# STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION

D-91-201-07

FOR INDEX OF SHEETS, SEE SHEET NO. 2

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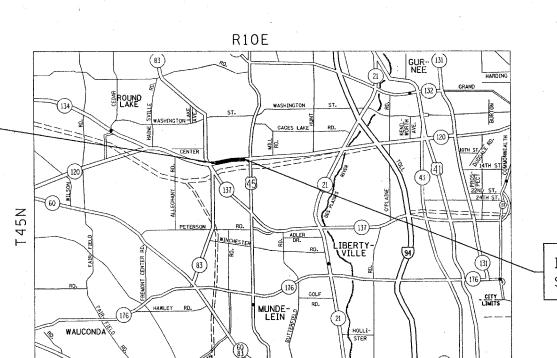
PROPOSED HIGHWAY PLANS

**DIVISION OF HIGHWAYS** 

IMPROVEMENT LOCATED
IN THE VILLAGE OF GRAYSLAKE

F.A.P. ROUTE 342: ILL 120 (E BELVIDERE RD)
W. OF US 45 TO ATKINSON RD. (E. OF ILL 83)
SECTION G-RS-4
RESURFACING (MAINTENANCE)

**LAKE COUNTY C**-91-201-07



LAKE VILLA AND AVON TOWNSHIPS

GROSS & NET LENGTH OF IMPROVEMENT = 5052 FEET (0.95 MILE)

TRAFFIC DATA

2005 ADT = 19,800

POSTED SPEED = 35 MPH

0 100' 200' 300' — 1" = 100'
0 50' 100' — 1" = 50'
0 50' 100' — 1" = 40'
0 50' — 100' — 1" = 30'

**IMPROVEMENT BEGINS:** 

STATION 33+95

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 – FRITZ GUILLAUME PROJECT MANAGER – KEN ENG (847) 705–4247

CONTRACT NO. 60C32

IMPROVEMENT ENDS: STATION 84+47

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION
DIVISION OF HIGHWAYS

SUBMITTED

APRIL 3, 20 08

DEPUTY DIRECTOR OF HIGHWAYS, REGION ENGINEER

May 9, 20 08

The Engineer of Design and Environment

May 9, 20 08

Christine M. Leeder

DIRECTOR OF HIGHWAYS, CHIEF ENGINEER

LOCATION OF SECTION INDICATED THUS: -

PRINTED BY THE AUTHORITY OF THE STATE OF ILLINOIS

#### INDEX OF SHEETS

#### LIST OF STATE STANDARDS

SHEET	NO.	DESCRIPTION	STANDARD NO.	DESCRIPTION
1		COVER SHEET	280001-04	TEMPORARY EROSION CONTROL SYSTEMS
. 2		INDEX OF SHEETS, STANDARDS, AND GENERAL NOTES	442201 <b>-03</b>	CLASS C AND D PATCHES
	5-4	SUMMARY OF QUANTITIES	606001 <b>-03</b>	CONCRETE CURB TYPE B AND COMBINATION CONCRETE CURB AND GUTTER
5		TYPICAL SECTIONS PLAN	701301 <b>-<i>0</i>2</b>	LANE CLOSURE, 2L, 2W, SHORT TIME OPERATIONS
			701311- <i>02</i>	LANE CLOSURE 2L, 2W MOVING OPERATIONS-DAY ONLY
_	5-8	ROADWAY & PAVEMENT MARKINGS PLANS	701501 <b>-04</b>	URBAN LANE CLOSURE, 2L, 2W, UNDIVIDED
. 9		DETECTOR LOOP REPLACEMENT PLANS	701701- <i>05</i>	URBAN LANE CLOSURE, MULTILANE INTERSECTION
10	0-13	PAVEMENT REPLACEMENT PLANS	701901	TRAFFIC CONTROL DEVICES
1-	4	DETAIL OF STORM SEWER CONNECTION TO EXISTING SEWER	704001- <b>04</b>	TEMPORARY CONCRETE BARRIER
1	5	DETAILS FOR FRAMES AND LIDS ADJUSTMENT WITH MILLING		TEM OTALL CONONETE BARRIER
10	6 .	PAVEMENT PATCHING FOR HMA SURFACED PAVEMENT		
1	7	BUTT JOINT AND HMA TAPER DETAILS		
1	8	TRAFFIC CONTROL AND PROTECTION FOR SIDE ROADS, INTERSECTIONS,	AND DRIVEWAYS	
. 1'	9	TYPICAL APPLICATIONS RAISED REFLECTIVE PAVEMENT MARKERS (SNOW-	-PLOW RESISTANT)	
2	20	DISTRICT ONE TYPICAL PAVEMENT MARKINGS		
. 2	21	TRAFFIC CONTROL AND PROTECTION AT TURN BAYS (TO REMAIN OPEN 1	TO TRAFFIC)	
2	22	PAVEMENT MARKING LETTERS AND SYMBOLS FOR TRAFFIC STAGING	en e	and the second of the second o
	23	ARTERIAL ROAD INFORMATION SIGN		
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#### GENERAL NOTES

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

THE CONTRACTOR SHALL COORDINATE CONSTRUCTION ACTIVITIES WITH UTILITY COMPANIES.

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

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

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

THE RESIDENT ENGINEER SHALL CONTACT MS DEBBIE HANLON AREA TRAFFIC FIELD ENGINEER AT (847) 438-2300 A MINIMUM OF 2 WEEKS PRIOR TO PLACEMENT OF PERMANENT PAVEMENT MARKING.

THE RESIDENT ENGINEER SHALL VERIFY ALL EXISTING PAVEMENT MARKINGS BEFORE MILLING

DO NOT SCALE PLANS FOR CONSTRUCTION DIMENSIONS

DOUBLE LANE MARKERS ARE TO BE USED AS SHOWN ON THE DISTRICT ONE DETAIL "TYPICAL APPLICATIONS -RAISED REFLECTIVE PAVEMENT MARKERS (SNOW-PLOW RESISTANT)" SHOWN IN THE PLANS.

PAVEMENT MARKING TAPE, TYPE III SHALL BE USED FOR SHORT TERM PAVEMENT MARKING ON ALL FINAL SURFACES. THE COST OF THE PAVEMENT MARKING TAPE, TYPE III AND ITS REMOVAL SHALL BE INCLUDED IN THE COST OF SHORT TERM PAVEMENT MARKING.

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

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

TOTAL SHEE SHEETS NO.

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

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c:\projects\d120107\sh_rdwy.dgn		DRAWN ~	REVISED -
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·	PLOT DATE = 4/17/2008	DATE -	REVISED -

DISTRICT ONE DETECTOR LOOP INSTALLATION DETAILS FOR ROADWAY RESURFACING

SCALE:

F.A.P. RTE.	SECTION		COUNT	Υ	TOTAL SHEETS	SHEET NO.
342 G-RS-4			LAKE		24	3
FED.	ROAD DIST. NO. 1	ILL	INOIS	HIG	HWAY PRO	DJECT

CONTRACT # 60C32

	SUMMARY OF QUANTITIES		URBAN 1001.STATE			CONSTRUCT	ION TYPE	CODE	1	1 1	SUMMARY OF QUANTITIES		URBAN 1001.STATE		1	CONSTRUCT	TION TYPE	CODE	
CODE NO	ITEM	UNIT	TOTAL QUANTITIES	1000	1000					CODE NO	ITEM	UNIT	TOTAL QUANTITIES	1000	1000				
0201006	GRADING AND SHAPING SHOULDERS	UNIT	101	101						50300300	PROTECTIVE COAT	SO YD	40	*	40				
201200	REMOVAL AND DISPOSAL OF UNSUITABLE	CU YD	557		557				**	50800105	REINFORCEMENT BARS	POUND	55		55	3			
800150	TRENCH BACKFILL	CU YD	37		37					54248510	CONCRETE COLLAR	CU YD	20,5		0.5	/			
101615	TOPSOIL FURNISH AND PLACE, 4"	SO YD	60		60					55021600	STORM SEWERS, TYPE 2, REINFORCED CONCRETE CULVERT, STORM DRAIN, AND SEWER PIPE, CLASS III 12"	FOOT	6		6				
200110	SODDING, SALT TOLERANT	SQ YD	60		60					55022200	STORM SEWERS, TYPE 2, REINFORCED	FOOT	26		26				
101400	SUB-BASE GRANULAR MATERIAL, TYPE B 6"	SQ YD	360		360						CONCRETE CULVERT, STORM DRAIN, AND SEWER PIPE, CLASS III 30"								
600200 600300	BITUMINOUS MATERIALS (PRIME COAT) AGGREGATE (PRIME COAT)	TON	100	100						60300310	FRAMES AND LIDS TO BE ADJUSTED (SPECIAL)	EACH	7	7					
500400	MIXTURE FOR CRACKS, JOINTS, AND FLANGEWAYS	TON	10	10						60603800	COMBINATION CONCRETE CURB AND GUTTER, TYPE B-6.12	F00T	180		180				
600895	CONSTRUCTING TEST STRIP	EACH	1	1						67000400	ENGINEER'S FIELD OFFICE, TYPE A	CAL MO	4	4					
500982	HOT-MIX ASPHALT SURFACE REMOVAL - BUTT JOINT	SO YD	33	33			.à			67100100	MOBILIZATION	L SUM	1	, 1					
500985	PORTLAND CEMENT CONCRETE SURFACE	SQ YD	3	3						70102620	TRAFFIC CONTROL AND PROTECTION. STANDARD 701501	L SUM	1	1					
601005	REMOVAL - BUTT JOINT HOT-MIX ASPHALT REPLACEMENT OVER PATCHES	TON	425	425	Δ					70102635	TRAFFIC CONTROL AND PROTECTION, STANDARD 701701	L SUM	1	0.5	0.5				
603310-	HOT-MIX ASPHALT SURFACE COURSE.	-TON-	4	-	4					70300100	SHORT-TERM PAVEMENT MARKING	FOOT	14480	14240	240				
	MIX "C". N50	1	1	<u>                                     </u>	-~					70300210	TEMPORARY PAVEMENT MARKING - LETTERS AND SYMBOLS	SO FT	568. 2	508.2	60	-	w -		
603340	HOT-MIX ASPHALT SURFACE COURSE, MIX "D", N70	TON	2044	2040	(4)					70300220	TEMPORARY PAVEMENT MARKING - LINE 4"	FOOT	30100	26100	4000				
701921	HOT-MIX ASPHALT PAVEMENT (FULL-DEPTH), 12"	SO YD	310		310				,	70300240	TEMPORARY PAVEMENT MARKING - LINE 6"	FOOT	2940	2540	400				
1000100	PAVEMENT REMOVAL	SO YD	310	•	310		-			70300260	TEMPORARY PAVEMENT MARKING	FOOT	2800	2500	300				
000158	HOT-MIX ASPHALT SURFACE REMOVAL, 2	SO YD	24190	24190							- LINE 12"								
000500	COMBINATION CURB AND GUTTER REMOVAL	FOOT	180		180					70300280	TEMPORARY PAVEMENT MARKING - LINE 24"	FOOT	150	150					
002236	HOT-MIX ASPHALT REMOVAL OVER PATCHES,	SO YD	817	817	Δ					70400100	TEMPORARY CONCRETE BARRIER	FOOT	388		388				
201753	CLASS D PATCHES, TYPE II, 9 INCH	SO YD	300	300						X 78000100	THERMOPLASTIC PAVEMENT MARKING - LETTERS AND SYMBOLS	SO FT	508. 2	508. 2					
201757	CLASS D PATCHES, TYPE III, 9 INCH	SO YD	25	25						¥ 78000200	THERMOPLASTIC PAVEMENT MARKING - LINE 4"	FOOT	26100	26100					
201759	CLASS D PATCHES, TYPE IV, 9 INCH	SQ YD	375	375						<del>X</del> 78000400	THERMOPLASTIC PAVEMENT MARKING	FOOT	2540	2540		-			
102100	AGGREGATE WEDGE SHOULDER, TYPE B	TON	912	912						¥ 78000600	- LINE 6" THERMOPLASTIC PAVEMENT MARKING	FOOT	2500	2500					
										"	- LINE 12"								

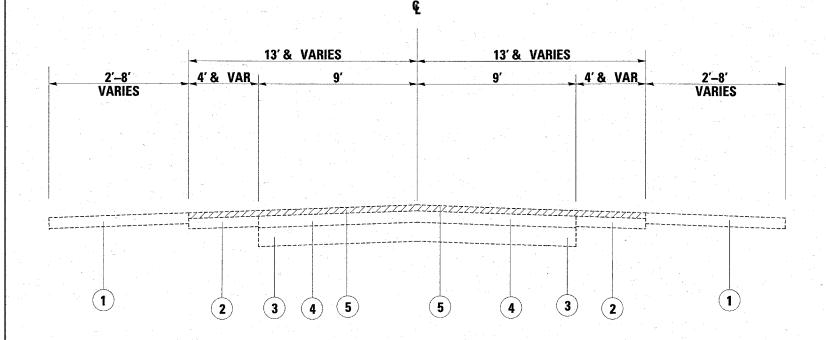
A Rev. 6-3-08
\* SPECIALTY MEMS

REVISIONS
NAME DATE

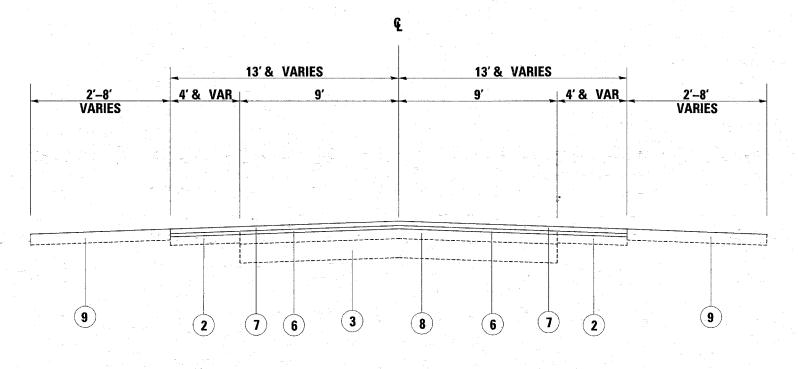
ILLINOIS DEPARTMENT OF TRANSPORTATION SUMMARY OF QUANTITIES

COUNTY TOTAL SHEETS SECTION 342 G-RS-4 LAKE FED. ROAD DIST. NO. 1 ILLINOIS HIGHWAY PROJECT CONTRACT # 60C32 CONSTRUCTION TYPE CODE CONSTRUCTION TYPE CODE URBAN SUMMARY OF QUANTITIES SUMMARY OF QUANTITIES 1001.5TATE TOTAL TOTAL QUANTITIES UNIT QUANTITIES CODE NO ITEM UNIT CODE NO ITEM 1000 1000 1000 FOOT THERMOPLASTIC PAVEMENT MARKING 150 150 78000650 - LINE 24" 78100100 RAISED REFLECTIVE PAVEMENT MARKER EACH 250 250 300 78300100 PAVEMENT MARKING REMOVAL SQ FT 300 RAISED REFLECTIVE PAVEMENT MARKER EACH 237 237 78300200 REMOVAL 88600600 DETECTOR LOOP REPLACEMENT FOOT 817 817 LIGHTWEIGHT AGGREGATE 521 X0326118 CH YD 521 X0322256 TEMPORARY INFORMATION SIGNING SQ FT 102.8 102.8 PORTLAND CEMENT CONCRETE SURFACE X0324626 SQ YD 160 160 REMOVAL 2 1/4" POLYMERIZED LEVELING BINDER (MACHINE TON 1020 1020 X4067107 METHOD), IL-4.75, N50 Z0030240 IMPACT ATTENUATORS. TEMPORARY (NON-EACH REDIRECTIVE). TEST LEVEL 2 208 208 FOOT PERIMETER EROSION BARRIER 28000400 SQ YD 34 34 HOT-MIX ASPHALT SURFACE REMOVAL, 2" 44000157 EACH GRATING FOR CONCRETE FLARED END SECTION 30" 54247150 EACH PRECAST REINFORCED FLARED END SECTION\$30" 542 13675 FOOT 40 STORM SEWERS TO BE CLEANED 30" 55038400 FOOT 40 STORM SEWER REMOVAL 30" 55101400 EACH MANHOLES TO BE ADJUSTED 60255500 REMOVING AND RE-ERECTING EXISTING RAILING FOOT 20 20 50900905 CU YD REMOVE AND REPLACE STONE RIPRAP 24 24 X0325592 PERMANENT STEEL SHEET PILING SQ FT 2,520 2,520 X5121800 REVISIONS ILLINOIS DEPARTMENT OF TRANSPORTATION DATE SUMMARY OF QUANTITIES Rev.

PLOT DATE: 4/17/2008



### EXISTING TYPICAL SECTION IL ROUTE 120



PROPOSED TYPICAL SECTION
IL ROUTE 120

#### LEGEND

- 1 EXISTING AGGREGATE SHOULDER
- (2) EXISTING HOT-MIX ASPHALT BASE COURSE WIDENING  $(\pm 9")$
- 3 EXISTING PCC PAVEMENT (9"-7"-9")
- 4 EXISTING HOT-MIX ASPHALT SURFACE (±8 3/4")
- (5) PROP. HOT-MIX ASPHALT SURFACE REMOVAL 2 1/4"
- 6 PROP. POLY. LEVELING BINDER (MACHINE METHOD) IL-4.75, N50, 3/4"
- 7 PROP. HOT-MIX ASPHALT SURFACE COURSE, MIX "D", N70, 1 12"
- 8 EXISTING HOT-MIX ASPHALT SURFACE OVERLAY
- 9 PROP. AGGREGATE WEDGE SHOULDERS, TYPE B

#### HOT-MIX ASPHALT MIXTURE REQUIREMENTS

22	MIXTURE TYPE	AC TYPE	AIR VOIDS
RESURFACING	HOT-MIX ASPHALT SURFACE COURSE, MIX "D", N7O (IL 9.5 mm)	PG 64-22	4% @ 70 GYR
RESURFACING	POLYMERIZED LEVELING BINDER, (MM), IL-4.75, N50	SBS/SBR PG 76-28/-22	4% <b>©</b> 50 GYR
DATOUEC	CLASS D PATCHES, (HMA BINDER IL-19 mm)	PG 64-22*	4% @ 70 GYR
PATCHES	HOT-MIX ASPHALT REPLACEMENT OVER PATCHES, (HMA BINDER IL-19 mm)	PG 64-22*	4% @ 70 GYR

THE UNIT WEIGHT USED TO CALCULATE ALL HOT-MIX ASPHALT SURFACE MIXTURE QUANTITIES IS 112 LBS/SQYD/IN.

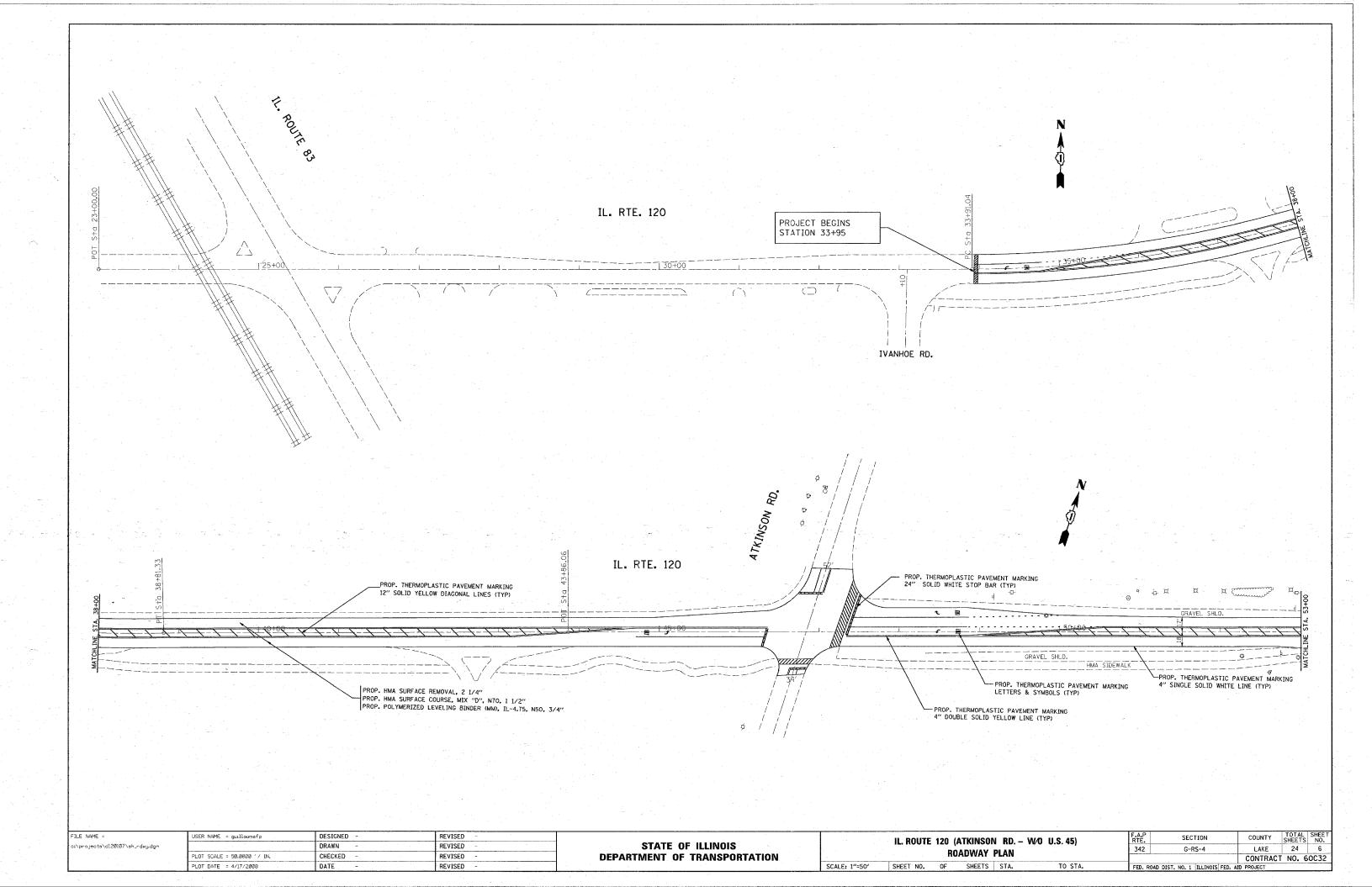
\*WHEN RAP EXCEEDS 20%, THE NEW ASPHALT BINDER IN THE MIX SHALL BE PG 58-22

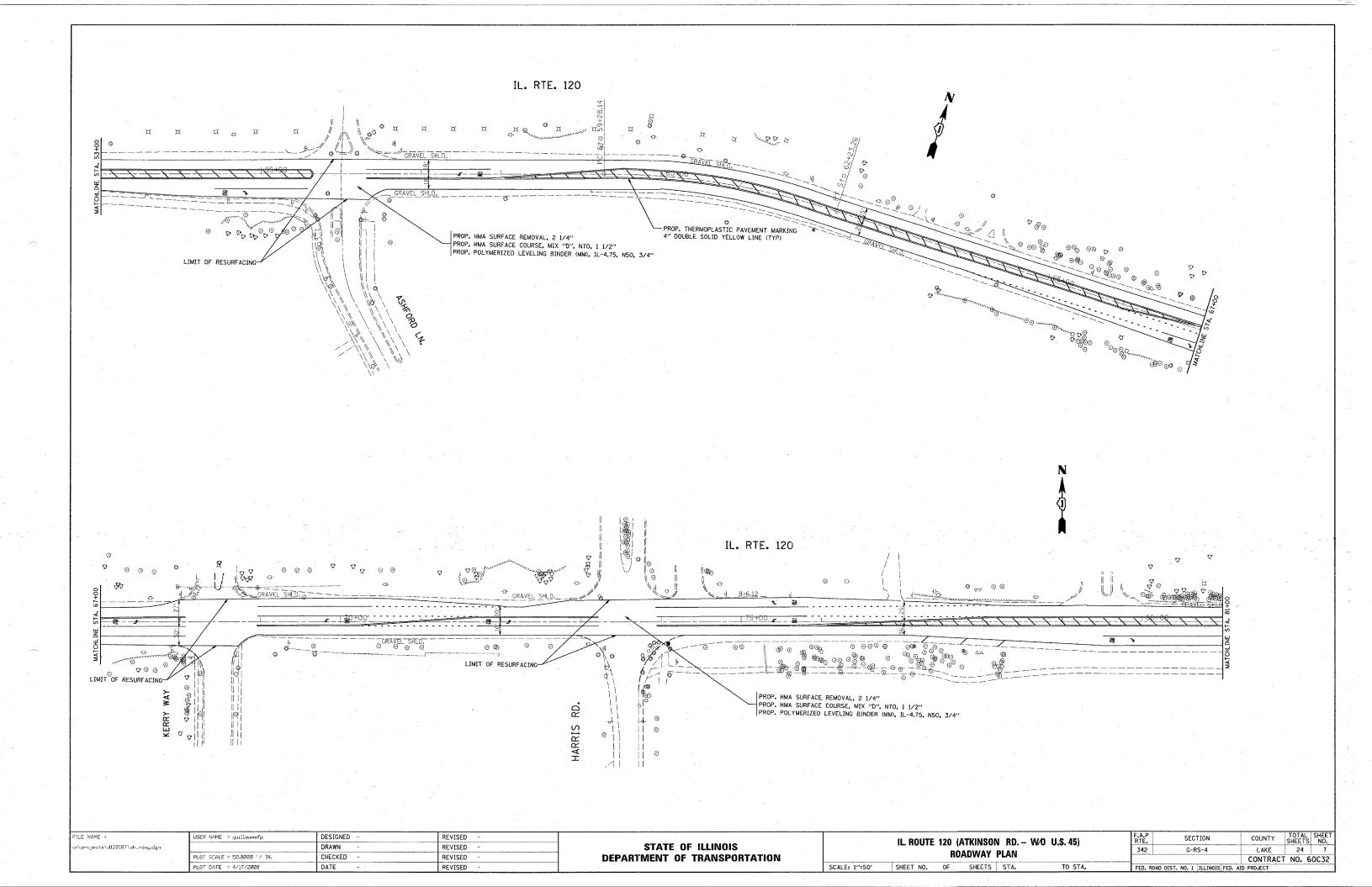
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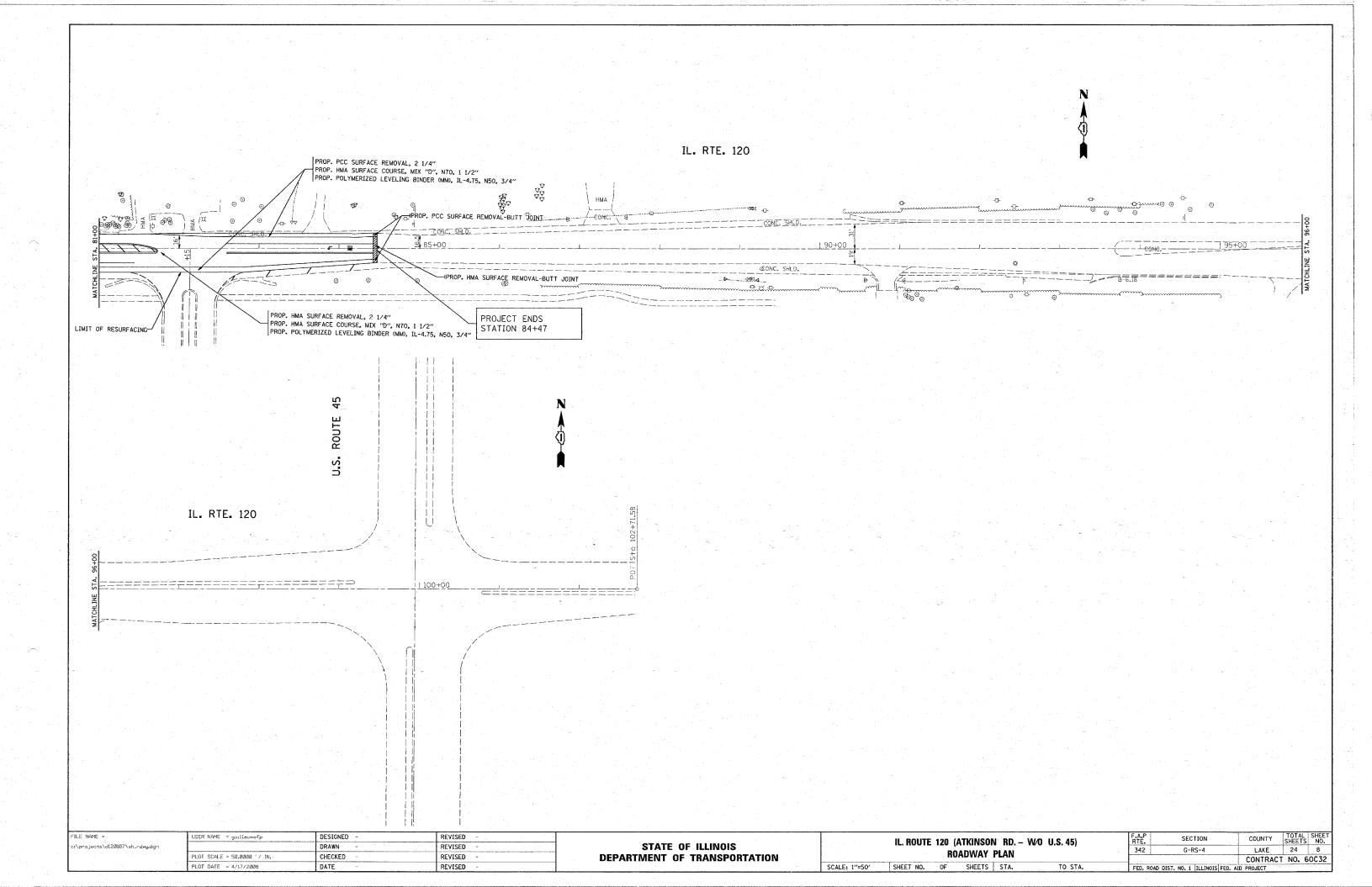
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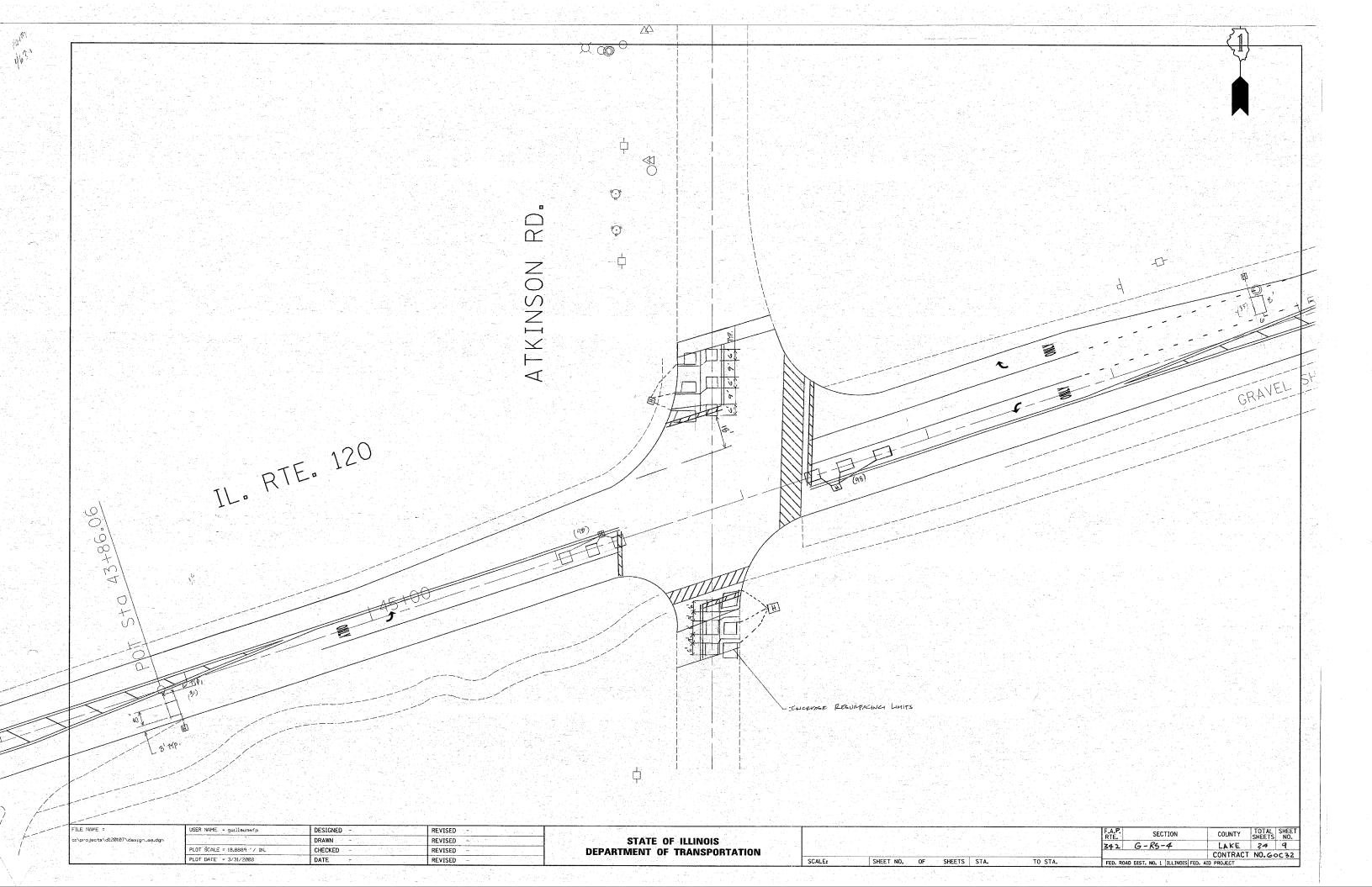
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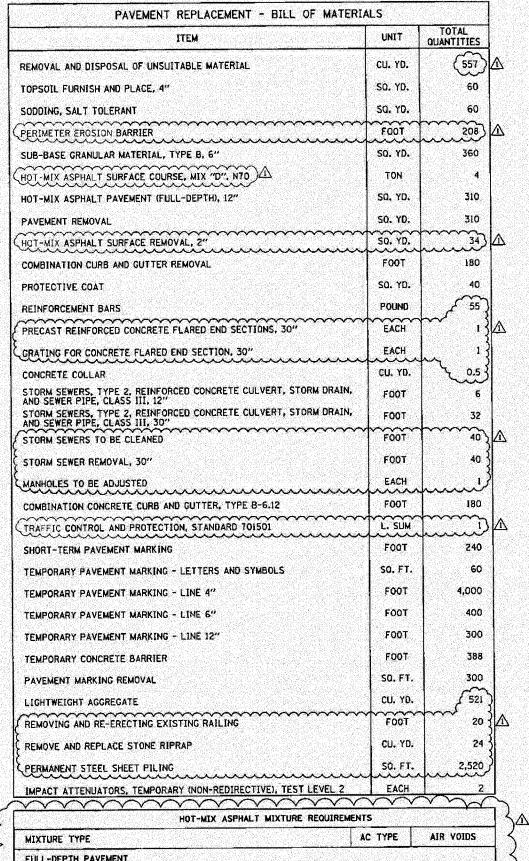
II DOLITE 120 (ATVINCON DD WAS II C 4E)				F.A.P RTE.	SECTION	COUNTY	SHEETS	SH
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	SHEET NO. OF	SHEETS STA.	TO STA.	FFD, RO	AD DIST. NO. 1 THE INOIS FED. AT	D PROJECT		











FULL-DEPTH PAVEMENT HOT-MIX ASPHALT SURFACE COURSE, MIX "O". N70 (IL 9.5 mm): 2" 4% 6 70 GYR. 4% e 50 GYR. PG 64-22\* HOT-MIX ASPHALT BINDER COURSE, IL-19.0, N50; 10'

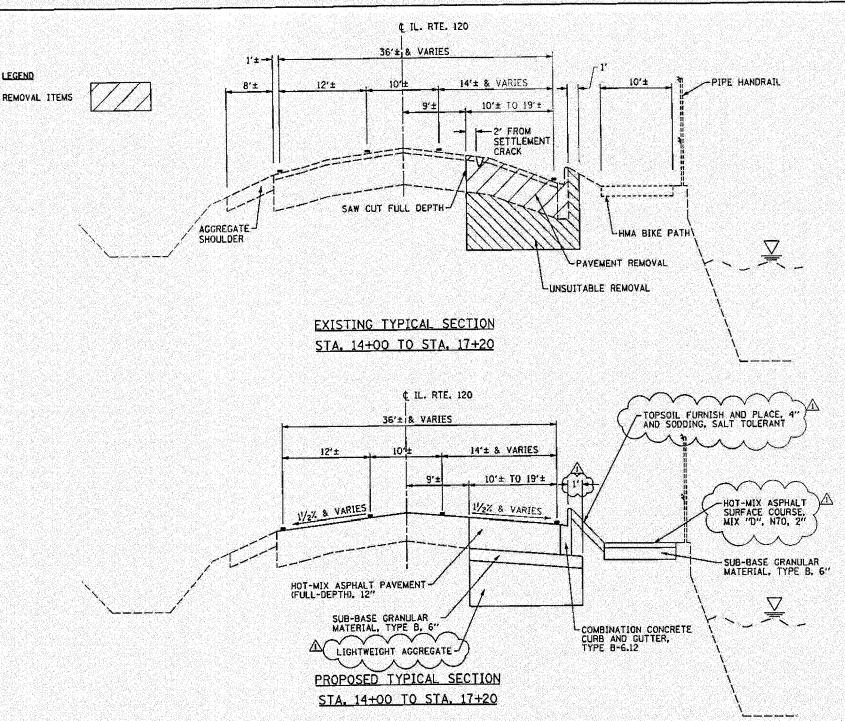
HOT-MIX ASPHALT BIKEWAY PG 64-22 4% @ 70 GYR. HOT-MIX ASPHALT SURFACE COURSE, MIX "O". N70 (IL 9.5 mm); 2"

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

THE UNIT WEIGHT USED TO MIXTURE QUANTITIES IS

CALCULATE ALL HMA SURFACE 112 LBS / 50. YD. / IN.

LEGENO



#### PAVEMENT REPLACEMENT GENERAL NOTES

- L. LOCATIONS OF EXISTING UTILITIES SHOWN ON THE PLANS ARE FROM BEST AVAILABLE RECORD INFORMATION AND MUST BE FIELD VERIFIED BY THE CONTRACTOR.
- 2. DO NOT SCALE PLANS FOR CONSTRUCTION DIMENSIONS.
- 3. SAW CUTTING PRIOR TO ANY REMOVAL ITEMS NOTED ON THE PLANS OR DIRECTED BY THE ENGINEER SHALL BE CONSIDERED INCLUDED IN THE COST OF THE ITEMS
- 4. THE CONTRACTOR SHALL USE CARE IN GRADING OR EXCAVATING NEAR ANY AND ALL EXISTING ITEMS WHICH WILL NOT BE REMOVED. ANY DAMAGE DONE TO EXISTING ITEMS BY THE CONTRACTOR SHALL BE REPAIRED BY HIM AT HIS OWN EXPENSE.
- THE CONTRACTOR SHALL COORDINATE CONSTRUCTION ACTIVITIES WITH THE VILLAGE OF GRAYSLAKE.
- ALL PAVEMENT MARKINGS REMOVED DURING CONSTRUCTION SHALL BE REPLACED WITH TEMP, PAVEMENT MARKINGS.
- 7. FIELD VERIFICATION SHALL BE INCLUDED IN THE COST OF THE ITEMS BEING REMOVED.

B. THE COST OF DEWATERING SHALL BE INCLUDED IN THE COST OF THE CONTRACT.

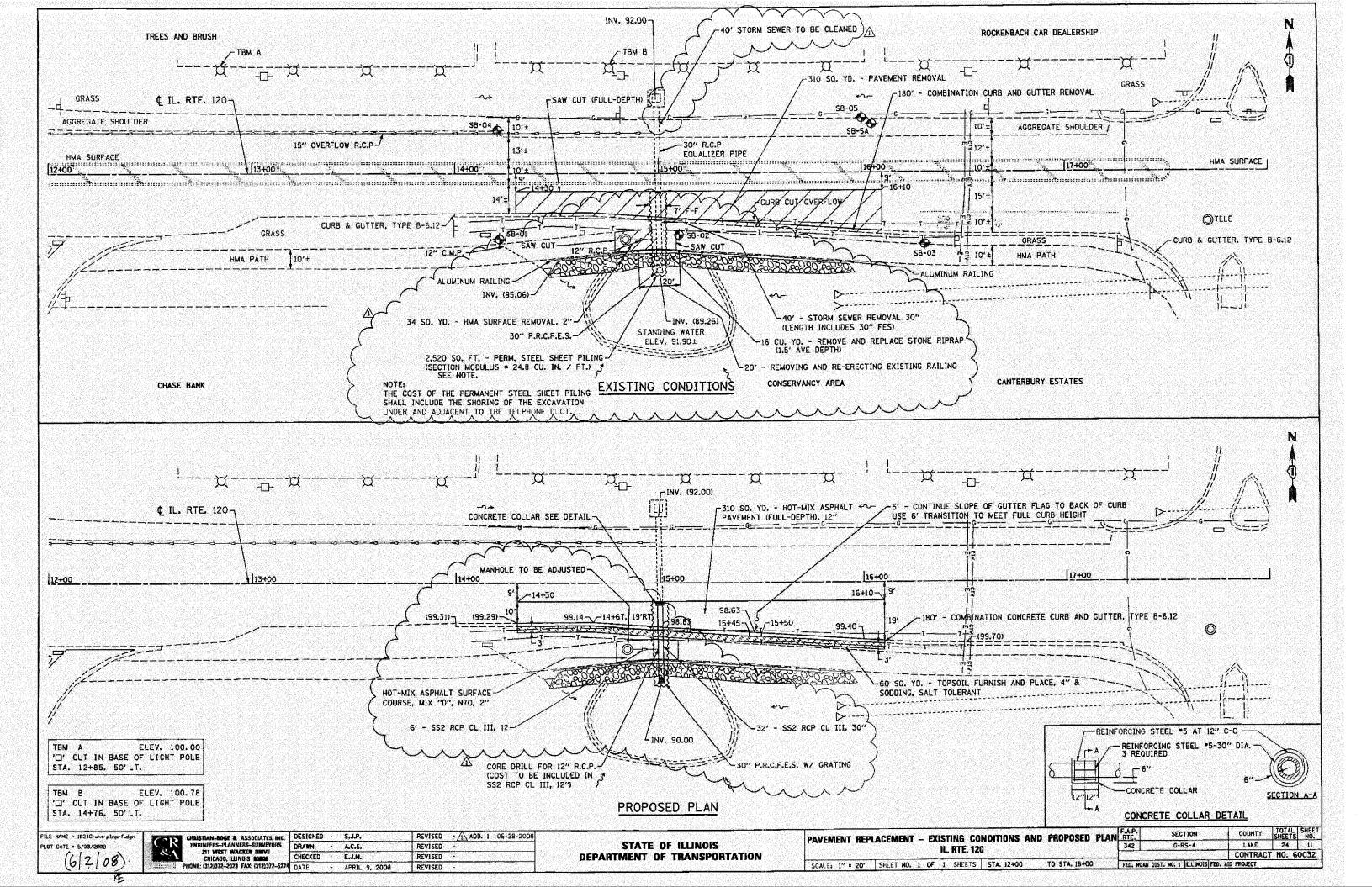
DESIGNED - S.J.P. REVISED - 1 ADD. 1 05-28-2006 PHRISTIAN ROCE & ASSOCIATES INC. GINEERS-PLANNERS SURVEYORS REVISED PLOT DATE . 5/38/2888 DRAWN - A.C.S. CHECKED - E.J.M. REVISED 6-2-08STAG PER STEEL STATE CECE - STEELE STATE - STATE APRIL 9, 2008

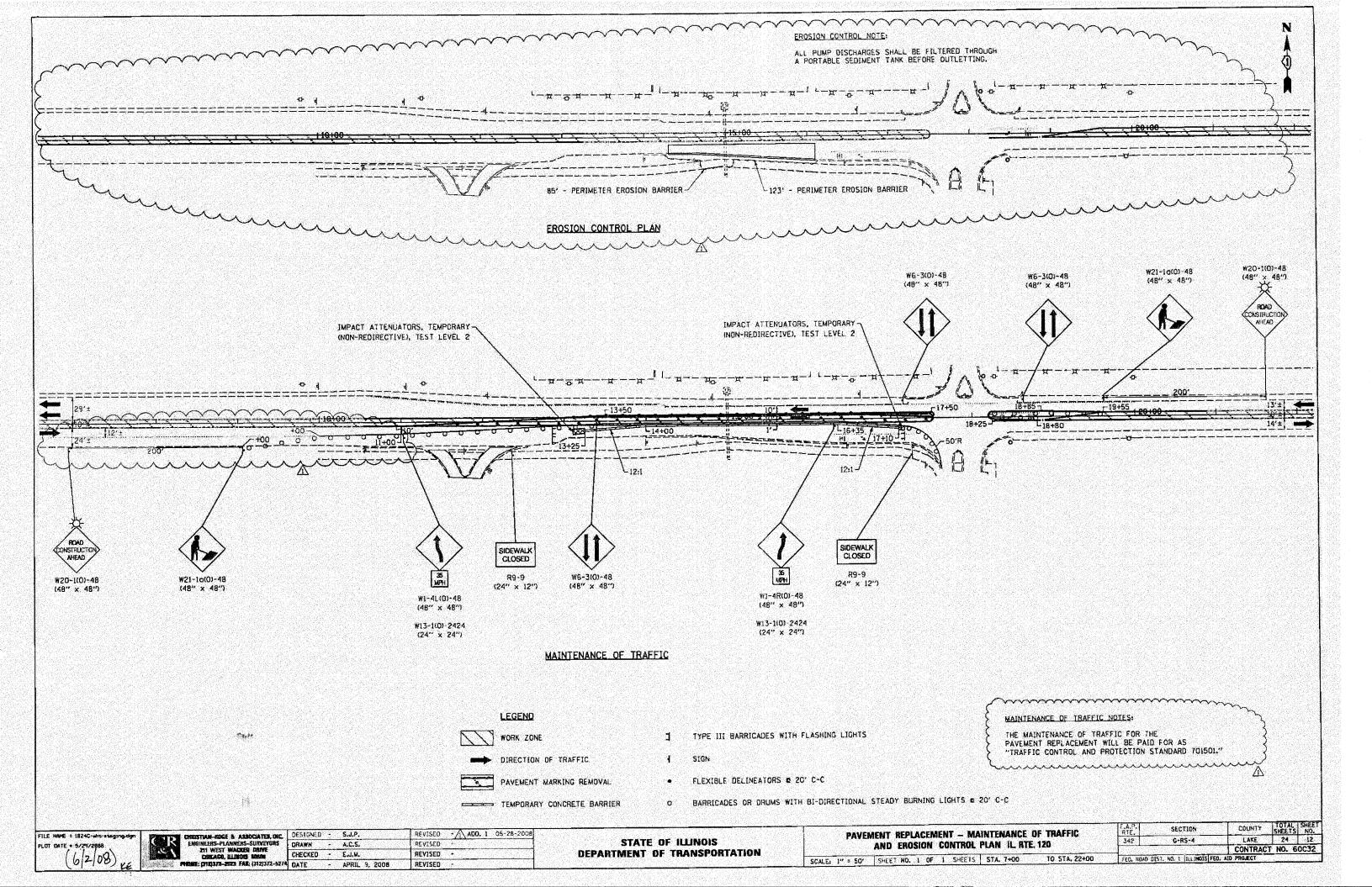
STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION

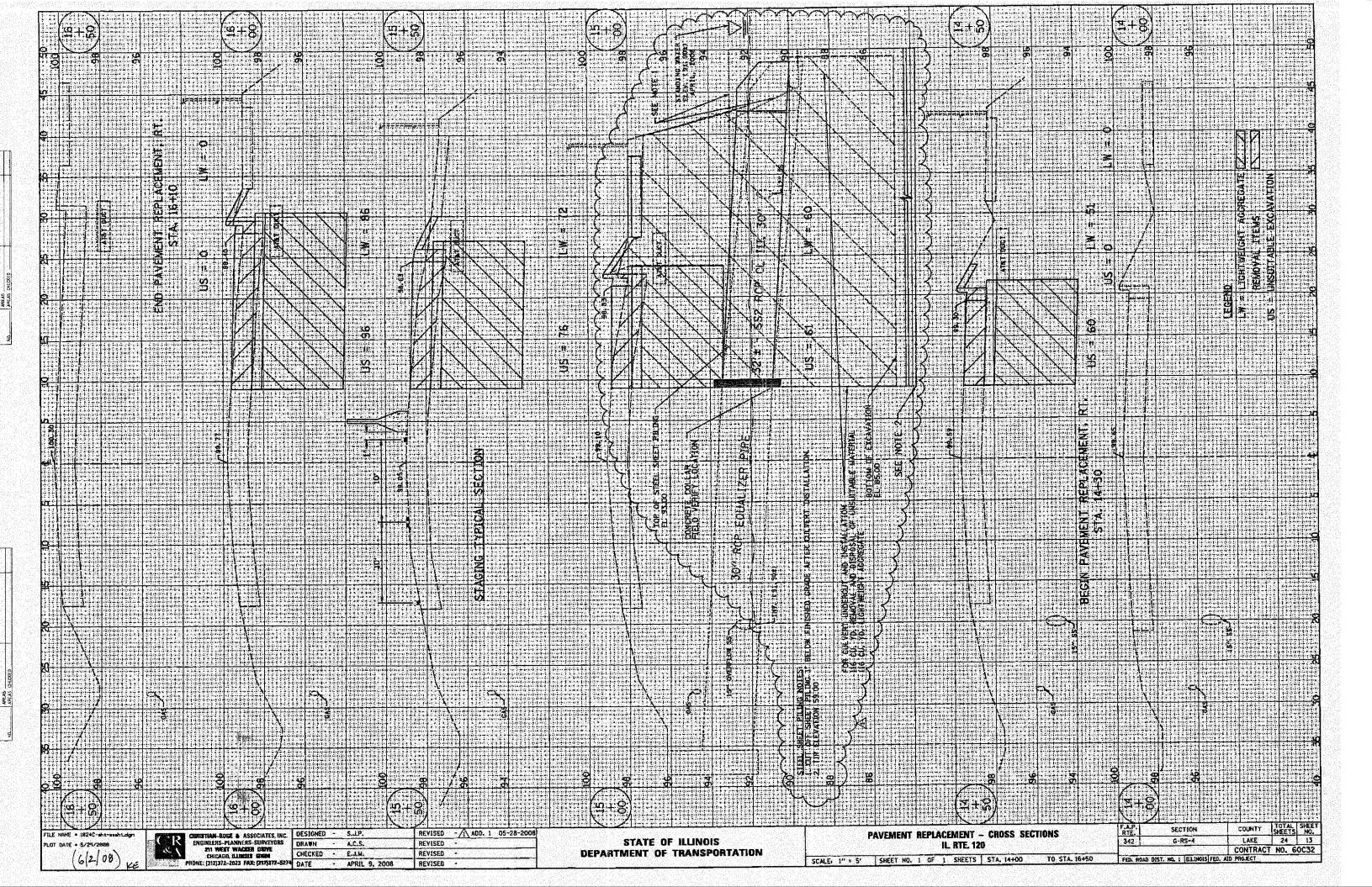
SECTION PAVEMENT REPLACEMENT - GENERAL NOTES, TYPICAL SECTION G-RS-4 AND DETAILS IL RTE 120 SCALE: NONE SHEET NO. 1 OF 1 SHEETS STA. 14400 FED. ROAD DIST. NO. 1 ILLUNOIS FED.

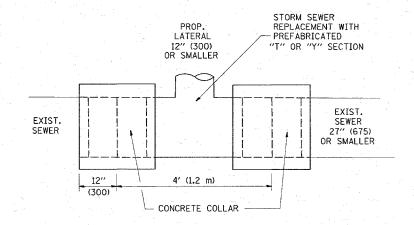
LAKE 24 10

CONTRACT NO. 60C32



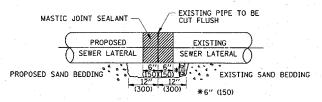


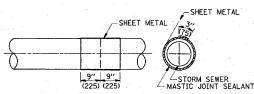


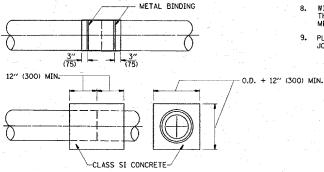


#### DETAIL "A"

LATERAL CONNECTION TO EXISTING SEWER
OF 27" (675) OR SMALLER



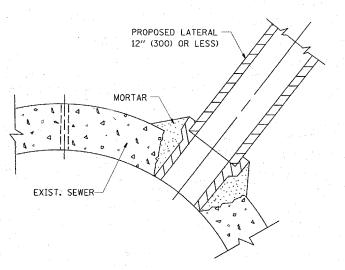




<u>DETAIL "B"</u> CLASS SI CONCRETE COLLAR

#### CONSTRUCTION SEQUENCE

- 1. CUT THE EXISTING END OF THE PIPE SO AS TO PRESENT A FLUSH BUTT JOINT. BRUSH AND CLEAN ALL PIPES.
- 2. APPLY THE MASTIC JOINT SEALANT TO THE FIRST  $6^{\prime\prime}$  (150) OF EACH PIPE.
- BUTT THE PIPES TOGETHER LEAVING A MINIMUM OF 12' x 6' (300 x 150) DEEP EXCAVATION UNDER AND AROUND EACH PIPE END.
- 4. CUT A PIECE OF SHEET METAL GAGE NO. 19 1.1 (0.0418) 18" (450) WIDE BY THE OUTSIDE CIRCUMFERANCE OF THE PIPE PLUS 3" (75) LONG.
- 5. WRAP THE SHEET METAL AROUND THE PIPES, 9" (225) ON EACH SIDE OF THE JOINT, STARTING AT THE TOP OF THE PIPE.
- 6. LAP THE SHEET METAL AT LEAST 3" (75) AT THE TOP OF THE PIPE AND PLACE THE MASTIC JOINT SEALANT BETWEEN THE LAP.
- 7. PLACE TWO METAL BANDS AROUND THE SHEET METAL AND TIGHTEN.
- 8. WIPE OFF ANY EXCESS MASTIC JOINT SEALANT THAT OOZES OUT FROM BETWEEN THE SHEET METAL AND THE PIPES.
- 9. PLACE CLASS SI CONCRETE AROUND THE



DETAIL "C"

PROPOSED LATERAL CONNECTION TO EXISTING SEWER OF 30" (750) OR LARGER

#### NOTES

#### MATERIAL

MATERIAL USED FOR THE TEE OR WYE SECTION SHALL BE COMPATIBLE WITH THE EXISTING STORM SEWER OR THE PROPOSED STORM SEWER.

#### CONSTRUCTION METHODS

- I. THIS WORK SHALL BE CONSTRUCTED IN CONFORMANCE WITH THE APPLICABLE PORTIONS OF SECTION 550 OF THE STANDARD SPECIFICATIONS.
- II. CONNECTION TO AN EXISTING STORM SEWER SHALL BE BY EITHER OF THE FOLLOWING METHODS A) PROPOSED STORM SEWER CONNECTION TO EXISTING SEWER OF 27" (675) OR SMALLER SEE DETAIL "A" AND "B".
  - B) PROPOSED STORM SEWER CONNECTION TO EXISTING SEWER OF 30" (750) OR LARGER SEE DETAIL "C".

IF THE EXISTING SEWER PIPE IS CRACKED, BROKEN OR OTHERWISE DAMAGED BY THE CONTRACTOR IN MAKING THE CIRCULAR OPENING, THE CONTRACTOR SHALL REPLACE THAT SECTION OF PIPE WITH PIPE EQUAL AND SIMILAR IN ALL RESPECTS TO THE PIPE IN THE EXISTING SEWER, IN A CAREFUL WORKMANLIKE MANNER, WITHOUT EXTRA COMPENSATION.

#### GENERAL

CARE MUST BE TAKEN TO PREVENT DEBRIS FROM ENTERING THE SEWER. ALL DEBRIS WHICH ENTERS THE SEWER MUST BE REMOVED. THE SEWER MUST BE LEFT CLEAN AND UNOBSTRUCTED UPON COMPLETION OF THE CONTRACT.

CARE MUST BE TAKEN TO PREVENT ANY PART OF THE NEW PIPE CONNECTION FROM PROJECTING INTO THE EXISTING SEWER.

#### BASIS OF PAYMENT

TEE OR WYE CONNECTIONS SHALL BE PAID FOR AT THE CONTRACT UNIT PRICE EACH FOR STORM SEWER TEE OR WYE OF THE TYPE AND SIZE SPECIFIED IN THE PLANS, THIS PRICE SHALL INCLUDE ALL EXCAVATION OF THE TRENCH, REMOVAL OF THE EXISTING STORM SEWER, FURNISHING AND INSTALLING THE SPECIFIED TEE OR WYE SECTION, FURNISHING AND INSTALLING THE REQUIRED CONCRETE COLLAR, AND ALL OTHER MATERIAL NECESSARY TO COMPLETE THIS WORK AS SHOWN AND SPECIFIED.

REMOVAL AND REINSTALLATION OF EXISTING STORM SEWER ADJACENT TO THE PROPOSED TEE OR WYE SECTION, FOR THE PURPOSE OF FACILITATING THE INSTALLATION OF THE TEE OR WYE SECTION, WILL NOT BE PAID FOR SEPARATELY BUT SHALL BE INCLUDED IN THE UNIT PRICE BID FOR THE WORK.

TRENCH BACKFILL, EXCAVATION IN ROCK AND REMOVAL AND REPLACEMENT OF UNSUITABLE MATERIAL BELOW PLAN BEDDING GRADE WILL BE PAID FOR SEPARATELY.

SCALE: NONE

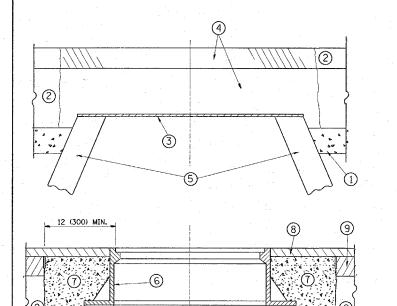
CONCRETE COLLAR FOR CONNECTING A PROPOSED STORM SEWER TO AN EXISTING STORM SEWER WILL NOT BE PAID PAID FOR SEPARATELY BUT SHALL BE INCLUDED IN THE COST OF THE PROPOSED STORM SEWER.

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

FILE NAME =	USER NAME = guilloumefp	DESIGNED - M. DE YONG	REVISED - M. DE YONG 05-08-92
W:\diststd\22x34\bd07.dgn		DRAWN -	REVISED - R. SHAH 09-09-94
	PLOT SCALE = 50.000 1/ IN.	CHECKED -	REVISED - R. SHAH 10-25-94
	PLOT DATE = 4/17/2008	DATE - 07-25-90	REVISED - R. SHAH 06-12-96

### STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION

	DETAIL OF STORM S	SEWER		F.A.P.	SECTION	COUNTY	TOTAL	SHEE NO.
CONNECTION TO EXISTING SEWER				342	G-RS-4	Lake	24	14
	OUTHED TO THE TOTAL THE TOTAL TO THE TOTAL THE TOTAL TO THE TOTAL THE TOTAL TO THE TOTAL THE TOTAL TO THE TOTAL THE TOTAL TO THE TOTAL TOTAL TO THE TOTAL TOTAL TO THE TOTAL TOTAL TO THE TOTAL				BD500-01 (BD-7)	CONTRACT	NO.600	<u> 2 8                                   </u>
	SHEET NO. 1 OF 1 SHEETS S	STA.	TO STA.	FED. R	DAD DIST. NO. 1 ILLINOIS FED. A	ID 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 WILL BE AS A SEPARATE DAY ITEM HAS BEEN PROPUTED.

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.

UNLESS A SEPARATE PAY ITEM HAS BEEN PROVIDED.

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
- CLASS SI CONCRETE, HMA SURFACE COURSE OR HMA BINDER COURSE
- 3 36 (900) DIAMETER METAL PLATE 4 PROPOSED CRUSHED STONE AND HMA SURFACE MIX
- 8 PROPOSED HMA SURFACE COURSE
- (5) EXISTING STRUCTURE
- 9 PROPOSED HMA BINDER

#### LOCATION OF STRUCTURES:

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

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

NEW FRAMES AND LIDS, WHEN SPECIFIED, WILL BE PAID FOR SEPARATELY.

#### DETAILS FOR FRAMES AND LIDS ADJUSTMENT WITH MILLING

ALL DIMENSIONS ARE IN INCHES (MILLIMETERS) UNLESS OTHERWISE SHOWN

FILE NAME = DESIGNED - R. SHAH REVISED - R. SHAH 03-10-95 USER NAME = guillaumefp i:\diststd\22x34\bd@8.dgn DRAWN REVISED - A. ABBAS 03-21-97 PLOT SCALE = 50.0000 '/ IN. REVISED - R. WIEDEMAN 05-14-04 PLOT DATE = 4/2/2008 DATE - 10-25-94 REVISED - R. BORO 01-01-07

STATE OF ILLINOIS

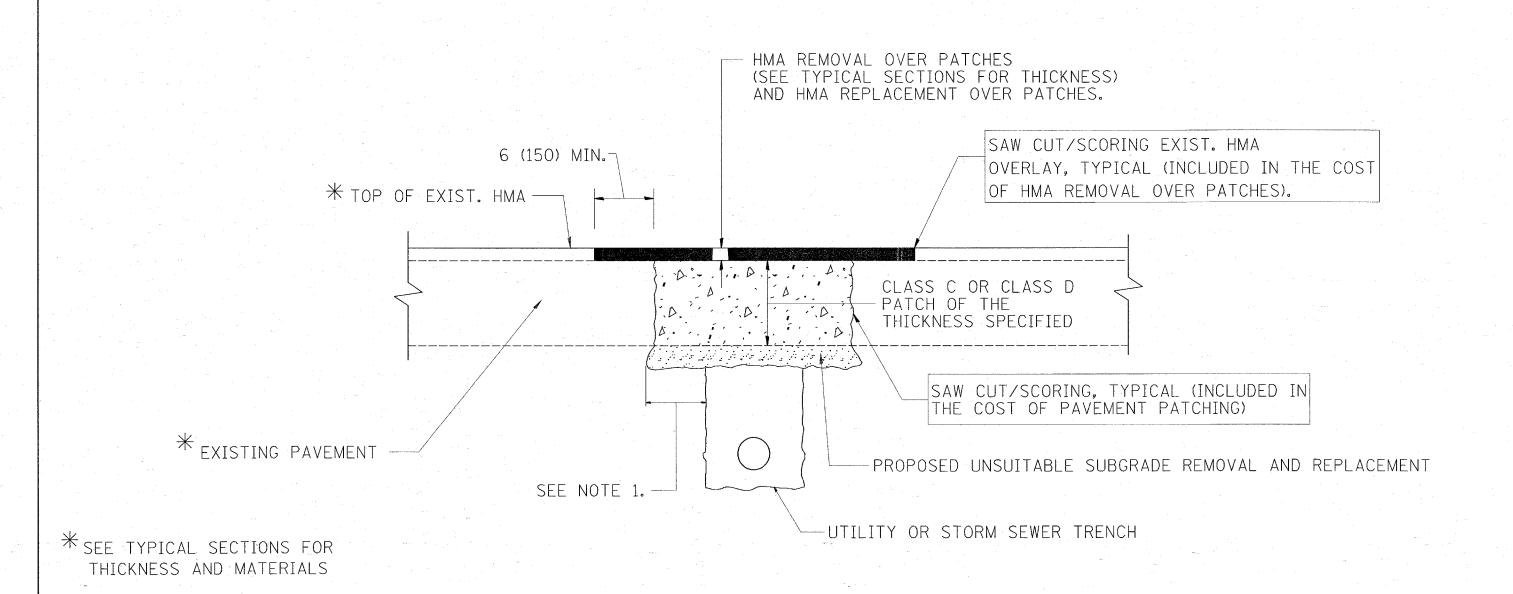
**DETAILS FOR** FRAMES AND LIDS ADJUSTMENT WITH MILLING SHEET NO. 1 OF 1 SHEETS STA. SCALE: NONE TO STA.

TOTAL SHEETS NO. SECTION COUNTY G-R5-4 LAKE 24 15 CONTRACT NO. 60C32 BD600-03 (BD-8) FED. ROAD DIST. NO. 1 ILLINOIS FED. AID PROJECT

**DEPARTMENT OF TRANSPORTATION** 

\* \*\*

NOTES:



#### NOTES:

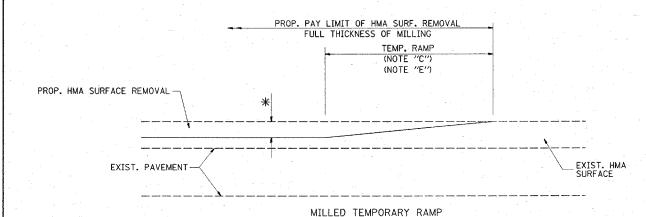
- 1. THE WIDTH OF THE FULL DEPTH PATCH OVER A TRENCH SHALL BE 12 (300) WIDER ON EACH SIDE OF THE TRENCH.
- 2. FOR METHOD OF MEASUREMENT AND BASIS OF PAYMENT, SEE RECURRING SPECIAL PROVISION "PATCHING WITH HOT-MIX ASPHALT OVERLAY REMOVAL".

#### 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.

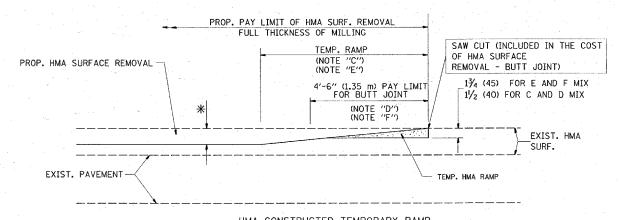
ALL DIMENSIONS ARE IN INCHES (MILLIMETERS) UNLESS OTHERWISE SHOWN.

FILE NAME =	USER NAME = guilloumefp	DESIGNED - R. SHAH	REVISED - A. ABBAS 01-20-98		PAVEMENT PATCHING FOR	RTE. SECTION COUNTY TOTAL SHEET NO.
Wr\diststd\22×34\bd22.dgn		DRAWN -	REVISED - A. ABBAS 04-27-98	STATE OF ILLINOIS	,	342 G-RS-4 LAKE 24 16
	PLOT SCALE = 50.000 '/ IN.	CHECKED ~	REVISED - R. BORO 01-01-07	DEPARTMENT OF TRANSPORTATION	HMA SURFACED PAVEMENT	BD400-04 (BD-22) CONTRACT NO. 60 C32
4	PLOT DATE = 4/2/2008	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. AID PROJECT



(FOR BUTT JOINT AND HMA TAPER SEE DETAIL BELOW)

#### OPTION 1

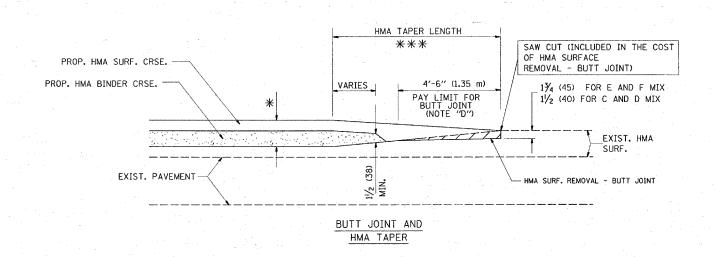


HMA CONSTRUCTED TEMPORARY RAMP

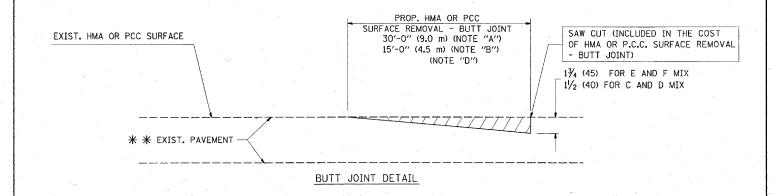
(FOR BUTT JOINT AND HMA TAPER SEE DETAIL BELOW)

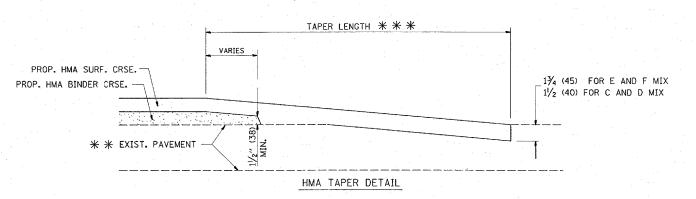
#### OPTION 2

#### TYPICAL TEMPORARY RAMP.



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





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

#### NOTES

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

#### BASIS OF PAYMENT:

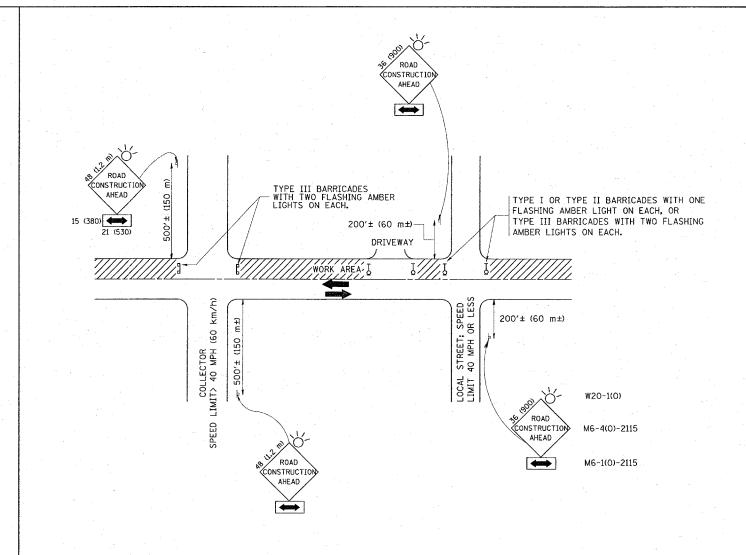
THE BUTT JOINT WILL BE PAID FOR AT THE CONTRACT UNIT PRICE PER SQUARE YARD (SQUARE METER) FOR "HOT-MIX ASPHALT SURFACE REMOVAL - BUTT JOINT" OR FOR "PORTLAND CEMENT CONCRETE SURFACE REMOVAL- BUTT JOINT".

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

FILE NAME =	USER NAME = guilloumefp	DESIGNED - M. DE YONG	REVISED - R. SHAH 10-25-94
W:\distatd\22x34\bd32.dgn		DRAWN -	REVISED - A. ABBAS 03-21-97
	PLST SCALE = 50.0000 '/ IN.	CHECKED -	REVISED - M. GOMEZ 04-06-01
	PLOT DATE = 4/2/2008	DATE - 06-13-90	REVISED R. BORO 01-01-07

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

BUTT JOINT AND		F.A.P. RTE.	SECTION	COUNTY	TOTAL	SHEET NO.
HMA TAPER DETAILS		342	G-R5-4	LAKE	25	17
			BD400-05 BD32	CONTRACT	NO. 6	0632
SHEET NO. 1 OF 1 SHEETS STA.	TO STA.	EED DO	AD DIST NO 1 THINOTS SED A	ID PROJECT		



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

#### NOTES:

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

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.

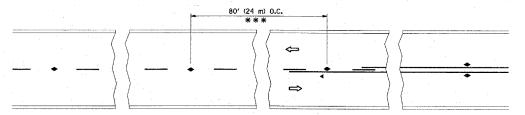
FILE NAME =	USER NAME = guillaumefp	DESIGNED - LHA	REVISED J. OBERLE 10-18-95
W:\diststd\22x34\tc10.dgm		DRAWN -	REVISED - A. HOUSEH 03-06-96
	PLOT SCALE = 50.000 '/ IN.	CHECKED -	REVISED - A. HOUSEH 10-15-96
	PLOT DATE = 4/2/2008	DATE - 06-89	REVISED -T. RAMMACHER 01-06-00

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

TRAFFIC	CONTROL AND	PROTECTION	FOR
SIDE ROAD	S, INTERSECTIO	NS, AND DRIV	EWAYS
CUEET NO. 1	AF 4 CUPET	CT.	

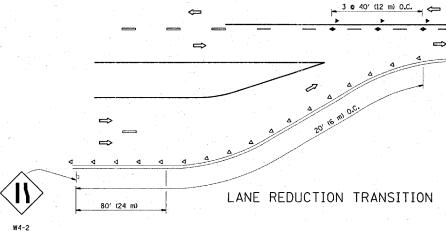
F.A.P. SECTION COUNTY TOTAL SHEETS NO. 3+2 G-RS-+ LAKE 2+ /8

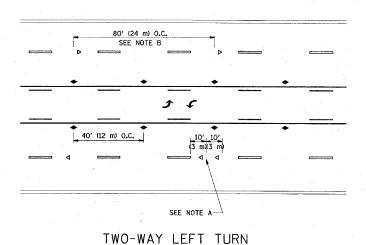
TC-10 CONTRACT NO. 60C32



\*\*\* 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





80' (24 m) 0.c.

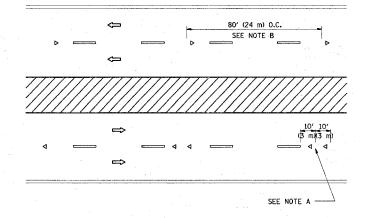
SEE NOTE B

40' (12 m) 0.c.

(3 m)(3 m)

SEE NOTE A

MULTI-LANE/UNDIVIDED



MULTI-LANE/DIVIDED

#### GENERAL NOTES

- MARKERS USED WITH DASHED LINES SHALL BE CENTERED IN THE GAP BETWEEN SEGMENTS.
- 2. MARKERS USED ADJACENT TO SOLID LINES SHALL BE OFFSET 2 TO 3 (50 TO 75) TOWARD TRAFFIC AS SHOWN.
- 3. MARKERS THROUGH 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. NOUBLE 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 © 40′ (12 m)

LEFT TURN

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

FILE NAME =	USER NAME = gunllaumefp	DESIGNED -	REVISED - T. RAMMACHER 09-19-94
W:\diststd\22x34\tcll.dgn		DRAWN -	REVISED - T. RAMMACHER 03-12-99
	PLOT SCALE = 50.000 '/ [N.	CHECKED -	REVISED -T. RAMMACHER 01-06-00
	PLOT DATE = 4/2/2008	DATE -	REVISED -

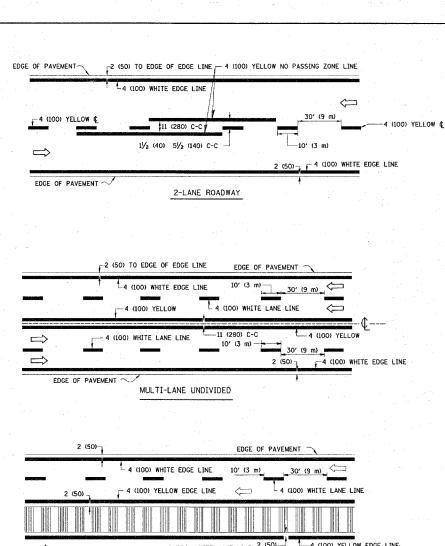
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

TYPICAL APPLICATIONS									
RAISED	REFLECTIVE	PAVEMENT	MARKERS (S	NOW-PLOW RESISTANT)					
SCALE: NONE	SHEET NO	. 1 OF 1	SHEETS STA	. TO STA.					

FA.P. SECTION COUNTY TOTAL SHEETS NO.

3/2 G-RS-4 LAKE 24 19

FED. BOAD DIST. NO. 1 ITLINOIS EED. ALD PROJECT.



2 (50) 4 (100) YELLOW EDGE LINE 4 (100) WHITE LANE LINE

4 (100) WHITE LANE LINE 2 (50) 4 (100) YELLOW EDGE LINE

10' (3 m) 10' 30' (9 m)

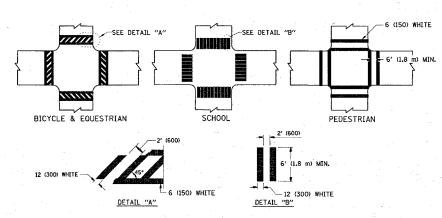
2 (50)

EDGE OF PAVEMENT

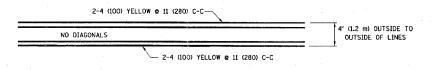
MULTI-LANE DIVIDED
WITH MOUNTABLE MEDIAN

NOTE: MEDIANS WITH BARRIER CURB DO NOT REQUIRE AN EDGE LINE

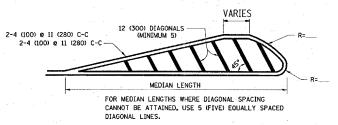
#### TYPICAL LANE AND EDGE LINE MARKING



#### TYPICAL CROSSWALK MARKING

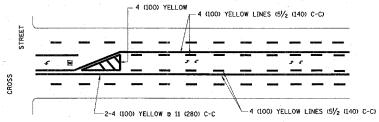


#### 4' (1.2 m) WIDE MEDIANS ONLY

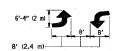


DIAGONAL LINE SPACING: 50' (15 m) C-C (LESS THAN 30MPH (50 km/h))
75' (25 m) C-C 30MPH (50 km/h) T0 45MPH (70 km/h))
150' (45 m) C-C (MORE THAN 45MPH (70 km/h))

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

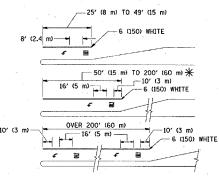


A MINIMUM OF TWO PAIRS OF TURN ARROWS SHALL BE USED, WHITE IN COLOR, ADDITIONAL PAIRS SHALL BE PLACED AT 200' (60 m) TO 300' (90 m) INTERVALS.



MEDIAN WITH TWO-WAY LEFT TURN LANE

#### TYPICAL PAINTED MEDIAN MARKING

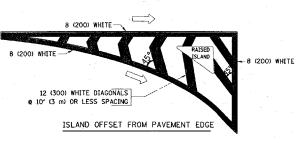


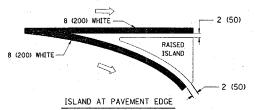
FULL SIZE LETTERS 8' (2.4 m) AND ARROWS SHALL BE USED.  $\P$  AREA = 15.6 SO. FT. (1.5 m² )  $\P$  AREA = 20.8 SO. FT. (1.9 m²)

\* TURN LAMES 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 to 4 (100)	SOLID SOLID	YELLOW YELLOW	5½ (140) C-C FROM SKIP-DASH CENTERLINE 11 (280) C-C OMIT SKIP-DASH CENTERLINE BETWEEN
LANE LINES	4 (100) 5 (125) ON FREEWAYS	SKIP-DASH SKIP-DASH	WHITE WHITE	10' (3 m) LINE WITH 30' (9 m) SPACE
DOTTED LINES (EXTENSIONS OF CENTER, LANE OR TURN LANE MARKINGS)	SAME AS LINE BEING EXTENDED	SKIP-DASH	SAME AS LINE BEING EXTENDED	2' (600) LINE WITH 6' (1.8 m) SPACE
EDGE LINES	4 (100)	SOLID	YELLOW-LEFT WHITE-RIGHT	OUTLINE MOUNTABLE MEDIANS IN YELLOW; EDGE LINES ARE NOT USED NEXT TO BARRIER CURB
TURN LANE MARKINGS	6 (150) LINE; FULL SIZE LETTERS & SYMBOLS (8' (2.4m))	SOLID	WHITE	SEE TYPICAL TURN LANE MARKING DETAIL
TWO WAY LEFT TURN MARKING	2 @ 4 (100) EACH DIRECTION	SKIP-DASH AND SOLID	YELLOW	10' (3 m) LINE WITH 30' (9 m) SPACE FOR SKIP-DASH; 5½ (140) C-C BETWEEN SOLID LINE AND SKIP-DASH LINE
	8' (2.4m) LEFT ARROW	IN PAIRS	WHITE	SEE TYPICAL TWO-WAY LEFT TURN MARKING DETAIL
CROSSWALK LINES (PEDESTRIAN) A. DIAGONALS (BIKE & EQUESTRIAN) B. LONGITUDINAL BARS (SCHOOL)	2 @ 6 (150) 12 (300) @ 45° 12 (300) @ 90°	SOLID SOLID SOLID	WHITE WHITE WHITE	NOT LESS THAN 6' (1.8 m) APART 2' (600) APART 2' (600) APART 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	DIACONALS: 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 (0VER 45MPH (70 km/h))
RAILROAD CROSSING	24 (600) TRANSVERSE LINES; "RR" IS 6' (1.8 m) LETTERS; 16 (400) LINE FOR "X"	SOLID	WHITE	SEE STATE STANDARD 780001 AREA OF: "R"=3.6 SQ. FT. (0.33 m²) EACH "X"=54.0 SQ. FT. (5.0 m²)
SHOULDER DIAGONALS	12 (300) @ 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 (0VER 45MPH (70 km/h))

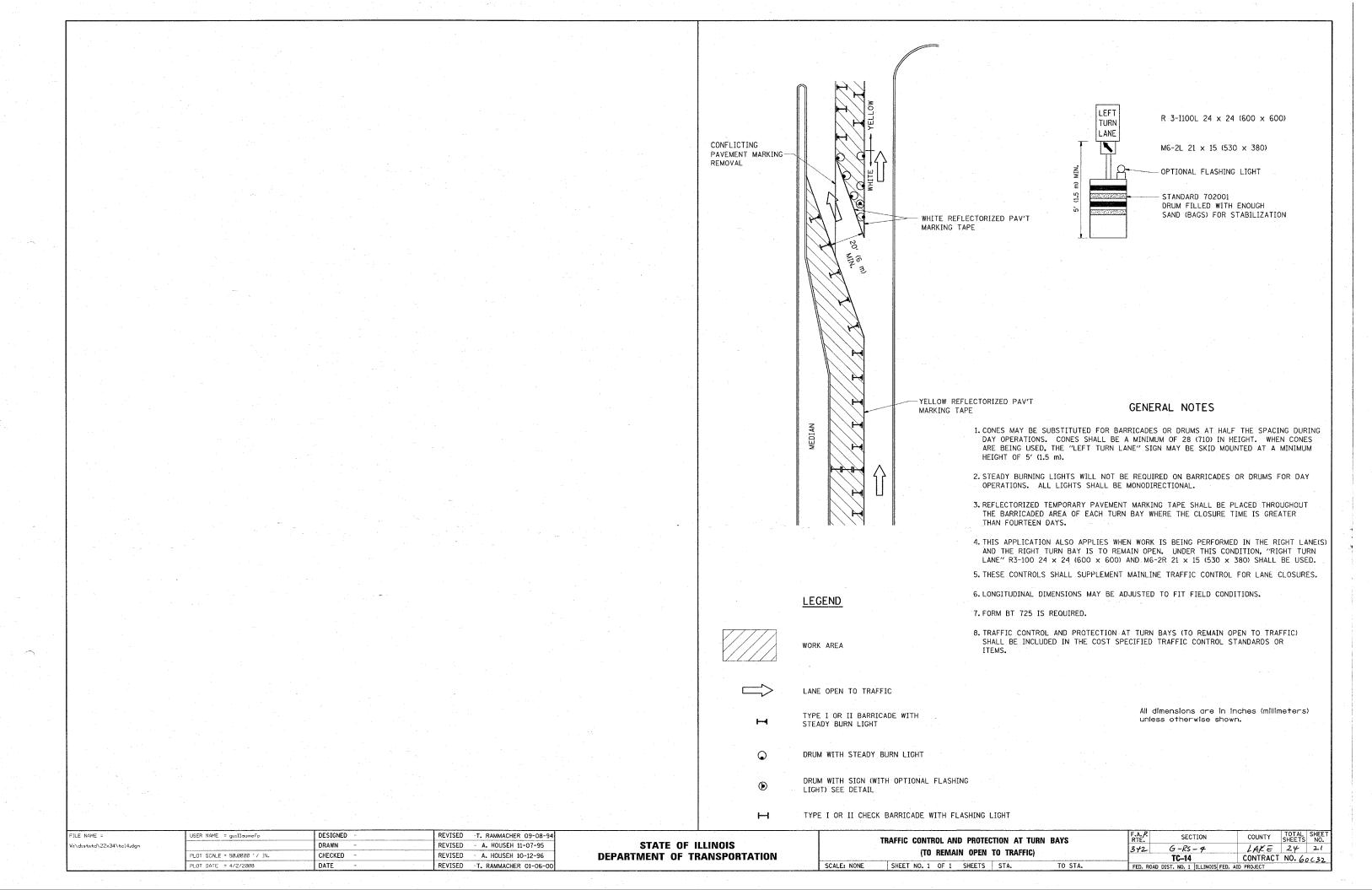
FOR FURTHER DETAILS ON PAVEMENT MARKING REFER TO STANDARD SPECIFICATIONS FOR ROAD AND BRIDGE CONSTRUCTION AND STATE STANDARD 780001.

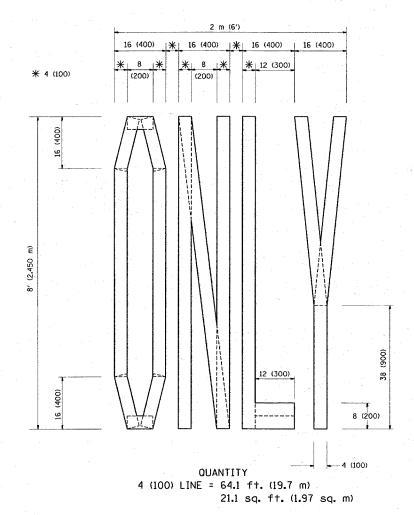
All dimensions are in inches (millimeters) unless otherwise shown.

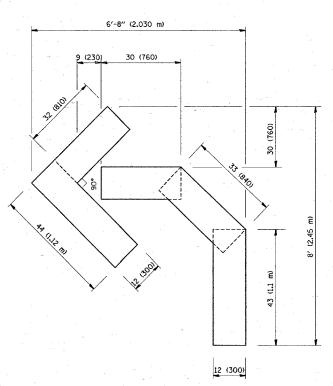
FILE NAME =	USER NAME = guillaumefp	DESIGNED - EVERS	REVISED -T. RAMMACHER 10-27-94
V:\diststd\22x34\to!3.dgn	-	DRAWN -	REVISED -A. HOUSEH 10-09-96
	PLOT SCALE = 50.000 '/ IN.	CHECKED -	REVISED -A. HOUSEH 10-17-96
	PLDT DATE = 4/2/2008	DATE - 03-19-90	REVISED -T, RAMMACHER 01-06-00

STATE	OF	ILLINOIS	
DEPARTMENT	OF 1	TRANSPORTATION	

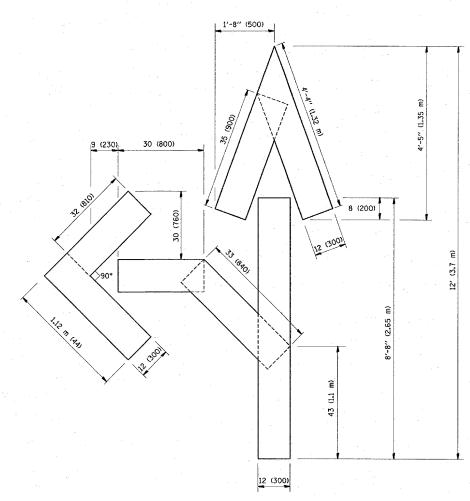
					RTE.	SECTION	COUNTY	SHEE!		
ļ	TYPICAL PAVEMENT MARKINGS					342	G-RS-4	LAKE	24	20
ļ	TTPICAL PAVEWENT WARRINGS						TC-13	CONTRACT	NO.60	C32
	SCALE: NONE	SHEET NO. 1 OF 1	SHEETS	STA.	TO STA.	FED. RO	DAD DIST. NO. 1 ILLINOIS FED. A	ID PROJECT		







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



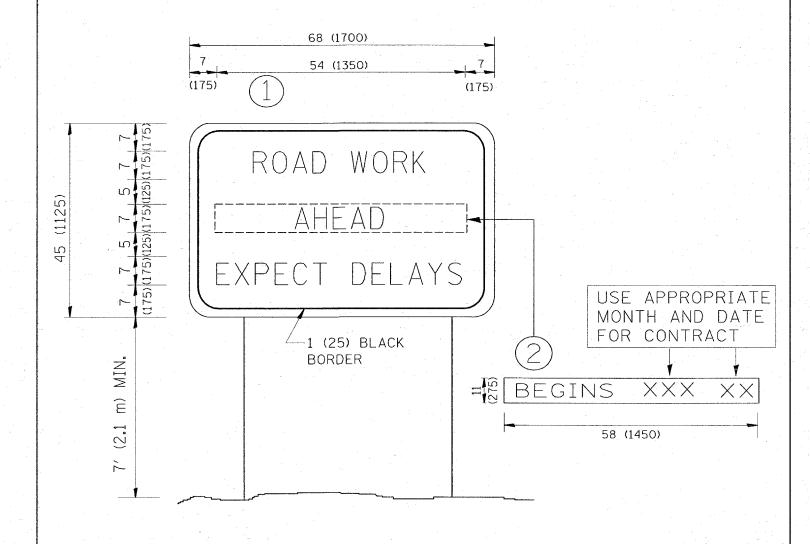
QUANTITY 4 (100) LINE = 82.5 ft. (25.3 m) 27.5 sq. ft. (2.53 sq. m)

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

FILE NAME =	USER NAME = gurllaumefp	DESIGNED -	REVISED -T. RAMMACHER 06-05-96
W:\diststd\22x34\tc16.dgn		DRAWN -	REVISED -T. RAMMACHER 11-04-97
	PLOT SCALE = 50.0000 '/ IN.	CHECKED -	REVISED -T. RAMMACHER 03-02-98
	PLOT DATE = 4/2/2008	DATE - 09-18-94	REVISED -E. GOMEZ 08-28-00

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

	PAVEMENT MARKING LETTERS AND SYMBOLS	F.A. R RTE. SECTION	COUNTY TOTAL SHEET NO.
	FOR TRAFFIC STAGING	3+2 G-RS-4	LAKE 24 22
		TC-16	CONTRACT NO. 60C32
SCALE: NONE	SHEET NO. 1 OF 1 SHEETS STA. TO STA.	FED. ROAD DIST. NO. 1 ILLINOIS FED. A	ID PROJECT



### NOTES:

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

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

FILE NAME =	USER NAME = guilloumefp	DESIGNED -	REVISED	- R. MIRS 09-15-97		1	ARTERIAL ROAD		F.A. P.	SECTION	COUNTY SHEET	AL SHEET
W:\diststd\22x34\to22.dgn		DRAWN -	REVISED	- R. MIRS 12-11-97	STATE OF ILLINOIS				342	G-85-4	14VE 24	23
	PLOT SCALE = 50.000 '/ IN.	CHECKED -	REVISED	-T. RAMMACHER 02-02-99	DEPARTMENT OF TRANSPORTATION	14 7	INFORMATION SIGN	and the second of the second	214	TC-22	CONTRACT NO.	60032
	PLOT DATE = 4/2/2008	DATE -	REVISED	- C. JUCIUS 01-31-07		SCALE: NONE	SHEET NO. 1 OF 1 SHEETS STA.	TO STA.	FED. ROAD		AID PROJECT	00001

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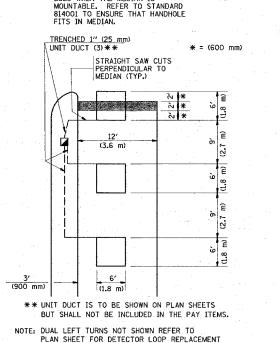
\*\* UNIT DUCT IS TO BE SHOWN ON PLAN SHEETS

BUT SHALL NOT BE INCLUDED IN THE PAY ITEMS.

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

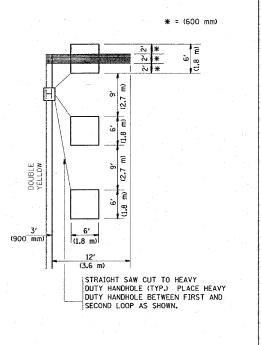
(PROTECTED / PERMITTED LEFT TURN PHASING)

HANDHOLE LOCATION MAY
VARY DEPENDING ON GEOMETRICS
AND DESIGN OF TRAFFIC SIGNALS.
HEAVY-OUTY HANDHOLES TO BE
USED WHEN THE MEDIAN IS



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

(PROTECTED / PERMITTED LEFT TURN PHASING)

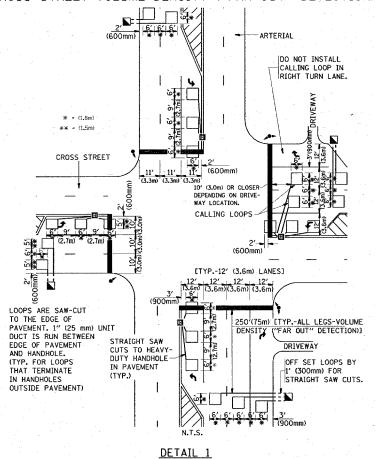


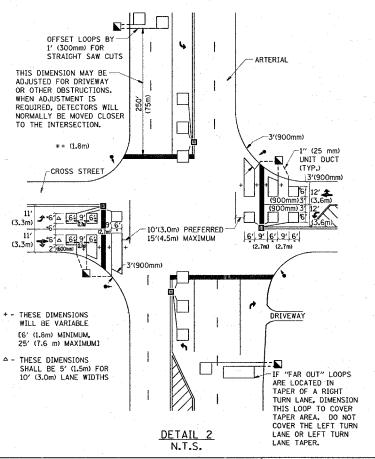
NOTE: DUAL LEFT TURNS NOT SHOWN REFER TO PLAN SHEET FOR DETECTOR LOOP REPLACEMENT

SCALE: NONE

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

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





#### NOTE:

#### VEHICLES LOOP DETECTORS

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

#### PLACEMENT OF DETECTORS

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

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

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

#### NOTE:

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

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

FILE NAME =	USER NAME = guillaumefp	DESIGNED -	REVISED -
W:\distatd\22x34\ts07.dgn		DRAWN -	REVISED -
	PLOT SCALE = 50.0000 '/ IN.	CHECKED - R.K.F.	REVISED -
	PLOT DATE = 4/2/2008	DATE -	REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

DISTRICT 1 - DETECTOR LOOP INSTALLATION

DETAILS FOR ROADWAY RESURFACING

SHEET NO. 1 OF 1 SHEETS STA. TO STA.

F.A.R. SECTION COUNTY TOTAL SHEETS NO.

3 \( \foatsize{2} \) \( \frac{C}{2} - RS - \gamma \) \( \frac{L}{2} + RC \