

STATE OF ILLINOIS  
DEPARTMENT OF TRANSPORTATION  
DIVISION OF HIGHWAYS

**PROPOSED  
HIGHWAY PLANS**

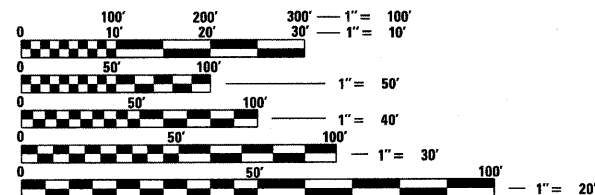
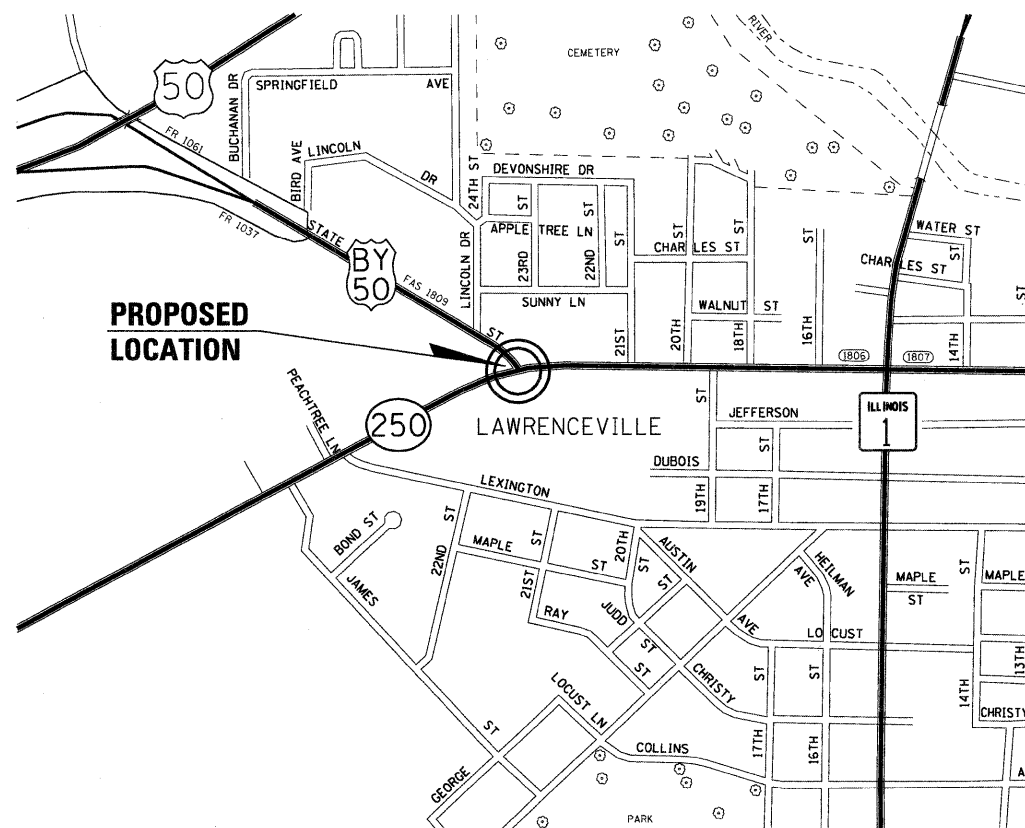
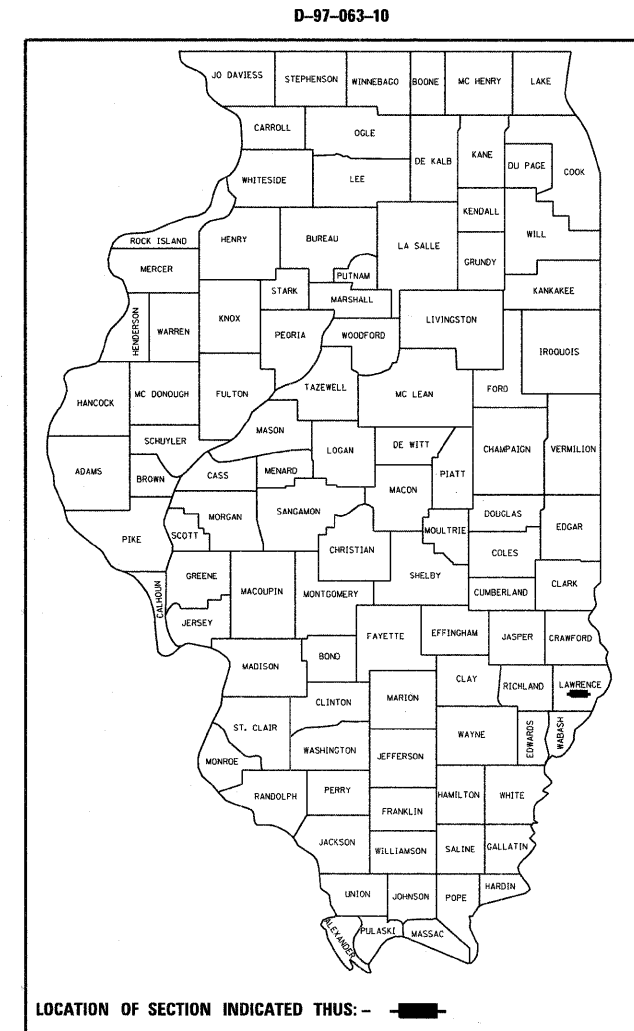
FAS ROUTE 1809 (U.S. BUS. ROUTE 50)  
SECTION (2Z)TS-1

TRAFFIC SIGNALS INSTALLATION  
LAWRENCE COUNTY

C-97-129-10

F.A.S. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
1809	(2Z)TS-1	LAWRENCE	12	1
		ILLINOIS	CONTRACT NO. 74480	

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  
OR 811

PROJECT ENGINEER ROB MACKLIN  
PROJECT MANAGER LYNN McCLELLAN

CONTRACT NO. 74480

STATE OF ILLINOIS  
DEPARTMENT OF TRANSPORTATION  
DIVISION OF HIGHWAYS

SUBMITTED Dec. 28 2010  
Ryan J. Dinkel  
DEPUTY DIRECTOR OF HIGHWAYS, REGION ENGINEER

February 4 2011  
Scott E. Stitt, P.E.  
ENGINEER OF DESIGN AND ENVIRONMENT

February 4 2011  
Christine M. Reed  
DIRECTOR OF HIGHWAYS, CHIEF ENGINEER

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OF THE STATE OF ILLINOIS**

TRAFFIC SIGNAL GENERAL NOTES

THIS TRAFFIC SIGNAL PROJECT IS LOCATED AT THE INTERSECTION OF BUSN US RTE 50 (STATE STREET) AND IL RTE 250 IN THE CITY OF LAWRENCEVILLE, LAWRENCE COUNTY. THE WORK INCLUDED IN THIS SECTION CONSISTS OF INSTALLING TRAFFIC SIGNALS AND ALL OTHER WORK NECESSARY TO COMPLETE THIS SECTION.

THE EXISTING UTILITY LINES ARE SHOWN ON THE PLANS TO INDICATE THEIR PRESENCE AND APPROXIMATE LOCATION. THE CONTRACTOR SHALL VERIFY THE EXACT LOCATION OF ALL UNDERGROUND UTILITIES PRIOR TO BEGINNING CONSTRUCTION. CALL J.U.L.I.E. AT 1-800-892-0123.

THE TRAFFIC SIGNAL ENGINEER AT THE ILLINOIS DEPARTMENT OF TRANSPORTATION SHALL BE NOTIFIED AT 217-342-8382 AT LEAST 72 HOURS PRIOR TO TURNING ON ANY FLASHER OR CONTROLLER UNIT.

THE SIZE OF THE CABLE SUPPLIED SHALL BE EQUAL TO OR GREATER THAN THE SIZE OF THE CABLE REQUIRED TO CARRY THE LOAD BETWEEN THE CONTROLLER AND THE SERVICE INSTALLATION.

THE CONTRACTOR SHALL ARRANGE FOR A FACTORY OR SUPPLIER REPRESENTATIVE TO BE PRESENT AT THE INTERSECTION WHEN THE SIGNALS ARE TURNED ON. THE REPRESENTATIVE SHALL MAKE CERTAIN THAT ALL EQUIPMENT OPERATES TO THE SATISFACTION OF THE ENGINEER.

A 2 FOOT MINIMUM, 6 FOOT DESIRABLE, HORIZONTAL CLEARANCE SHALL BE MAINTAINED FROM THE BACK OF CURB TO THE EDGE OF HANDHOLES, JUNCTION BOXES AND SIGNAL POST FOUNDATIONS. A 5 FOOT MINIMUM HORIZONTAL CLEARANCE SHALL BE MAINTAINED FROM THE BACK OF THE CURB TO ALL MAST ARM FOUNDATIONS. CONTROLLER FOUNDATIONS SHALL BE LOCATED AS FAR FROM THE BACK OF THE CURB AS POSSIBLE TO PROTECT THE CONTROLLER CABINET.

ALL HARDWARE SHALL BE TIGHTENED AND WELL SECURED. CABLES SHALL BE NEATLY WOUND IN HANDHOLES. CABLES SHALL BE NEATLY TRAINED IN THE CONTROLLER CABINET.

ALL THREADS OF BOLTS USED IN ASSEMBLY OF TRAFFIC SIGNAL COMPONENTS SHALL BE COATED WITH A NON-LEAD BASED ANTI-SEIZE COMPOUND, SIMILAR TO LEAD PLATE, PRIOR TO ASSEMBLY.

NO ADDITIONAL COMPENSATION WILL BE ALLOWED FOR PLACING CONDUIT AT GREATER THAN 2 FOOT MINIMUM DEPTH TO AVOID OBSTACLES SUCH AS UNDERGROUND UTILITIES.

THE CONTRACTOR IS RESPONSIBLE FOR UNCOVERING OR HAND DIGGING AROUND UTILITIES AS NECESSARY. THE COST OF THIS WORK IS TO BE INCLUDED WITH THE TRENCH AND BACKFILL FOR ELECTRICAL WORK PAY ITEM.

THE NUMBER OF CONDUCTORS FOR ELECTRIC CABLES AS SHOWN ON THE PLANS SHALL BE THE MINIMUM NUMBER OF CONDUCTORS FURNISHED FOR EACH LOCATION. THE CONTRACTOR MAY SUBSTITUTE AN ELECTRIC CABLE WITH MORE CONDUCTORS THAN SPECIFIED BUT NO ADDITIONAL COMPENSATION WILL BE MADE FOR THE EXTRA CONDUCTORS.

ALL NEW TRAFFIC SIGNAL WIRING SHALL EXTEND FROM CONTROLLER TO SIGNAL. SPLICES IN HANDHOLES WILL NOT BE ALLOWED.

ALL MAST ARM MOUNTED SIGNAL HEADS ON AN INDIVIDUAL MAST ARM SHALL BE MOUNTED SO THAT THE RED INDICATIONS ARE LEVEL WITH EACH OTHER.

TRAFFIC SIGNAL HEADS SHALL BE PROPERLY COVERED PRIOR TO INTERSECTION TURN-ON OR AS DIRECTED BY THE ENGINEER. THIS COST SHALL BE INCLUDED WITH THE COST OF THE ASSOCIATED SIGNAL HEAD PAY ITEMS.

ALL TRAFFIC SIGNAL MAST ARM ASSEMBLIES (STANDARD, COMBINATION, OR DUAL) MUST BE DESIGNED FOR THE LOADINGS SHOWN ON THE HIGHWAY STANDARDS OR THESE SIGNAL PLANS, WHICHEVER IS GREATER.

THE TOTAL QUANTITY OF THERMOPLASTIC PAVEMENT MARKINGS ARE AS FOLLOWS:  
 LINE 8"-CONSISTS OF 183 FEET OF WHITE  
 LINE 12"-CONSISTS OF 133 FEET OF WHITE  
 LINE 24"-CONSISTS OF 62 FEET OF YELLOW

AMEREN CIPS  
 RON BAILEY  
 OFFICE: (618) 393-5641  
 CELL: (618) 553-2770  
 EMAIL: ronbailey@ameren.com

INDEX OF SHEETS

- 1 COVER SHEET
- 2 INDEX OF SHEETS AND GENERAL NOTES
- 3 SUMMARY OF QUANTITIES
- 4 DETAILS & STREET SIGNS
- 5 PROPOSED SIGNAL LAYOUT WITH EXISTING UTILITIES, ISLAND REMAVAL & PAVEMENT MARKING
- 6 SIGNAL LAYOUT
- 7 CABLE LAYOUT
- 8 TYPICAL APPLICATION OF DETECTOR LOOPS
- 9-12 PAVEMENT MARKING AND RAISED REFLECTIVE PAVEMENT MARKERS (RURAL & URBAN APPLICATIONS)

THE FOLLOWING STANDARDS ARE A PART OF THESE PLANS AND ARE INCLUDED AFTER SHEET NO. 12:

- 000001-06 STANDARD SYMBOLS, ABBREVIATIONS AND PATTERNS
- 001001-02 AREAS OF REINFORCEMENT BARS
- 701001-02 OFF-ROAD OPERATIONS, 2L, 2W, MORE THAN 15' AWAY
- 701006-03 OFF-ROAD OPERATIONS, 2L, 2W, 15' TO 24" FROM PAVEMENT EDGE
- 701501-06 URBAN LANE CLOSURE, 2L, 2W, UNDIVIDED
- 701701-07 URBAN LANE CLOSURE, MULTILANE INTERSECTION
- ~~701801-01 LANE CLOSURE, MULTILANE LW OR RW CROSSWALK OR SIDEWALK CLOSURE~~
- 701901-01 TRAFFIC CONTROL DEVICES
- 720001-01 SIGN PANEL MOUNTING DETAILS
- 720006-02 SIGN PANEL ERECTION DETAILS
- 720016-02 MAST ARM MOUNTED STREET NAME SIGNS
- 805001-01 ELECTRICAL SERVICE INSTALLATION DETAILS
- 814001-02 HANDHOLES
- 814006-02 DOUBLE HANDHOLES
- 857001-01 STANDARD PHASE DESIGNATION DIAGRAMS AND PHASE SEQUENCES
- 873001-02 TRAFFIC SIGNAL GROUNDING & BONDING
- 877001-04 STEEL MAST ARM ASSEMBLY AND POLE 16' THROUGH 55'
- 878001-08 CONCRETE FOUNDATION DETAILS
- 880006-01 TRAFFIC SIGNAL MOUNTING DETAILS
- 886001-01 DETECTOR LOOP INSTALLATION
- 886006-01 TYPICAL LAYOUT FOR DETECTION LOOPS

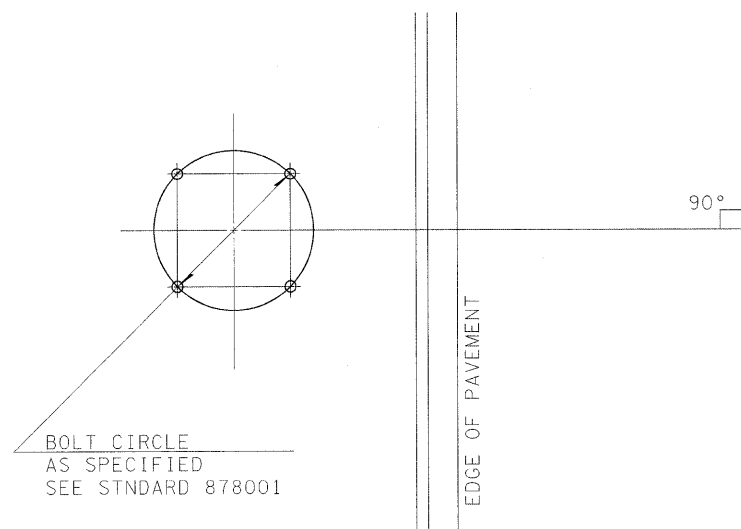
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PLOT DATE = #DATE#	CHECKED -	REVISED -	SCALE:		SHEET NO.	OF	SHEETS	STA.	TO STA.	CONTRACT NO. 74480		
	DATE -	REVISED -	ILLINOIS FED. AID PROJECT									

SUMMARY OF QUANTITIES			TOTAL QUANTITIES	CONSTRUCTION TYPE CODE		
CODE NO	ITEM	UNIT		0021 100% STATE		
35300505	PORTLAND CEMENT CONCRETE BASE COURSE 10 1/4"	SQ YD	12	12		
44003100	MEDIAN REMOVAL	SQ FT	108	108		
67100100	MOBILIZATION	L SUM	1	1		
70102635	TRAFFIC CONTROL AND PROTECTION, STANDARD 701701	L SUM	1	1		
<del>70102620</del>	TRAFFIC CONTROL AND PROTECTION, STANDARD 701501	L SUM	1	1		
*72000300	SIGN PANEL - TYPE 3	SQ FT	78	78		
*78000500	THERMOPLASTIC PAVEMENT MARKING - LINE 8"	FOOT	183	183		
*78000600	THERMOPLASTIC PAVEMENT MARKING - LINE 12"	FOOT	133	133		
*78000650	THERMOPLASTIC PAVEMENT MARKING - LINE 24"	FOOT	72	72		
78300100	PAVEMENT MARKING REMOVAL	SQ FT	92	92		
80500100	SERVICE INSTALLATION, TYPE A	EACH	1	1		
81012200	CONDUIT IN TRENCH, 3/4" DIA., PVC	FOOT	15	15		
81012400	CONDUIT IN TRENCH, 1 1/4" DIA., PVC	FOOT	571	571		
81012600	CONDUIT IN TRENCH, 2" DIA., PVC	FOOT	301	301		
81013000	CONDUIT IN TRENCH, 4" DIA., PVC	FOOT	42	42		
81021370	CONDUIT PUSHED, 4" DIA., PVC	FOOT	197	197		
81400100	HANDHOLE	EACH	5	5		
81400300	DOUBLE HANDHOLE	EACH	1	1		
81500100	GULFBOX JUNCTION	EACH	4	4		
81900200	TRENCH AND BACKFILL FOR ELECTRICAL WORK	FOOT	929	929		
85700200	FULL-ACTUATED CONTROLLER AND TYPE IV CABINET	EACH	1	1		
86200300	UNINTERRUPTIBLE POWER SUPPLY, EXTENDED	EACH	1	1		
87301245	ELECTRIC CABLE IN CONDUIT, SIGNAL NO. 14 5C	FOOT	1426	1426		
87301255	ELECTRIC CABLE IN CONDUIT, SIGNAL NO. 14 7C	FOOT	588	588		
87301305	ELECTRIC CABLE IN CONDUIT, LEAD-IN, NO. 14 1 PAIR	FOOT	1715	1715		
87301805	ELECTRIC CABLE IN CONDUIT, SERVICE, NO. 6 2 C	FOOT	27	27		
87502680	TRAFFIC SIGNAL POST, ALUMINUM 14 FT.	EACH	1	1		
87502700	TRAFFIC SIGNAL POST, ALUMINUM 16 FT.	EACH	1	1		
87700160	STEEL MAST ARM ASSEMBLY AND POLE, 24 FT.	EACH	1	1		
87700170	STEEL MAST ARM ASSEMBLY AND POLE, 26 FT.	EACH	1	1		

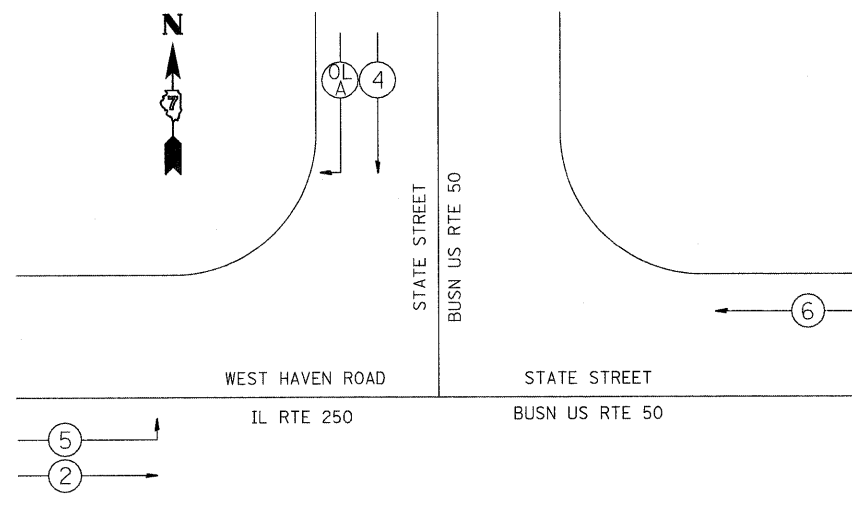
\* SPECIALTY ITEM

SUMMARY OF QUANTITIES			TOTAL QUANTITIES	CONSTRUCTION TYPE CODE		
CODE NO	ITEM	UNIT		0021 100% STATE		
87700180	STEEL MAST ARM ASSEMBLY AND POLE, 28 FT.	EACH	1	1		
87800100	CONCRETE FOUNDATION, TYPE A	FOOT	6	6		
87800150	CONCRETE FOUNDATION, TYPE C	FOOT	3.5	3.5		
87800400	CONCRETE FOUNDATION, TYPE E 30-INCH DIAMETER	FOOT	30	30		
88040070	SIGNAL HEAD, POLYCARBONATE, LED, 1-FACE, 3-SECTION, BRACKET MOUNTED	EACH	4	4		
88040090	SIGNAL HEAD, POLYCARBONATE, LED, 1-FACE, 3-SECTION, MAST ARM MOUNTED	EACH	5	5		
88040160	SIGNAL HEAD, POLYCARBONATE, LED, 1-FACE, 5-SECTION, MAST ARM MOUNTED	EACH	1	1		
88040260	SIGNAL HEAD, POLYCARBONATE, LED, 2-FACE, 1-3-SECTION, 1-5-SECTION, BRACKET MOUNTED	EACH	1	1		
88200400	TRAFFIC SIGNAL BACKPLATE, FORMED PLASTIC	EACH	12	12		
88500100	INDUCTIVE LOOP DETECTOR	EACH	10	10		
88600100	DETECTOR LOOP, TYPE I	FOOT	788	788		
X8730027	ELECTRIC CABLE IN CONDUIT, GROUNDING, NO. 6 1C	FOOT	408	408		

FILE NAME =	USER NAME = #USER#	DESIGNED -	REVISED -	<b>STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION</b>	<b>SUMMARY OF QUANTITIES</b>			F.A.S. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
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	PLOT DATE = #DATE#	DATE -	REVISED -					ILLINOIS FED. AID PROJECT				



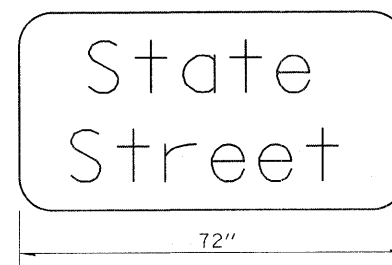
DETAIL OF MAST ARM FOUNDATION  
BOLT PATTERN



VEHICULAR PHASE NO. X

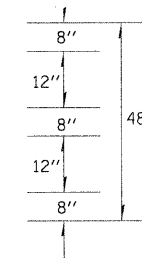


PHASE DESIGNATION DIAGRAM

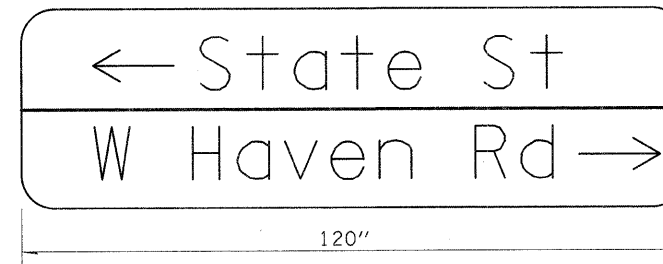


TO BE INSTALLED ON EASTBOUND MAST ARM (STA 7+59 25' L+.)  
TO BE INSTALLED ON WESTBOUND MAST ARM (STA 9+44 39' Rt.)

SIGN PANEL DETAILS

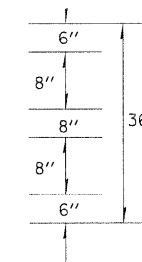


1. SIGN SHALL HAVE A WHITE REFLECTORIZED LEGEND AND BORDER ON A GREEN REFLECTORIZED BACKGROUND.
2. UPPER/LOWER CASE LETTERS, 5W CLEARVIEW FONT.



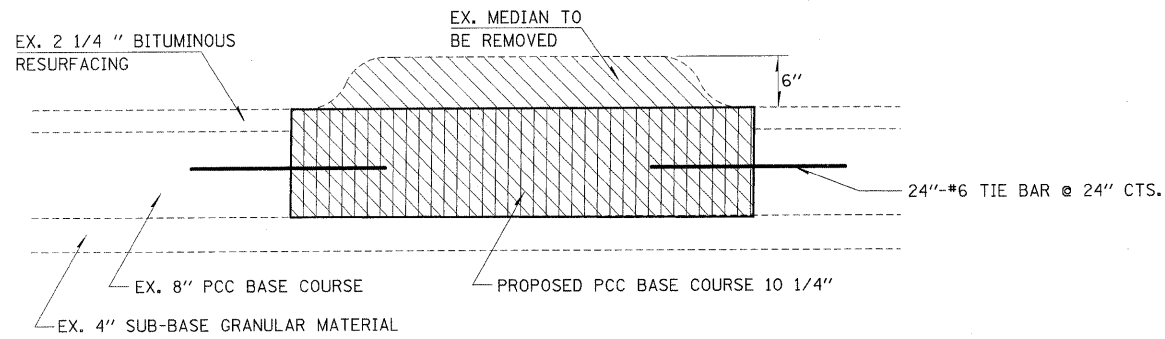
TO BE INSTALLED ON SOUTHBOUND MAST ARM (STA 8+75 27' L+.)

SIGN PANEL DETAILS



1. SIGN SHALL HAVE A WHITE REFLECTORIZED LEGEND AND BORDER ON A GREEN REFLECTORIZED BACKGROUND.
2. UPPER/LOWER CASE LETTERS, 5W CLEARVIEW FONT.

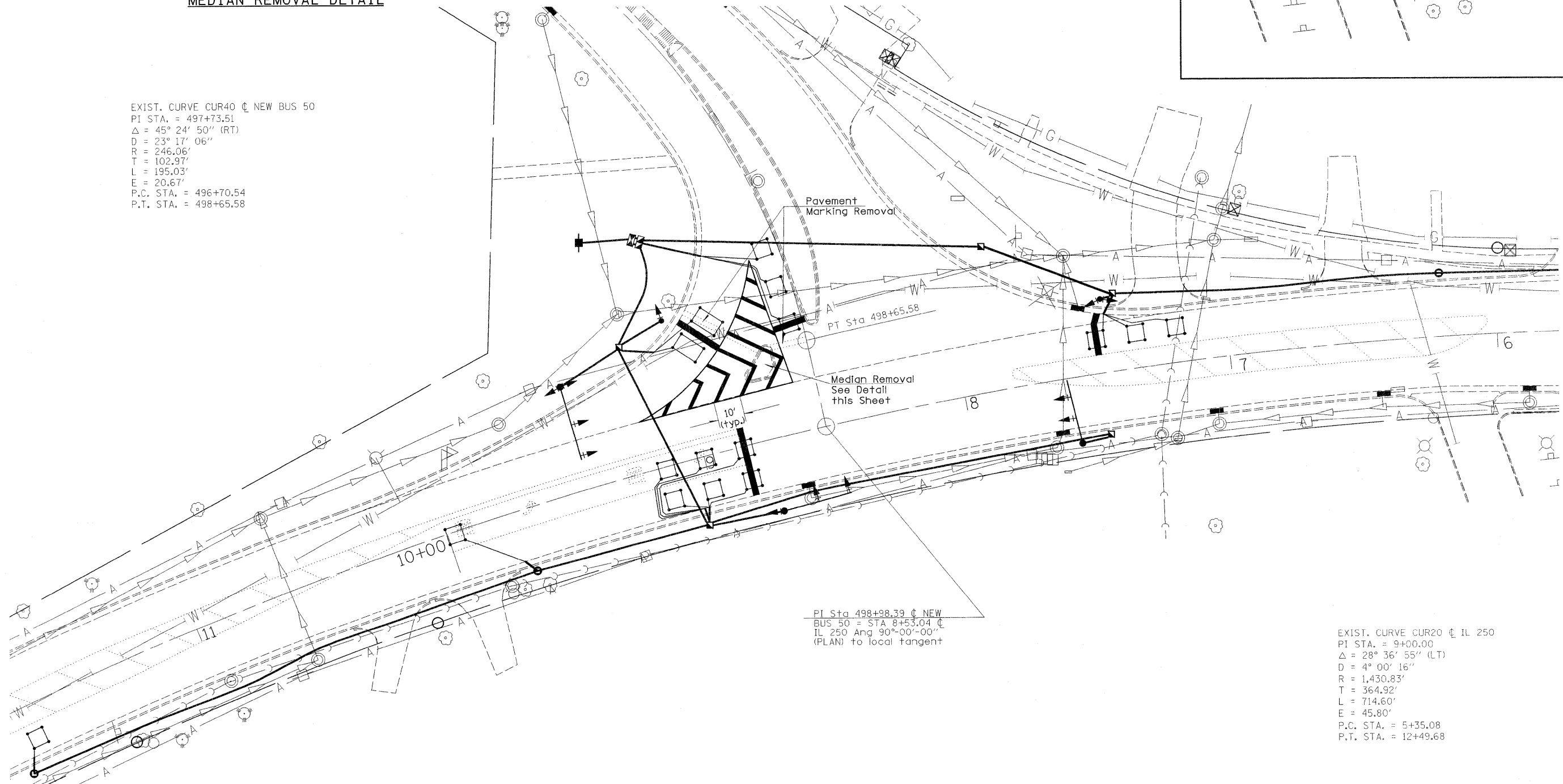
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PLOT SCALE = 20.0000' / IN.		CHECKED -	REVISED -		CONTRACT NO. 74480			ILLINOIS FED. AID PROJECT				
PLOT DATE = 12/28/2010		DATE -	REVISED -		SCALE:	SHEET NO.	OF SHEETS	STA.	TO STA.			



NOTE: 1.) THE SURFACE SHALL BE FINISHED ACCORDING TO ARTICLE 420.09(e)(2).  
 2.) THE TIE BARS REQUIRED FOR THIS WORK SHALL BE INCLUDED IN THE COST OF THE PCC BASE COURSE PAY ITEM.

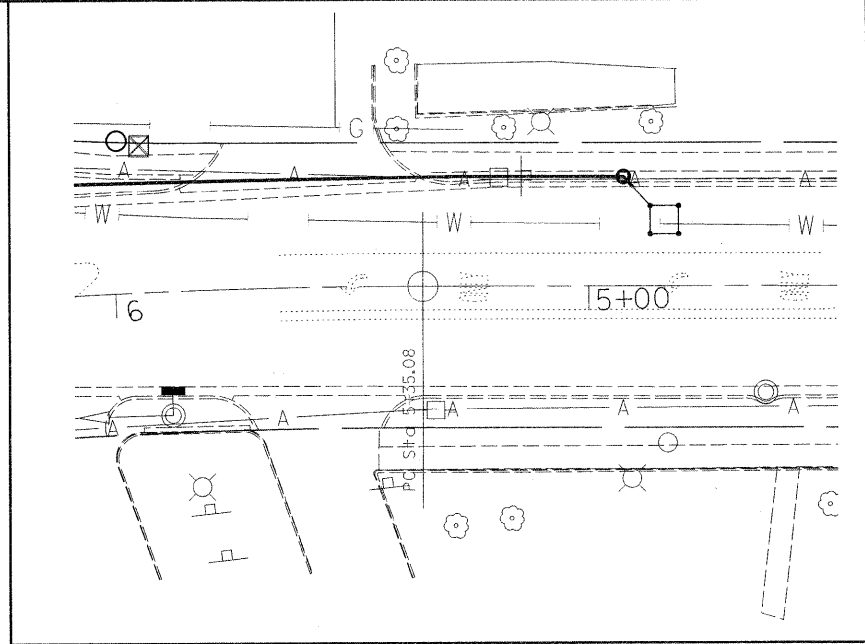
**MEDIAN REMOVAL DETAIL**

EXIST. CURVE CUR40 @ NEW BUS 50  
 PI STA. = 497+73.51  
 $\Delta = 45^\circ 24' 50''$  (RT)  
 $D = 23^\circ 17' 06''$   
 $R = 246.06'$   
 $T = 102.97'$   
 $L = 195.03'$   
 $E = 20.67'$   
 P.C. STA. = 496+70.54  
 P.T. STA. = 498+65.58

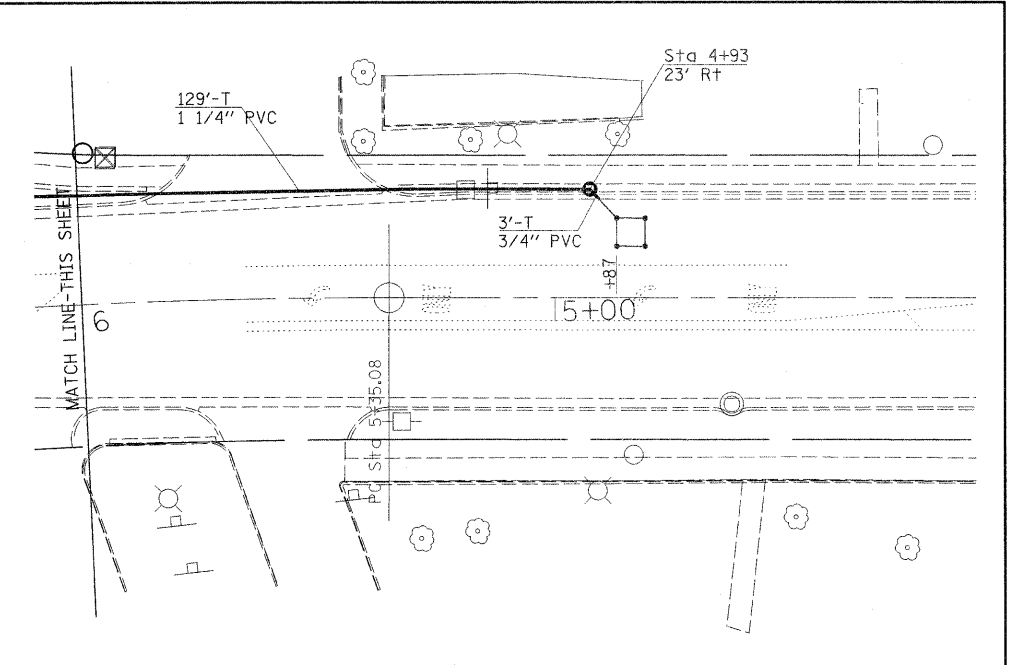
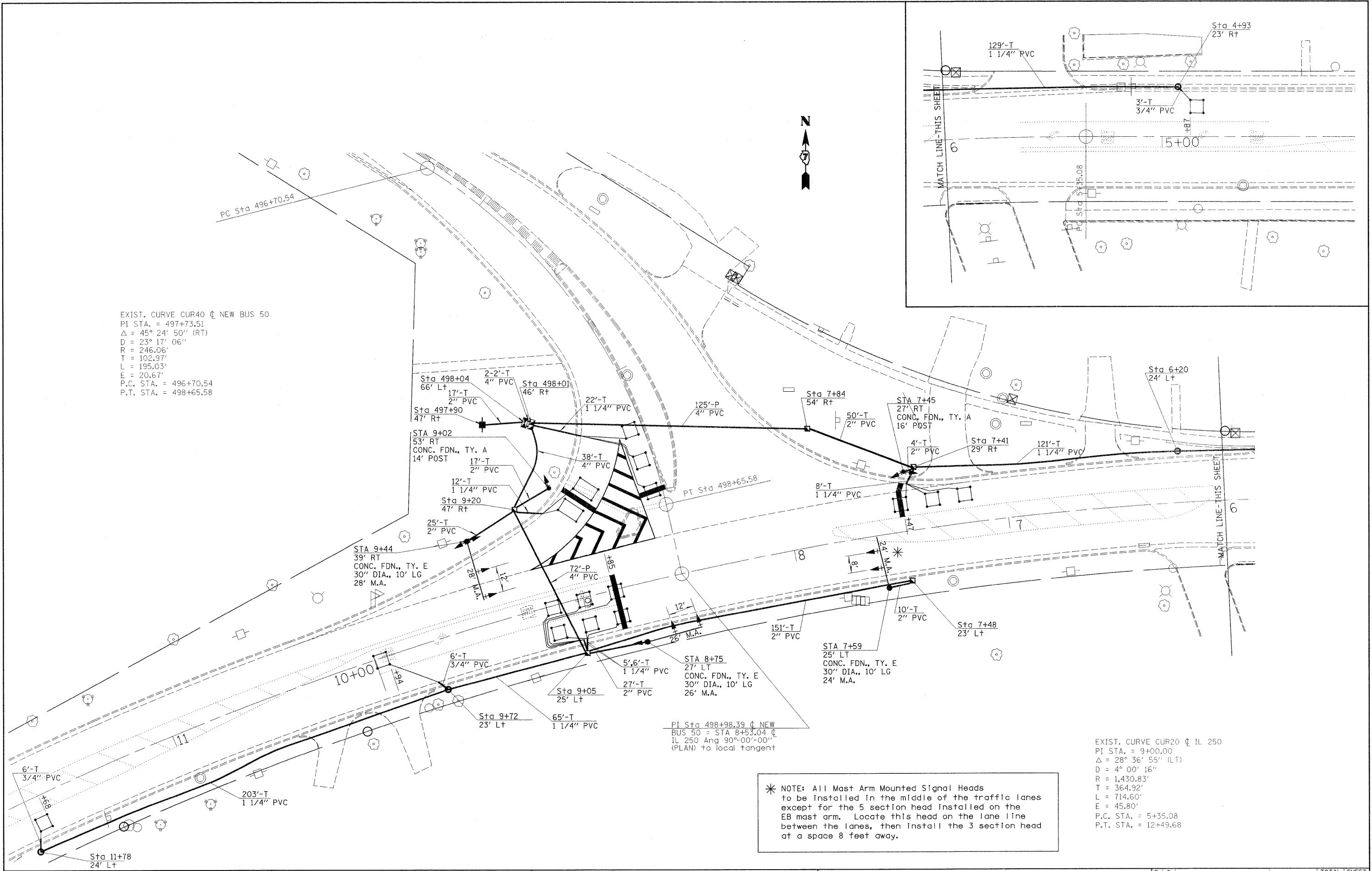


PI Sta 498+98.39 @ NEW  
 BUS 50 = STA 8+53.04 @  
 IL 250 Ang 90°-00'-00''  
 (PLAN) to local tangent

EXIST. CURVE CUR20 @ IL 250  
 PI STA. = 9+00.00  
 $\Delta = 28^\circ 36' 55''$  (LT)  
 $D = 4^\circ 00' 16''$   
 $R = 1,430.83'$   
 $T = 364.92'$   
 $L = 714.60'$   
 $E = 45.80'$   
 P.C. STA. = 5+35.08  
 P.T. STA. = 12+49.68



FILE NAME =	USER NAME = mcllennla	DESIGNED -	REVISED -	<b>STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION</b>	<b>PROPOSED SIGNAL LAYOUT WITH EXISTING UTILITIES ISLAND REMOVAL &amp; PAVEMENT MARKING</b>	F.A.S. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.	
ca:\pw_work\pwidot\mcllennla\d0196565\d	774480-TS-sht.dgn	DRAWN -	REVISED -			1809	(22)TS-1	LAWRENCE	12	5	
	PLOT SCALE = 20,0000 ' / IN.	CHECKED -	REVISED -			CONTRACT NO. 74480					
	PLOT DATE = 12/30/2018	DATE -	REVISED -			ILLINOIS FED. AID PROJECT					
					SCALE:	SHEET NO. OF SHEETS		STA. TO STA.			



EXIST. CURVE CUR40 @ NEW BUS 50  
 PI STA. = 497+73.51  
 $\Delta = 45^\circ 24' 50''$  (RT)  
 D = 23' 17' 06"  
 R = 246.06'  
 T = 102.97'  
 L = 195.03'  
 E = 20.67'  
 P.C. STA. = 496+70.54  
 P.T. STA. = 498+65.58

EXIST. CURVE CUR20 @ IL 250  
 PI STA. = 9+00.00  
 $\Delta = 28^\circ 36' 55''$  (LT)  
 D = 4' 00' 16"  
 R = 1,430.83'  
 T = 364.92'  
 L = 714.60'  
 E = 45.80'  
 P.C. STA. = 5+35.08  
 P.T. STA. = 12+49.68

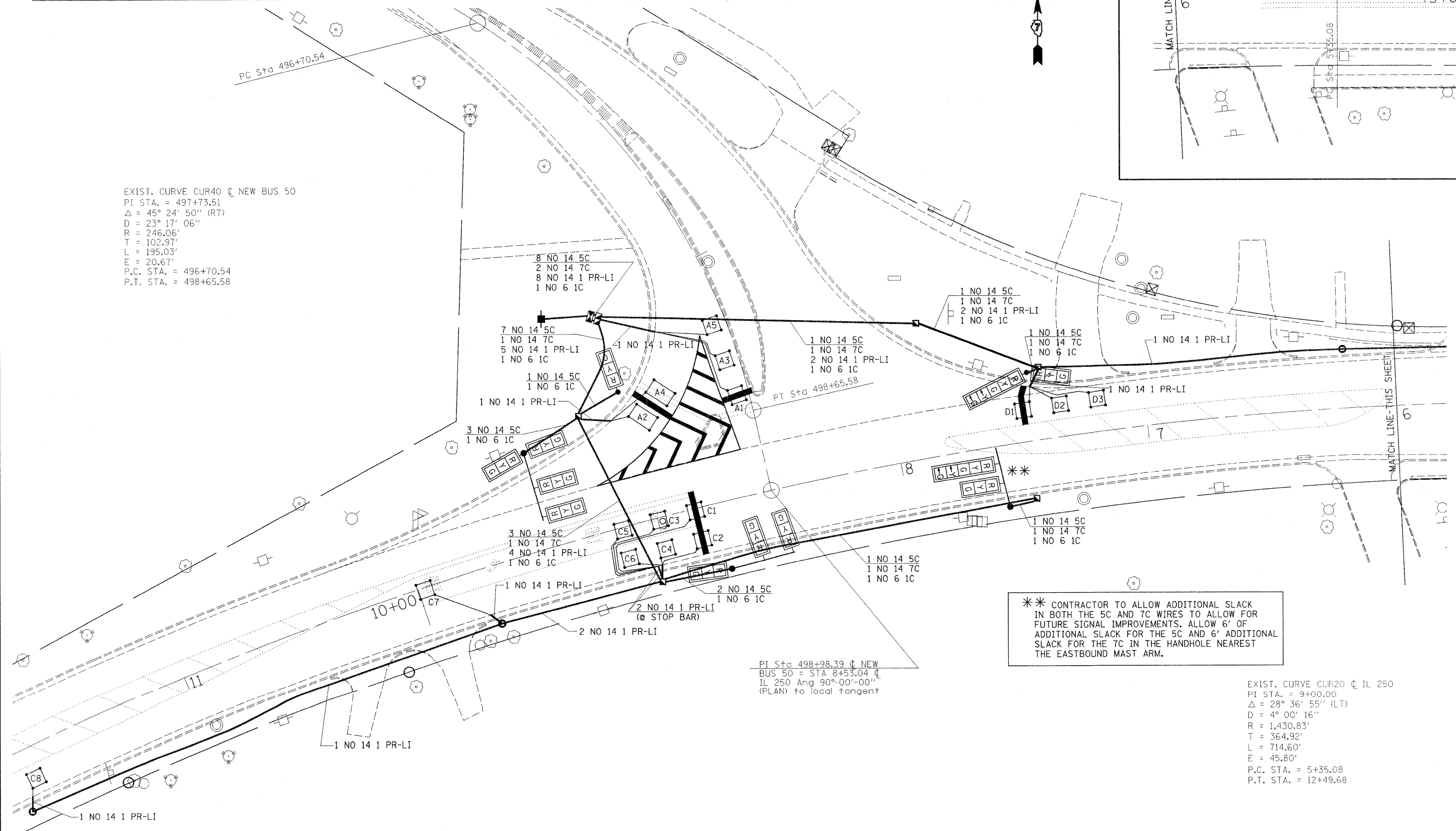
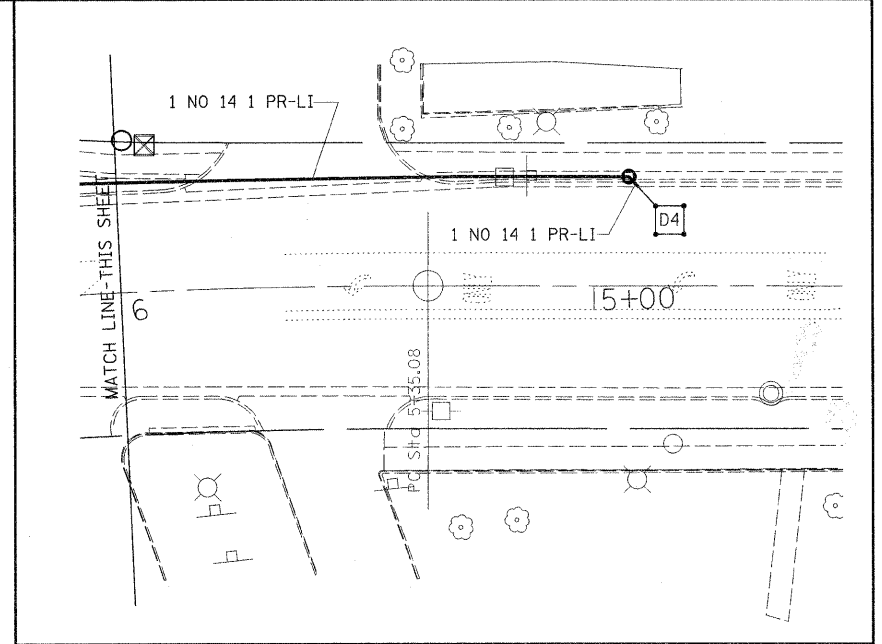
\* NOTE: All Mast Arm Mounted Signal Heads to be installed in the middle of the traffic lanes except for the 5 section head installed on the EB mast arm. Locate this head on the lane line between the lanes, then install the 3 section head at a space 8 feet away.

FILE NAME =	USER NAME = mcelleanla	DESIGNED -	REVISED -	<b>STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION</b>	<b>INTERSECTION-BSN RTE 50 &amp; IL 250 SIGNAL LAYOUT</b>			F.A.S. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
c:\pwork\pwork\mcelleanla\2196565\074480-TS-sht.dgn	PLOT SCALE = 20.0000' / IN.	DRAWN -	REVISED -					1809	(2)TS-1	LAWRENCE	12	6
PLOT DATE = 12/30/2010	DATE -	CHECKED -	REVISED -					CONTRACT NO. 74480				
		DATE -	REVISED -					ILLINOIS FED. AID PROJECT				
				SCALE:	SHEET NO.	OF	SHEETS	STA.	TO STA.			

LOOP:	SIZE:	MODE:	QUADRA-POLE:	DELAY:
A1,A3,A5, C1,C3,C5,C2,C4,C6, D1,D2,D3	6' X 6'	NORMAL	NO	0
C7,C8,D4	6' X 6'	EXTENDED	NO	0
A2,A4	6' X 10'	DELAY	NO	15

THE FOLLOWING CABLES SHALL BE WIRED TO COMMON AMPLIFIERS:  
 (A1, A3, A5), (A2, A4),  
 (C1, C3, C5), (C2, C4, C6),  
 (C7), (C8)  
 (D1, D2, D3), (D4),  
 8 AMPLIFIERS PLUS 2 ADDITIONAL  
 TOTAL 10 AMPLIFIERS

EXIST. CURVE CUR40 @ NEW BUS 50  
 PI STA. = 497+73.51  
 $\Delta = 45^\circ 24' 50''$  (RT)  
 $D = 23^\circ 17' 06''$   
 $R = 246.06'$   
 $T = 102.97'$   
 $L = 195.03'$   
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 P.C. STA. = 496+70.54  
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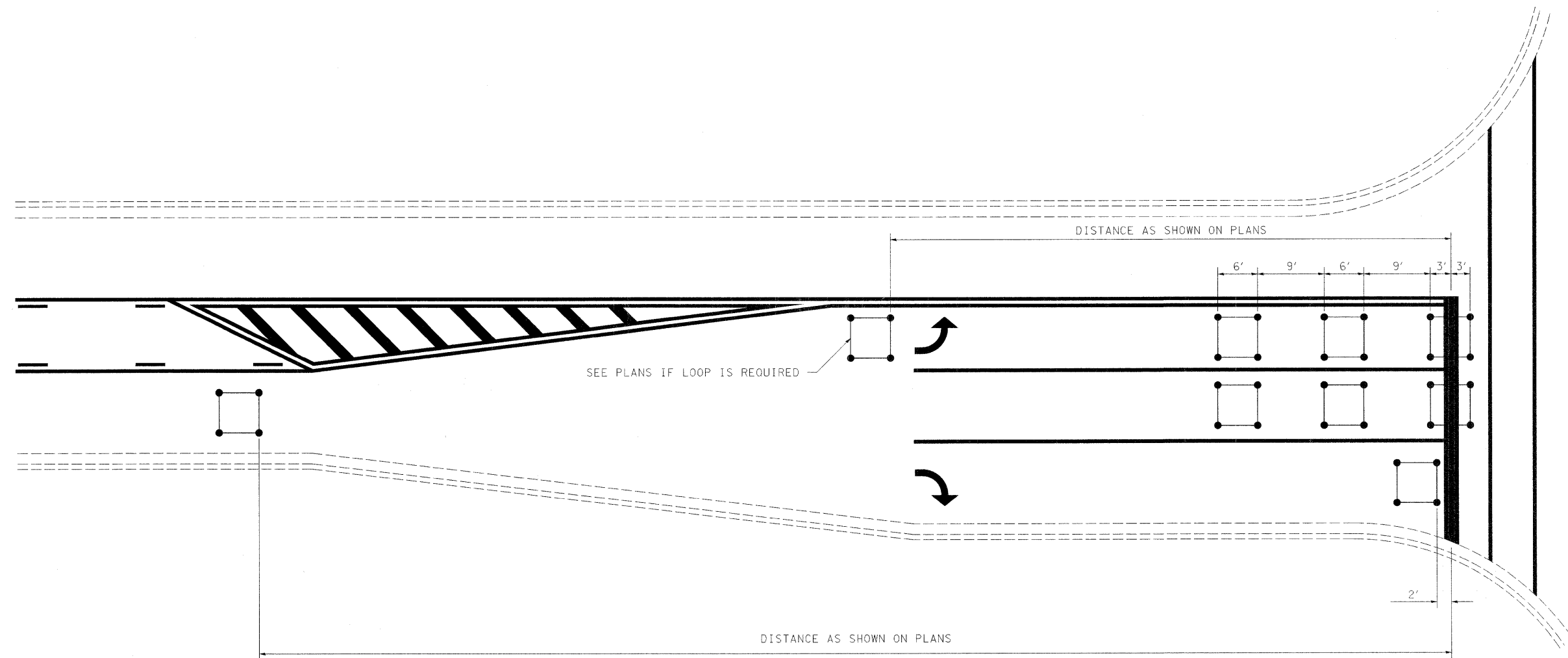
PI Sta 498+98.39 @ NEW  
 BUS 50 = STA 8+53.04 @  
 IL 250 Ang 90°-00'-00''  
 (PLAN) to local tangent

\*\* CONTRACTOR TO ALLOW ADDITIONAL SLACK  
 IN BOTH THE 5C AND 7C WIRES TO ALLOW FOR  
 FUTURE SIGNAL IMPROVEMENTS. ALLOW 6' OF  
 ADDITIONAL SLACK FOR THE 5C AND 6' ADDITIONAL  
 SLACK FOR THE 7C IN THE HANDHOLE NEAREST  
 THE EASTBOUND MAST ARM.

EXIST. CURVE CUR20 @ IL 250  
 PI STA. = 9+00.00  
 $\Delta = 28^\circ 36' 55''$  (LT)  
 $D = 4^\circ 00' 16''$   
 $R = 1,430.83'$   
 $T = 364.92'$   
 $L = 714.60'$   
 $E = 45.80'$   
 P.C. STA. = 5+35.08  
 P.T. STA. = 12+49.68

FILE NAME =	USER NAME = mcelleanla	DESIGNED -	REVISED -	<b>STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION</b>	<b>INTERSECTION-BSN RTE 50 &amp; IL 250 CABLE LAYOUT</b>			F.A.S. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
or\pwork\pwork\mcelleanla\d0196565\0774480-TS-sht.dgn	PLOT SCALE = 20,0000' / IN.	DRAWN -	REVISED -					1809	(2)TIS-1	LAWRENCE	12	7
PLOT DATE = 12/30/2010	DATE -	CHECKED -	REVISED -					CONTRACT NO. 74480				
		DATE -	REVISED -					ILLINOIS FED. AID PROJECT				
					SCALE:	SHEET NO.	OF	SHEETS	STA.	TO	STA.	

# TYPICAL APPLICATION OF DETECTOR LOOPS



**NOTE:**

1. EACH LOOP SHALL HAVE ITS OWN HOMERUN TO THE GULFBOX/HANDHOLE.
2. LOOPS SHOULD BE CENTERED IN EACH LANE.
3. USE 6' BY 6' LOOPS FOR LANE WIDTHS OF 11' OR GREATER.
4. USE 5' BY 5' LOOPS IF LANE WIDTH IS LESS THAN 11'.

NOT TO SCALE

**DISTRICT 7 DETAIL NO. 88600100**

FILE NAME =	USER NAME = mcelleania	DESIGNED -	REVISED - MKS 4-08
cr\pwork\pwork\mcelleania\d0196555\0744480-TS-sht.dgn		DRAWN -	REVISED -
	PLOT SCALE = 20,0000' / IN.	CHECKED -	REVISED -
	PLOT DATE = 12/28/2010	DATE -	REVISED -

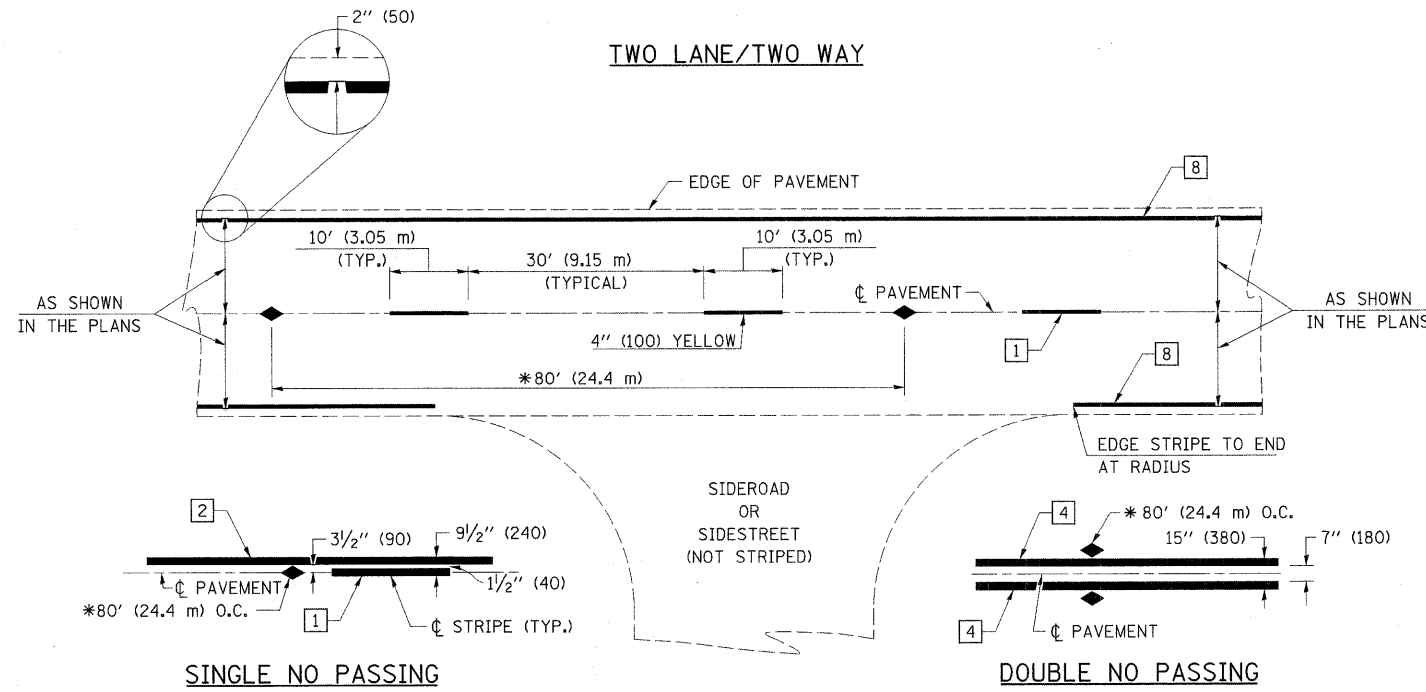
**STATE OF ILLINOIS  
DEPARTMENT OF TRANSPORTATION**

**TYPICAL APPLICATIONS OF DETECTOR LOOPS**

SCALE: SHEET NO. OF SHEETS STA. TO STA.

F.A.S. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
1809	(22)TS-1	LAWRENCE	12	8
FED. ROAD DIST. NO.			ILLINOIS FED. AID PROJECT	
			CONTRACT NO. 74480	





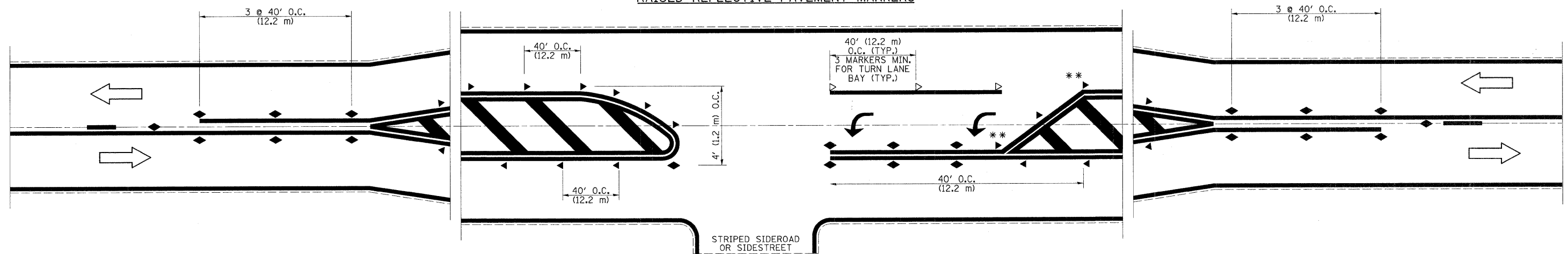
**PAVEMENT MARKING LEGEND**

- 1 4" (100) SKIP-DASH (YELLOW)
- 2 4" (100) SOLID (YELLOW)
- 3 12" (300) DIAGONAL (YELLOW)
- 4 4" (100) DOUBLE YELLOW (NARROW)
- 5 RESERVED
- 6 RESERVED
- 7 6" (150) SKIP-DASH (WHITE)
- 8 4" (100) SOLID (WHITE)
- 9 12" (300) DIAGONAL (WHITE)
- 10 6" (150) SOLID (WHITE)
- 11 24" (600) STOP BAR (WHITE)
- 12 8" (200) SOLID (WHITE)
- 13 6" (100) LANE LINE EXTENSIONS
- 14 4" (100) PARKING WHITE

**TYPICAL PAVEMENT MARKERS LEGEND**

- ◆ TWO-WAY AMBER MARKER
- ▶ ONE-WAY AMBER MARKER
- ▷ ONE-WAY CRYSTAL MARKER

**RAISED REFLECTIVE PAVEMENT MARKERS**



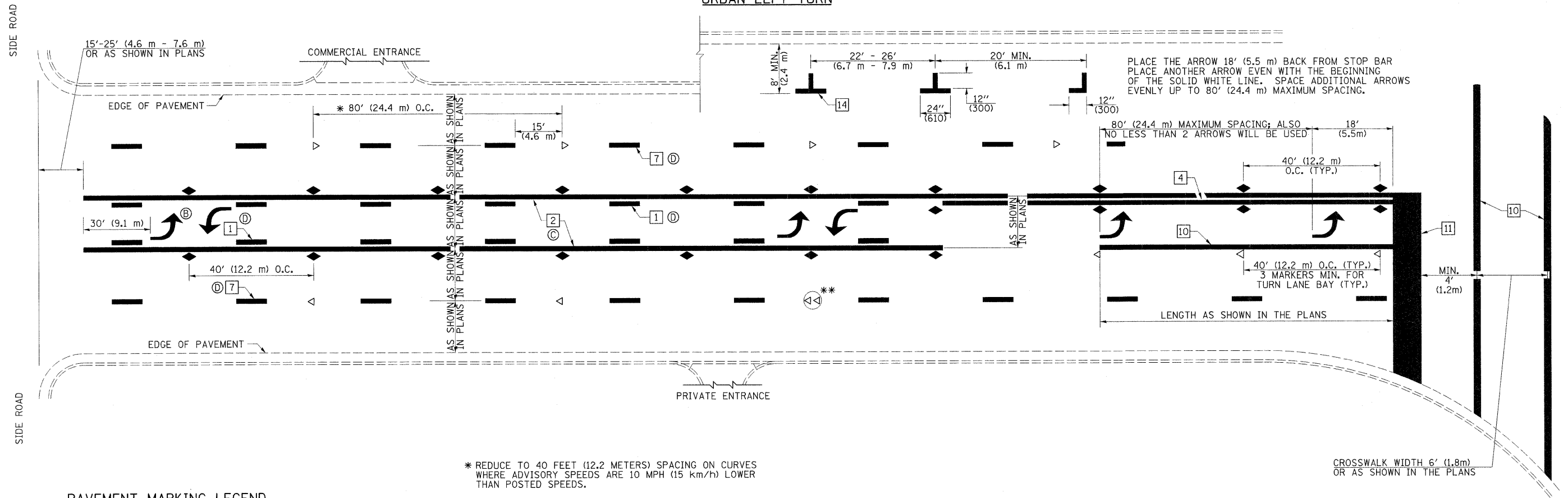
\*\* REDUCE SPACING IF NECESSARY TO ASSURE MARKERS AT CORNER POINTS.

NOT TO SCALE  
Note: All dimensions are in INCHES (millimeters) unless otherwise shown.

**DISTRICT 7 DETAIL NO. 7800001**

FILE NAME =	USER NAME = mcellellan	DESIGNED -	REVISED -	<b>STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION</b>	<b>PAVEMENT MARKING AND RAISED REFLECTIVE PAVEMENT MARKERS (RURAL &amp; URBAN APPLICATIONS)</b>	F.A.S. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.	
es:\pwork\pwork\mcellellan\0196565\0774400-TS-sht.dgn	74400-TS-sht.dgn	DRAWN -	REVISED -			1809	(2)TS-1	LAWRENCE	12	9	
PLOT SCALE = 20,0000 ' / IN.		CHECKED -	REVISED -			CONTRACT NO. 74480					
PLOT DATE = 12/28/2018		DATE -	REVISED -			ILLINOIS FED. AID PROJECT					

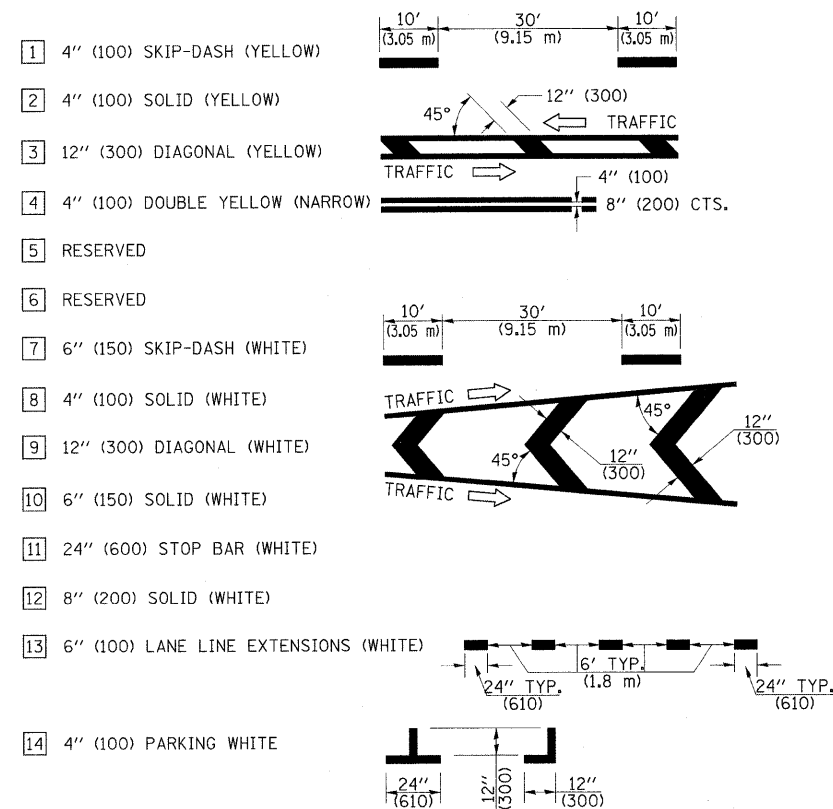
URBAN LEFT TURN



\* REDUCE TO 40 FEET (12.2 METERS) SPACING ON CURVES WHERE ADVISORY SPEEDS ARE 10 MPH (15 km/h) LOWER THAN POSTED SPEEDS.

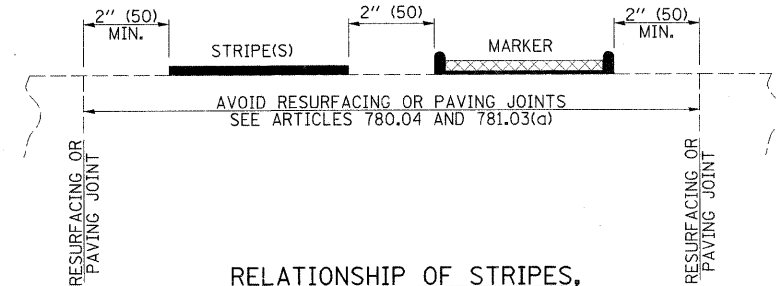
\*\* DOUBLE LANE LINE MARKERS SHALL BE SPECIFIED AND SPACED AS SHOWN IN HIGHWAY STANDARD 781001 FOR MULTI-LANE DIVIDED AND UNDIVIDED HIGHWAYS.

PAVEMENT MARKING LEGEND

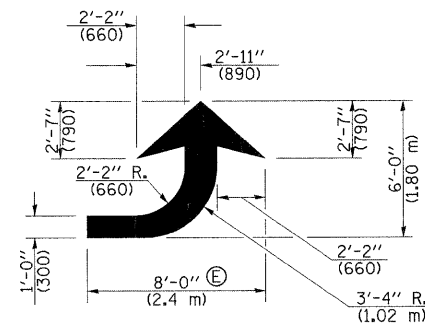


GENERAL NOTES

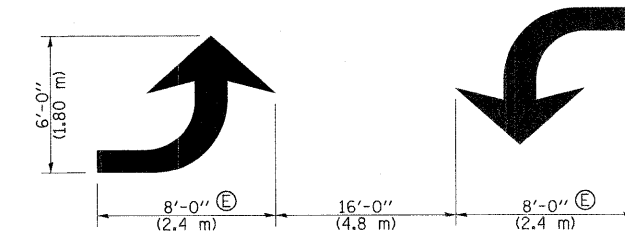
- (B) TURN ARROW PAIRS SHALL BE PLACED AT 250' (75 m) INTERVALS AND SHALL BE EVENLY SPACED BETWEEN BOTH ENDS OF THE BIDIRECTIONAL LEFT TURN LANE. USE A MINIMUM OF TWO PAIRS PER BLOCK.
- (C) THE SOLID YELLOW PAVEMENT MARKINGS [2] SHOULD GENERALLY START OR END NEAR THE RADIUS POINT OF EACH STREET RETURN EXCEPT WHERE ONE OR BOTH ENDS WOULD INCLUDE STOP BARS.
- (D) THE SKIP-DASH PAVEMENT MARKINGS [1] OR [7] SHOULD BE CENTERED BETWEEN BOTH ENDS OF EACH CITY BLOCK AND SHALL BE PLACED SO THEY LINE UP ACROSS FROM EACH OTHER.
- (E) USE LARGE ARROW SIZE FOR BOTH RURAL AND URBAN LOCATIONS. (SEE LAST PAGE OF SECTION 780X FOR SYMBOLS TABLE)



RELATIONSHIP OF STRIPES, MARKERS AND JOINTS



LEFT ARROW  
REVERSE FOR RIGHT ARROW  
AREA = 15.6 SQ. FT. (1.47 m<sup>2</sup>)  
(WHITE)



TYPICAL DOUBLE  
TURN ARROWS (WHITE)

NOT TO SCALE

Note: All dimensions are in INCHES (millimeters) unless otherwise shown.

FILE NAME =	USER NAME = mcelleanla	DESIGNED -	REVISED -
ci:\pwork\puidot\mcelleanla\d0196565\074480-TS-sht.dgn		DRAWN -	REVISED -
PLOT SCALE = 20,0000 "/>			

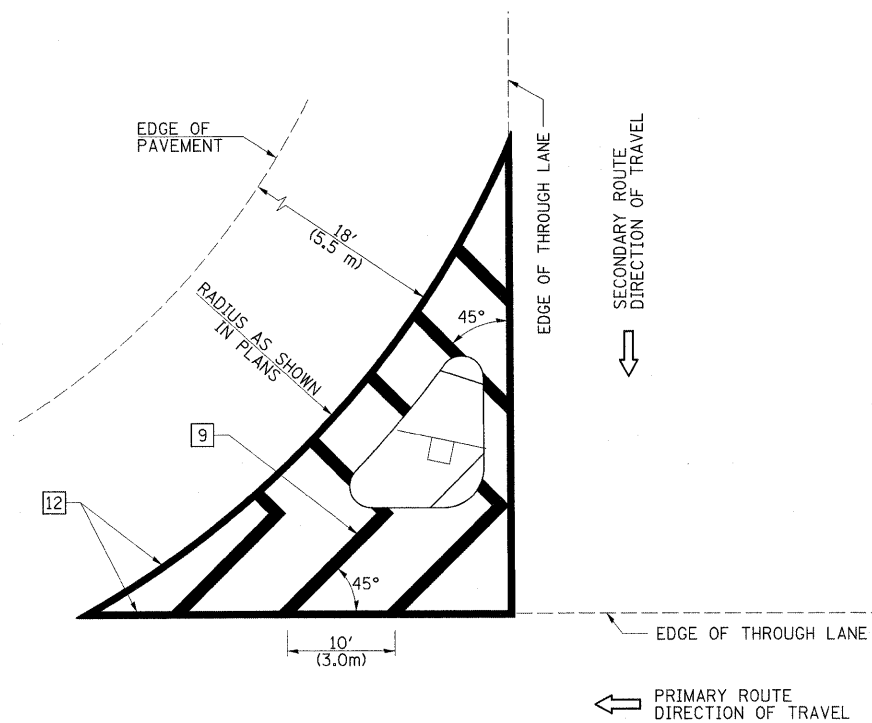
STATE OF ILLINOIS  
DEPARTMENT OF TRANSPORTATION

PAVEMENT MARKING AND RAISED REFLECTIVE PAVEMENT MARKERS  
(RURAL & URBAN APPLICATIONS)

SCALE: SHEET NO. 2 OF 4 SHEETS STA. TO STA.

DISTRICT 7 DETAIL NO. 7800001				
F.A.S. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
1809	(22)TS-1	LAWRENCE	12	10
CONTRACT NO. 74480			ILLINOIS FED. AID PROJECT	

**ISLAND**

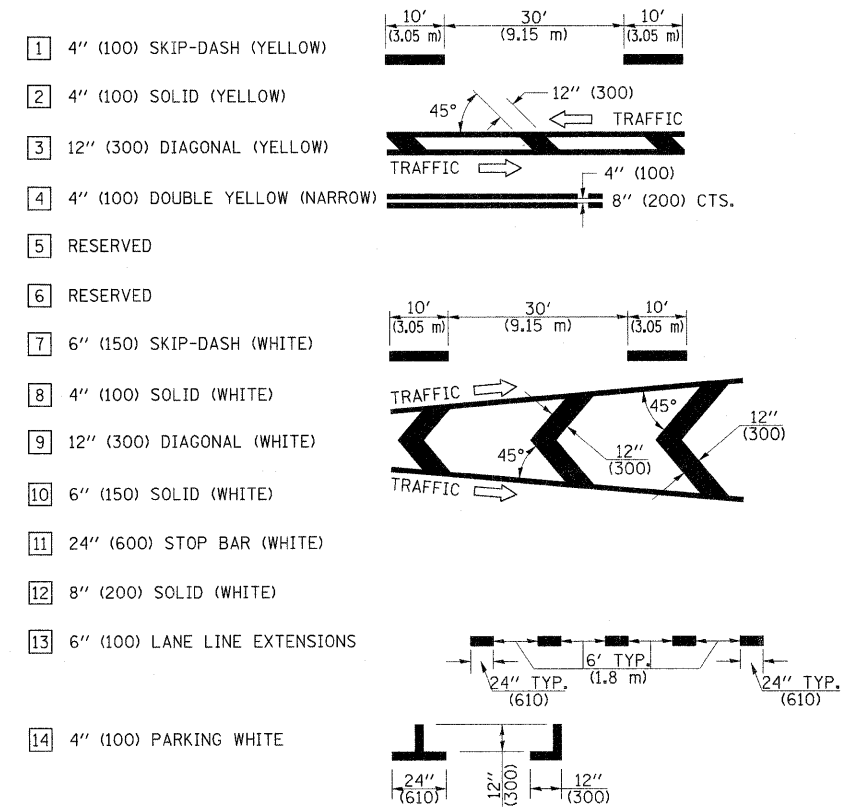


**GENERAL NOTES**

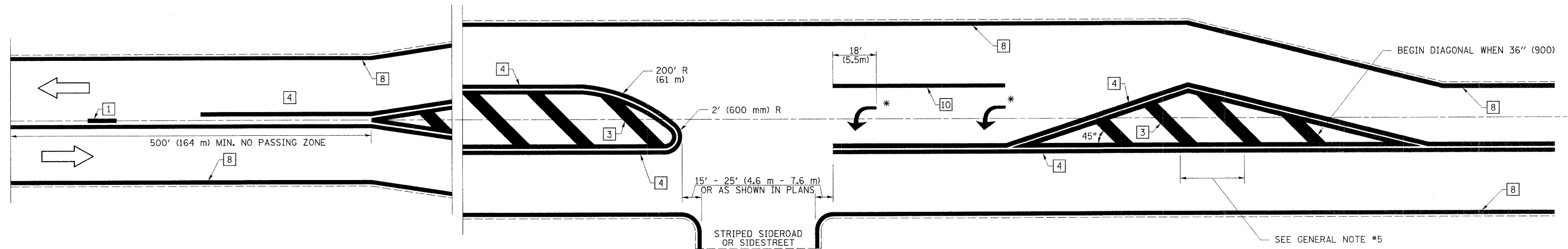
1. RAISED AND CORRUGATED MEDIANS SHALL BE OUTLINED WITH [2] IF PRESENT.
2. SOME OF THE INFORMATION INCLUDED WITH THIS DETAIL MAY NOT BE APPLICABLE TO THIS IMPROVEMENT.
3. PAVEMENT MARKINGS ARE TO BE EXTENDED THROUGH OMISSIONS WHEN APPLICABLE.
4. FINAL PAVEMENT MARKINGS SHALL BE IN PLACE PRIOR TO PLACING ANY RAISED REFLECTIVE PAVEMENT MARKERS.
5. THE FOLLOWING CRITERIA SHALL BE USED FOR SELECTING THE DIAGONAL PAVEMENT MARKING SPACING:
 

< 30 MPH (< 50 km/h)	15' (4.5 m)
30-45 MPH (50-75 km/h)	20' (6.0 m)
> 45 MPH (> 75 km/h)	30' (9.0 m)

**PAVEMENT MARKING LEGEND**



**RURAL LEFT TURN STRIPING**



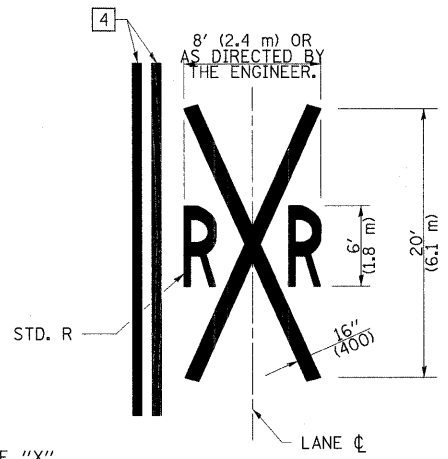
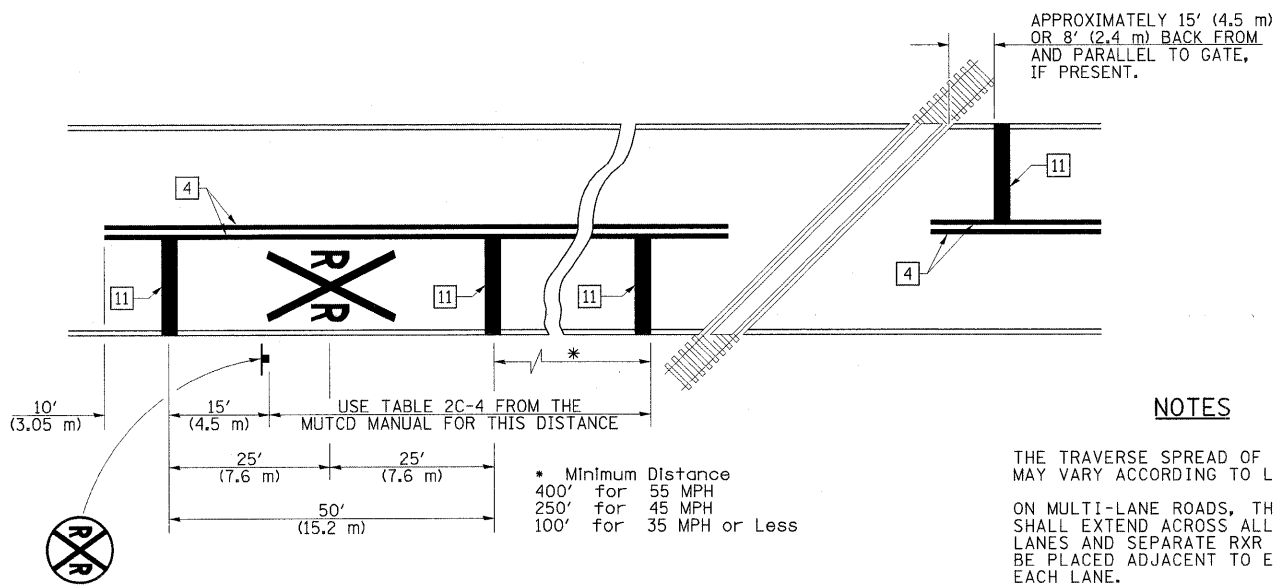
\* PLACE AN ARROW 18' (5.5 m) BACK FROM STOP BAR. PLACE ANOTHER ARROW EVEN WITH THE BEGINNING OF THE SOLID WHITE LINE. SPACE ADDITIONAL ARROWS EVENLY UP TO 80' (24.4 m) MAXIMUM SPACING. USE MINIMUM OF 2 ARROWS.

NOT TO SCALE  
Note: All dimensions are in INCHES (millimeters) unless otherwise shown.

**DISTRICT 7 DETAIL NO. 78000001**

FILE NAME =	USER NAME = mcollellan	DESIGNED -	REVISED -	<b>STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION</b>	<b>PAVEMENT MARKING AND RAISED REFLECTIVE PAVEMENT MARKERS (RURAL &amp; URBAN APPLICATIONS)</b>		F.A.S. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
ca:\pwork\pwork\mcollellan\0196565\0774480-TS-shd.dgn		DRAWN -	REVISED -		1809	(22)TS-1	LAWRENCE	12	11		
PLOT SCALE = 20.0000" / IN.		CHECKED -	REVISED -		CONTRACT NO. 74480			ILLINOIS FED. AID PROJECT			
PLOT DATE = 12/28/2010		DATE -	REVISED -		SCALE:	SHEET NO. 3 OF 4 SHEETS	STA. TO STA.				

PAVEMENT MARKINGS AT RAILROAD-HIGHWAY GRADE CROSSING



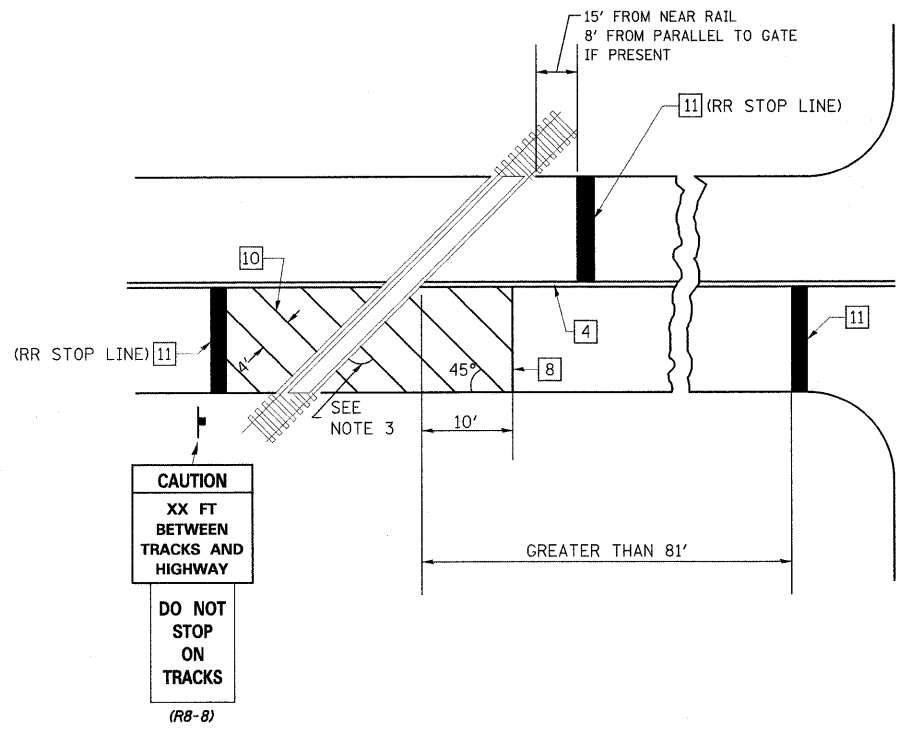
NOTES

THE TRAVERSE SPREAD OF THE "X" MAY VARY ACCORDING TO LANE WIDTH.  
 ON MULTI-LANE ROADS, THE STOP LINES SHALL EXTEND ACROSS ALL APPROACH LANES AND SEPARATE RXR SYMBOLS SHALL BE PLACED ADJACENT TO EACH OTHER IN EACH LANE.  
 WHEN THE PAVEMENT MARKING SYMBOL IS USED, A PORTION OF THE SYMBOL SHOULD BE LOCATED DIRECTLY ADJACENT TO THE ADVANCE WARNING SIGN (W10-1) AS PLACED BY TABLE 11-1, CONDITION B OF THE MUTCD.

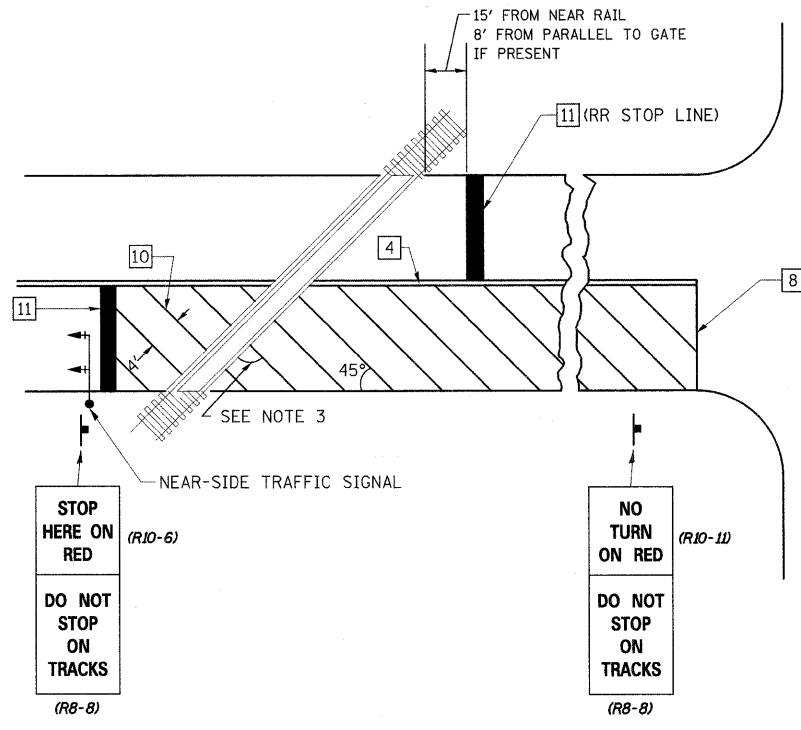
PAVEMENT MARKING LEGEND

- 1 4" (100) SKIP-DASH (YELLOW)
- 2 4" (100) SOLID (YELLOW)
- 3 12" (300) DIAGONAL (YELLOW)
- 4 4" (100) DOUBLE YELLOW (NARROW)
- 5 RESERVED
- 6 RESERVED
- 7 6" (150) SKIP-DASH (WHITE)
- 8 4" (100) SOLID (WHITE)
- 9 12" (300) DIAGONAL (WHITE)
- 10 6" (150) SOLID (WHITE)
- 11 24" (600) STOP BAR (WHITE)
- 12 8" (200) SOLID (WHITE)
- 13 6" (100) LANE LINE EXTENSIONS
- 14 4" (100) PARKING WHITE

RAILROAD CROSSING WITH INTERCONNECT ONLY



RAILROAD CROSSING WITH INTERCONNECT AND PRE-SIGNALS



GENERAL NOTES

1. SUPPLEMENTAL PAVEMENT MARKINGS TO BE INSTALLED ONLY ON APPROACHES TO INTERSECTIONS CONTROLLED BY TRAFFIC SIGNALS WHICH ARE INTERCONNECTED WITH THE RAILROAD WARNING SIGNALS.
2. EXTEND PAVEMENT MARKINGS TO THE INTERSECTION ONLY WHERE NEAR-SIDE TRAFFIC SIGNALS ARE USED.
3. WHERE THE ANGLE BETWEEN THE DIAGONAL PAVEMENT MARKINGS AND THE TRACK WOULD BE LESS THAN 20°, THE PAVEMENT MARKINGS SHOULD BE PLACED IN THE OPPOSITE DIRECTION FROM THAT SHOWN.

SUPPLEMENTAL PAVEMENT MARKING TREATMENT FOR RAILROAD-HIGHWAY GRADE CROSSING

NOT TO SCALE  
 Note: All dimensions are in INCHES (millimeters) unless otherwise shown.

DISTRICT 7 DETAIL NO. 7800001

FILE NAME =	USER NAME = mcelleanla	DESIGNED -	REVISED -	<b>STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION</b>	<b>PAVEMENT MARKING AND RAISED REFLECTIVE PAVEMENT MARKERS (RURAL &amp; URBAN APPLICATIONS)</b>	F.A.S. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.	
ct:\pw\work\pawdot\mcelleanla\d0196565\0774480-TS-shd.dgn	PLOT SCALE = 20,00000' / IN.	DRAWN -	REVISED -			1809	(22)TS-1	LAWRENCE	12	12	
PLOT DATE = 12/28/2010	DATE -	CHECKED -	REVISED -			CONTRACT NO. 74480					
		DATE -	REVISED -			ILLINOIS FED. AID PROJECT					