

STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION DIVISION OF HIGHWAYS

SUBMITTED April 9 2007

DEPUTY DIRECTOR OF HIGHWAYS, REGION 1 ENGINEER

May 11, 20 07

Chie E Ham To
Option Engineer of Design and Environment

May 11, 20 07 Milton & See F. B. Diffector, Division of Highways

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GRAEF, ANHALT, SCHLOEMER & ASSOCIATES, INC. ENGINEERS & SCIENTISTS 8501 W. Higgins Road; Suite 280 Chicago, Illinois 60631 (773) 399-0112

STATE OF ILLINOIS **DEPARTMENT OF TRANSPORTATION DIVISION OF HIGHWAYS**

PLANS FOR PROPOSED **HIGHWAY**

SECTION:(8 & 9) RS-4 GREENWOOD AVE TO GENESEE ST. **RESURFACING (3P)** LAKE COUNTY C-91-424-06

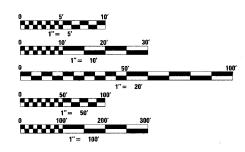
FAP 352 (IL 137/AMSTUTZ EXPY)



14,800 (2006) SPEED LIMIT 40 MPH GREENWOOD AVE SPEED LIMIT 55 MPH AMSTUTZ EXPY

TRAFFIC DATA **EXISTING ADT**

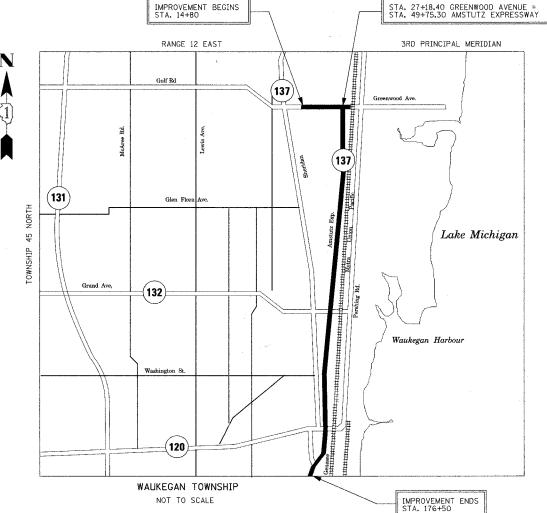
FOR INDEX OF SHEETS, SEE SHEET NO. 2



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

CONTRACT NO. 60B75



GROSS AND NET LENGTH OF IMPROVEMENT: 13,913 FT (2.63 MILES)

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F.A.P ROUTE NO.	SECTION		COL	JNTY	TOTAL SHEETS	SHEET NO.
352	(8 & 9) RS	-4	L	4KE	31	2
FED. ROAD D	IST. NO.	ILL.	INOIS	FED. A	ID PROJEC	T.

INDEX OF SHEETS

23-

30

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28	ARTERIAL ROAD INFORMATION SIGN
29	CURB OR CURB AND GUTTER REMOVAL AND REPLACEMENT

STATE STANDARDS

STD. NO.	DESCRIPTION
000001-04	STANDARD SYMBOLS, ABBREVATIONS AND PATTERNS
442201- <i>0</i> 2	CLASS C AND D PATCHES
630001- <i>0</i> 7	STEEL PLATE BEAM GUARDRAIL
630301- <i>04</i>	SHOULDER WIDENING FOR TYPE 1 (SPECIAL) GUARDRAIL TERMINALS
635006- <i>0</i> 2	REFLECTOR AND TERMINAL MARKER PLACEMENT
701400- <i>02</i>	APPROACH TO LANE CLOSURE, FREEWAY/EXPRESSWAY
701401 -<i>03</i>	LANE CLOSURE, FREEWAY/EXPRESSWAY
701402- <i>05</i>	LANE CLOSURE, FREEWAY/EXPRESSWAY, WITH BARRIER
701406- 04	LANE CLOSURE, FREEWAY/EXPRESSWAY, DAY OPERATIONS ONLY
701411- <i>0</i> 3	LANE CLOSURE, MULTILANE, AT ENTRANCE OR EXIT RAMP, FOR SPEEDS \geq 45 MP
701601- 04	URBAN LANE CLOSURE, MULTILANE, 1W OR 2W WITH NONTRAVERSABLE MEDIAN
702001- 06	TRAFFIC CONTROL DEVICES
780001- <i>01</i>	TYPICAL PAVEMENT MARKINGS
781001 -02	TYPICAL APPLICATIONS RAISED REFLECTIVE PAVEMENT MARKERS

HOT MIX ASPHALT MIXTURE REQUIREMENTS							
DESCRIPTION	AC TYPE	AIR VOIDS	MIX TYPE				
HOT-MIX ASPHALT SURFACE COURSE, MIX "D", N70	PG 64-22	4% @ 70 GYR.	SAME				
LEVELING BINDER (MACHINE METHOD), N70 .	PG 64-22 / 58-22	4% @ 70 GYR.	SAME.				
CLASS D PATCHES •	PG 64-22 / 58-22	4% @ 70 GYR.	HMA BINDER IL 19 mm				
HOT-MIX ASPHALT REPLACEMENT OVER PATCHES .	PG 64-22 / 58-22	4% @ 70 GYR.	HMA BINDER IL 19 mm				

THE UNIT WEIGHT USED TO CALCULATE ALL HOT-MIX ASPHALT SURFACE MIXTURES IS 112 Lbs/SqYd/in

• WHEN RAP EXCEEDS 20%, THE NEW ASPHALT BINDER SHALL BE PG 64-22

DETAILS FOR FRAMES AND LIDS ADJUSTMENT WITH MILLING

DETECTOR LOOP INSTALLATION DETAIL FOR ROADWAY RESURFACING

GENERAL NOTES

- BEFORE STARTING ANY EXCAVATION, THE CONTRACTOR SHALL CALL "J.U.L.I.E." AT 800-892-0123 OR "CUAN" (CHICAGO UTILITY ALERT NETWORK), 312-744-7000 FOR FIELD LOCATIONS OF BURIED ELECTRIC, TELEPHONE AND GAS FACILITIES. (48 HOUR NOTIFICATION IS REQUIRED).
- 2. 3 METER (10 FEET) TRANSITIONS SHALL BE USED TO MATCH PROPOSED CURB & GUTTER AND MEDIAN ITEMS OF WORK TO EXISTING CURBS AND CUTTERS AND MEDIANS 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 CONTRACTOR SHALL COORDINATE CONSTRUCTION ACTIVITIES WITH UTILITY COMPANIES AND THE CITY OF CHICAGO.
- 4. THE CONTRACTOR WILL NOT BE ALLOWED TO SET UP A YARD OR FIELD OFFICE ON STATE PROPERTY WITHOUT WRITTEN PERMISSION FROM THE DEPARTMENT.
- 5. BARRICADES: THE CONTRACTOR SHALL PROVIDE AND INSTALL TWO (2) WEIGHTED SANDBAGS ON EACH TYPE I OR TYPE II BARRICADE USED ONE (1) WEIGHTED SANDBAG ACROSS EACH BOTTOM RAIL.
- 6. WHEN ARTIFICIAL LIGHTING IS USED IN NIGHT OPERATIONS THE CONTRACTOR SHALL EXERCISE THE UTMOST PRECAUTIONS IN PREVENTING ADVERSE VISIBILTY TO THE MOTORING PUBLIC AND ADJOINING RESIDENTIAL AREAS.
- 7. ON STATE STANDARDS 482001 AND 483001 AGGREGATE SUBGRADE 300 MM (12") SHALL BE USED AS THE IMPROVED SUBGRADE. THE ADDITIONAL THICKNESS OF AGGREGATE SUBGRADE UNDER THE SHOULDER SHALL BE INCLUDED IN THE COST PER SQUARE METER (SQ YARD) OF "AGGREGATE SUBGRADE 300 MM (12").
- 8. ALL STORM SEWER CONNECTIONS WITH PIPES 675 MM (27 INCHES) DIAMETER AND SMALLER SHALL BE MADE WITH PRECAST "TEE" OR "WYE" PIPES. FOR PROPOSED STORM SEWER PIPES LARGER THAN 675 MM (27 INCHES) DIAMETER, OPENINGS OF THE SPECIFIED DIAMETER SHALL BE MADE IN THE PIPE AT THE TIME IT IS MANUFACTURED. PRECAST "TEE" AND "WYE" PIPE CONNECTIONS FOR PROPOSED STORM SEWER WILL NOT BE PAID FOR SEPARATELY BUT WILL BE INCLUDED IN THE COST FOR THE STORM SEWERS.
- 9. USE NO. 25 (*8) EPOXY-COATED TIE BARS CONFORMING TO ART. 1006.10 (B)(2) OF THE STANDARD SPECIFICATIONS FOR LONGITUDINAL CONSTRUCTION JOINT GROUTED-IN-PLACE TIE BAR AS SHOWN ON STATE STANDARD 420001 AND FOR TIEING PC CONCRETE WIDENING TO EXISTING CONCRETE PAVEMENT AS SHOWN ON THE PLANS. THE TIE BARS WILL NOT BE PAID FOR SEPARATELY BUT SHALL BE INCLUDED IN THE COST OF THE PAVEMENT ITEMS BEING CONSTRUCTEO.
- 10. WHEN MILLED PAVEMENT IS OPEN TO TRAFFIC THE MAXIMUM GRADE DIFFERENTIAL BETWEEN PASSES OF THE MILLING MACHINE SHALL NOT EXCEED 40 MM (1½ INCHES) WHERE THE SPEED LIMIT IS 80 KM/H (45 MPH) OR LESS AND 25 MM (1 INCH) WHERE THE SPEED LIMIT IS GREATER THAN 80 KM/H (45 MPH). WITH WRITTEN APPROVAL FROM THE ENGINEER, A MAXIMUM GRADE DIFFERENTIAL OF 75 MM (3 INCHES) MAY BE ALLOWED IF THE EDGE OF THE MILLING IS SLOPED A MINIMUM 1:3 (V:H).
- 11. BUTT JOINTS WILL BE INSTALLED AT THE ENDS OF ALL RESURFACING (WHERE RESURFACING MEETS EXISTING PAVEMENT), IN ACCORDANCE WITH THE "BUTT JOINT AND BITUMINOUS TAPER DETAILS" SHEET INCLUDED IN THE PLANS, UNLESS OTHERWISE SPECIFIED.
- 12. FOR PAVEMENT MARKING, REFER TO DISTRICT ONE TYPICAL MARKINGS FOR DETAILS NOT SHOWN.
- 13. MATCH EXISTING PAVEMENT MARKINGS AT PROJECT LIMITS.
- 14. THE CONTRACTOR SHALL SAW CUT PAYEMENT PRIOR TO REMOVING PAYEMENT FOR PATCHING. THE COST FOR SAW CUTTING WILL NOT BE PAID FOR SEPARATELY BUT INCLUDED IN THE COST OF CLASS D PATCHES OF TYPE SPECIFIED.

REVISIONS ILLINOIS DEPARTMENT OF TRANSPORTATION

NAME DATE

FAP 352 (IL 137)

GREENWOOD AVE TO GENESEE ST.

INDEX OF SHEETS, STATE

STANDARDS, GENERAL NOTES AND
BITUMINOUS MIXTURE REQUIREMENTS

DRAWN BY: WS
DATE: 9/14/06

CRAEF, ANHALT, SCHLOEMER & ASSOCIATES, INC.

CHICAGO, ILLINOIS

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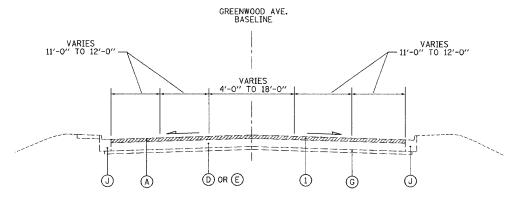
SUMMARY OF QUANTITIES

				URBAN
ENGLISH	PAY ITEM DESCRIPTION	UNIT	TOTAL QUANTITY	1000 100% STATI
20200600	EXCAVATING AND GRADING EXISTING SHOULDERS	UNIT	278	278
40600200	BITUMINOUS MATERIALS (PRIME COAT)	TON	107	107
40600300	AGGREGATE (PRIME COAT)	TON	514	514
40600400	MIXTURE FOR CRACKS, JOINTS, AND FLANGEWAYS	TON	26	26
40600635	LEVELING BINDER (MACHINE METHOD), N70	TON	7,192	7,192
40600895	CONSTRUCTING TEST STRIP	EACH	2	2
40600982	HOT-MIX ASPHALT SURFACE REMOVAL - BUTT JOINT	SQ YD	218	218
40600990	TEMPORARY RAMP	SQ YD	146	146
40601005	HOT-MIX ASPHALT REPLACEMENT OVER PATCHES	TON	284	284
40603340	HOT-MIX ASPHALT SURFACE COURSE, MIX "D", N70	TON	10,787	10,787
44000159	HOT-MIX ASPHALT SURFACE REMOVAL, 2 1/2"	SQYD	55,892	55,892
44001700	COMBINATION CONCRETE CURB AND GUTTER REMOVAL AND REPLACEMENT	FOOT	119	119
44201741	CLASS D PATCHES, TYPE II, 8 INCH	SQYD	603	603
44201745	CLASS D PATCHES, TYPE III, 8 INCH	SQYD	960	960
44201747	CLASS D PATCHES, TYPE IV, 8 INCH	SQYD	1,443	1,443
48102100	AGGREGATE WEDGE SHOULDER, TYPE B	TON	563	563
48301000	PROTECTIVE COAT	SQ YD	40	40
60266600	VALVE BOXES TO BE ADJUSTED	EACH	1	1
60300310	FRAMES AND LIDS TO BE ADJUSTED (SPECIAL)	EACH	26	26
* 63000000	STEEL PLATE BEAM GUARD RAIL, TYPE A	FOOT	375	375
★ 63100167	TRAFFIC BARRIER TERMINAL, TYPE 1, SPECIAL (TANGENT)	EACH	5	5
63200310	GUARDRAIL REMOVAL	FOOT	625	625
67000400	ENGINEER'S FIELD OFFICE, TYPE A	CAL MO	4	4
67100100	MOBILIZATION	L SUM	1	1
70100420	TRAFFIC CONTROL AND PROTECTION, STANDARD 701411	EACH	1	1
70100700	TRAFFIC CONTROL AND PROTECTION, STANDARD 701406	L SUM	1	1
70100700	TRAFFIC CONTROL AND PROTECTION, STANDARD 701401	LSUM	1	1
70100805	TRAFFIC CONTROL AND PROTECTION, STANDARD 701401	EACH	1	1
70102630	TRAFFIC CONTROL AND PROTECTION, STANDARD 701402	LSUM	1	1
70102030	TRAFFIC CONTROL AND PROTECTION, STANDARD 701001		60	60
70300100		CAL DA FOOT		
* 78000100	SHORT-TERM PAVEMENT MARKING		12,555	12,555
★ 78000100 ★ 78000200	THERMOPLASTIC PAVEMENT MARKING - LETTERS AND SYMBOLS	SQ FT	437	437
*78000400	THERMOPLASTIC PAVEMENT MARKING - LINE 4"	FOOT	67,013	67,013
↑78000400 ★78000500	THERMOPLASTIC PAVEMENT MARKING - LINE 6"	FOOT	987	987
*78000500 *78000600	THERMOPLASTIC PAVEMENT MARKING - LINE 8"	FOOT	9,201	9,201
	THERMOPLASTIC PAVEMENT MARKING - LINE 12"	FOOT	1,613	1,613
¥78000650	THERMOPLASTIC PAVEMENT MARKING - LINE 24"	FOOT	77	77
78003120	PREFORMED PLASTIC PAVEMENT MARKING, TYPE B - LINE 5"	FOOT	5,781	5,781
*78100100	RAISED REFLECTIVE PAVEMENT MARKER	EACH	781	781
78300200	RAISED REFLECTIVE PAVEMENT MARKER REMOVAL	EACH	781	781
* 88600600	DETECTOR LOOP REPLACEMENT	FOOT	433	433
X0322256	TEMPORARY INFORMATION SIGNING	SQ FT	85	85
X4400100	PORTLAND CEMENT CONCRETE SURFACE REMOVAL (VARIABLE DEPTH)	SQ YD	285	285
X4422025	PARTIAL DEPTH REMOVAL 2"	SQ YD	2,535	2,535
70300210 70300220 70300230 70300240 70300250 70300260	TEMPORARY PAVEMENT MARKING - LETTELS AND SYMBOLS TEMPORARY PAVEMENT MARKING - LINE 4" TEMPORARY PAVEMENT MARKING - LINE 5" TEMPORARY PAVEMENT MARKING - LINE 6" TEMPORARY PAVEMENT MARKING - LINE 8" TEMPORARY PAVEMENT MARKING - LINE 2" TEMPORARY PAVEMENT MARKING - LINE 2" TEMPORARY PAVEMENT MARKING - LINE 24"	5Q FT FADT FADT FADT FADT FADT FADT	874 94,083 8,151 1,876 14,720 2,260 324	874 94,083 8,151 1,876 14,720 2,260 324

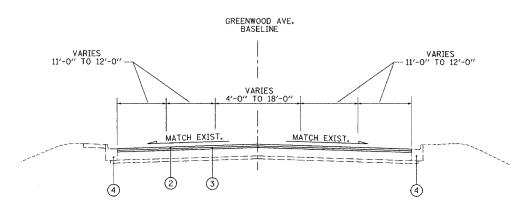
SECOND 1 Sec.

REVISI	ONS	ILLINOIS DEPARTMEN	NT OF TRANSPORTATION
NAME DATE		E A D 353	2 (IL 137)
			TO GENESEE ST.
		SUMMARY OF	QUANTITIES
		DATE: 9/14/06	DRAWN BY: WS CHECKED BY: PJ





GREENWOOD AVENUE EXISTING TYPICAL SECTION STA. 14+80 TO STA. 31+05±



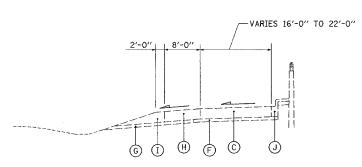
GREENWOOD AVENUE PROPOSED TYPICAL SECTION STA. 14+80 TO STA. 31+05±

EXISTING CONDITIONS:

- A HOT-MIX ASPHALT SURFACE AND BINDER COURSE, (3" & VARIES)
- (B) CONTINUOUSLY REINFORCED PORTLAND CEMENT CONCRETE PAVEMENT, 8"
- © PORTLAND CEMENT CONCRETE PAVMENT, 10"
- (D) HOT-MIX ASPHALT BASE COURSE, (DEPTH VARIES)
- E PORTLAND CEMENT CONCRETE BASE COURSE
- F HOT-MIX ASPHALT SUB-BASE, 4"
- G SUB-BASE GRANULAR MATERIAL
- H) HOT-MIX ASPHALT SHOULDERS
- AGGREGATE SHOULDERS
- (J) COMBINATION CONCRETE CURB AND GUTTER
- K BARRIER CURB
- RETAINING WALL

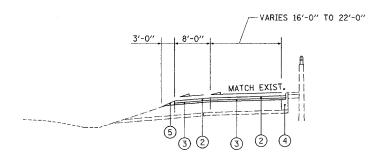
PROPOSED IMPROVEMENTS:

- 1 HOT-MIX ASPHALT SURFACE REMOVAL, 21/2"
- \bigcirc HOT-MIX ASPHALT SURFACE COURSE, MIX "D", N70, (1\sqrt{2}")
- 3 LEVELING BINDER (MACHINE METHOD), N70, (1")
- (4) COMBINATION CONCRETE CURB AND REMOVAL AND REPLACEMENT (AS DETERMINED BY THE ENGINEER)
- 5 AGGREGATE WEDGE SHOULDER, TYPE B



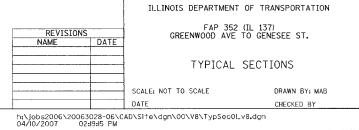
EXISTING TYPICAL RAMP SECTION

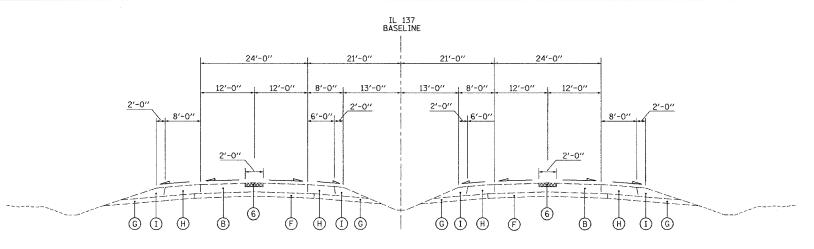
STA. 50+00± TO STA. 68+00± STA. 103+50± TO STA. 126+00±



PROPOSED TYPICAL RAMP SECTION

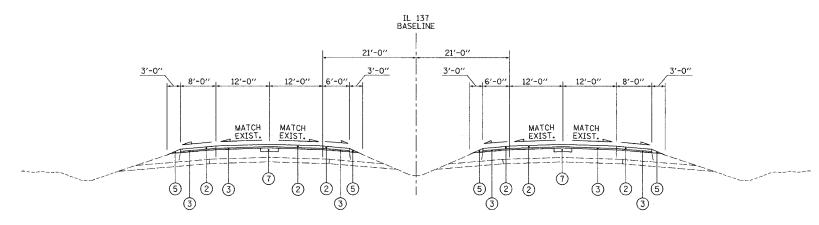
STA. 50+00± TO STA. 68+00± STA. 103+50± TO STA. 126+00±





IL 137 EXISTING TYPICAL SECTION

STA. 60+00 TO STA. 109+00±



IL 137 PROPOSED TYPICAL SECTION

STA. 60+00 TO STA. 109+00±

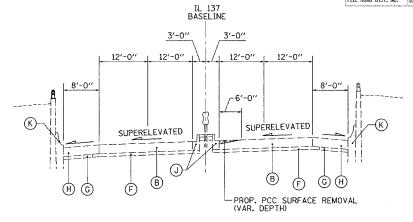
EXISTING CONDITIONS:

- (A) HOT-MIX ASPHALT SURFACE AND BINDER COURSE, (3" & VARIES)
- (B) CONTINUOUSLY REINFORCED PORTLAND CEMENT CONCRETE PAVEMENT, 8"
- © PORTLAND CEMENT CONCRETE PAVMENT, 10"
- (D) HOT-MIX ASPHALT BASE COURSE, (DEPTH VARIES)
- (E) PORTLAND CEMENT CONCRETE BASE COURSE
- F HOT-MIX ASPHALT SUB-BASE, 4"
- G SUB-BASE GRANULAR MATERIAL
- H HOT-MIX ASPHALT SHOULDERS
- AGGREGATE SHOULDERS
- J COMBINATION CONCRETE CURB AND GUTTER
- (K) BARRIER CURB
- RETAINING WALL

PROPOSED IMPROVEMENTS:

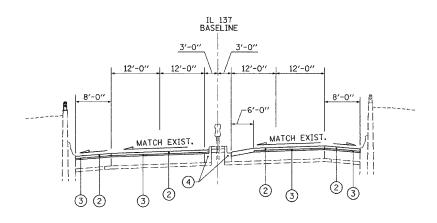
- 1) HOT-MIX ASPHALT SURFACE REMOVAL, 21/2"
- 2 HOT-MIX ASPHALT SURFACE COURSE, MIX "D", N70, (11/2")
- 3 LEVELING BINDER (MACHINE METHOD), N70, (1")
- (4) COMBINATION CONCRETE CURB AND REMOVAL AND REPLACEMENT (AS DETERMINED BY THE ENGINEER)
- 5 AGGREGATE WEDGE SHOULDER, TYPE B
- (6) PARTIAL DEPTH REMOVAL 2"
- 7) PARTIAL DEPTH PATCHING (HOT-MIX ASPHALT REPLACEMENT OVER PATCHES), (2")

CONTRACT NO. 60B75



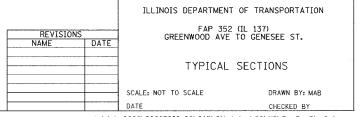
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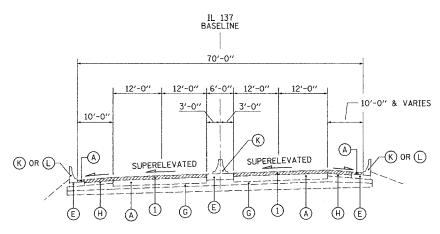
STA. 122+00 TO STA. 126+28±



IL 137 PROPOSED TYPICAL SECTION

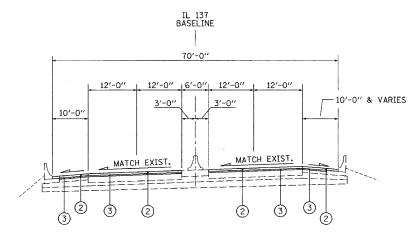
STA. 122+00 TO STA. 126+28±





IL 137 EXISTING TYPICAL SECTION

STA. 126+28± TO STA. 137+08± STA. 144+30± TO STA. 150+12± (REVERSED SUPERELEVATION)



IL 137 PROPOSED TYPICAL SECTION

STA. 126+28± TO STA. 137+08± STA. 144+30± TO STA. 150+12± (REVERSED SUPERELEVATION)

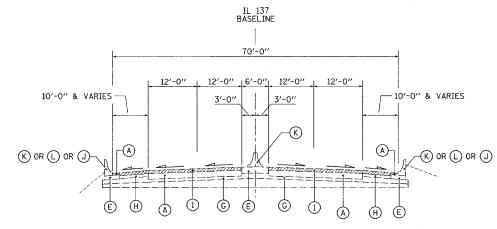
EXISTING CONDITIONS:

- (A) HOT-MIX ASPHALT SURFACE AND BINDER COURSE, (3" & VARIES)
- B CONTINUOUSLY REINFORCED PORTLAND CEMENT CONCRETE PAVEMENT, 8"
- © PORTLAND CEMENT CONCRETE PAVMENT, 10"
- (D) HOT-MIX ASPHALT BASE COURSE, (DEPTH VARIES)
- E PORTLAND CEMENT CONCRETE BASE COURSE
- F HOT-MIX ASPHALT SUB-BASE, 4"
- G SUB-BASE GRANULAR MATERIAL
- (H) HOT-MIX ASPHALT SHOULDERS
- (I) AGGREGATE SHOULDERS
- (J) COMBINATION CONCRETE CURB AND GUTTER
- K BARRIER CURB
- RETAINING WALL

PROPOSED IMPROVEMENTS:

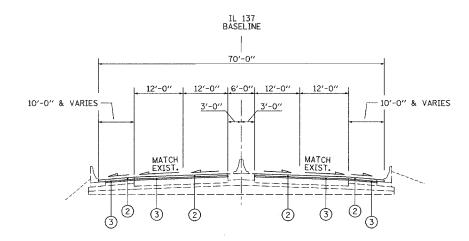
- 1 HOT-MIX ASPHALT SURFACE REMOVAL, 21/2"
- 2 HOT-MIX ASPHALT SURFACE COURSE, MIX "D", N70, (11/2")
- (3) LEVELING BINDER (MACHINE METHOD), N70, (1")
- 4 COMBINATION CONCRETE CURB AND REMOVAL AND REPLACEMENT (AS DETERMINED BY THE ENGINEER)
- AGGREGATE WEDGE SHOULDER, TYPE B

CONTRACT NO. 60B75



IL 137 EXISTING TYPICAL SECTION

STA. 137+08± TO STA. 144+30± STA. 150+87± TO STA. 169+44±



IL 137 PROPOSED TYPICAL SECTION

STA. 137+08± TO STA. 144+30± STA. 150+87± TO STA. 169+44±

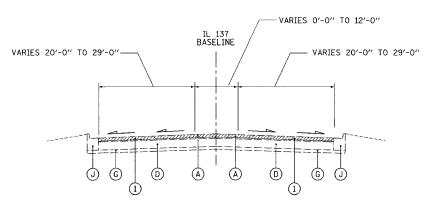
ILLINOIS DEPARTMENT OF TRANSPORTATION

FAP 352 (IL 137)
GREENWOOD AVE TO GENESEE ST.

TYPICAL SECTIONS

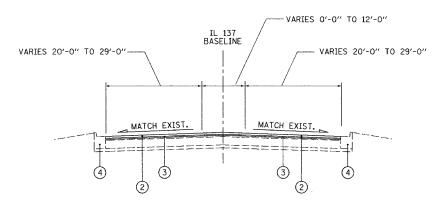
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IL 137 EXISTING TYPICAL SECTION

STA. 169+44± TO STA. 176+50



IL 137 PROPOSED TYPICAL SECTION

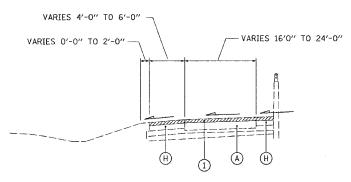
STA. 169+44± TO STA. 176+50

EXISTING CONDITIONS:

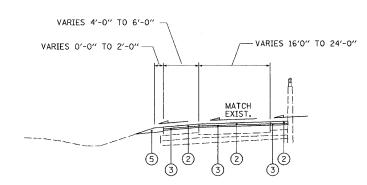
- A HOT-MIX ASPHALT SURFACE AND BINDER COURSE, (3" & VARIES)
- B) CONTINUOUSLY REINFORCED PORTLAND CEMENT CONCRETE PAVEMENT, 8"
- © PORTLAND CEMENT CONCRETE PAVMENT, 10"
- (D) HOT-MIX ASPHALT BASE COURSE, (DEPTH VARIES)
- E PORTLAND CEMENT CONCRETE BASE COURSE
- F HOT-MIX ASPHALT SUB-BASE, 4"
- G SUB-BASE GRANULAR MATERIAL
- (H) HOT-MIX ASPHALT SHOULDERS
- I AGGREGATE SHOULDERS
- U COMBINATION CONCRETE CURB AND GUTTER
- K BARRIER CURB
- RETAINING WALL

PROPOSED IMPROVEMENTS:

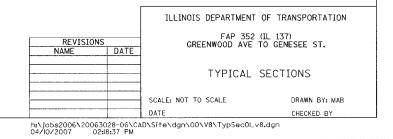
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- 2 HOT-MIX ASPHALT SURFACE COURSE, MIX "D", N70, (11/2")
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- 4 COMBINATION CONCRETE CURB AND REMOVAL AND REPLACEMENT (AS DETERMINED BY THE ENGINEER)
- 5 AGGREGATE WEDGE SHOULDER, TYPE B



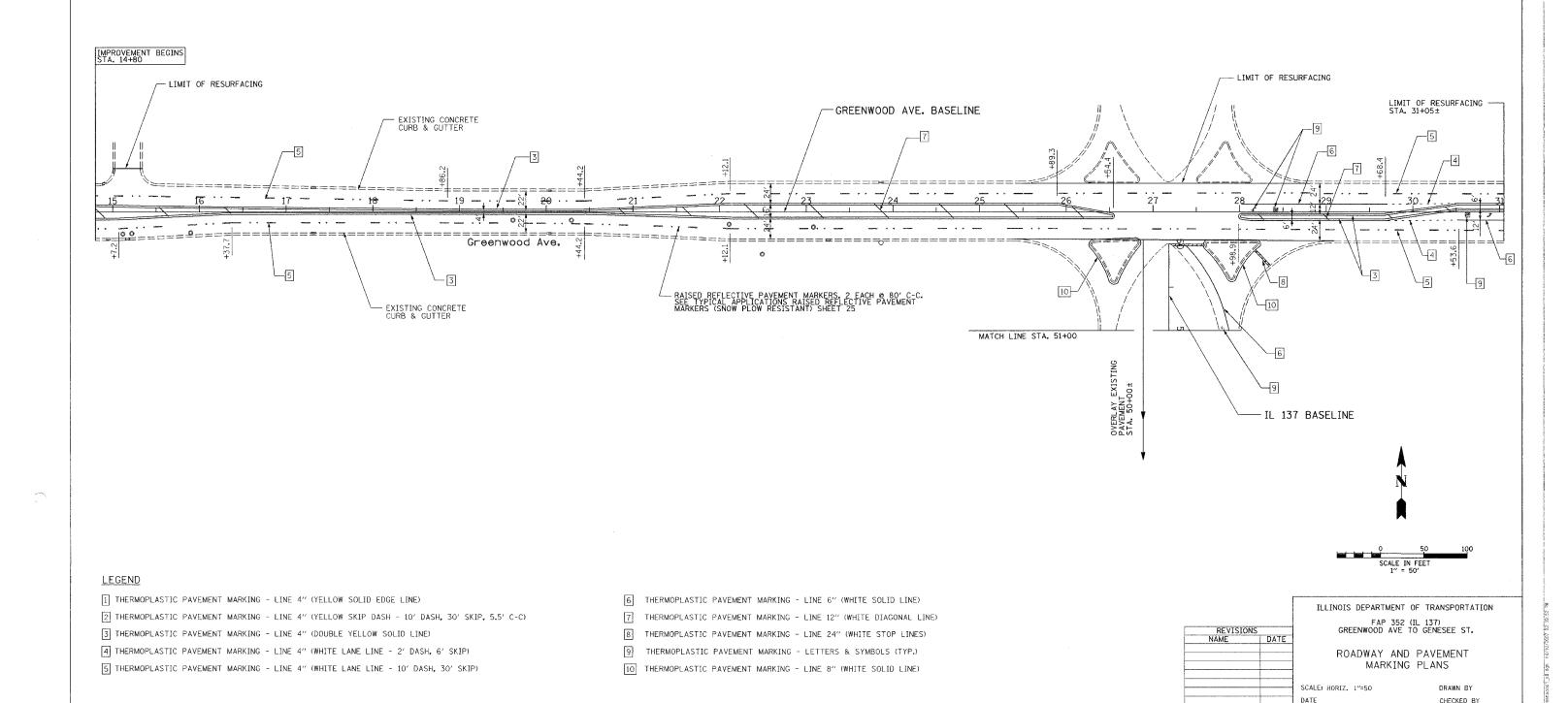
EXISTING TYPICAL RAMP SECTION
STA. 127+05± TO STA. 147+75±



PROPOSED TYPICAL RAMP SECTION
STA. 127+05± TO STA. 147+75±

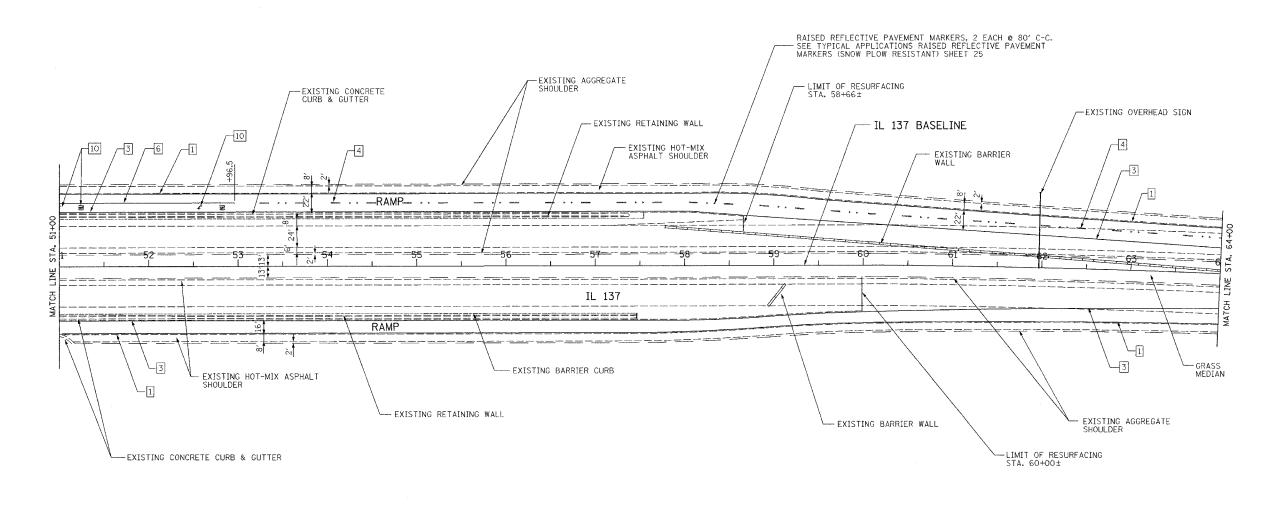






	F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
5	352	(8&9) RS-4	LAKE	31	9
	STA.		TO STA.		
	FED. RO	AD DIST. NO. ILLIN	OIS FED. AII	PROJECT	-





1 THERMOPLASTIC PAVEMENT MARKING - LINE 4" (WHITE SOLID EDGE LINE)

2 THERMOPLASTIC PAVEMENT MARKING - LINE 4" (WHITE LANE LINE - 2' DASH, 6' SKIP)

3 THERMOPLASTIC PAVEMENT MARKING - LINE 4" (YELLOW SOLID EDGE LINE)

4 PREFORMED PLASTIC PAVEMENT MARKING, TYPE B - LINE 5" (WHITE LANE LINE - 10' DASH, 30' SKIP)

5 THERMOPLASTIC PAVEMENT MARKING - LINE 4" (DOUBLE YELLOW SOLID LINE)

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7 THERMOPLASTIC PAVEMENT MARKING - LINE 8" (WHITE SOLID LINE)

8 THERMOPLASTIC PAVEMENT MARKING - LINE 12" (WHITE DIAGONAL LINE)

9 THERMOPLASTIC PAVEMENT MARKING - LINE 24" (WHITE STOP LINES)

10 THERMOPLASTIC PAVEMENT MARKING - LETTERS & SYMBOLS (TYP.)



ILLINOIS DEPARTMENT OF TRANSPORTATION

FAP 352 (IL 137) GREENWOOD AVE TO GENESEE ST.

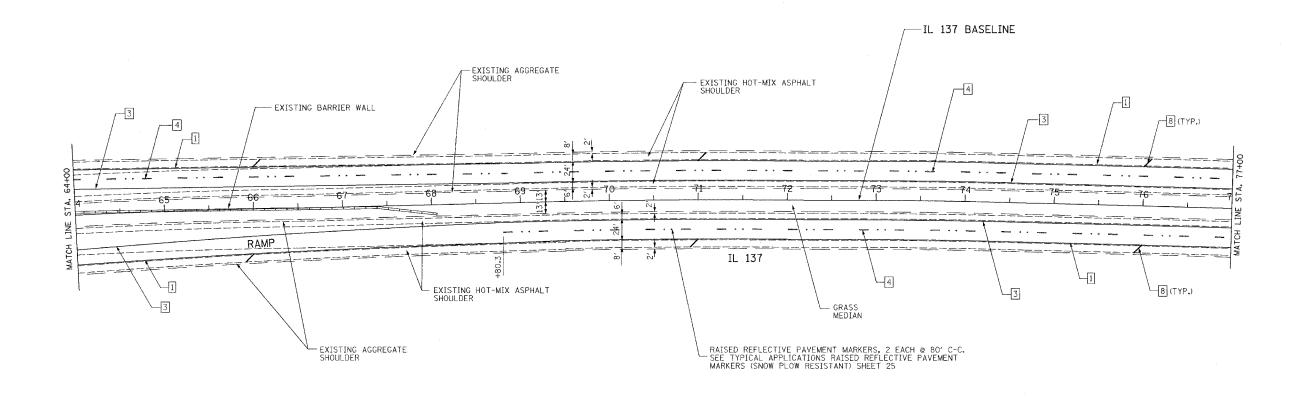
ROADWAY AND PAVEMENT MARKING PLANS

SCALE: HORIZ. 1"=50

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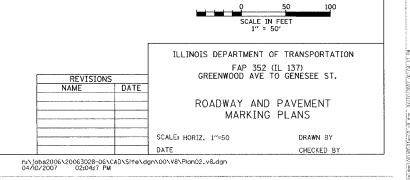
F.A. RTE	P.	SECT	ION		С	OUNT	1	TOTAL SHEETS	SHEET NO.
352	:	(8&9)	RS-	4		LAKE	Ξ	31	10
STA				-	го	STA.			
FED.	ROAD	DIST. N	0.	ILLIN	210	FED.	AID	PROJECT	1





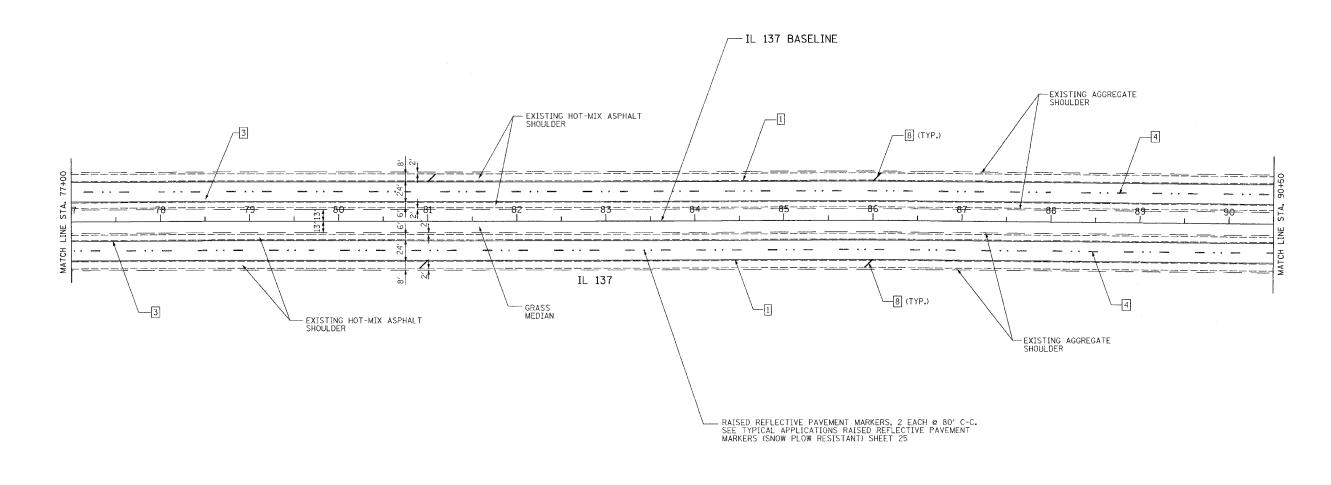
LEGEN

- 1 THERMOPLASTIC PAVEMENT MARKING LINE 4" (WHITE SOLID EDGE LINE)
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- 9 THERMOPLASTIC PAVEMENT MARKING LINE 24" (WHITE STOP LINES)
- 10 THERMOPLASTIC PAVEMENT MARKING LETTERS & SYMBOLS (TYP.)



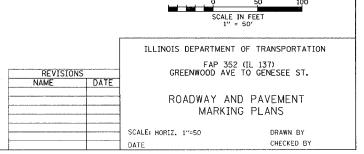
	F.A.P. RTE.	SECTION	С	OUNT	1	TOTAL SHEETS	SHEET NO.
j	352	(8&9) RS-4		LAKE		31	11
	STA.		TO	STA.			
	FED. ROAD	DIST. NO. H	LINOIS	FED.	AID	PROJECT	





LEGEND

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- 10 THERMOPLASTIC PAVEMENT MARKING LETTERS & SYMBOLS (TYP.)

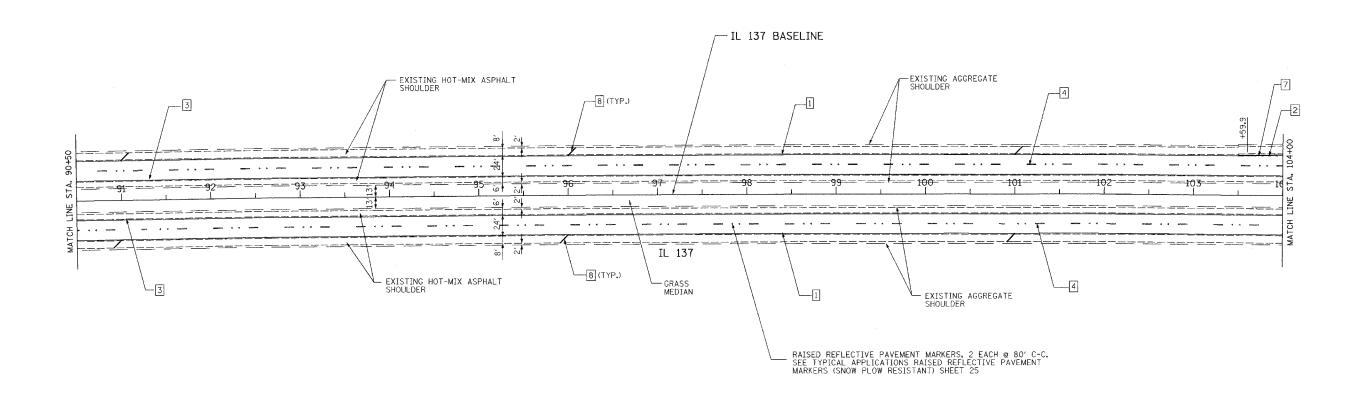


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CONTRACT NO. 60875

75	F.A.P. RTE.	SECTION	COUNTY	TOTAL	SHEET NO.
	352	(8&9) RS-4	LAKE	31	12
	STA.	-	TO STA.		
	FED. ROA	D DIST. NO. ILLIN	OIS FED. AID	PROJECT	





LEGEND

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- 10 THERMOPLASTIC PAVEMENT MARKING LETTERS & SYMBOLS (TYP.)

P	50	100
	IN FEET = 50'	

ILLINOIS DEPARTMENT OF TRANSPORTATION

FAP 352 (IL 137) GREENWOOD AVE TO GENESEE ST.

ROADWAY AND PAVEMENT
MARKING PLANS

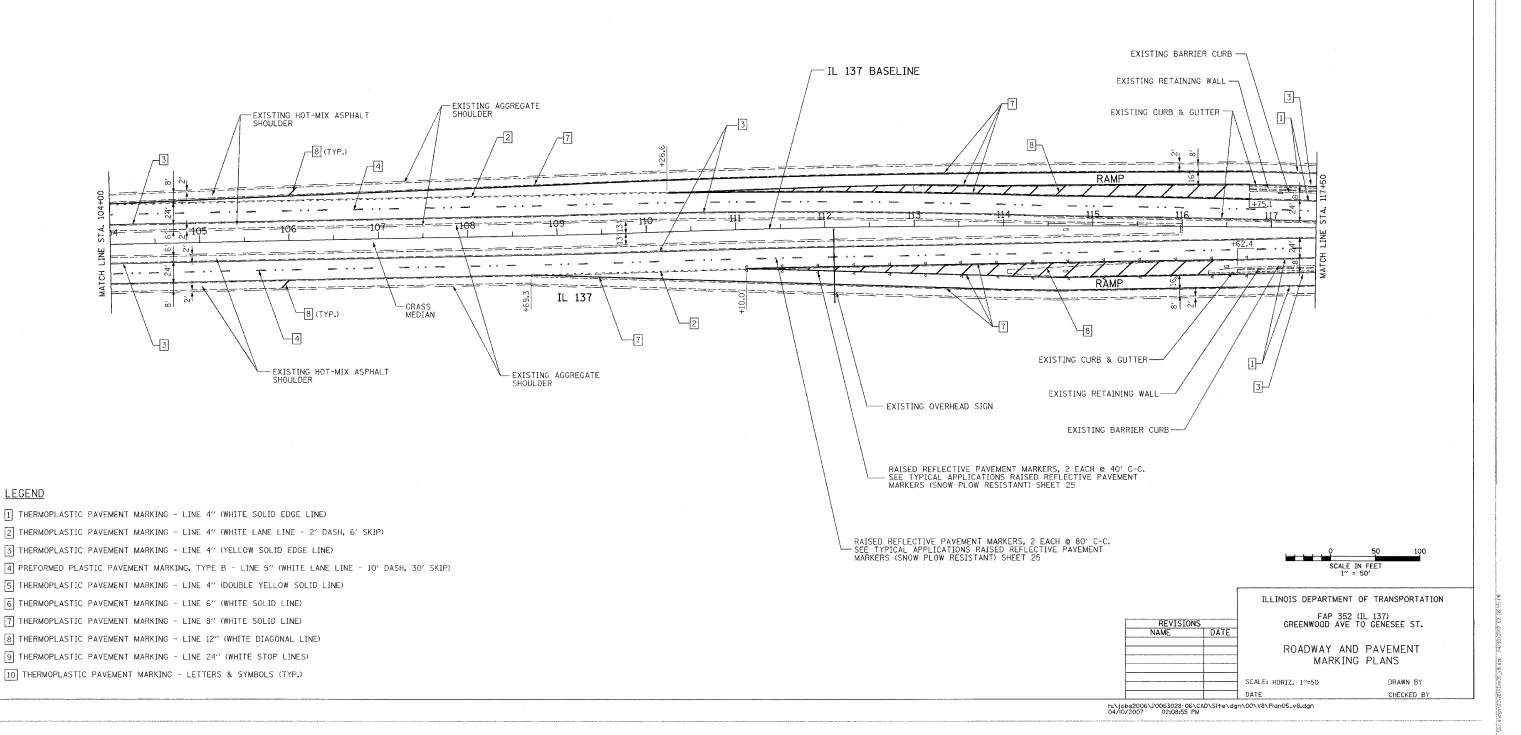
SCALE: HORIZ. 1"=50

DRAWN BY CHECKED BY

CHECKED B

F.A RTE	P SE	CTION	COUNTY	TOTAL SHEETS	SHEET NO.
35	2 (8&	9) RS-4	LAKE	31	13
STA	4.		TO STA.		
FED.	ROAD DIST	NO. ILLI	NOIS FED. AI	D PROJECT	

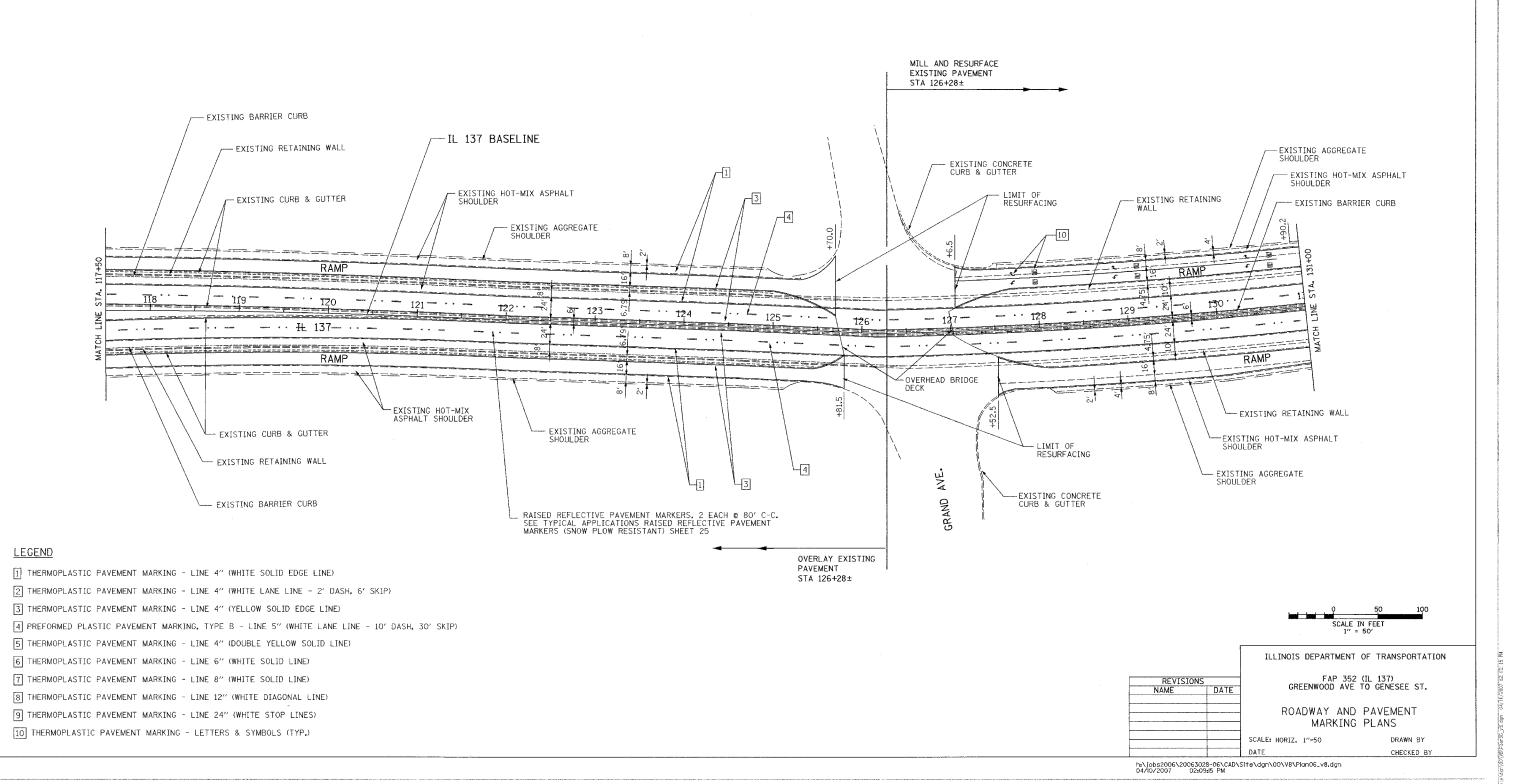
≺ Z ≪





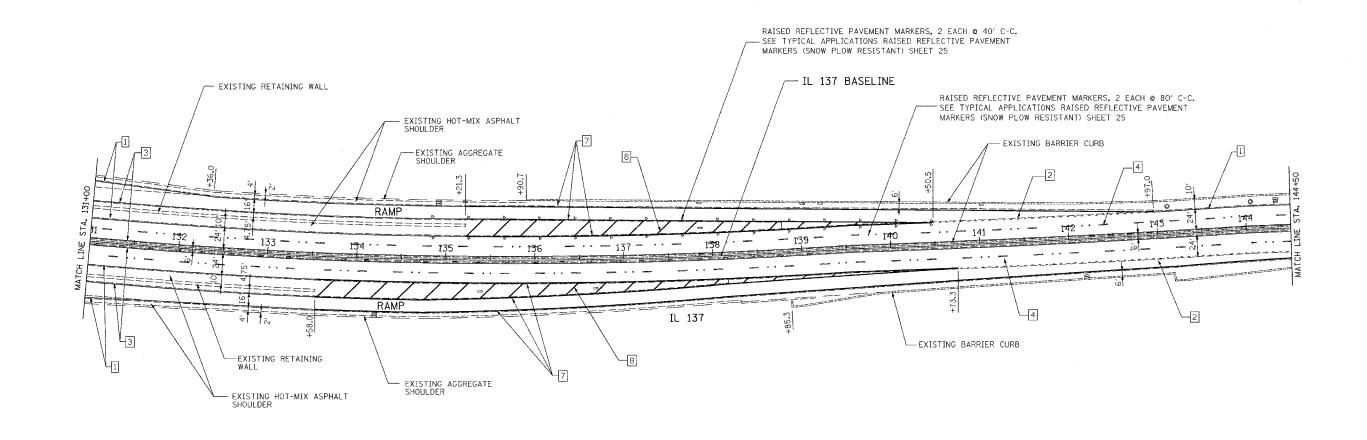
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,	352	(8&9) RS-4	LAKE	31	14
	STA.		TO STA.		
	FED. ROA	D DIST. NO. ILLIN	OIS FED. AID	PROJECT	





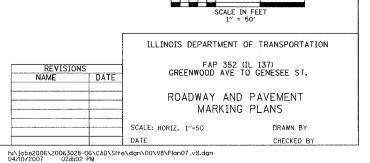
	F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
5	352	(8&9) RS-4	LAKE	31	15
	STA.		TO STA.		
	FED. ROA	D DIST. NO. ILLIN	KOIS FED. AID	PROJECT	





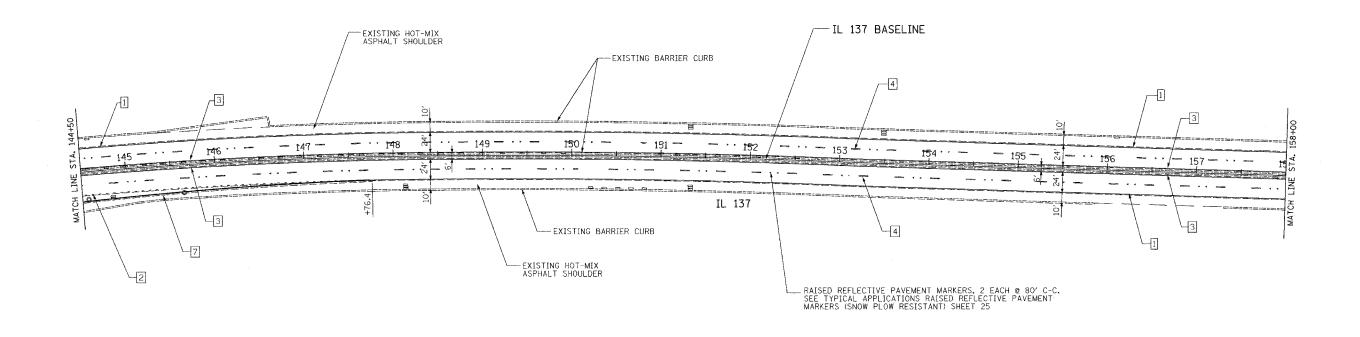
<u>LEGEND</u>

- 1 THERMOPLASTIC PAVEMENT MARKING LINE 4" (WHITE SOLID EDGE LINE)
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- 10 THERMOPLASTIC PAVEMENT MARKING LETTERS & SYMBOLS (TYP.)



	F.A.P. RTE.	SECTION	COUNTY		TOTAL SHEETS	SHEET NO.
75	352	(8&9) RS-4	LAKE		31	16
	STA.		TO STA.			
	FED. RO	AD DIST. NO. ILL	INOIS FED.	AID	PROJECT	





LEGEND

1 THERMOPLASTIC PAVEMENT MARKING - LINE 4" (WHITE SOLID EDGE LINE)

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10 THERMOPLASTIC PAVEMENT MARKING - LETTERS & SYMBOLS (TYP.)

0 50 100 SCALE IN FEET 1" = 50'

ILLINOIS DEPARTMENT OF TRANSPORTATION

TONS GREENWOOD AVE TO GENESEE ST.

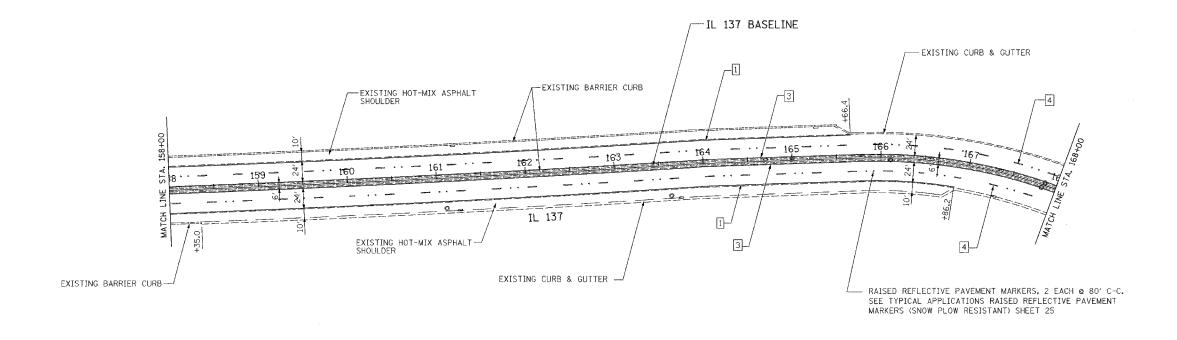
ROADWAY AND PAVEMENT
MARKING PLANS

SCALE: HORIZ. 1"=50

DRAWN BY CHECKED BY

375	F.A.P. RTE.	SECTION	1 (COUNT	Y	TOTAL SHEETS	SHEET NO.
	352	(8&9) RS	-4	LAK	E	31	17
	STA.		TO	STA.			
	FED. ROA	D DIST. NO.	ILLINOIS	FED.	AID	PROJECT	





LEGEN

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- 10 THERMOPLASTIC PAVEMENT MARKING LETTERS & SYMBOLS (TYP.)

SCALE IN FEET

1" = 50'

ILLINOIS DEPARTMENT OF TRANSPORTATION

FAP 352 (IL 137)

GREENWOOD AVE TO GENESEE ST.

ROADWAY AND PAVEMENT

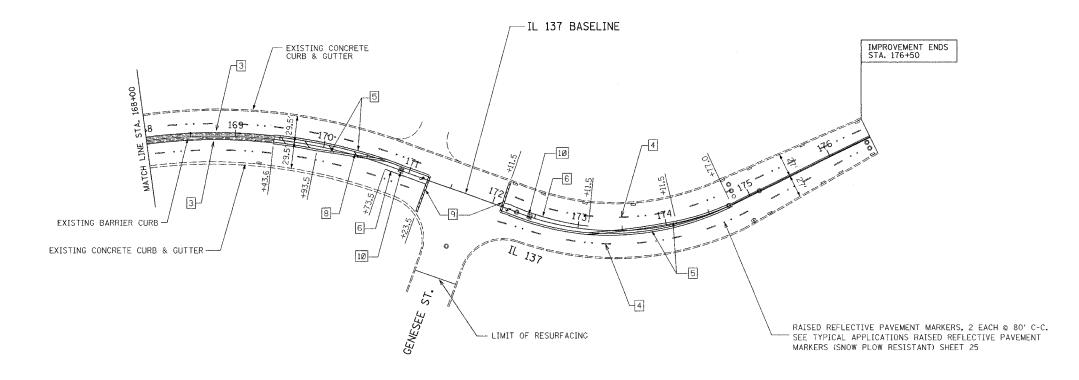
MARKING PLANS

SCALE: HORIZ. 1"=50 DRAWN BY

DATE CHECKED BY

75	F.A.P. RTE.	SECTION	COUNTY	TOTAL	SHEET NO.
	352	(8&9) RS-4	LAKE	31	18
	STA.		TO STA.		
	FED. RO	AD DIST. NO. ILLIN	OIS FED. AID	PROJECT	•





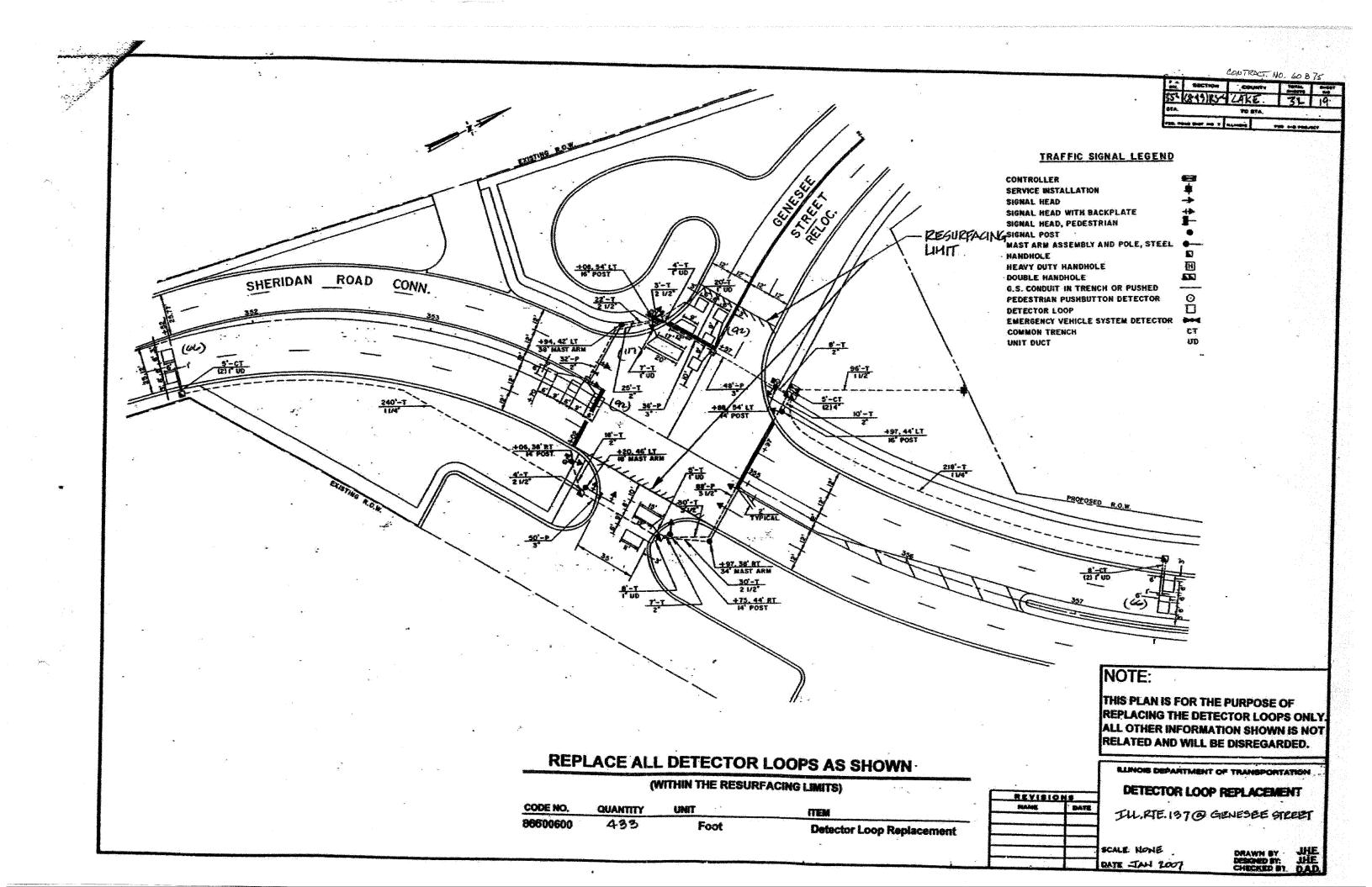
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- THERMOPLASTIC PAVEMENT MARKING LINE 24" (WHITE STOP LINES)
- 10 THERMOPLASTIC PAVEMENT MARKING LETTERS & SYMBOLS (TYP.)

ILLINOIS DEPARTMENT OF TRANSPORTATION FAP 352 (IL 137) GREENWOOD AVE TO GENESEE ST.

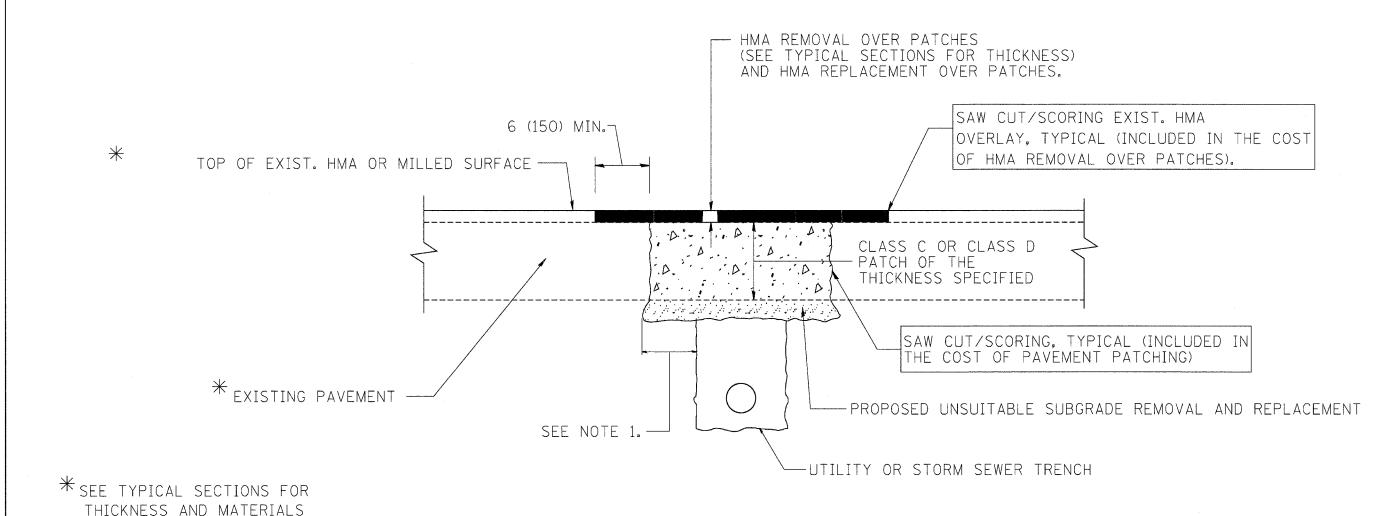
ROADWAY AND PAVEMENT MARKING PLANS

SCALE: HORIZ. 1"=50

CHECKED BY



CONTRACT NO. SECTION COUNTY TOTAL SHEE SHEETS NO. 352 (849) R5-4 LAKE 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

REVISIONS		ILLINOIS DEPARTMENT OF TRANSPORTATION				
NAME	DATE	ILLINOIS DEFANIMENT OF TRANSPORTA	LITON			
R. SHAH	10/25/94					
R. SHAH	01/14/95					
R. SHAH	03/23/95	PAVEMENT PATCHING FO	R			
R. SHAH	04/24/95	HMA SURFACED				
A. HOUSEH	03/15/96					
A. ABBAS	03/21/97	PAVEMENT				
A. ABBAS	01/20/98					
ART ABBAS	04/27/98	SCALE: VERT. NONE DRAWN BY				
R. BORO	01/01/07	SCALE: HORIZ NONE DRAWN BY				

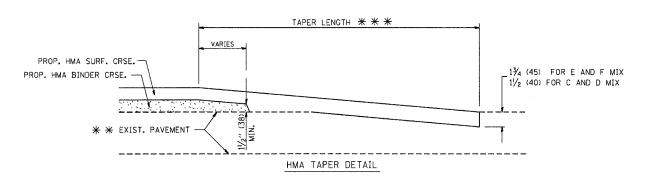
PLOT DATE: 10/31/2006 REVISION DATE: 01/01/07

P.C. P.C.E. USER

PROP. PAY LIMIT OF HMA SURF. REMOVAL FULL THICKNESS OF MILLING TEMP. RAMP (NOTE "E") PROP. HMA SURFACE REMOVAL EXIST. PAVEMENT MILLED TEMPORARY RAMP (FOR BUTT JOINT AND HMA TAPER SEE DETAIL BELOW) OPTION 1 PROP. PAY LIMIT OF HMA SURF. REMOVAL FULL THICKNESS OF MILLING SAW CUT (INCLUDED IN THE COST TEMP. RAMP OF HMA SURFACE (NOTE "C") PROP. HMA SURFACE REMOVAL REMOVAL - BUTT JOINT) 13/4 (45) FOR E AND F MIX 4'-6" (1.35 m) PAY LIMIT 11/2 (40) FOR C AND D MIX EXIST. HMA SURF. EXIST. PAVEMENT TEMP, HMA RAMP HMA CONSTRUCTED TEMPORARY RAMP (FOR BUTT JOINT AND HMA TAPER SEE DETAIL BELOW) OPTION 2 TYPICAL TEMPORARY RAMP HMA TAPER LENGTH *** SAW CUT (INCLUDED IN THE COST OF HMA SURFACE PROP. HMA SURF. CRSE. REMOVAL - BUTT JOINT) 4'-6" (1.35 m) PROP. HMA BINDER CRSE. VARIES 13/4 (45) FOR E AND F MIX PAY LIMIT FOR BUTT JOINT (NOTE "D") 1/2 (40) FOR C AND D MIX EXIST. HMA SURF. EXIST. PAVEMENT HMA SURF. REMOVAL - BUTT JOINT BUTT JOINT AND HMA TAPER

TYPICAL BUTT JOINT AND HMA TAPER
FOR MILLING AND RESURFACING

F.A. SECTION COUNTY 352 (8 \$9) RS-4 LAKE TO STA. FED. ROAD DIST. NO. 1 ILLINOIS FED. AID PROJECT PROP. HMA OR PCC SURFACE REMOVAL - BUTT JOINT SAW CUT (INCLUDED IN THE COST EXIST. HMA OR PCC SURFACE 30'-0" (9.0 m) (NOTE "A") OF HMA OR P.C.C. SURFACE REMOVAL 15'-0" (4.5 m) (NOTE "B") BUTT JOINT) (NOTE "D") 13/4 (45) FOR E AND F MIX 1/2 (40) FOR C AND D MIX * * EXIST. PAVEMENT BUTT JOINT DETAIL



TYPICAL BUTT JOINT AND HMA TAPER FOR RESURFACING ONLY

* * PC CONCRETE, HMA OR HMA RESURFACED PAVEMENT.

NOTES

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

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

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".

LEA1910	ן כות
NAME	DATE
M. DE YONG	6-13-90
M. DE YONG	7-3-90
M. DE YONG	3-27-92
R. SHAH	09/09/94
R. SHAH	10/25/94
A. ABBAS	03/21/97
M. GOMEZ	04/06/01
R. BORO	01/01/07

ILLINOIS DEPARTMENT OF TRANSPORTATION

BUTT JOINT AND HMA TAPER DETAILS

SCALE: VERT. NONE HORIZ. NONE PLOT DATE: 10/31/2006 DRAWN BY CHECKED BY

BD400-05 (VI=BD32)
REVISION DATE: 01/01/07

CONTRACT NO. 60875

ATE = 10/31/2006 WE = Kildiststd\bd32.dgn CALE = 50.0000 '/ IN.

| CONTRACT NO. &0875 | F.A. | SECTION | COUNTY | TOTAL SHEET | SHEETS | NO. | | 35Z (849) RS-4 | LAKE | 31 | 22 TO STA. FED. ROAD DIST. NO. 1 ILLINOIS FED. AID PROJECT

TOTAL HMA OVERLAY THICKNESS 21/2 (63) 6'-0" (1.8 m) - EXIST. CURB & GUTTER EXIST. P.C. CONCRETE PAVEMENT PROP. PORTLAND CEMENT CONCRETE SURFACE REMOVAL (VAR. DEPTH) IN SQUARE YARD (SQUARE METER) PROP. LEVELING BINDER (MACHINE METHOD) PROP. HMA SURFACE COURSE

	_		_
HMA SURFACE		LEVELING BINDER	
MIX	THICKNESS	THICKNESS	* MILLING AT GUTTER FLAG
C OR D	11/2 (38)	1 (25)	11/4 (33)
F	1¾ (44)	3/4 (19)	11/2 (38)

HMA TAPER AT EDGE OF P.C.C PAVEMENT

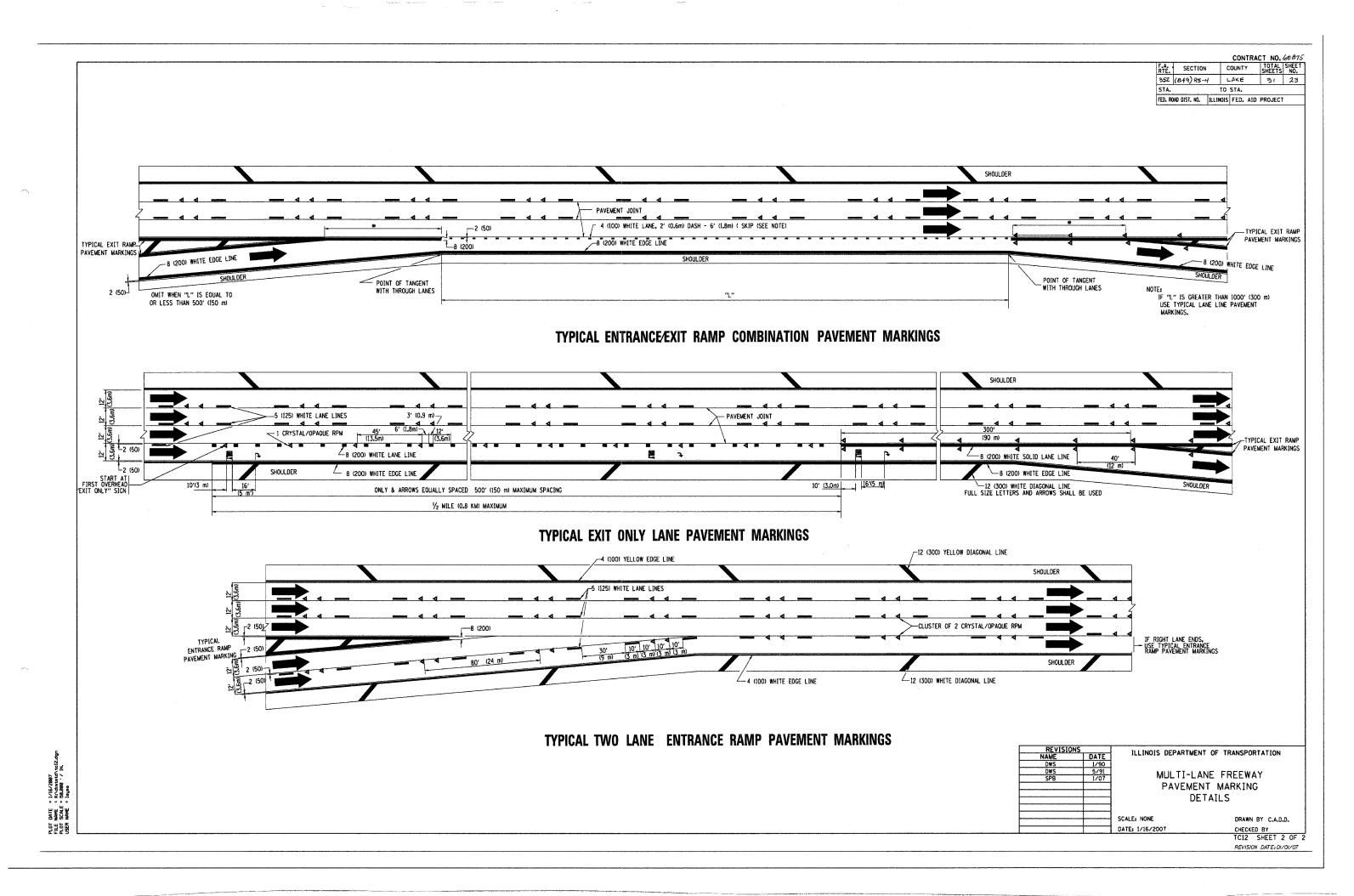
ALL DIMENSIONS ARE IN INCHES (MILLIMETERS) UNLESS OTHERWISE SHOWN.

ILLINOIS DEPARTMENT OF TRANSPORTATION

HMA TAPER AT EDGE OF P.C.C. PAVEMENT

SCALE: VERT. NONE HORIZ. NONE PLOT DATE: 10/31/2006

DRAWN BY JIS CHECKED BY A. ABBAS
BD400-06 (BD33)



SHOULDER 45°

2 (50)

2 (50)

2 (50)

2 (50)

3 (100) YELLOW EDGE LINE

4 (100) YELLOW EDGE LINE

4 (100) YELLOW EDGE LINE

2 (50)

2 (50)

3 (100) YELLOW DIAGONAL LINE

4 (100) YELLOW EDGE LINE

5 (100) YELLOW EDGE LINE

2 (50)

2 (50)

3 (100) YELLOW EDGE LINE

4 (100) YELLOW EDGE LINE

2 (50)

5 (100) YELLOW EDGE LINE

THE DIAGONAL LINES SHALL BE SPACED AT 40' (12 m) C-C

ACROSS ALL STRUCTURES WHICH ARE 500' (150 m) OR LESS

THE DIAGONAL LINES ARE NOT REQUIRED ON SHOULDERS

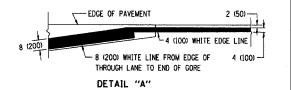
WHICH ARE 6' (1.8 m) OR LESS IN WIDTH

IN LENGTH

TYPICAL EDGE LINES & LANE LINES

NOTES:

- 1. THERMO PLASTIC PAVEMENT MARKING LINE SHALL BE USED FOR THE EDGE LINES, GORE LINES, AND DIAGONAL LINES ON
- BITUMINOUS PAVEMENT ONLY.
- 2. PREFORMED PLASTIC TYPE B PAVEMENT MARKING LINE SHALL BE USED FOR ALL LANE LINES ON BITUMINOUS PAVEMENT
- 3. POLYUREA PAVEMENT MARKING SHALL BE USED FOR ALL MARKINGS ON PCC



SECTION

STA.

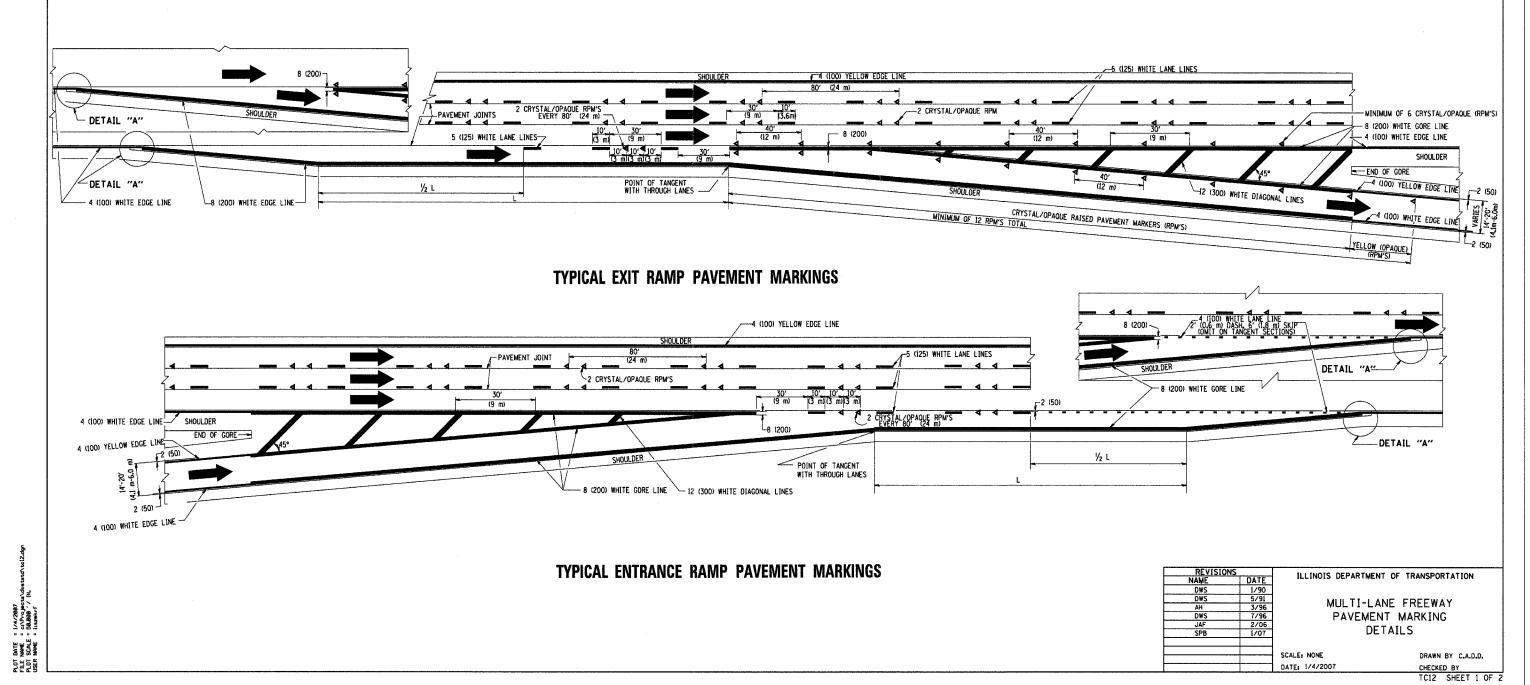
352 (8\$9) R5-4 LAKE 31 24

FED. ROAD DIST. NO. ILLINOIS FED. AID PROJECT

TO STA.

CONTRACT NO. 60875
COUNTY TOTAL SHEET NO.

REVISION DATE: 01/01/07

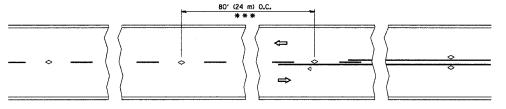


CONTRACT NO. 60675

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

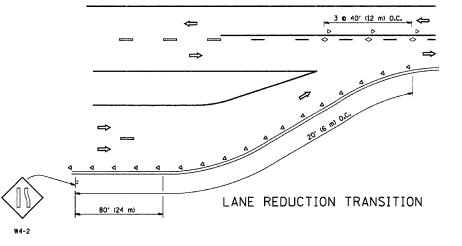
352 (6 49) RS-4 LAKE 31 25

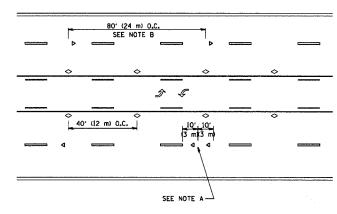
FED. ROAD DIST. NO. ILLINOIS FED. AID PROJECT



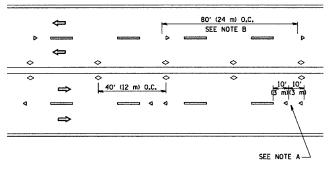
*** REDUCE TO 40' (12 m) O.C. ON CURVES WITH POSTED OR ADVISORY SPEED 45 M.P.H. (70 km/h) OR LESS.

TWO-LANE/TWO-WAY

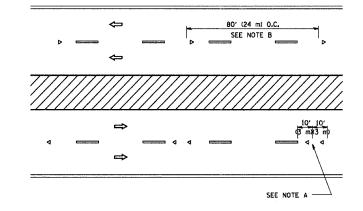




TWO-WAY LEFT TURN



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.
- 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 (₩/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.

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

REVISIONS
NAME DATE
T. RAMMACHER 09-19-94
T. RAMMACHER 03-12-99
T. RAMMACHER 01-06-00

ILLINOIS DEPARTMENT OF TRANSPORTATION

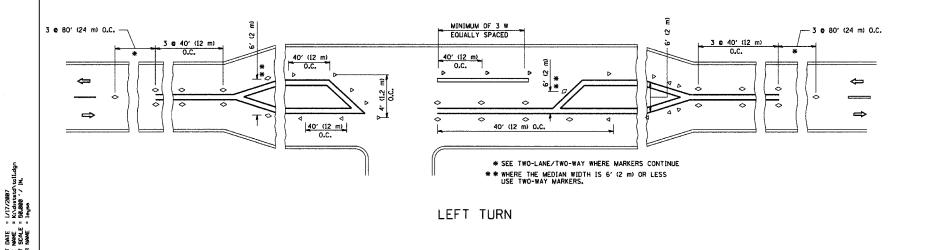
TYPICAL APPLICATIONS

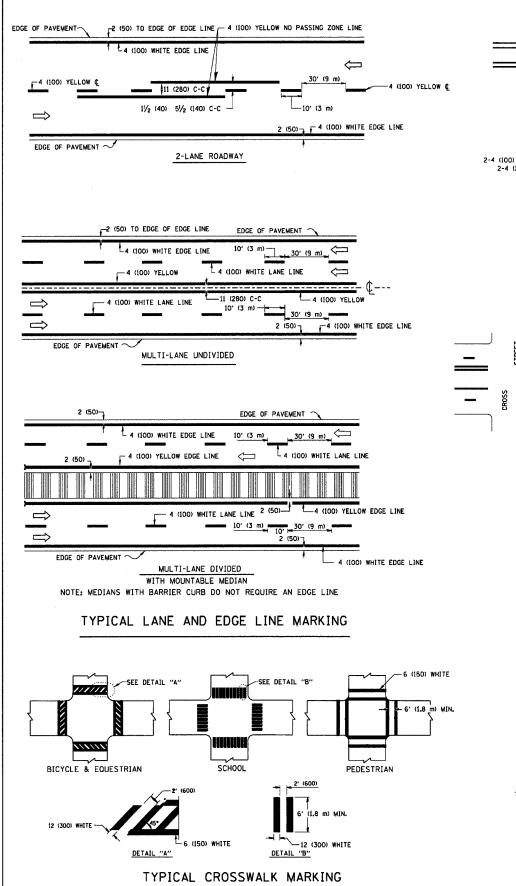
TYPICAL APPLICATIONS
RAISED REFLECTIVE PAVEMENT
MARKERS (SNOW-PLOW RESISTANT)

SCALE: NONE DATE: 1/17/2007

DRAWN BY CADD CHECKED BY TC-11

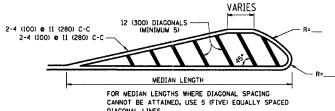
REVISION DATE: 01/06/00





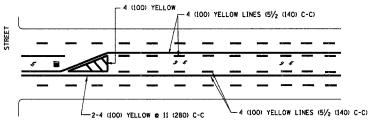
2-4 (100) YELLOW @ 11 (280) C-C-1' (1.2 m) OUTSIDE TO NO DIAGONALS OUTSIDE OF LINES - 2-4 (100) YELLOW @ 11 (280) C-C

4' (1.2 m) WIDE MEDIANS ONLY

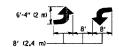


DIAGONAL LINE SPACING: 50' (15 m) C-C (LESS THAN 30MPH (50 km/h)) 75' (25 m) C-C 30MPH (50 km/h) TO 45MPH (70 km/h)) 150' (45 m) C-C (MORE THAN 45MPH (70 km/h))

MEDIANS OVER 4' (1.2 m) WIDE

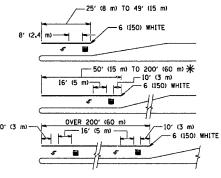


A MINIMUM OF TWO PAIRS OF TURN ARROWS SHALL BE USED, WHITE IN COLOR. ADDITIONAL PAIRS SHALL BE PLACED AT 200' (60 m) TO 300' (90 m) INTERVALS.



MEDIAN WITH TWO-WAY LEFT TURN LANE

TYPICAL PAINTED MEDIAN MARKING

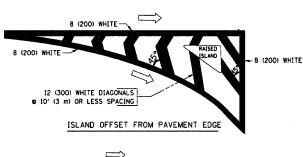


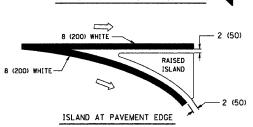
FULL SIZE LETTERS 8' (2.4 m) AND ARROWS SHALL BE USED. AREA = 15.6 SO. FT. (1.5 m2) (1) AREA = 20.8 SQ. FT. (1.9 m2)

* 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

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 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 e 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 e 6 (150) 12 (300) e 45° 12 (300) e 90°	SOLID SOLID SOLID	WHITE WHITE WHITE	NOT LESS THAN 6' (1.8 m) APART 2' (600) APART 2' (600) APART SEE TYPICAL CROSSWALK MARKING DETAILS.
STOP LINES	24. (600)	SOLID	WHITE	PLACE 4' (1.2 m) IN ADVANCE OF AND PARALLEL TO CROSSWALK, IF PRESENT. OTHERWISE, PLACE AT DESIRED STOPPING POINT. PARALLEL TO CROSSROAD CENTERLINE, WHERE POSSIBLE
PAINTED MEDIANS	2 @ 4 (100) WITH 12 (300) DIAGONALS @ 45° NO DIAGONALS USED FOR 4' (1.2 m) WIDE MEDIANS	SOLID	YELLOW: TWO WAY TRAFFIC WHITE: ONE WAY TRAFFIC	11 (280) C-C FOR THE DOUBLE LINE SEE TYPICAL PAINTED MEDIAN MARKING.
GORE MARKING AND CHANNELIZING LINES	8 (200) WITH 12 (300) DIAGONALS @ 45°	SOLID	WHITE	DIAGONALS: 15' (4.5 m) C-C (LESS THAN 30MPH (50 km/h)) 20' (6 m) C-C 30MPH (50 km/h) TO 45MPH (70 km/h)) 30' (9 m) C-C (OVER 45MPH (70 km/h))
RAILROAD CROSSING	24 (600) TRANSVERSE LINES: "RR" IS 6' (1.8 m! LETTERS: 16 (400) LINE FOR "X"	SOLID	WHITE	SEE STATE STANDARD 780001 AREA OF: "R"#3.6 SO. FT. (0.33 m ²) EACH "X"=54.0 SO. FT. (5.0 m ²)
SHOULDER DIAGONALS	12 (300) e 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) T0 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 millimeters (inches) unless otherwise shown.

REVISION		THE INDIS DEPARTME	ENT OF TRANSPORTATION
NAME	DATE	ILLINOIS DEPARTME	ENT OF TRANSPORTATION
EVERS	03-19-90		
T. RAMMACHER	10-27-94	DISTR	RICT ONE
ALEX HOUSEH	10-09-96		
ALEX HOUSEH	10-17-96	TYPICAL	PAVEMENT
T. RAMMACHER	01-06-00		RKINGS
		IŅAF	KINGS
		SCALE: NONE	DRAWN BY CADD
		DATE: 1/17/2007	CHECKED BY

TC-13 REVISION DATE: 01/06/00

CONTRACT NO. 60875

31 26

RTE. SECTION COUNTY TOTAL SHEET NO.

TO STA. FED. ROAD DIST. NO. | ILLINOIS | FED. AID PROJECT

352 (849) RS-4 LAKE

STA.

PLOT FILE PLOT USER

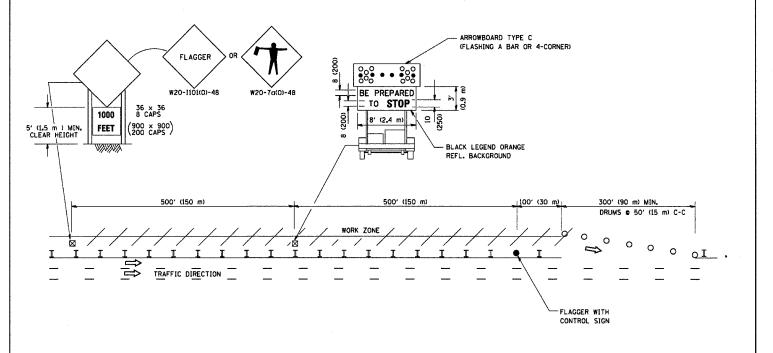
CONTRACT NO. 60 B 75 F.A. SECTION

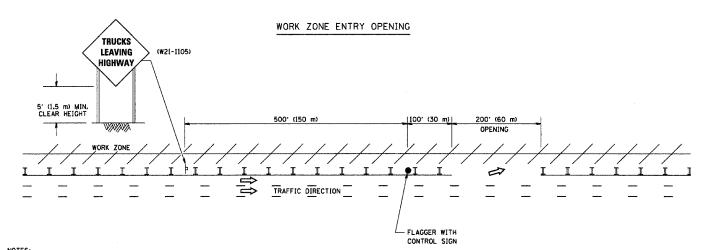
COUNTY TOTAL SHEET NO. 352 (844) RS-4 LAKE TO STA.

FED. ROAD DIST. NO. ILLINOIS FED. AID PROJECT

SIGNING FOR FLAGGING OPERATIONS AT WORK ZONE OPENINGS

WORK ZONE EXIT OPENING





- 1. 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

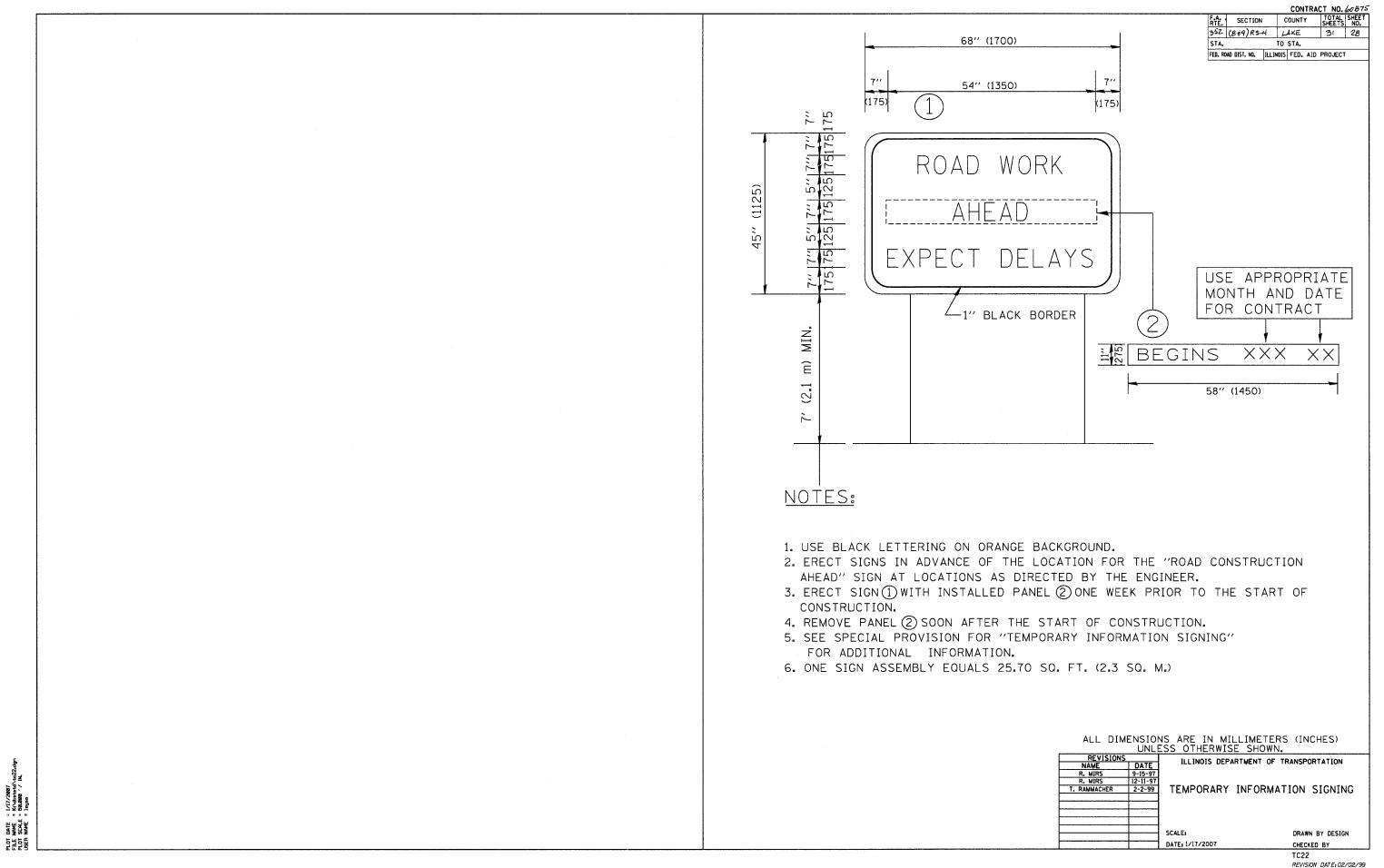
ALL DIMENSIONS ARE IN INCHES (MILLIMETERS)
UNLESS OTHERWISE SHOWN

ILLINOIS DEPARTMENT OF TRANSPORTATION SIGNING FOR FLAGGING OPERATIONS

AT WORK ZONE OPENINGS

SCALE: NONE DATE: 1/16/2007 DRAWN BY CADD CHECKED BY

REVISION DATE: 01/01/07



RTE. SECTION COUNTY 352 (849)RS-4 LAKE TO STA. VARIABLE - TO MEET EXISTING FED. ROAD DIST. NO. 1 ILLINOIS FED. AID PROJECT DIMENSIONS AND FIELD CONDITIONS (SEE NOTE 2) PROP. CONC. CURB OR CURB AND GUTTER REPLACEMENT IN ACCORDANCE WITH STATE STANDARD 606001. (SEE NOTE 2) SAW CUT FULL DEPTH - INCLUDED IN THE COST OF SIDEWALK, DRIVEWAY OR MEDIAN SURFACE REMOVAL 18 (450) SEE STATE STANDARD 606001 MAX. EXISTING OR PROPOSED HMA SURFACE (IF APPLICABLE) ¼ (5) ****** EXISTING SIDEWALK, DRIVEWAY, MEDIAN SURFACE OR GROUND. PROPOSED SIDEWALK, DRIVEWAY PAVEMENT, MEDIAN SURFACE OR SALT TOLERANT SOD AND TOP SOIL, 4 (100) SOD RESTORATION (SEE NOTE (1)). EXISTING CONCRETE PAVEMENT, CONCRETE BASE COURSE OR FLEXIBLE PAVEMENT SUITABLE BACKFILL MATERIAL -3 (75) MIN. (INCLUDED IN THE COST OF CURB OR CURB AND GUTTER REMOVAL AND REPLACEMENT) * 3 (75) MINIMUM FROM TOP AND BOTTOM OF THE CONCRETE PAVEMENT OR BASE COURSE. PROPOSED 34" (20) PREFORMED EXPANSION JOINT AT CONCRETE SIDEWALKS, DRIVEWAYS, AND MEDIANS. (INCLUDED IN THE COST * IF THE FINAL SURFACE OF THE PAVEMENT IS CONCRETE, THE GUTTER IS TO BE FLUSH OF CURB OR CURB AND GUTTER REMOVAL AND REPLACEMENT.) WITH THE PAVEMENT. NOTE: (1) SIDEWALK, DRIVEWAY PAVEMENT OR MEDIAN SURFACE SHALL BE SIMILAR TO THE MATERIAL BEING REMOVED AND WILL BE PAID FOR SEPARATELY. UNSUITABLE SUB-BASE MATERIAL TO BE REMOVED, IF DIRECTED BY THE ENGINEER, SHALL BE REPLACED WITH EITHER SUB-BASE GRANULAR SALT TOLERANT SOD AND TOP SOIL, 4 (100) RESTORATION WILL NOT BE PAID FOR SEPARATELY, MATERIAL. TYPE B OR ADDITIONAL THICKNESS OF CONCRETE. BUT SHALL BE INCLUDED IN THE COST OF CURB OR CURB AND GUTTER REMOVAL AND REPLACEMENT. REMOVAL AND REPLACEMENT 4 (100) OR LESS IS INCLUDED IN THE COST OF CURB OR CURB AND GUTTER REMOVAL AND REPLACEMENT. (2) CURB OR CURB AND GUTTER REPLACEMENT SHALL MATCH THE SHAPE OF THE EXISTING CURB OR CURB AND GUTTER UNLESS OTHERWISE SPECIFIED. REMOVAL AND REPLACEMENT IN EXCESS OF 4 (100) WILL BE PAID FOR IN ACCORDANCE WITH ARTICLE 109.04 OF THE STANDARD SPECIFICATIONS. 3 FOR CURB OR CURB AND GUTTER REMOVAL AND REPLACEMENT ADJACENT TO FLEXIBLE PAVEMENT DELETE EPOXY COATED TIE BARS. PROPOSED #6 (20) EPOXY COATED TIE BARS 24 (600) LONG AT (4) LONGITUDINAL BARS, IF ENCOUNTERED IN THE EXISTING CURB OR CURB AND GUTTER, ARE 24 (600) CENTERS WILL NOT BE PAID FOR SEPARATELY. DELETE EPOXY NOT TO BE REPLACED. CUTTING AND REMOVING LONGITUDINAL BARS SHALL BE INCLUDED COATED TIE BARS IF EXISTING TIE BARS ARE USUABLE AS DETERMINED IN THE COST OF CURB OR CURB AND GUTTER REMOVAL AND REPLACEMENT. BY THE ENGINEER. (SEE NOTE 3). (5) THE COST OF HMA SURFACE REMOVAL IN THE EXISTING GUTTER FLAG SHALL BE INCLUDED IN THE COST OF THE CURB AND GUTTER REMOVAL AND REPLACEMENT. BASIS OF PAYMENT: 6 THE REMOVAL AND REPLACEMENT OF THE EXISTING CURB OR CURB AND GUTTER SHALL THIS WORK WILL BE PAID FOR AT THE CONTRACT UNIT PRICE PER FOOT (METER) FOR "CURB REMOVAL AND REPLACEMENT" OR BE DONE IN ACCORDANCE WITH THE APPLICABLE PORTIONS OF SECTION 440 AND 606 OF THE STANDARD SPECIFICATIONS. "COMBINATION CONCRETE CURB AND GUTTER REMOVAL AND REPLACEMENT". THE LOCATIONS OF REMOVAL AND REPLACEMENT OF EXISTING CURB OR CURB AND GUTTER SHALL BE DETERMINED BY THE RESIDENT ENGINEER AT THE TIME OF CONSTRUCTION. ALL DIMENSIONS ARE IN INCHES (MILLIMETERS) UNLESS OTHERWISE SHOWN. ILLINOIS DEPARTMENT OF TRANSPORTATION

CURB OR CURB AND GUTTER REMOVAL AND REPLACEMENT

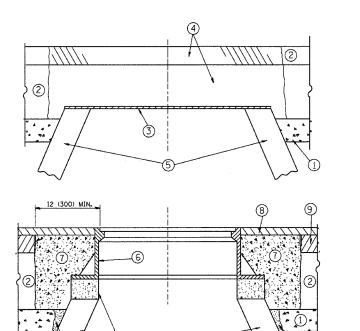
CURB AND GUTTER REMOVAL AND REPLACEMENT

SCALE: VERT. NONE

BD600-06 (BD-24)

CONTRACT NO

F.A	SECTION	-	OUNT	Y	TOTAL SHEETS	SHEE NO.
352	(8 49) RS-	4 1	_AKE		31	30
STA.		TO	STA.			
FED. R	DAD DIST. NO. 1	ILLINOIS	FED.	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 COST OF THE CORRESPONDING PAY ITEM.

NOTES

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.

1 SUB-BASE GRANULAR MATERIAL

PROPOSED SAND FILL

- 6 FRAME AND LID (SEE NOTES)
- 2 EXISTING PAVEMENT
- 3 36 (900) DIAMETER METAL PLATE PROPOSED CRUSHED STONE AND HMA SURFACE MIX
- (5) EXISTING STRUCTURE
- 7 CLASS SI CONCRETE, HMA SURFACE COURSE OR HMA BINDER COURSE
- 8 PROPOSED HMA SURFACE COURSE
- 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

REVISI(ONS	
NAME	DATE	
R. SHAH	10/25/94	
R. SHAH	01/30/95	
R, SHAH	03/10/95	
A. ABBAS	03/21/97	
R. WIEDEMAN	05/14/04	
R. BORO	01/01/07	

ILLINOIS DEPARTMENT OF TRANSPORTATION

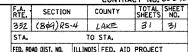
DETAILS FOR FRAMES AND LIDS ADJUSTMENT WITH MILLING

SCALE: VERT, NONE HORIZ. PLOT DATE: 10/31/2006

CHECKED BY

BD600-03 (BD-8) REVISION DATE: 01/01/07

DATE NAME SCALE NAME PLOT FILE PLOT USER



NOTES:

VEHICLES LOOP DETECTORS

- * ALL LEAD IN CABLE SHALL BE TWO CONDUCTOR NO. 14 TWISTED,
- * 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. <u>EACH</u> ONE OF THESE TYPE OF LOOPS REQUIRES A <u>SEPARATE</u> 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

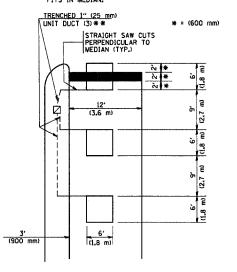
REVISIONS		ILLINOIS DEPARTMENT OF TRANSPORTATION			
NAME	DATE	ILLINOIS D	ELWINELLI (DE TRANSFORTATION	
		DISTRICT 1 DETECTOR LOOP			
		INS	TALLATIO	ON DETAILS	
		FOR I	ROADWAY	RESURFACING	
				DESIGNED BY	
		SCALE: NONE		DRAWN BY CADD	
		DATE: 2/15/2006		CHECKED BY R.K.F.	

TS07

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

(PROTECTED / PERMITTED LEFT TURN PHASING)

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



** UNIT DUCT IS TO BE SHOWN ON PLAN SHEETS NOTE: DUAL LEFT TURNS NOT SHOWN REFER TO PLAN SHEET FOR DETECTOR LOOP REPLACEMENT

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

(900 mm)

LEFT TURN LANES WITHOUT MEDIANS

VOLUME DENSITY ("FAR OUT" DETECTION)

ON SAME APPROACH

(PROTECTED / PERMITTED LEFT TURN PHASING)

(1.8 m)

ISTRAIGHT SAW CUT TO HEAVY

DUTY HANDHOLE (TYP.) PLACE HEAVY DUTY HANDHOLE BETWEEN FIRST AND SECOND LOOP AS SHOWN.

* = (600 mm)

BUT SHALL NOT BE INCLUDED IN THE PAY ITEMS.

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

LOOPS NEXT TO SHOULDERS

PAVED OR

SHOULDER

1" (25 mm) UNIT

DUCT-TRENCHED

DRIVEWAY

7

IOFF SET LOOPS BY

STRAIGHT SAW CUTS.

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

(1.5 m) (1.8 m) (1.5 m)

* = (600 mm)

(3.0 m)

* * UNIT DUCT IS TO BE SHOWN ON PLAN SHEETS

BUT SHALL NOT BE INCLUDED IN THE PAY ITEMS.

RIGHT TURN LANE * = (1.8m) CROSS STREET (3.3m) (3.3m) (3.3m) WAY LOCATION. CALLING LOOPS [TYP.-12' (3.6m) LANES] 12' 12' 12' 12' 12' 12' 13.6m) (3.6m) LOOPS ARE SAW-CUT TO THE EDGE OF 250'(75m) [TYP.-ALL LEGS-VOLUME DENSITY ("FAR OUT" DETECTION)] PAVEMENT. 1" (25 mm) UNIT DUCT IS RUN BETWEEN EDGE OF PAVEMENT CI

STRAIGHT SAW CUTS TO HEAVY-

DUTY HANDHOLE

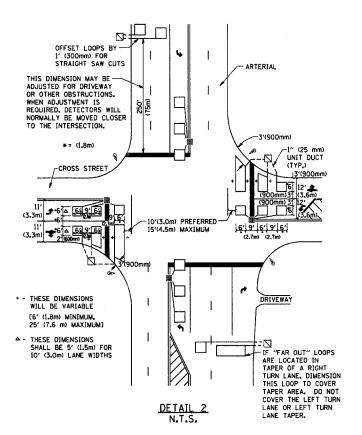
IN PAVEMENT

AND HANDHOLE.

DATE NAME SCALE NAME

IN HANDHOLES OUTSIDE PAVEMENT)

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



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.

REVIS		THE THINKS DEPARTMEN	NT OF TRANSPORTATION		
NAME	DATE	ILLINOIS DEPARTMENT OF TRANSPORTATION			
		DISTRICT 1			
		DETECTOR LOOP			
		INSTALLA	TION DETAILS		
		FOR ROADW	AY RESURFACING		
			DESIGNED BY		
		SCALE: NONE	DRAWN BY CADD		
		DATE: 2/15/2006	CHECKED BY R.K.F.		