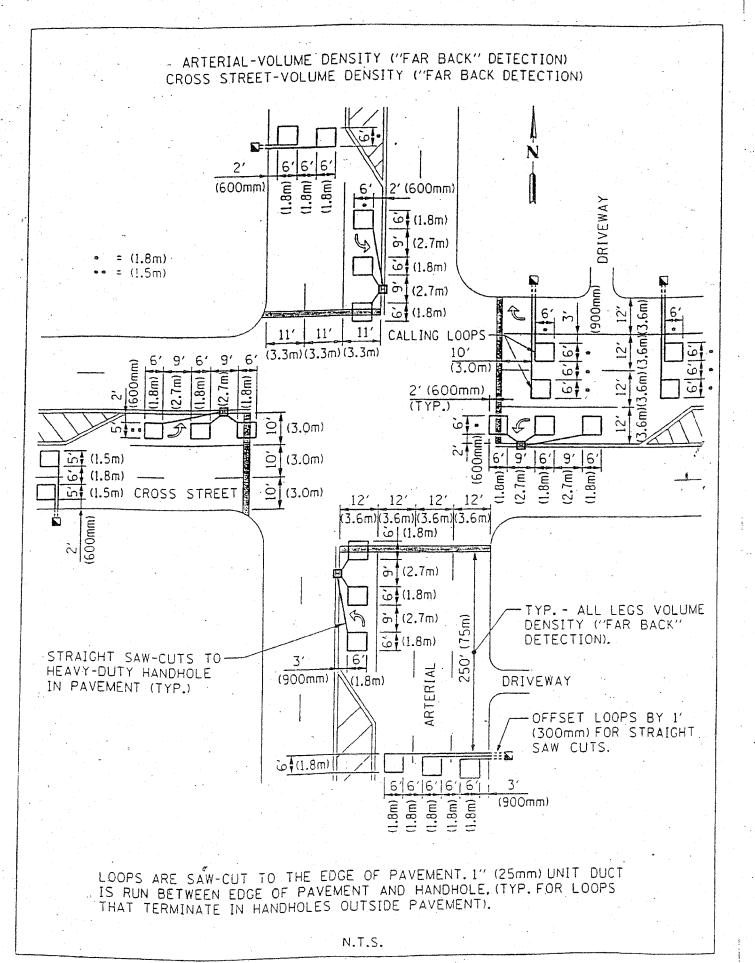


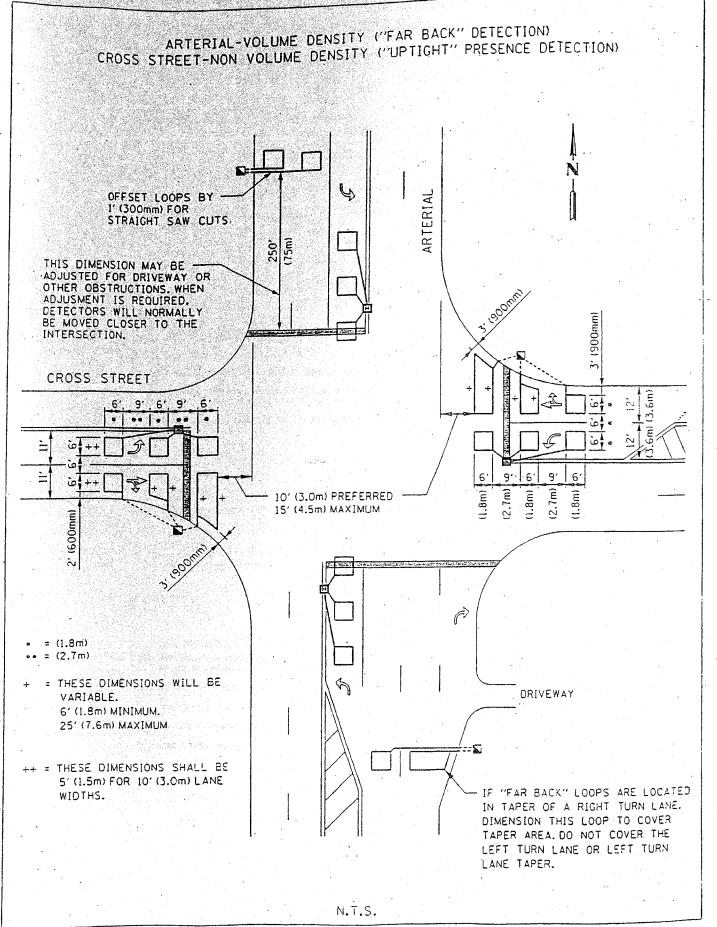
## NOTES:

- 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 (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.

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

FILE NAME =	USER NAME = abrevah	DESIGNED -	REVISED - R. MIRS 09-15-97		ARTERIAL ROAD	RTE SECTION COL	OUNTY TOTAL SHEET NO.
c:\projects\dl16908\dl16908aa.dgn		DRAWN -	REVISED - R. MIRS 12-11-97	STATE OF ILLINOIS		870 534 RS-3 W	WILL 41 39
	PLOT SCALE = 50.0000 '/ IN.	CHECKED -	REVISED -T. RAMMACHER 02-02-99	DEPARTMENT OF TRANSPORTATION	INFORMATION SIGN	TC-22 CON	NTRACT NO. 60E08
	PLGT DATE = 2/20/2008	DATE -	REVISED - C. JUCIUS 01-31-07		SCALE: NONE SHEET NO. 1 OF 1 SHEETS STA. TO STA.	FED. ROAD DIST. NO. 1 ILLINOIS FED. AID PROJE	

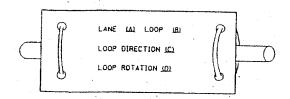




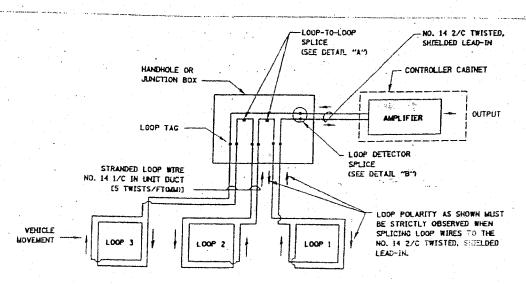
#### LOOP DETECTOR NOTES

- I. 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" USO mm). UNIT DUCT SHALL BE INCLUDED IN THE COST OF THE LOOP WIRE.
- 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 I 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

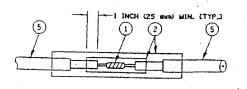


- A. LANE I IS THE LANE CLOSEST TO THE CENTERLINE OF THE ROADWAY
- B. LOOP OF IS THE LOOP IN THE LANE CLOSEST TO THE INTERSECTION.
- C. LABEL LOOP CABLE "IN" OR LOOF CABLE "OUT".
- D. LABEL LOOP CABLE CLOCKWISE OR LOOP CABLE COUNTERCLOCKWISE.

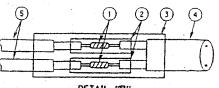


#### DETECTOR LOOP WIRING SCHEMATIC

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



DETAIL "A"
LOOP-TO-LOOP SPLICE



DETAIL "B"
LOOP-TO-CONTROLLER SPLICE

#### LOOP DETECTOR SPLICE

- WESTERN UNION SPLICE SOLDERED WITH ROSIN CORE FLUX. ALL EXPOSED SURFACES.
  OF THE SOLDER SHALL BE SHOOTH.
- 2 BCSWB 30/100 HEAT SHRINK TUBE, MINIDAIN LENGTH 3" (75 mm), UNDERBATER GRADE.
- 3 MCS 200/750 HEAT SHRINK TUBE, MINIMUM LENGHT E4 (150 mm), UNDERWATER GRADE,
- 4 NO. 14 2/C TWISTED. SHIELDED CABLE
- (5) LOOP CONDUCTOR WITH FLEXIBLE PLASTIC TUBE.

F	REVISION NAME	DATE	ILLINOIS DEPA	RTHENT OF TRANSPORTATION
F	<del></del>			STRICT ONE
上			STANDAR	D TRAFFIC SIGNAL
E			DES	IGN DETAILS
L			SCALE VERT, NONE	DRAWN BY: RWP
-		+	DATE 1-01-02	DESIGNED BY, DAD CHECKET BY, TAZ SHEET OF

RTE SECTION COUNTY

FR. NOW BIST. NO. 1 BLONDIS FED. AND PROJECT