

STATE OF ILLINOIS  
DEPARTMENT OF TRANSPORTATION

F. A. 10	SECTION	COUNTY	SHEET	SHEET
17-00174-00-RS	COOK	23	1	
STA.		TO STA.		
FED. AID PROJ. NO. 1	ALPINE	FED. AID PROJECT	PL1E (411)	

CONTRACT #61G39

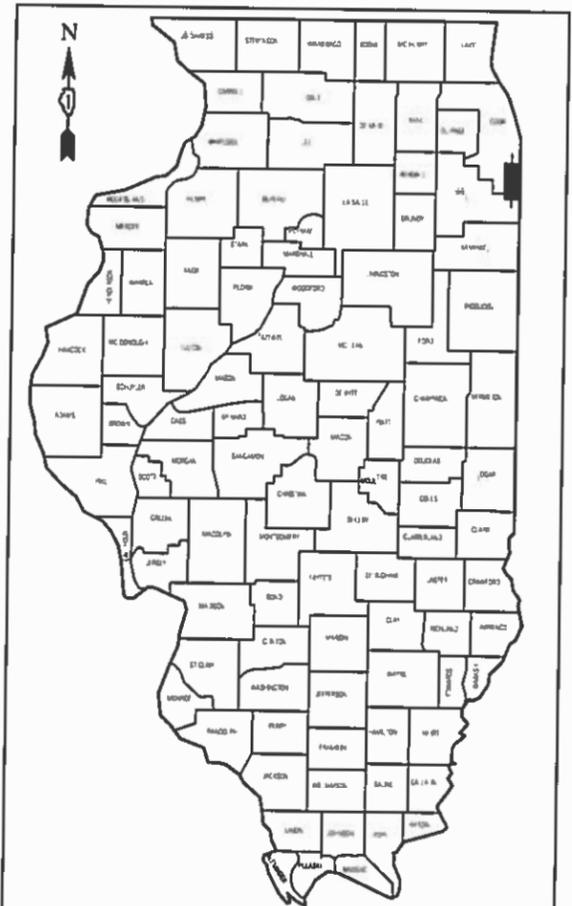
# PLANS FOR PROPOSED FEDERAL AID HIGHWAY

WENTWORTH AVENUE (FAU 2946)  
RIDGE ROAD (FAU 1621) TO BERNICE ROAD (FAU 1683)  
ROADWAY RESURFACING  
SECTION NO.: 17-00174-00-RS  
PROJECT NO.: PL1E (411)  
VILLAGE of LANSING  
COOK COUNTY  
C-91-125-18

INDEX OF SHEETS  
SEE SHEET NO. 2

HIGHWAY STANDARDS  
SEE SHEET NO. 2

WENTWORTH AVENUE	
2018 ADT -	8,700
2050 ADT -	10,700
POSTED SPEED LIMIT -	35 mph
DESIGN PERIOD -	20 YEARS
DESIGN SPEED LIMIT -	40 mph
STREET CLASSIFICATION -	MAJOR COLLECTOR



LOCATION OF SECTION INDICATED THUS: - ■ -

STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION

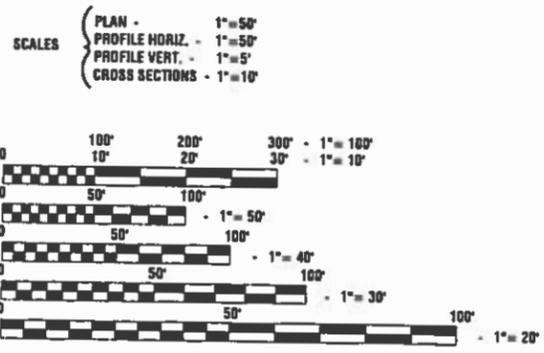
Approved: 1-9-2020  
*Palmer L. Edson*  
Mayor, Village of Lansing

Passed: FEB 11, 2020  
*C.J. Pirelli*  
Director of Regional & Local Planning & Services

Released for Bid Based on Limited Review: 2/12/2020  
*Anthony J. O'Byrne*  
Regional Engineer

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THE STATE OF ILLINOIS

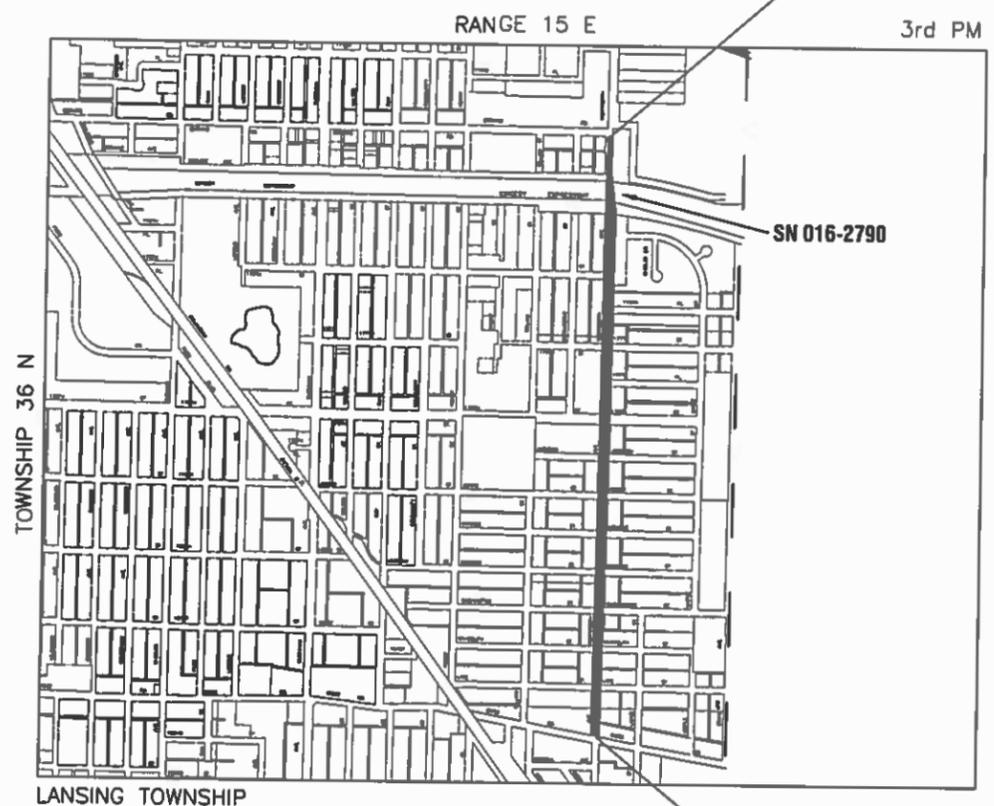
PREPARED BY OR UNDER THE  
DIRECT SUPERVISION OF:  
*M. C. O'Connell*  
01/08/20



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

CONTRACT NO. 61G39



LOCATION MAP  
- INDICATES PROPOSED IMPROVEMENT  
GROSS LENGTH = 5,500 FEET = 1.04 MILES  
NET LENGTH = 5,500 FEET = 1.04 MILES

PROJECT BEGINS  
RIDGE ROAD  
STA 10+50

PROJECT ENDS  
BERNICE ROAD  
STA 65+50

FEDERAL AID PROGRAM ENGINEER: CARMEN RAMOS, P.E., SCHAMBURG, IL.  
CONSULTANTS: ROBINSON ENGINEERING, LTD. 708-331-6700

**INDEX OF SHEETS**

- 1 COVER SHEET
- 2 INDEX OF SHEETS, HIGHWAY STANDARDS AND GENERAL NOTES
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- 4 TYPICAL CROSS SECTIONS
- 5-6 PAVEMENT PLAN
- 7-8 PAVEMENT MARKING PLAN
- 9-10 SIGNING PLAN
- 11-23 IDOT DISTRICT 1 STANDARD DETAILS

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- 000001-07 STANDARD SYMBOLS, ABBREVIATIONS AND PATTERNS
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- 442201-03 CLASS C AND D PATCHES
- 604001-05 FRAMES AND LIDS TYPE 1
- 606001-07 CONCRETE CURB TYPE B AND COMBINATION CONCRETE CURB AND GUTTER
- 701006-05 OFF-RD OPERATIONS, 2L, 2W, 15' TO 24" FROM PAVEMENT EDGE
- 701011-04 OFF-RD MOVING OPERATIONS, 2L, 2W, DAY ONLY
- 701101-05 OFF-RD OPERATIONS, MULTILANE, 15' (4.5m) TO 24" (600mm) FROM PAVEMENT EDGE
- 701301-04 LANE CLOSURE, 2L, 2W, SHORT TIME OPERATIONS
- 701311-03 LANE CLOSURE, 2L, 2W, MOVING OPERATIONS-DAY ONLY
- 701427-05 LANE CLOSURE, MULTILANE, INTERMITTENT OR MOVING OPERATIONS FOR SPEEDS LESS THAN 40MPH
- 701501-06 URBAN LANE CLOSURE, 2L, 2W, UNDIVIDED
- 701502-09 URBAN LANE CLOSURE, 2L, 2W, WITH BIDIRECTIONAL LEFT TURN LANE
- 701606-10 URBAN SINGLE LANE CLOSURE, MULTILANE, 2W WITH MOUNTABLE MEDIAN
- 701611-01 URBAN HALF ROAD CLOSURE, MULTILANE, 2W WITH MOUNTABLE MEDIAN
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- 729001-01 APPLICATIONS OF TYPES A & B METAL POSTS
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- TC-10 TRAFFIC CONTROL AND PROTECTION FOR SIDE ROADS, INTERSECTIONS, AND DRIVEWAYS
- TC-11 TYPICAL APPLICATIONS RAISED REFLECTIVE PAVEMENT MARKERS (SNOW-PLOW RESISTANT)
- TC-13 DISTRICT ONE TYPICAL PAVEMENT MARKINGS
- TC-14 TRAFFIC CONTROL AND PROTECTION AT TURN BAYS (TO REMAIN OPEN TO TRAFFIC)
- TC-16 SHORT TERM PAVEMENT MARKINGS LETTERS AND SYMBOLS
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**GENERAL NOTES**

1. THE ROBINSON ENGINEERING, LTD. OFFICE (708-331-6700), AND THE PUBLIC WORKS DIRECTOR, AT THE VILLAGE OF LANSING (GARY RICHARDSON, 708-895-7190), SHALL BE NOTIFIED TWO (2) WORKING DAYS BEFORE CONSTRUCTION BEGINS.
2. BEFORE STARTING ANY EXCAVATION THE CONTRACTOR SHALL CALL "J.U.L.I.E." AT (800) 892-0123 OR 811 AND (312) 744-7000 FOR FIELD LOCATIONS OF BURIED ELECTRIC, TELEPHONE AND GAS UTILITIES. (48 HOUR NOTIFICATION REQUIRED)
3. UTILITIES INDICATED ON THE PLANS ARE PROVIDED FOR THE CONTRACTOR'S USE AND ARE BASED UPON INFORMATION AVAILABLE AT THE TIME OF THE ADVERTISEMENT FOR BIDS. THE OWNER AND ENGINEER DO NOT GUARANTEE THE ACCURACY OF UTILITY INFORMATION.
4. IT SHALL BE THE CONTRACTOR'S RESPONSIBILITY TO VERIFY ALL DIMENSIONS AND CONDITIONS EXISTING IN THE FIELD PRIOR TO CONSTRUCTION AND ORDERING OF MATERIALS.
5. THE THICKNESS OF HMA MIXTURE STATED IN THE SPECIFICATIONS IS THE NOMINAL THICKNESS. DEVIATIONS FROM THE NOMINAL THICKNESS WILL BE PERMITTED WHEN SUCH DEVIATIONS OCCUR DUE TO IRREGULARITIES IN THE EXISTING SURFACE OR BASE ON WHICH THE HMA SURFACE IS PLACED.
6. CLASS C AND D PATCHING QUANTITIES FOR THIS CONTRACT SHALL BE PERFORMED AT THE DIRECTION OF THE ENGINEER AFTER PAVEMENT MILLING.
7. EXISTING TREES ARE NOT AFFECTED BY THE LIMITS OF CONSTRUCTION. CONTRACTOR SHALL BE CAUTIOUS ON TREE PROTECTION DURING THE CONSTRUCTION. IF ANY DAMAGE OCCURS, CONTRACTOR SHALL REPLACE ANY TREES AT THEIR OWN EXPENSE.
8. THE CONTRACTOR SHALL CONTACT THE DISTRICT ONE TRAFFIC CONTROL SUPERVISOR FOR ARTERIALS KALPANA.KANNAN-HOSADURGA@ILLINOIS.GOV AT LEAST 72 HOURS BEFORE BEGINNING WORK.

**COMMITMENTS**

1. NO PAVEMENT PATCHING SHALL BE PERMITTED AFTER FRIDAY AT 3:00PM OF EACH AND EVERY WEEK AND NO HOLES WILL BE ALLOWED TO REMAIN OPEN OVERNIGHT OR OVER THE WEEKEND.
2. ALL EQUIPMENT SHALL BE REMOVED OFF THE VILLAGE STREETS DURING ALL HOLIDAY WEEKENDS AS COORDINATED WITH THE VILLAGE.

FILE NAME = 18R0909-NOTE-01 - P01	USER NAME =	DESIGNED -- SK	REVISED --	STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION	WENTWORTH AVENUE ROADWAY RESURFACING INDEX OF SHEETS, STATE STANDARDS & GENERAL NOTES	F.A.U. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.	
	CHECKED -- JCP	REVISED --				17-00174-00-RS	COOK	23	2		
	PLOT SCALE =	DRAWN -- RG	REVISED --			CONTRACT NO. 61G39					
	PLOT DATE = 01-08-20	CHECKED -- AG	REVISED --			SCALE: NONE	SHEET NO. 2 OF 23 SHEETS	STA. TO STA.	FED. ROAD DIST. NO. 1	ILLINOIS	FED. AID PROJECT

SUMMARY OF QUANTITIES				TOTAL	ROAD	SAFETY
S.I.	CODE NO.	ITEM	UNIT	QUANTITY	CONSTRUCTION TYPE CODE 0005	CONSTRUCTION TYPE CODE 0021
	20200100	EARTH EXCAVATION	CU YD	10	10	
	21101615	TOPSOIL FURNISH AND PLACE, 4"	SQ YD	1,250	1,250	
	25000210	SEEDING, CLASS 2A	ACRE	0.3	0.3	
	25000400	NITROGEN FERTILIZER NUTRIENT	POUND	27	27	
	25000500	PHOSPHORUS FERTILIZER NUTRIENT	POUND	27	27	
	25000600	POTASSIUM FERTILIZER NUTRIENT	POUND	27	27	
	25100630	EROSION CONTROL BLANKET	SQ YD	1,250	1,250	
	28000510	INLET FILTERS	EACH	25	25	
	35101600	AGGREGATE BASE COURSE, TYPE B 4"	SQ YD	620	620	
	35800100	PREPARATION OF BASE	SQ YD	9,500	9,500	
	40600290	BITUMINOUS MATERIALS (TACK COAT)	POUND	12,810	12,810	
	40600982	HOT-MIX ASPHALT SURFACE REMOVAL - BUTT JOINT	SQ YD	340	340	
	40603085	HOT-MIX ASPHALT BINDER COURSE, IL-19.0, N70	TON	2,400	2,400	
	40604062	HOT-MIX ASPHALT SURFACE COURSE, IL-9.5, MIX "D", N70	TON	1,600	1,600	
	42300300	PORTLAND CEMENT CONCRETE DRIVEWAY PAVEMENT, 7 INCH	SQ YD	200	200	
	42400200	PORTLAND CEMENT CONCRETE SIDEWALK 5 INCH	SQ FT	5,550		5,550
	42400800	DETECTABLE WARNINGS	SQ FT	720		720
	44000163	HOT-MIX ASPHALT SURFACE REMOVAL, 3 1/2"	SQ YD	18,980	18,980	
	44000200	DRIVEWAY PAVEMENT REMOVAL	SQ YD	400	400	
	44000500	COMBINATION CURB AND GUTTER REMOVAL	FOOT	3,100	3,100	
	44000600	SIDEWALK REMOVAL	SQ FT	5,550		5,550
	44201313	CLASS C PATCHES, TYPE I, 7 INCH	SQ YD	15	15	
	44201317	CLASS C PATCHES, TYPE II, 7 INCH	SQ YD	120	120	
	44201321	CLASS C PATCHES, TYPE III, 7 INCH	SQ YD	130	130	
	44201323	CLASS C PATCHES, TYPE IV, 7 INCH	SQ YD	380	380	
	44201690	CLASS D PATCHES, TYPE I, 4 INCH	SQ YD	5	5	
	44201692	CLASS D PATCHES, TYPE II, 4 INCH	SQ YD	40	40	
	44201694	CLASS D PATCHES, TYPE III, 4 INCH	SQ YD	50	50	
	44201696	CLASS D PATCHES, TYPE IV, 4 INCH	SQ YD	50	50	
	60266600	VALVE BOXES TO BE ADJUSTED	EACH	6	6	
	60603800	COMBINATION CONCRETE CURB AND GUTTER, TYPE B-6.12	FOOT	3,100	3,100	
	67100100	MOBILIZATION	LSUM	1	1	
	70102620	TRAFFIC CONTROL AND PROTECTION, STANDARD 701501	LSUM	1	1	

\* - INDICATES SPECIALTY ITEMS

SUMMARY OF QUANTITIES				TOTAL	ROAD	SAFETY
S.I.	CODE NO.	ITEM	UNIT	QUANTITY	CONSTRUCTION TYPE CODE 0005	CONSTRUCTION TYPE CODE 0021
	70102622	TRAFFIC CONTROL AND PROTECTION, STANDARD 701502	LSUM	1	1	
	70102625	TRAFFIC CONTROL AND PROTECTION, STANDARD 701606	LSUM	1	1	
	70102634	TRAFFIC CONTROL AND PROTECTION, STANDARD 701611	LSUM	1	1	
	70102635	TRAFFIC CONTROL AND PROTECTION, STANDARD 701701	LSUM	1	1	
	70102640	TRAFFIC CONTROL AND PROTECTION, STANDARD 701801	LSUM	1	1	
	70300100	SHORT TERM PAVEMENT MARKING	FOOT	550		550
	70300150	SHORT TERM PAVEMENT MARKING REMOVAL	SQ FT	190		190
*	72000100	SIGN PANEL - TYPE 1	SQ FT	575		575
	72400100	REMOVE SIGN PANEL ASSEMBLY - TYPE A	EACH	80		80
	72400310	REMOVE SIGN PANEL - TYPE 1	SQ FT	13		13
*	72800100	TELESCOPING STEEL SIGN SUPPORT	FOOT	195		195
*	72900100	METAL POST - TYPE A	FOOT	108		108
*	72900200	METAL POST - TYPE B	FOOT	535		535
*	78000100	THERMOPLASTIC PAVEMENT MARKING - LETTERS AND SYMBOLS	SQ FT	680		680
*	78000200	THERMOPLASTIC PAVEMENT MARKING - LINE 4"	FOOT	4,370		4,370
*	78000400	THERMOPLASTIC PAVEMENT MARKING - LINE 6"	FOOT	1,360		1,360
*	78000600	THERMOPLASTIC PAVEMENT MARKING - LINE 12"	FOOT	590		590
*	78000650	THERMOPLASTIC PAVEMENT MARKING - LINE 24"	FOOT	310		310
*	78001100	PAINT PAVEMENT MARKING - LETTERS AND SYMBOLS	SQ FT	270		270
*	78001110	PAINT PAVEMENT MARKING - LINE 4"	FOOT	6,620		6,620
*	78001130	PAINT PAVEMENT MARKING - LINE 6"	FOOT	930		930
*	78001150	PAINT PAVEMENT MARKING - LINE 12"	FOOT	1,060		1,060
*	78001180	PAINT PAVEMENT MARKING - LINE 24"	FOOT	150		150
*	78100100	RAISED REFLECTIVE PAVEMENT MARKER	EACH	172		172
	78300200	RAISED REFLECTIVE PAVEMENT MARKER REMOVAL	EACH	12		12
*	88600600	DETECTOR LOOP REPLACEMENT	FOOT	160		160
	X0327980	PAVEMENT MARKING REMOVAL - WATER BLASTING	SQ FT	410		410
	Z0004514	HOT-MIX ASPHALT DRIVEWAY PAVEMENT, 4"	SQ YD	200	200	
	Z0017400	DRAINAGE & UTILITY STRUCTURES TO BE ADJUSTED	EACH	96	96	
	Z0017700	DRAINAGE & UTILITY STRUCTURES TO BE RECONSTRUCTED	EACH	4	4	
	Z0030850	TEMPORARY INFORMATION SIGNING	SQ FT	52	52	
	Z0033700	LONGITUDINAL JOINT SEALANT	FOOT	7,300	7,300	

\* - INDICATES SPECIALTY ITEMS

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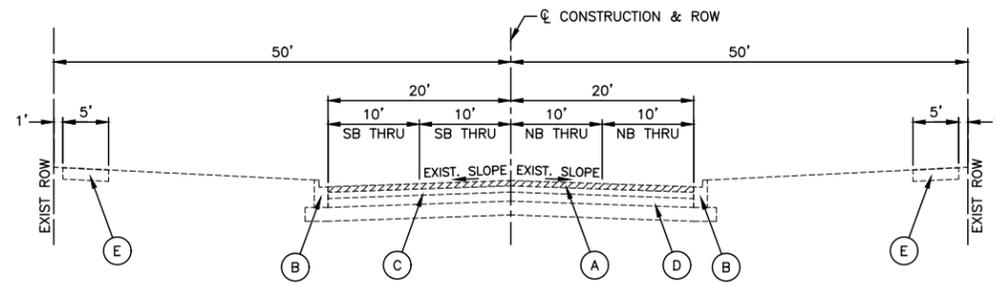
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PLOT SCALE =	DRAWN -- RG	REVISED --
PLOT DATE = 01-08-20	CHECKED -- AG	REVISED --

STATE OF ILLINOIS  
DEPARTMENT OF TRANSPORTATION

WENTWORTH AVENUE  
ROADWAY RESURFACING  
SUMMARY OF QUANTITIES

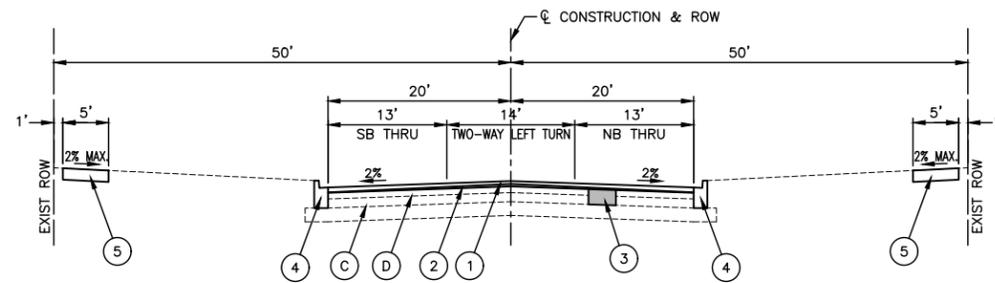
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F.A.U. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
	17-00174-00-RS	COOK	23	3
CONTRACT NO. 61G39				
FED. ROAD DIST. NO. 1 ILLINOIS FED. AID PROJECT PL1E (411)				



**EXISTING TYPICAL SECTION**

WENTWORTH AVENUE  
STA 10+50 TO STA 47+02.24



**PROPOSED TYPICAL SECTION**

WENTWORTH AVENUE  
STA 10+50 TO STA 47+02.24

**EXISTING LEGEND**

- (A) HOT-MIX ASPHALT SURFACE REMOVAL, 3 1/2"
- (B) EXISTING CURB & GUTTER TO BE REMOVED AT LOCATIONS SHOWN ON PLANS OR DIRECTED BY ENGINEER
- (C) EXISTING HOT-MIX ASPHALT PAVEMENT, ±1 1/2"-7"
- (D) EXISTING PCC PAVEMENT, ±0"-9"
- (E) EXISTING PCC SIDEWALK TO BE REMOVED AT LOCATIONS SHOWN ON PLANS OR DIRECTED BY ENGINEER

**PROPOSED LEGEND**

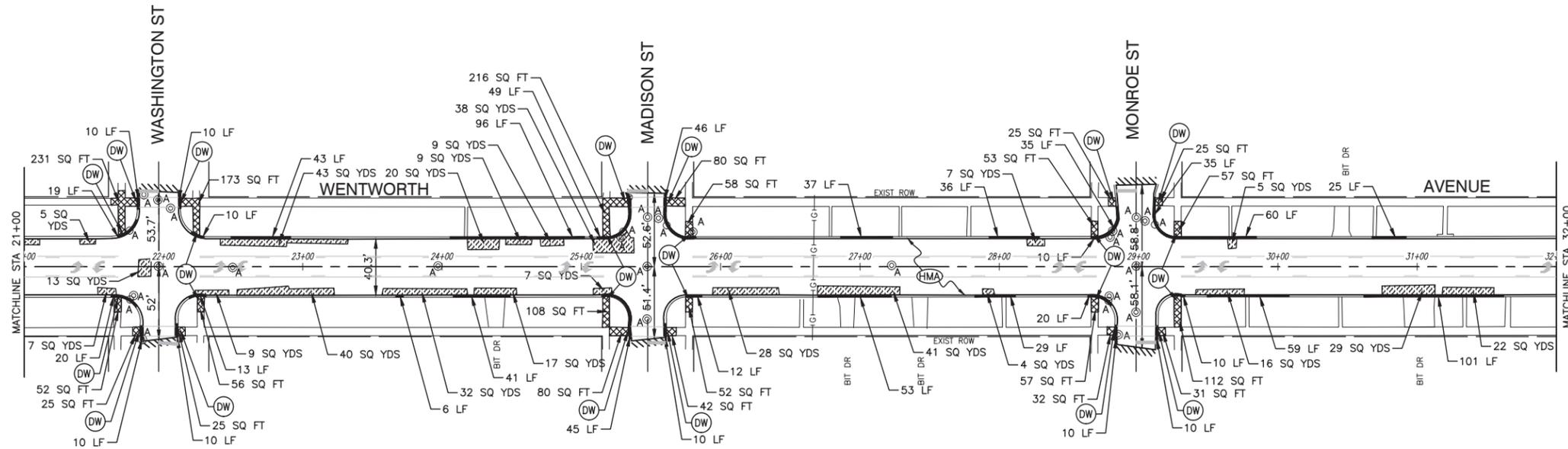
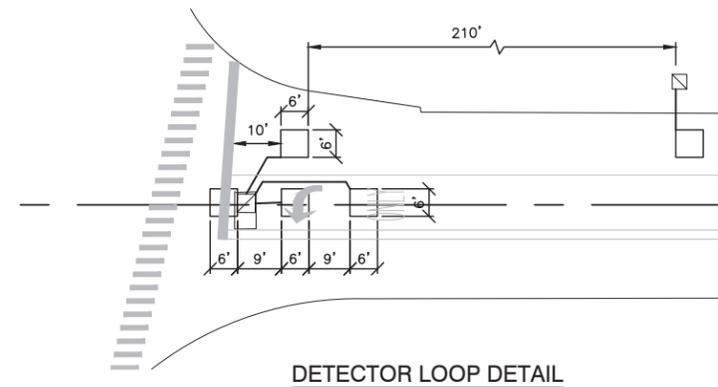
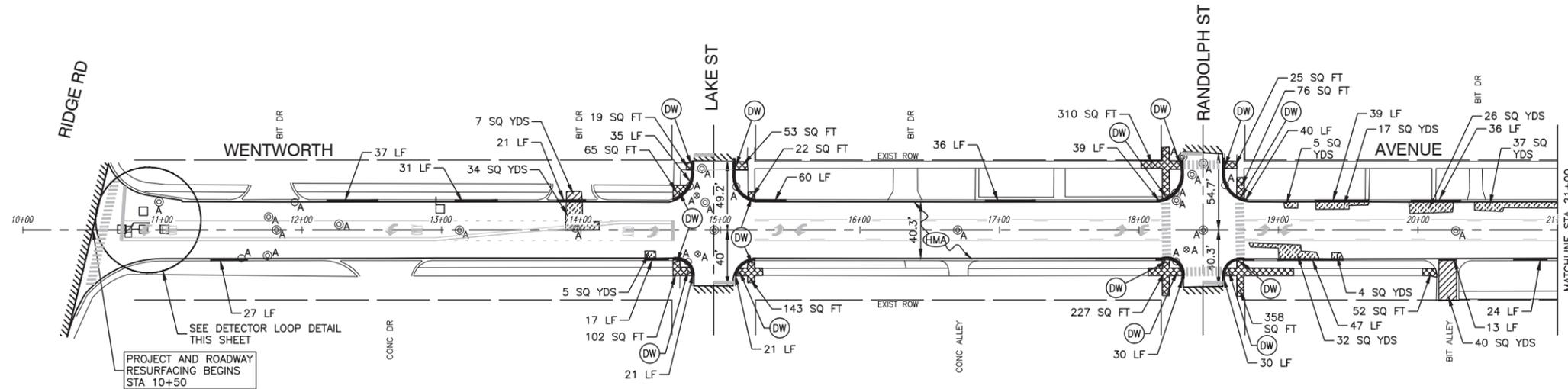
- (1) HOT-MIX ASPHALT SURFACE COURSE, MIX "D", N70, 1 1/2"
- (2) HOT-MIX ASPHALT BINDER COURSE, IL-19.0, N70, 2 1/4"
- (3) CLASS D PATCHES, 4 INCH OR CLASS C PATCHES, 7 INCH
- (4) PROPOSED CURB AND GUTTER TO BE INSTALLED AT LOCATIONS SHOWN ON PLAN OR DIRECTED BY ENGINEER (IN KIND)
- (5) PROPOSED PORTLAND CEMENT CONCRETE SIDEWALK 5 INCH (REPLACEMENT AT LOCATIONS DIRECTED BY THE ENGINEER)

**HOT-MIX ASPHALT MIXTURE REQUIREMENTS**

MIXTURE TYPE	AIR VOIDS
ROADWAY	
HOT-MIX ASPHALT SURFACE COURSE, MIX "D", N70 (IL-9.5mm); 1 1/2"	4% @ 70 Gyr.
HOT-MIX ASPHALT BINDER COURSE, IL-19.0, N70, 2 1/4"	4% @ 70 Gyr.
PATCHING	
CLASS D PATCHES (HMA BINDER IL-19.0 MM): 4"	4% @ 70 Gyr.
HMA DRIVEWAY PAVEMENT, 4"	
HOT-MIX ASPHALT SURFACE COURSE, MIX "D", N50 (IL-9.5mm); 1 1/2"	4% @ 50 Gyr.
HOT-MIX ASPHALT BINDER COURSE, IL-19.0, N50, 2 1/2"	4% @ 50 Gyr.

**NOTE:**

1. THE UNIT WEIGHT USED TO CALCULATE ALL HOT-MIX ASPHALT SURFACE MIXTURE QUANTITIES IS 112 LBS/SY/IN.
2. FOR USE OF RECYCLED MATERIALS, SEE SPECIAL PROVISIONS.
3. THE "AC TYPE" FOR POLYMERIZED HMA MIXES SHALL BE "SBS/SBR PC 76-22" AND FOR NON-POLYMERIZED HMA THE "AC TYPE" SHALL BE PG 64-22 UNLESS MODIFIED BY DISTRICT ONE SPECIAL PROVISIONS.
4. LONGITUDINAL JOINT SEALANT SHALL BE APPLIED UNDER THE HOT-MIX ASPHALT SURFACE LIFT.



**NOTES**

1. CLASS C PATCHES, 7 INCH CLASS D PATCHES, 4 INCH SHALL BE AS SHOWN ON THE PLANS AND/OR AS DIRECTED BY THE ENGINEER.
2. DRIVEWAY REMOVAL AND REPLACEMENT SHALL BE COMPLETED AS DIRECTED BY THE ENGINEER.
3. ANY TOPSOIL EXCAVATED DURING SIDEWALK OR CURB AND GUTTER REMOVAL AND REPLACEMENT SHALL BE STOCKPILED ON-SITE AND RE-USED AS FILL IN THE RESTORATION AREAS. THIS SHALL BE INCLUDED IN THE COST OF THE VARIOUS CONTRACT PAY ITEMS.
4. FOR CURB RAMP DETAILS, SEE HIGHWAY STANDARD 424001-11.

**LEGEND**

- (HMA) HMA RESURFACING  
-HMA SC, IL-9.5, D, N70, 1.5"  
-HMA BC, IL-19, D, N70, 2.25"
- (Cross-hatched) PROPOSED PCC SIDEWALK OR SIDEWALK REMOVAL AND REPLACEMENT
- (Diagonal lines) CLASS D PATCHES, 4 INCH OR CLASS C PATCHES, 7 INCH
- (Hatched) DRIVEWAY PAVEMENT REMOVAL AND REPLACEMENT
- (Solid black) COMBINATION CONCRETE CURB AND GUTTER REMOVAL AND REPLACEMENT
- (Wavy lines) HMA SURFACE REMOVAL - BUTT JOINT
- (DW) DETECTABLE WARNINGS
- "A" DRAINAGE STRUCTURES TO BE ADJUSTED
- (A) VALVE BOXES TO BE ADJUSTED
- (Square) DETECTOR LOOP REPLACEMENT

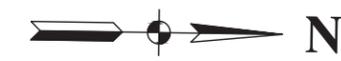
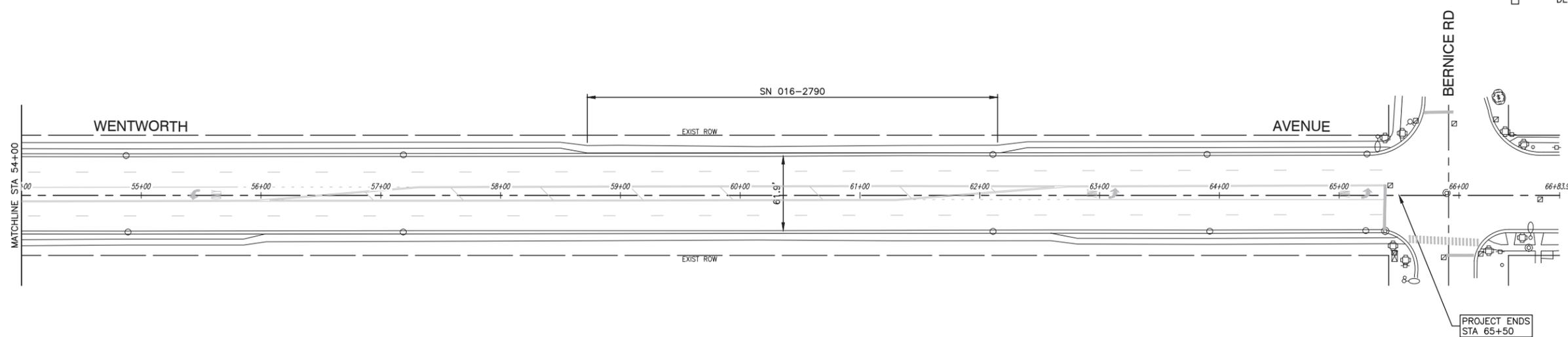
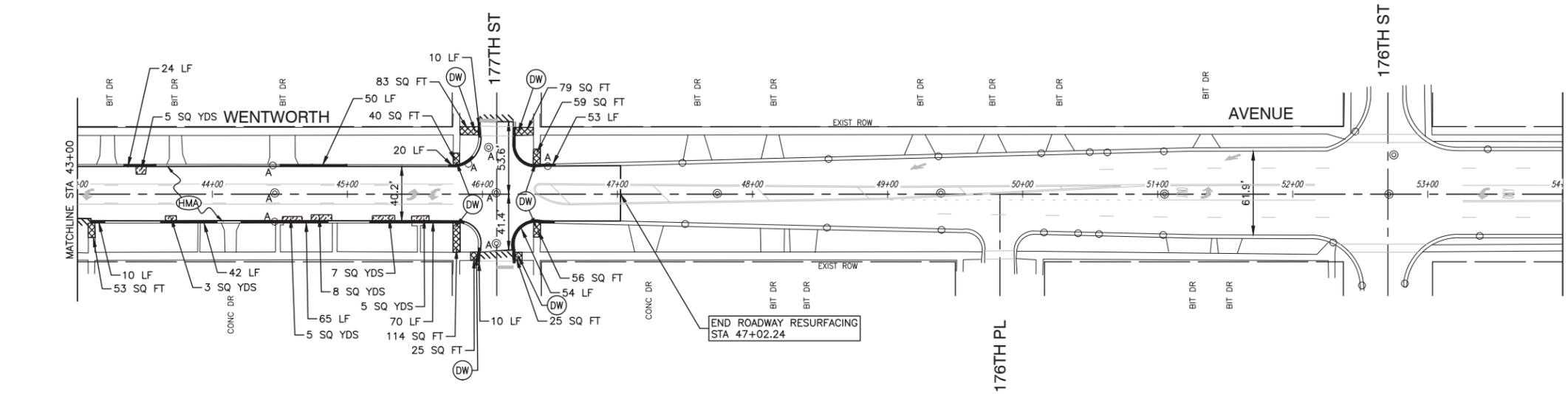
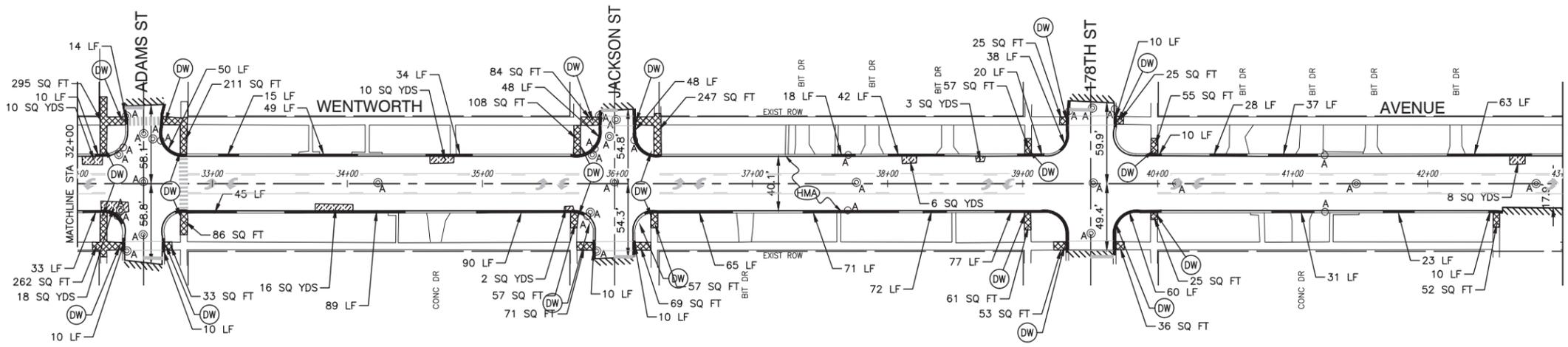
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PLOT SCALE =	DRAWN -- RG	REVISED --
PLOT DATE = 01-08-20	CHECKED -- AG	REVISED --

STATE OF ILLINOIS  
DEPARTMENT OF TRANSPORTATION

WENTWORTH AVENUE ROADWAY RESURFACING PROPOSED PLAN	
SCALE: 1"=50'	SHEET NO. 5 OF 23 SHEETS STA. TO STA.

F.A.U. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
	17-00174-00-RS	COOK	23	5
CONTRACT NO. 61G39				
FED. ROAD DIST. NO. 1	ILLINOIS	FED. AID PROJECT	PL1E (411)	



- NOTES**
1. CLASS C PATCHES, 7 INCH CLASS D PATCHES, 4 INCH SHALL BE AS SHOWN ON THE PLANS AND/OR AS DIRECTED BY THE ENGINEER.
  2. DRIVEWAY REMOVAL AND REPLACEMENT SHALL BE COMPLETED AS DIRECTED BY THE ENGINEER.
  3. ANY TOPSOIL EXCAVATED DURING SIDEWALK OR CURB AND GUTTER REMOVAL AND REPLACEMENT SHALL BE STOCKPILED ON-SITE AND RE-USED AS FILL IN THE RESTORATION AREAS. THIS SHALL BE INCLUDED IN THE COST OF THE VARIOUS CONTRACT PAY ITEMS.
  4. FOR CURB RAMP DETAILS, SEE HIGHWAY STANDARD 424001-11.

- LEGEND**
- HMA RESURFACING  
-HMA SC, IL-9.5, D, N70, 1.5"  
-HMA BC, IL-19, D, N70, 2.25"
  - PROPOSED PCC SIDEWALK OR SIDEWALK REMOVAL AND REPLACEMENT
  - CLASS D PATCHES, 4 INCH OR CLASS C PATCHES, 7 INCH
  - DRIVEWAY PAVEMENT REMOVAL AND REPLACEMENT
  - COMBINATION CONCRETE CURB AND GUTTER REMOVAL AND REPLACEMENT
  - HMA SURFACE REMOVAL - BUTT JOINT
  - DETECTABLE WARNINGS
  - "A" DRAINAGE STRUCTURES TO BE ADJUSTED
  - "A" VALVE BOXES TO BE ADJUSTED
  - DETECTOR LOOP REPLACEMENT

FILE NAME = 18R0909-PLAN-01 - P02

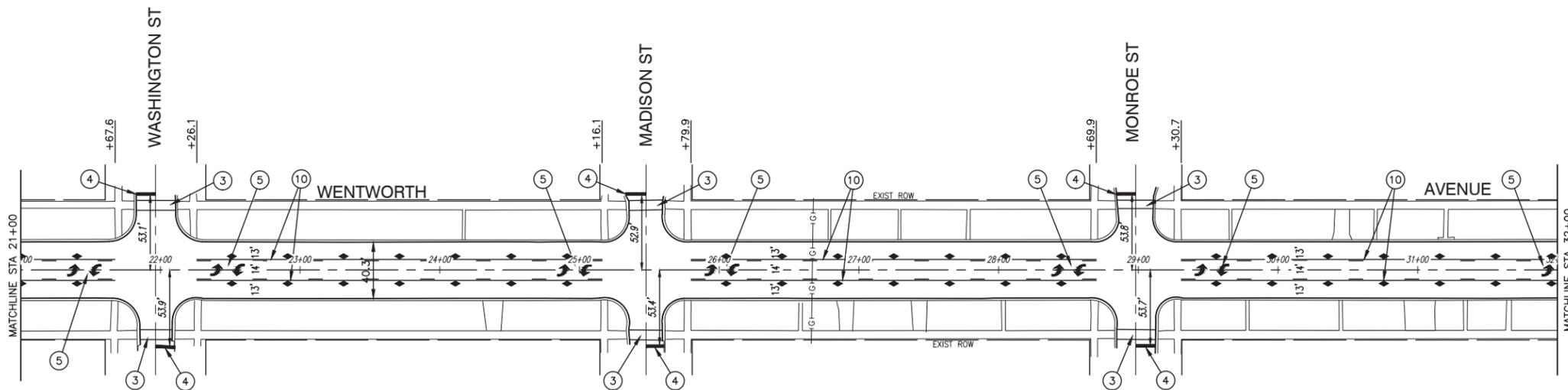
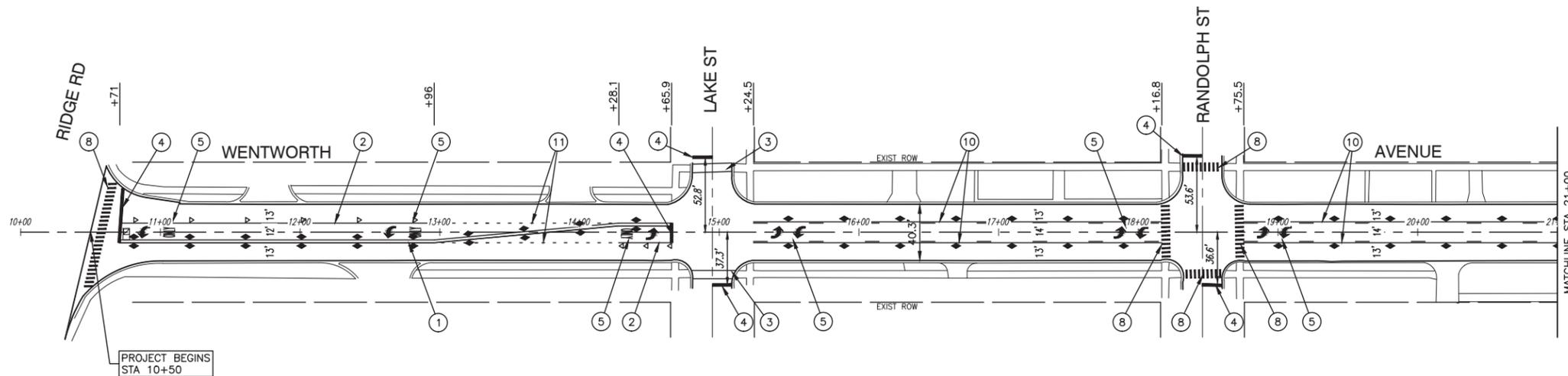
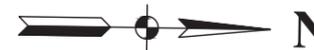
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STATE OF ILLINOIS  
DEPARTMENT OF TRANSPORTATION

WENTWORTH AVENUE  
ROADWAY RESURFACING  
PROPOSED PLAN

SCALE: 1"=50'    SHEET NO. 6 OF 23 SHEETS    STA. TO STA.

F.A.U. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
	17-00174-00-RS	COOK	23	6
CONTRACT NO. 61G39				
FED. ROAD DIST. NO. 1 ILLINOIS FED. AID PROJECT PL1E (411)				



**LEGEND**

- ① 4" THERMOPLASTIC DOUBLE YELLOW LINE (11" C/C)
- ② 6" THERMOPLASTIC WHITE LINE
- ③ 6" THERMOPLASTIC WHITE CROSSWALK LINE (6' APART)
- ④ 24" THERMOPLASTIC WHITE STOP BAR
- ⑤ THERMOPLASTIC WHITE LETTERS AND SYMBOLS - FULL SIZE
- ⑥ 12" THERMOPLASTIC WHITE SOLIDS @ 2' SP. C-C (NOT USED)
- ⑦ 4" THERMOPLASTIC WHITE SKIP DASH (10' LINE, 30' SPACE)
- ⑧ 12" THERMOPLASTIC WHITE LINE (3' C-C) (SCHOOL TYPE CROSSING)
- ⑨ 12" THERMOPLASTIC YELLOW DIAGONAL LINE (20' C-C)
- ⑩ 4" THERMOPLASTIC YELLOW LINE W/ 4" YELLOW SKIP DASH
- ⑪ 6" THERMOPLASTIC WHITE SKIP DASH (2' LINE, 6' SPACE)
- ◆ TWO-WAY AMBER MARKER  
40' C/C UNLESS OTHERWISE INDICATED
- ◀ ONE-WAY AMBER MARKER  
40' C/C UNLESS OTHERWISE INDICATED
- ◄ ONE-WAY CRYSTAL MARKER  
40' C/C UNLESS OTHERWISE INDICATED

**NOTES:**

1. SEE TC-13 DISTRICT ONE TYPICAL PAVEMENT MARKING FOR GUIDANCE.
2. PAVEMENT MARKINGS ON CONCRETE PAVEMENT SHALL BE PAINT. CONCRETE PAVEMENT BEGINS AT APPROXIMATELY STA 47+00 TO THE NORTH.

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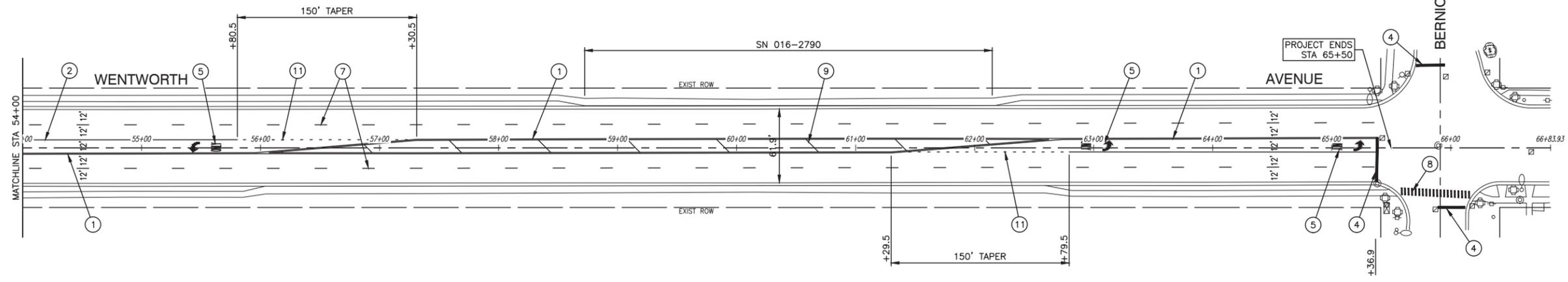
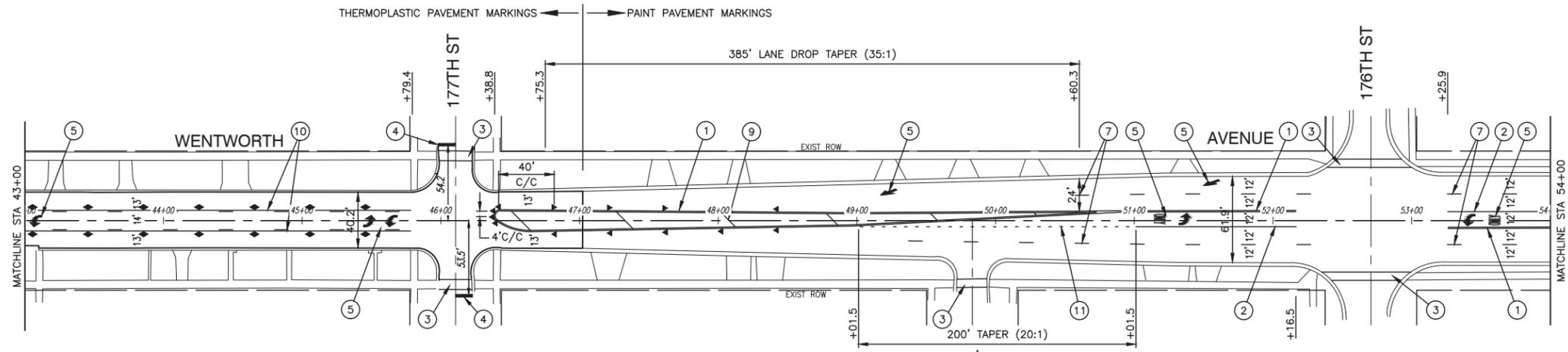
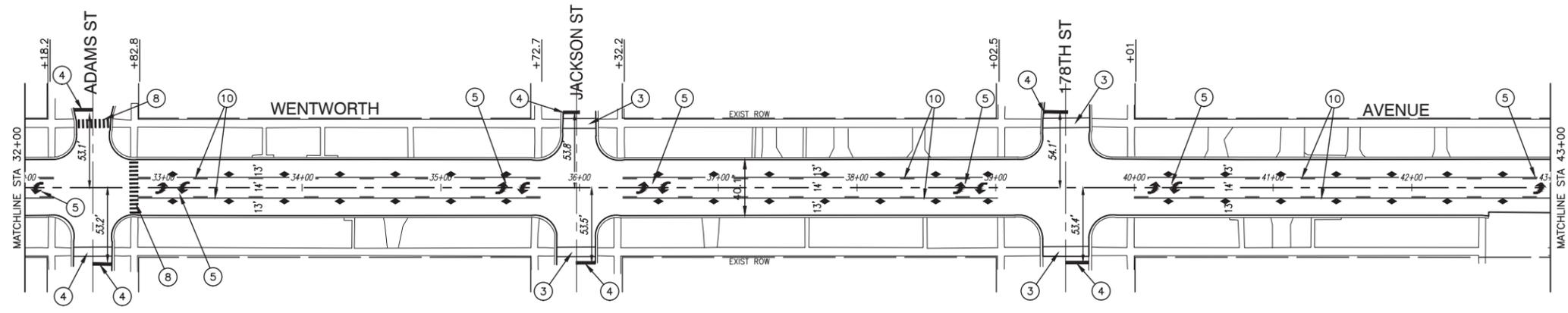
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STATE OF ILLINOIS  
DEPARTMENT OF TRANSPORTATION

WENTWORTH AVENUE  
ROADWAY RESURFACING  
PAVEMENT MARKING PLAN

SCALE: 1"=50' SHEET NO. 7 OF 23 SHEETS STA. TO STA.

F.A.U. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
	17-00174-00-RS	COOK	23	7
CONTRACT NO. 61G39				
FED. ROAD DIST. NO. 1	ILLINOIS	FED. AID PROJECT	PL1E (411)	



**LEGEND**

- ① 4" THERMOPLASTIC DOUBLE YELLOW LINE (11" C/C)
- ② 6" THERMOPLASTIC WHITE LINE
- ③ 6" THERMOPLASTIC WHITE CROSSWALK LINE (6' APART)
- ④ 24" THERMOPLASTIC WHITE STOP BAR
- ⑤ THERMOPLASTIC WHITE LETTERS AND SYMBOLS - FULL SIZE
- ⑥ 12" THERMOPLASTIC WHITE SOLIDS @ 2' SP. C-C (NOT USED)
- ⑦ 4" THERMOPLASTIC WHITE SKIP DASH (10' LINE, 30' SPACE)
- ⑧ 12" THERMOPLASTIC WHITE LINE (3' C-C) (SCHOOL TYPE CROSSING)
- ⑨ 12" THERMOPLASTIC YELLOW DIAGONAL LINE (20' C-C)
- ⑩ 4" THERMOPLASTIC YELLOW LINE W/ 4" YELLOW SKIP DASH
- ⑪ 6" THERMOPLASTIC WHITE SKIP DASH (2' LINE, 6' SPACE)
- ◆ TWO-WAY AMBER MARKER  
40' C/C UNLESS OTHERWISE INDICATED
- ▲ ONE-WAY AMBER MARKER  
40' C/C UNLESS OTHERWISE INDICATED
- ◀ ONE-WAY CRYSTAL MARKER  
40' C/C UNLESS OTHERWISE INDICATED

**NOTES:**

1. SEE TC-13 DISTRICT ONE TYPICAL PAVEMENT MARKING FOR GUIDANCE.
2. PAVEMENT MARKINGS ON CONCRETE PAVEMENT SHALL BE PAINT. CONCRETE PAVEMENT BEGINS AT APPROXIMATELY STA 47+00 TO THE NORTH.

FILE NAME = 18R0909-PLAN-01 - PVMK02

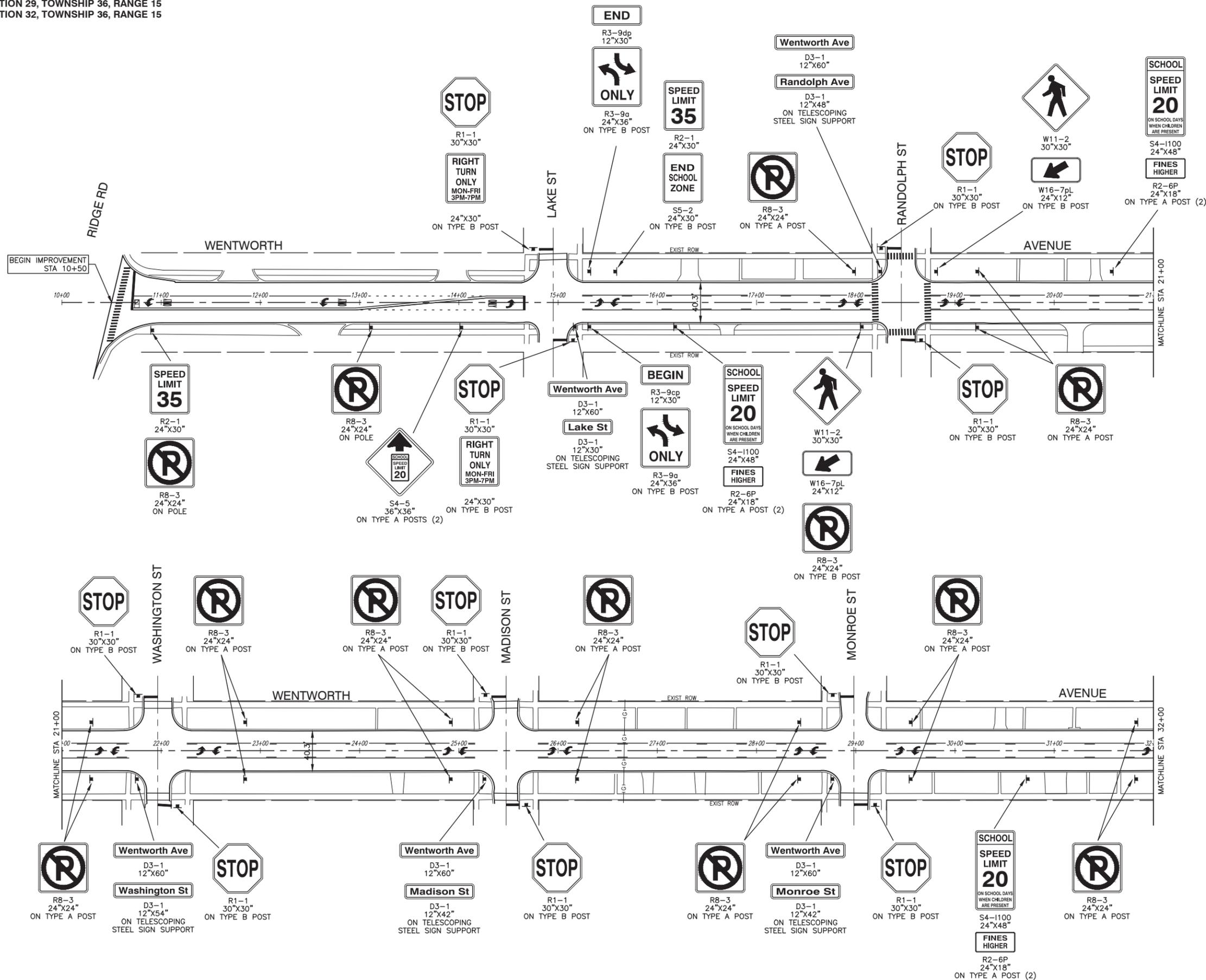
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PLOT DATE = 01-08-20	CHECKED - AG	REVISED -

STATE OF ILLINOIS  
DEPARTMENT OF TRANSPORTATION

WENTWORTH AVENUE  
ROADWAY RESURFACING  
PAVEMENT MARKING PLAN

SCALE: 1"=50'    SHEET NO. 8 OF 23 SHEETS    STA. TO STA.

F.A.U. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
	17-00174-00-RS	COOK	23	8
CONTRACT NO. 61G39				
FED. ROAD DIST. NO. 1 ILLINOIS FED. AID PROJECT PL1E (411)				



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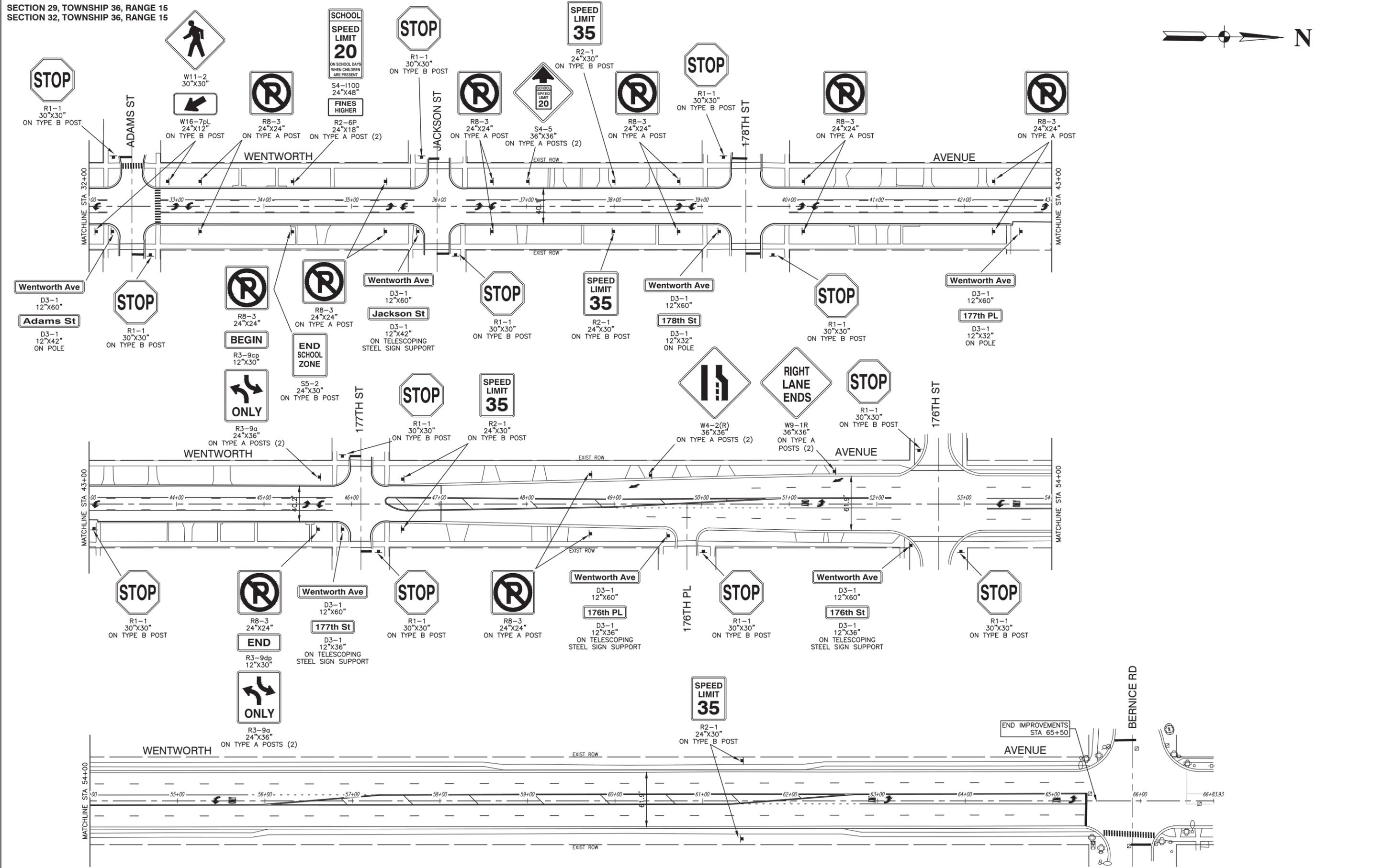
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PLOT DATE = 01-08-20	DRAWN -- RG	REVISED --
	CHECKED -- AG	REVISED --

STATE OF ILLINOIS  
DEPARTMENT OF TRANSPORTATION

WENTWORTH AVENUE  
ROADWAY RESURFACING  
SIGNING PLAN

SCALE: 1"=50' SHEET NO. 9 OF 23 SHEETS STA. TO STA.

F.A.U. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
	17-00174-00-RS	COOK	23	9
CONTRACT NO. 61G39				
FED. ROAD DIST. NO. 1	ILLINOIS	FED. AID PROJECT	PL1E (411)	



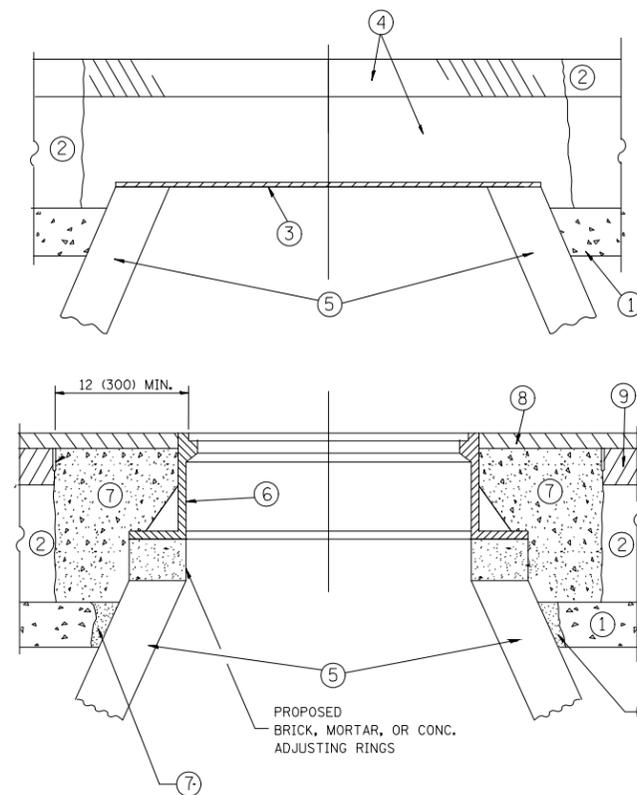
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PLOT DATE = 01-08-20	DRAWN -- RG	REVISED --
	CHECKED -- AG	REVISED --

STATE OF ILLINOIS  
DEPARTMENT OF TRANSPORTATION

WENTWORTH AVENUE ROADWAY RESURFACING SIGNING PLAN	
SCALE: 1"=50'	SHEET NO. 10 OF 23 SHEETS
STA.	TO STA.

F.A.U. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
	17-00174-00-RS	COOK	23	10
CONTRACT NO. 61G39				
FED. ROAD DIST. NO. 1 ILLINOIS FED. AID PROJECT PL1E (411)				



**CONSTRUCTION PROCEDURES**

**STAGE 1 (BEFORE PAVEMENT MILLING)**

- A) REMOVE A MINIMUM OF 12 (300) OF THE PAVEMENT FROM AROUND THE STRUCTURE.
- B) REMOVE THE EXISTING FRAME AND LID FROM THE STRUCTURE.
- C) COVER THE STRUCTURE OPENING WITH A 36 (900) DIAMETER METAL PLATE.
- D) BACKFILL WITH CRUSHED STONE AND A MINIMUM 1 1/2 (40) THICK HMA SURFACE MIX APPROVED BY THE ENGINEER.

**STAGE 2 (AFTER PAVEMENT MILLING)**

- A) REMOVE THE HMA SURFACE MIX AND CRUSHED STONE.
- B) INSTALL THE FRAME AND LID; ADJUST THE FRAME TO ITS FINAL SURFACE ELEVATION.
- C) THE SURROUNDING SPACE SHALL BE FILLED WITH CLASS PP-1\* CONCRETE TO THE ELEVATION OF THE SURFACE OF THE EXISTING BASE COURSE OR THE BINDER COURSE.

\* UNLESS OTHERWISE SPECIFIED IN THE PLANS.

THE PROCEDURE EXPLAINED ABOVE SHALL CONFORM TO THE APPLICABLE PORTIONS OF SECTIONS 353, 406, 602, AND 603 OF THE STANDARD SPECIFICATIONS EXCEPT THAT "THE CONTRACTOR SHALL ADJUST THE STRUCTURES TO THE FINISHED PAVEMENT ELEVATION NO MORE THAN 5 CALENDAR DAYS PRIOR TO PLACEMENT OF THE FINAL LIFT OF SURFACE UNLESS APPROVED BY THE ENGINEER."

**LEGEND**

- ① SUB-BASE GRANULAR MATERIAL
- ② EXISTING PAVEMENT
- ③ 36 (900) DIAMETER METAL PLATE
- ④ PROPOSED CRUSHED STONE AND HMA SURFACE MIX
- ⑤ EXISTING STRUCTURE
- ⑥ FRAME AND LID (SEE NOTES)
- ⑦ CLASS PP-1\* CONCRETE
- 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:**

REMOVING FRAMES AND LIDS ON DRAINAGE AND UTILITY STRUCTURES IN THE PAVEMENT PRIOR TO MILLING, AND ADJUSTING TO FINAL GRADE PRIOR TO PLACING THE SURFACE COURSE, WILL BE PAID FOR AT THE CONTRACT UNIT PRICE EACH FOR "DRAINAGE AND UTILITY STRUCTURES TO BE ADJUSTED."

THIS WORK WILL NOT BE PAID FOR WHEN DRAINAGE AND UTILITY STRUCTURES ARE SPECIFIED FOR PAYMENT AS STRUCTURE RECONSTRUCTION.

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

**NOTES:**

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.

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

ALL DIMENSIONS ARE IN INCHES (MILLIMETERS) UNLESS OTHERWISE SHOWN

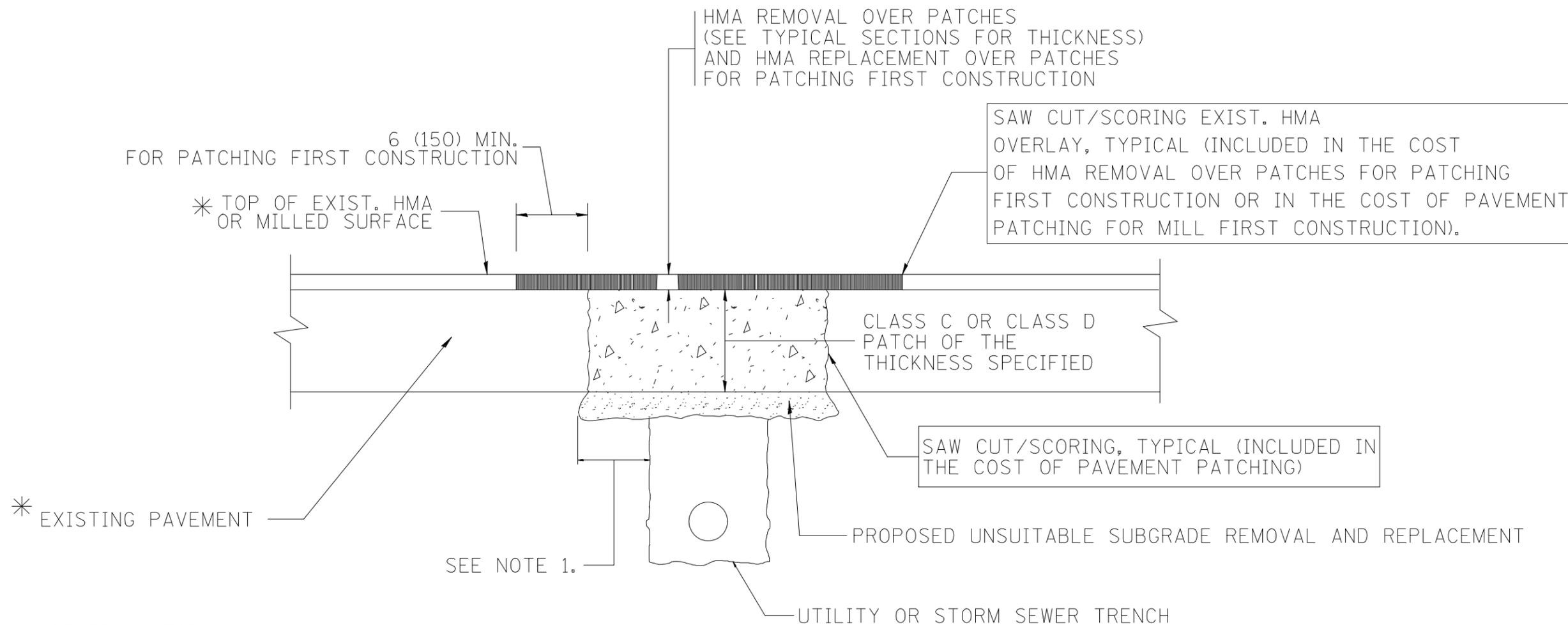
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STATE OF ILLINOIS  
DEPARTMENT OF TRANSPORTATION

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

SCALE: SHEET NO. 11 OF 23 SHEETS STA. TO STA.

F.A.U. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
	17-00174-00-RS	COOK	23	11
<b>BD600-03 (BD-9)</b>		CONTRACT NO. 61G39		
FED. ROAD DIST. NO. 1	ILLINOIS	FED. AID PROJECT PL1E (411)		



\* SEE TYPICAL SECTIONS FOR THICKNESS AND MATERIALS

NOTES:

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

SEQUENCE OF CONSTRUCTION (PATCHING FIRST)

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

SEQUENCE OF CONSTRUCTION (MILLING FIRST)

1. MILL HMA FIRST IF THERE IS AT LEAST 4 1/2 INCHES OR MORE OF HMA MATERIAL ON TOP OF THE EXISTING PAVEMENT OR IF THE PAVEMENT IS FULL DEPTH HMA. A MINIMUM OF 2 INCHES OF HMA MATERIAL SHALL BE IN PLACE AFTER MILLING.
2. REMOVE AND REPLACE WITH FULL DEPTH CLASS D PATCHES TO TOP OF MILLED SURFACE.

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

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PLOT DATE = 01-08-20	CHECKED -- ACAD	REVISED --

STATE OF ILLINOIS  
DEPARTMENT OF TRANSPORTATION

PAVEMENT PATCHING FOR  
HMA SURFACED PAVEMENT

SCALE: SHEET NO. 12 OF 23 SHEETS STA. TO STA.

F.A.U. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
	17-00174-00-RS	COOK	23	12
80400-04 (BD-22)			CONTRACT NO. 61G39	
FED. ROAD DIST. NO. 1 ILLINOIS FED. AID PROJECT PL1E (411)				

VARIABLE - TO MEET EXISTING 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 PAY ITEM.

SEE STATE STANDARD 606001  
EXISTING OR PROPOSED HMA SURFACE (IF APPLICABLE)

1/4" (5) \*\*

18" (450) MAX.

EXISTING SIDEWALK, DRIVEWAY, MEDIAN SURFACE, SOD OR GROUND.

PROPOSED SIDEWALK, DRIVEWAY PAVEMENT, MEDIAN SURFACE OR SODDING SALT TOLERANT WITH TOP SOIL, 4" (100) SOD RESTORATION (SEE NOTE ①).

EXISTING CONCRETE PAVEMENT, CONCRETE BASE COURSE OR FLEXIBLE PAVEMENT

3" (75) MIN.

SUITABLE BACKFILL MATERIAL (INCLUDED IN THE COST OF CURB OR CURB AND GUTTER REMOVAL AND REPLACEMENT)

PROPOSED 3/4" (20) PREFORMED EXPANSION JOINT AT CONCRETE SIDEWALKS, DRIVEWAYS, AND MEDIANS. (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.

\*\* IF THE FINAL SURFACE OF THE PAVEMENT IS CONCRETE, THE GUTTER IS TO BE FLUSH 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.

SODDING, SALT TOLERANT AND TOP SOIL, FURNISH AND PLACE 4" WILL BE PAID FOR SEPARATELY,

② FERTILIZER FOR THE PLACEMENT OF THE SOD IS NOT REQUIRED

③ CURB OR CURB AND GUTTER REPLACEMENT SHALL MATCH THE SHAPE OF THE EXISTING CURB OR CURB AND GUTTER UNLESS OTHERWISE SPECIFIED.

④ FOR CURB OR CURB AND GUTTER REMOVAL AND REPLACEMENT ADJACENT TO FLEXIBLE PAVEMENT DELETE EPOXY COATED TIE BARS.

⑤ LONGITUDINAL BARS, IF ENCOUNTERED IN THE EXISTING CURB OR CURB AND GUTTER, ARE NOT TO BE REPLACED. CUTTING AND REMOVING LONGITUDINAL BARS SHALL BE INCLUDED IN THE COST OF CURB OR CURB AND GUTTER REMOVAL AND REPLACEMENT.

⑥ 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.

⑦ THE REMOVAL AND REPLACEMENT OF THE EXISTING CURB OR CURB AND GUTTER SHALL BE DONE IN ACCORDANCE WITH THE APPLICABLE PORTIONS OF SECTION 440 AND 606 OF THE STANDARD SPECIFICATIONS.

⑧ 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.

UNSUITABLE SUB-BASE MATERIAL TO BE REMOVED, IF DIRECTED BY THE ENGINEER, SHALL BE REPLACED WITH EITHER SUB-BASE GRANULAR MATERIAL, TYPE B OR ADDITIONAL THICKNESS OF CONCRETE.

REMOVAL AND REPLACEMENT 4" (100) OR LESS IS INCLUDED IN THE COST OF CURB OR CURB AND GUTTER REMOVAL AND REPLACEMENT.

REMOVAL AND REPLACEMENT IN EXCESS OF 4" (100) WILL BE PAID FOR IN ACCORDANCE WITH ARTICLE 109.04 OF THE STANDARD SPECIFICATIONS.

PROPOSED #6 (20) EPOXY COATED TIE BARS 24" (600) LONG AT 24" (600) CENTERS WILL NOT BE PAID FOR SEPARATELY. DELETE EPOXY COATED TIE BARS IF EXISTING TIE BARS ARE USUABLE AS DETERMINED BY THE ENGINEER. (SEE NOTE ③).

**BASIS OF PAYMENT:**

THIS WORK WILL BE PAID FOR AT THE CONTRACT UNIT PRICE PER FOOT (METER) FOR "CURB REMOVAL AND REPLACEMENT" OR "COMBINATION CONCRETE CURB AND GUTTER REMOVAL AND REPLACEMENT".

# CURB OR CURB AND GUTTER REMOVAL AND REPLACEMENT

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

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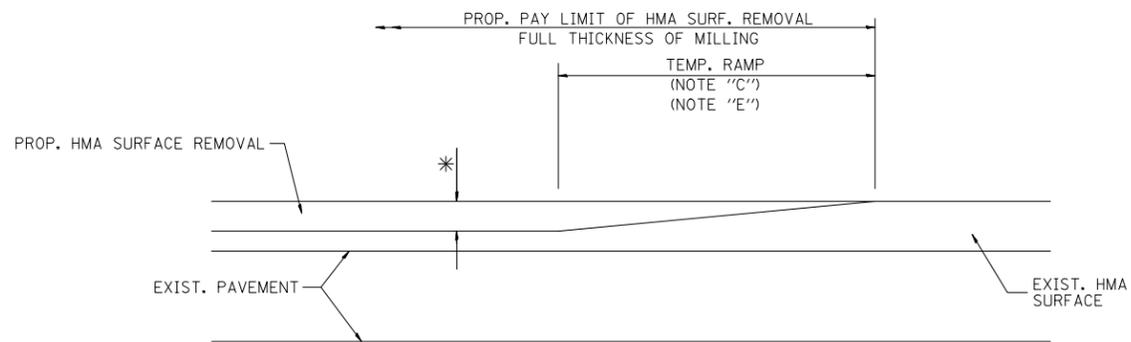
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PLOT DATE = 01-08-20	CHECKED -- ACAD	REVISED --

STATE OF ILLINOIS  
DEPARTMENT OF TRANSPORTATION

**CURB OR CURB AND GUTTER  
REMOVAL AND REPLACEMENT**

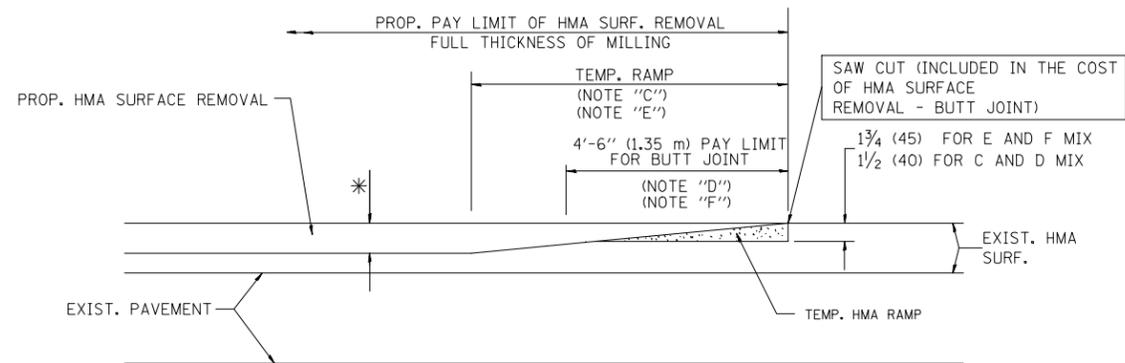
SCALE: SHEET NO. 13 OF 23 SHEETS STA. TO STA.

F.A.U. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
	17-00174-00-RS	COOK	23	13
80600-06 (BD-24)			CONTRACT NO. 61G39	
FED. ROAD DIST. NO. 1	ILLINOIS	FED. AID PROJECT	PL1E (411)	



MILLED TEMPORARY RAMP  
(FOR BUTT JOINT AND HMA TAPER SEE DETAIL BELOW)

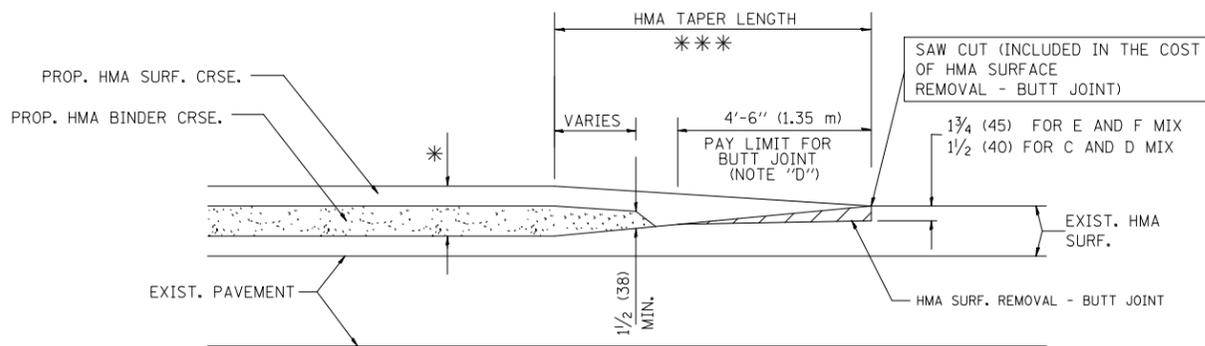
OPTION 1



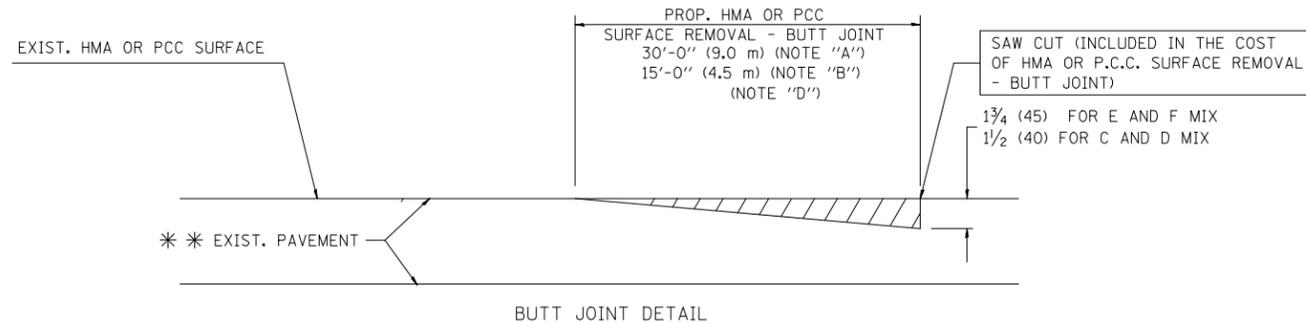
HMA CONSTRUCTED TEMPORARY RAMP  
(FOR BUTT JOINT AND HMA TAPER SEE DETAIL BELOW)

OPTION 2

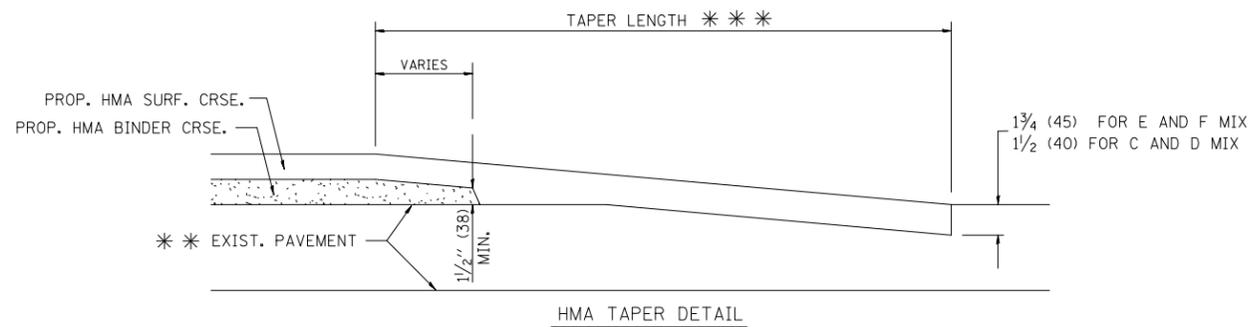
TYPICAL TEMPORARY RAMP



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



BUTT JOINT DETAIL



HMA TAPER 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.
- \*\*\* 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 = 18R0909-DTLS-01 - BD-32

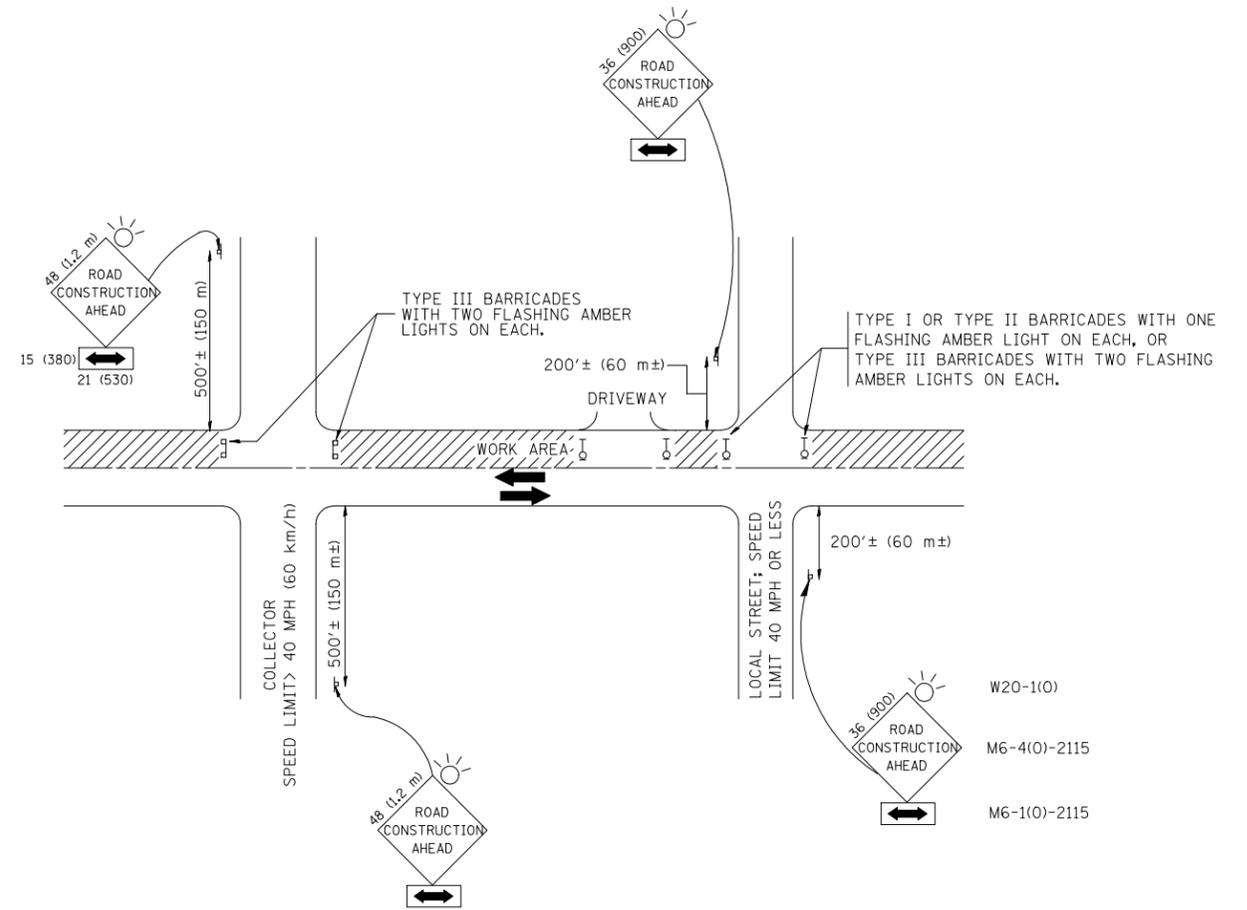
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STATE OF ILLINOIS  
DEPARTMENT OF TRANSPORTATION

BUTT JOINT AND  
HMA TAPER DETAILS

SCALE: SHEET NO. 14 OF 23 SHEETS STA. TO STA.

F.A.U. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
	17-00174-00-RS	COOK	23	14
80400-05 8032		CONTRACT NO. 61G39		
FED. ROAD DIST. NO. 1 ILLINOIS FED. AID PROJECT PL1E (411)				



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:
    - ONE **ROAD CONSTRUCTION AHEAD** SIGN 36 x 36 (900x900) WITH A FLASHER AND FLAG MOUNTED ON IT APPROXIMATELY 200' (60 m) IN ADVANCE OF THE MAIN ROUTE.
    - 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.
  - SIDE ROAD WITH A SPEED LIMIT GREATER THAN 40 MPH (60 km/h) AS SHOWN ON THE DRAWING AND AS DIRECTED BY THE ENGINEER:
    - ONE **ROAD CONSTRUCTION AHEAD** SIGN 48 x 48 (1.2 m x 1.2 m) WITH A FLASHER MOUNTED ON IT APPROXIMATELY 500' (150 m) IN ADVANCE OF THE MAIN ROUTE.
    - 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.
  - WHEN THE SIDE ROAD LIES BETWEEN THE BEGINNING OF THE MAINLINE SIGNING AND THE WORK ZONE, A SINGLE HEADED ARROW (M6-1) SHALL BE USED IN LIEU OF THE DOUBLE HEADED ARROW (M6-4).
- 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.

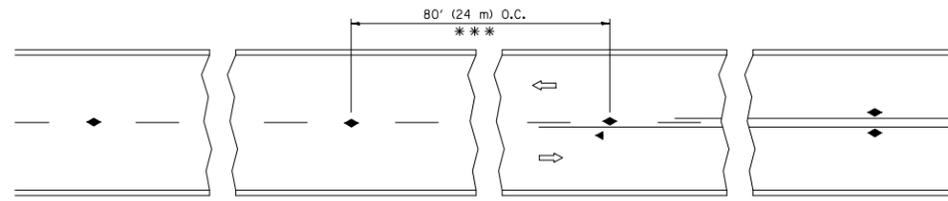
FILE NAME = 18R0909-DTLS-01 - TC-10	USER NAME =	DESIGNED — SK	REVISED —
		CHECKED — JCP	REVISED —
	PLOT SCALE =	DRAWN — ACAD	REVISED —
	PLOT DATE = 01-08-20	CHECKED — ACAD	REVISED —

STATE OF ILLINOIS  
DEPARTMENT OF TRANSPORTATION

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

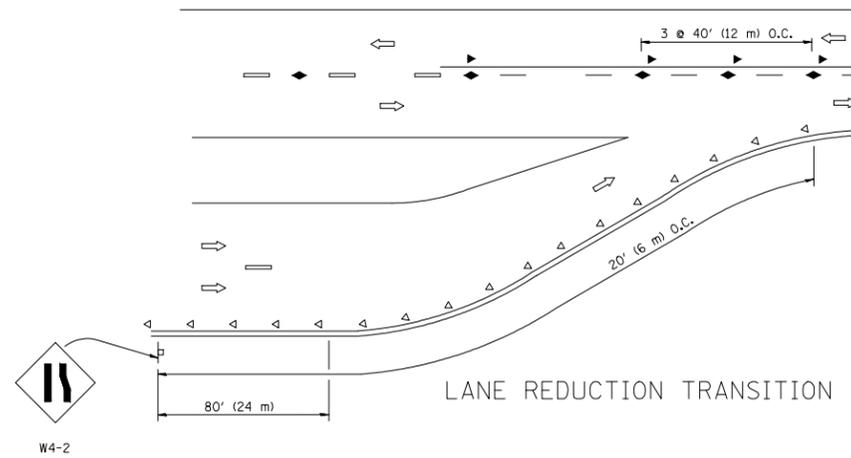
SCALE: SHEET NO. 15 OF 23 SHEETS STA. TO STA.

F.A.U. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
	17-00174-00-RS	COOK	23	15
TC-10			CONTRACT NO. 61G39	
FED. ROAD DIST. NO. 1	ILLINOIS	FED. AID PROJECT	PL1E (411)	

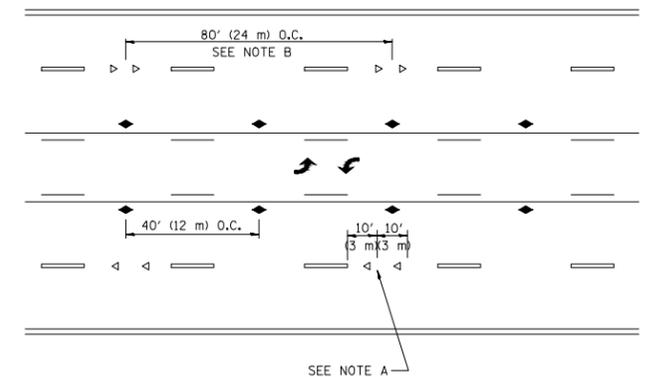


\*\*\* REDUCE TO 40' (12 m) O.C. ON CURVES WITH POSTED OR ADVISORY SPEED 45 M.P.H. (70 km/h) OR LESS.

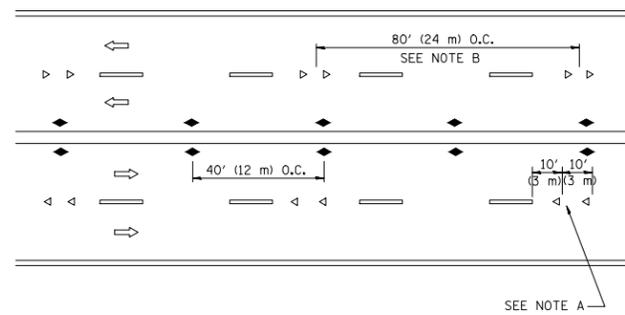
TWO-LANE/TWO-WAY



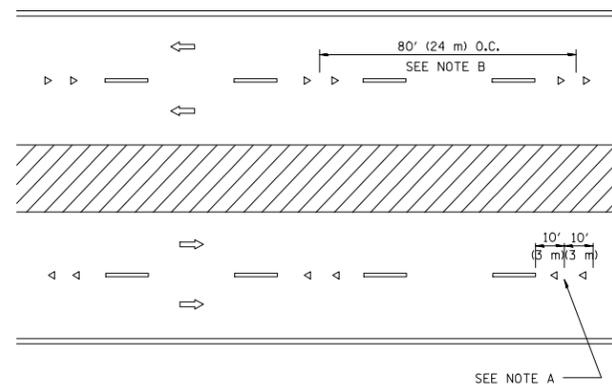
LANE REDUCTION TRANSITION



TWO-WAY LEFT TURN



MULTI-LANE/UNDIVIDED



MULTI-LANE/DIVIDED

GENERAL NOTES

1. MARKERS USED WITH DASHED LINES SHALL BE CENTERED IN THE GAP BETWEEN SEGMENTS.
2. MARKERS USED ADJACENT TO SOLID LINES SHALL BE OFFSET 2 TO 3 (50 TO 75) TOWARD TRAFFIC AS SHOWN.
3. MARKERS THROUGH TANGENTS LESS THAN 500' (150 m) IN LENGTH BETWEEN CURVES SHALL BE INSTALLED AT THE LESSER OF THE TWO CURVE SPACINGS.

SYMBOLS

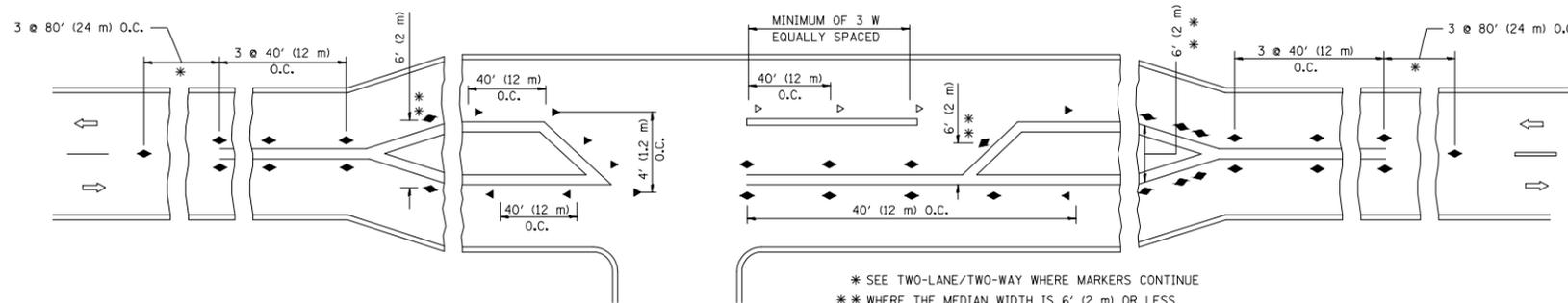
- YELLOW STRIPE
- WHITE STRIPE
- ◀ ONE-WAY AMBER MARKER
- ◁ ONE-WAY CRYSTAL MARKER (W/O)
- ◆ TWO-WAY AMBER MARKER

LANE MARKER NOTES

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

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 SHALL BE INCLUDED IN THE PLANS WHEN STANDARD SPECIFICATIONS ARE NOT BEING USED.
4. MARKERS SHOULD NOT BE USED ALONGSIDE CURBS EXCEPT FOR EXTREMELY SHORT SECTIONS OF CURBS WHERE NOT MORE THAN TWO MARKERS WOULD BE INVOLVED.



LEFT TURN

\* SEE TWO-LANE/TWO-WAY WHERE MARKERS CONTINUE  
 \*\* WHERE THE MEDIAN WIDTH IS 6' (2 m) OR LESS USE TWO-WAY MARKERS.

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

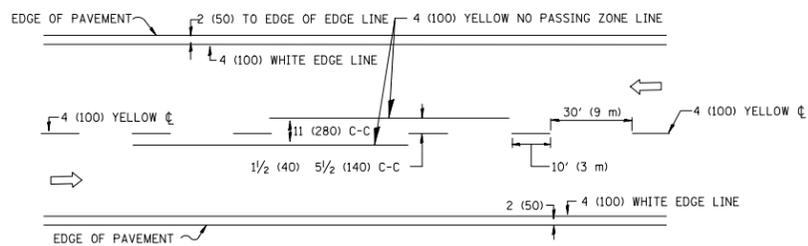
FILE NAME = 18R0909-DTLS-01 - TC-11

USER NAME =	DESIGNED — SK	REVISED —
	CHECKED — JCP	REVISED —
PLOT SCALE =	DRAWN — ACAD	REVISED —
PLOT DATE = 01-08-20	CHECKED — ACAD	REVISED —

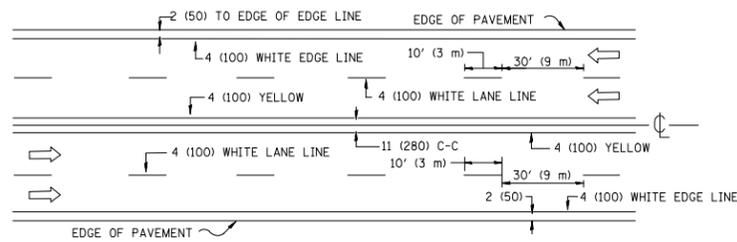
STATE OF ILLINOIS  
 DEPARTMENT OF TRANSPORTATION

TYPICAL APPLICATIONS	
RAISED REFLECTIVE PAVEMENT MARKERS (SNOW-PLOW RESISTANT)	
SCALE:	SHEET NO. 16 OF 23 SHEETS
STA.	TO STA.

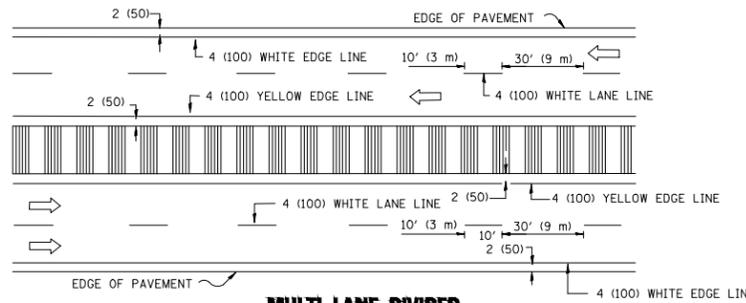
F.A.U. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
	17-00174-00-RS	COOK	23	16
TC-11		CONTRACT NO. 61G39		
FED. ROAD DIST. NO. 1	ILLINOIS	FED. AID PROJECT PL1E (411)		



**2-LANE ROADWAY**

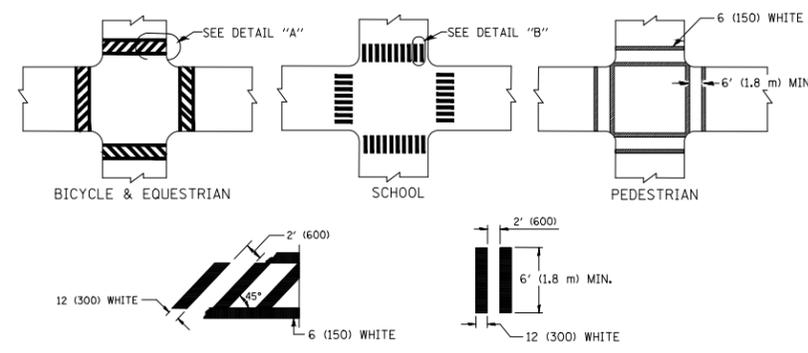


**MULTI-LANE UNDIVIDED**



**MULTI-LANE DIVIDED WITH MEDIAN**

**TYPICAL LANE AND EDGE LINE MARKING**

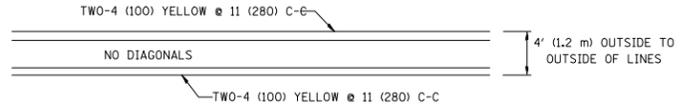


**DETAIL "A"**

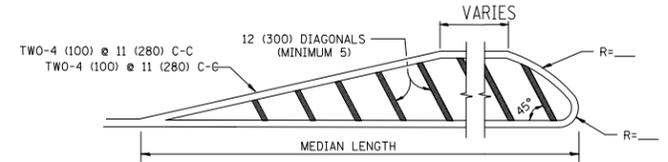
**DETAIL "B"**

**TYPICAL CROSSWALK MARKING**

\* MARKINGS SHALL BE INSTALLED PARALLEL TO THE CENTERLINE OF THE ROAD WHICH IT CROSSES

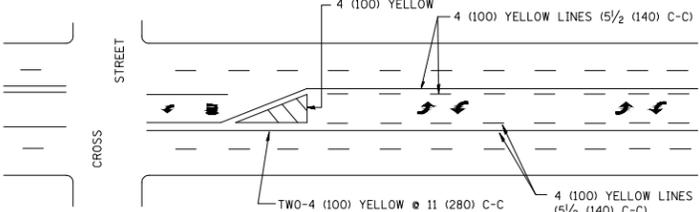


**4' (1.2 m) WIDE MEDIANS ONLY**



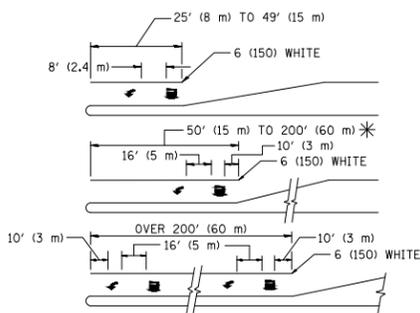
**MEDIANS OVER 4' (1.2 m) WIDE**

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))



**MEDIAN WITH TWO-WAY LEFT TURN LANE**

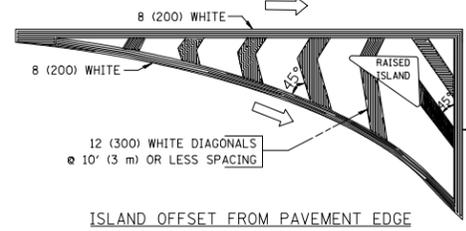
**TYPICAL PAINTED MEDIAN MARKING**



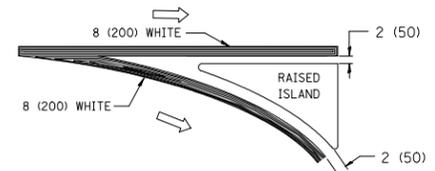
**TYPICAL LEFT (OR RIGHT) TURN LANE**

**TYPICAL TURN LANE MARKING**

FULL SIZE LETTERS 8' (2.4 m) AND ARROWS SHALL BE USED.  
AREA = 15.6 SQ. FT. (1.5 m<sup>2</sup>) ONLY AREA = 20.8 SQ. FT. (1.9 m<sup>2</sup>)  
\* 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".

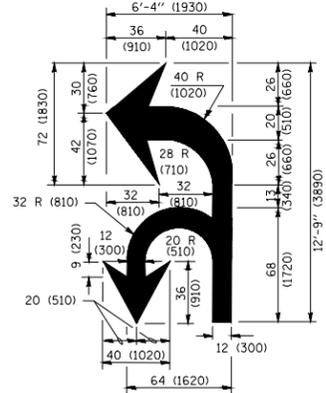


**ISLAND OFFSET FROM PAVEMENT EDGE**

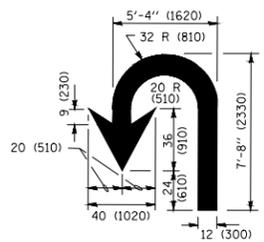


**ISLAND AT PAVEMENT EDGE**

**TYPICAL ISLAND MARKING**

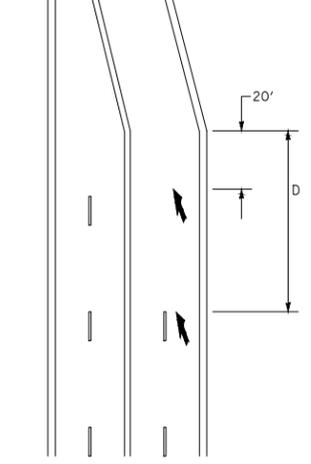


**COMBINATION LEFT AND U-TURN**



**U-TURN**

D(FT)	SPEED LIMIT
345	30
425	35
500	40
580	45
665	50
750	55



**LANE REDUCTION TRANSITION**

\* LANE REDUCTION ARROWS REQUIRED AT SPEEDS OF 45 MPH OR GREATER OR WHEN SPECIFIED IN PLANS.

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 UNDIVIDED PAVEMENT	2 @ 4 (100)	SOLID	YELLOW	11 (280) C-C
NO PASSING ZONE LINES: FOR ONE DIRECTION	4 (100)	SOLID	YELLOW	5/2 (140) C-C FROM SKIP-DASH CENTERLINE
NO PASSING ZONE LINES: FOR BOTH DIRECTIONS	2 @ 4 (100)	SOLID	YELLOW	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 MEDIANS IN YELLOW
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 8' (2.4m) LEFT ARROW	SKIP-DASH AND SOLID IN PAIRS	YELLOW WHITE	10' (3 m) LINE WITH 30' (9 m) SPACE FOR SKIP-DASH; 5/2 (140) C-C BETWEEN SOLID LINE AND SKIP-DASH LINE 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	DIAGONALS: 15' (4.5 m) C-C (LESS THAN 30MPH (50 km/h)) 20' (6 m) C-C 30MPH (50 km/h) TO 45MPH (70 km/h) 30' (9 m) C-C (OVER 45MPH (70 km/h))
RAILROAD CROSSING	24 (600) TRANSVERSE LINES; "RR" IS 6' (1.8 m) LETTERS; 16 (400) LINE FOR "X"	SOLID	WHITE	SEE STATE STANDARD 780001 AREA OF: "R"=3.6 SQ. FT. (0.33 m <sup>2</sup> ) EACH "X"=54.0 SQ. FT. (5.0 m <sup>2</sup> )
SHOULDER DIAGONALS (REQUIRED FOR SHOULDERS ≥ 8')	12 (300) @ 45°	SOLID	WHITE - RIGHT YELLOW - LEFT	50' (15 m) C-C (LESS THAN 30MPH (50 km/h)) 75' (25 m) C-C (30 MPH (50 km/h) TO 45MPH (70 km/h)) 150' (45 m) C-C (OVER 45MPH (70 km/h))
U TURN ARROW	SEE DETAIL	SOLID	WHITE	16.3 SF
2 ARROW COMBINATION LEFT AND U TURN	SEE DETAIL	SOLID	WHITE	30.4 SF

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 = 18R0909-DTLS-01 - TC-13

USER NAME =	DESIGNED — SK	REVISED —
CHECKED — JCP	REVISOR —	REVISED —
PLOT SCALE =	DRAWN — ACAD	REVISED —
PLOT DATE = 01-08-20	CHECKED — ACAD	REVISED —

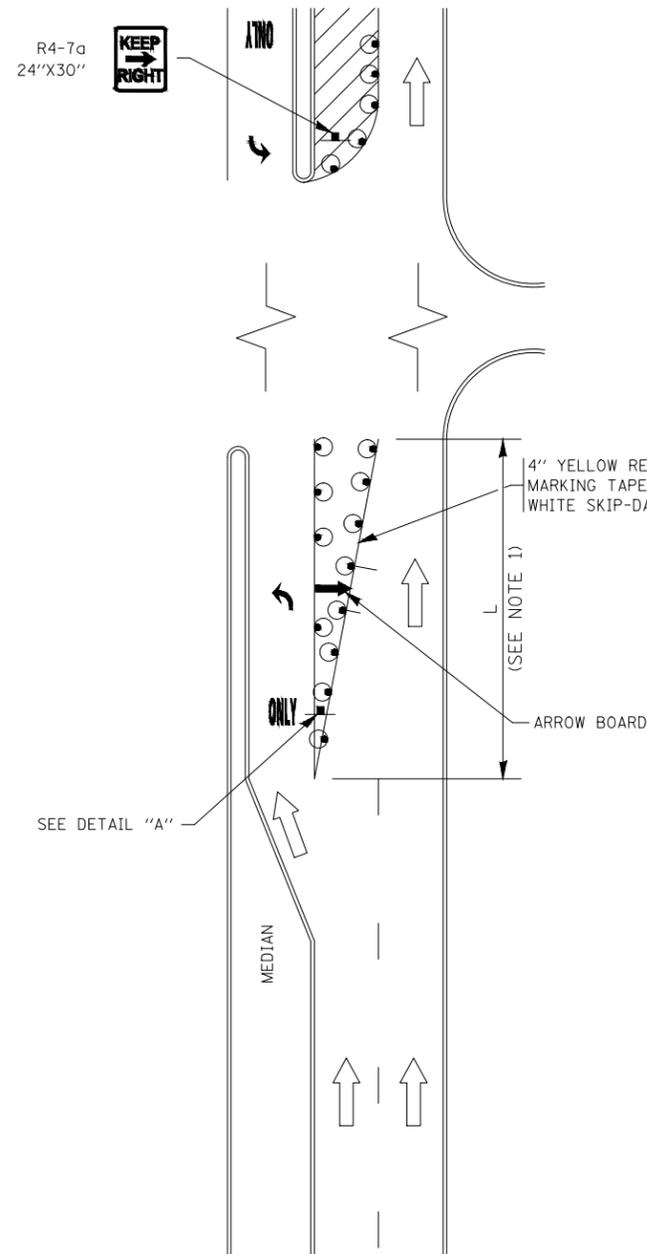
STATE OF ILLINOIS  
DEPARTMENT OF TRANSPORTATION

DISTRICT ONE  
TYPICAL PAVEMENT MARKINGS

SCALE: SHEET NO. 17 OF 23 SHEETS STA. TO STA.

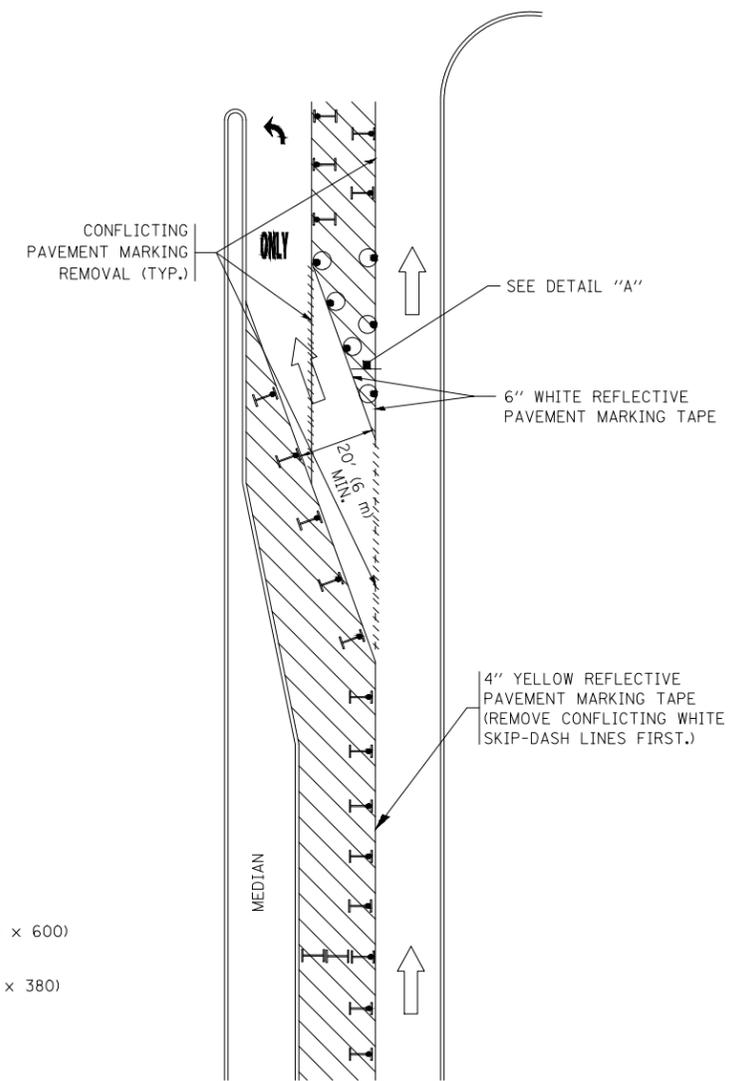
F.A.U. R.T.E.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
	17-00174-00-RS	COOK	23	17
TC-13		CONTRACT NO. 61G39		
FED. ROAD DIST. NO. 1	ILLINOIS	FED. AID PROJECT	PL1E (411)	

# TURN BAY ENTRANCE AT START OF LANE CLOSURE TAPER



**FIGURE 1**

# TURN BAY ENTRANCE WITHIN A LANE CLOSURE



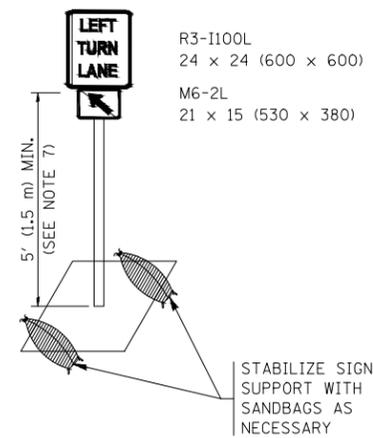
**FIGURE 2**

### LEGEND

- WORK AREA
- LANE OPEN TO TRAFFIC
- ARROW BOARD
- TYPE I OR II BARRICADE OR DRUM WITH STEADY BURN LIGHT
- DRUM WITH STEADY BURN LIGHT
- SIGN ASSEMBLY
- TYPE I OR II CHECK BARRICADE WITH FLASHING LIGHT

### NOTES:

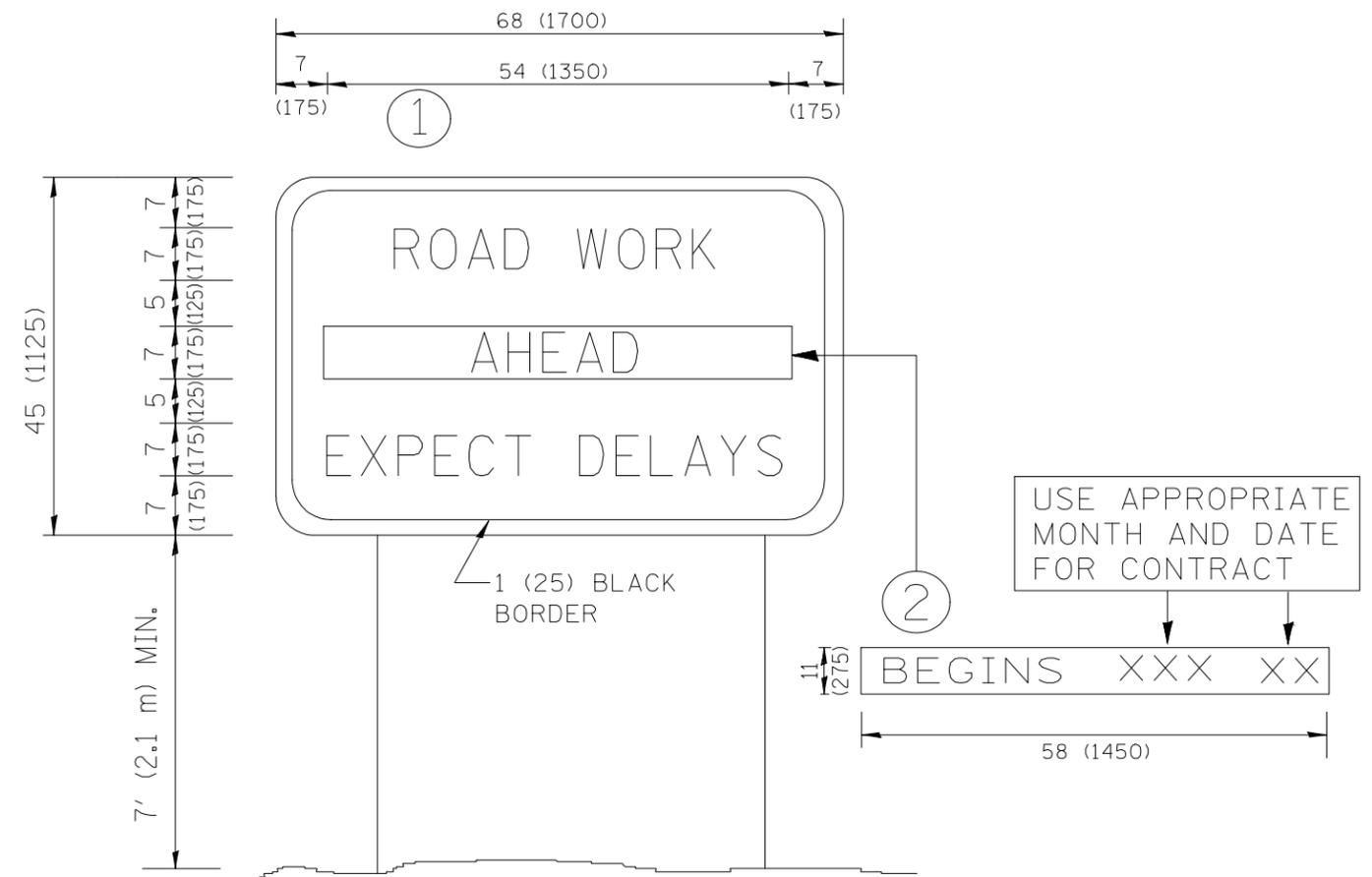
1. A) WHEN "L" IS  $\leq$  THE STORAGE LENGTH OF THE TURN LANE (AS SHOWN IN FIG. 1), USE FIGURE 1.  
B) WHEN "L" IS  $>$  THE STORAGE LENGTH OF THE TURN LANE OR THE TURN LANE IS WITHIN THE LANE CLOSURE, USE FIGURE 2.
2. CONES MAY BE SUBSTITUTED FOR BARRICADES OR DRUMS AT HALF THE SPACING DURING DAY OPERATIONS. CONES SHALL BE A MINIMUM OF 28 (710) IN HEIGHT.
3. LIGHTS WILL NOT BE REQUIRED ON BARRICADES OR DRUMS FOR DAY OPERATIONS. ALL LIGHTS SHALL BE MONODIRECTIONAL.
4. REFLECTIVE TEMPORARY PAVEMENT MARKINGS SHALL BE PLACED THROUGHOUT THE BARRICADED AREAS OF EACH TURN BAY AS SHOWN WHERE THE CLOSURE TIME IS GREATER THAN FOURTEEN (14) DAYS.
5. THIS APPLICATION ALSO APPLIES WHEN WORK IS BEING PERFORMED IN THE RIGHT LANE(S) AND THE RIGHT TURN BAY IS TO REMAIN OPEN. UNDER THIS CONDITION, "RIGHT TURN LANE" R3-I100R 24 x 24 (600 x 600) AND M6-2R 21 x 15 (530 x 380) SHALL BE USED.
6. THESE CONTROLS SHALL SUPPLEMENT MAINLINE TRAFFIC CONTROL FOR LANE CLOSURES.
7. THE SIGNS SHALL BE MOUNTED ABOVE THE BARRICADES/DRUMS ON SEPARATE SIGN SUPPORTS THAT MEET NCHRP 350 OR MASH PREQUIREMENTS.
8. TRAFFIC CONTROL AND PROTECTION AT TURN BAYS (TO REMAIN OPEN TO TRAFFIC) SHALL BE INCLUDED IN THE COST OF SPECIFIED TRAFFIC CONTROL STANDARDS OR ITEMS.



**DETAIL A**

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





NOTES:

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

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

FILE NAME = 18R0909-DTLS-01 - TC-22

USER NAME =	DESIGNED — SK	REVISED —
	CHECKED — JCP	REVISED —
PLOT SCALE =	DRAWN — ACAD	REVISED —
PLOT DATE = 01-08-20	CHECKED — ACAD	REVISED —

STATE OF ILLINOIS  
DEPARTMENT OF TRANSPORTATION

**ARTERIAL ROAD  
INFORMATION SIGN**

SCALE: SHEET NO. 20 OF 23 SHEETS STA. TO STA.

F.A.U. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
	17-00174-00-RS	COOK	23	20
TC-22			CONTRACT NO. 61G39	
FED. ROAD DIST. NO. 1	ILLINOIS	FED. AID PROJECT	PL1E (411)	



3.0" RADIUS, 0.5" BORDER, WHITE ON GREEN; REFLECTORIZED  
 "DRIVEWAY" D; "ENTRANCE" D; STANDARD ARROW CUSTOM 12.0" x 5.0"

**NOTES:**

1. HALF OF THE SIGNS WILL REQUIRE A LEFT HAND FACING ARROW.
2. TWO SIGNS SHALL BE USED AT EACH COMMERCIAL ENTRANCE  
 PLACED BACK-TO-BACK; ONE WITH A RIGHT HAND ARROW (SHOWN)  
 SHALL BE PLACED ON THE NEAR RIGHT SIDE THE DRIVEWAY  
 AND ONE WITH A LEFT HAND ARROW SHALL BE PLACED ON THE  
 FAR LEFT SIDE OF THE DRIVEWAY.
3. SIGNS TO BE PAID FOR AS ITEM "TEMPORARY INFORMATION SIGNING".

FILE NAME = 18R0909-DTLS-01 - TC-26

USER NAME =	DESIGNED -- SK	REVISED --
	CHECKED -- JCP	REVISED --
PLOT SCALE =	DRAWN -- ACAD	REVISED --
PLOT DATE = 01-08-20	CHECKED -- ACAD	REVISED --

STATE OF ILLINOIS  
 DEPARTMENT OF TRANSPORTATION

**DRIVEWAY ENTRANCE SIGNING**

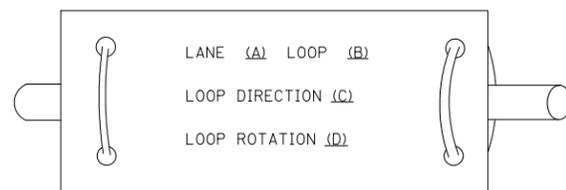
SCALE: SHEET NO. 21 OF 23 SHEETS STA. TO STA.

F.A.U. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
	17-00174-00-RS	COOK	23	21
<b>TC-26</b>			CONTRACT NO. 61G39	
FED. ROAD DIST. NO. 1	ILLINOIS	FED. AID PROJECT	PL1E (411)	

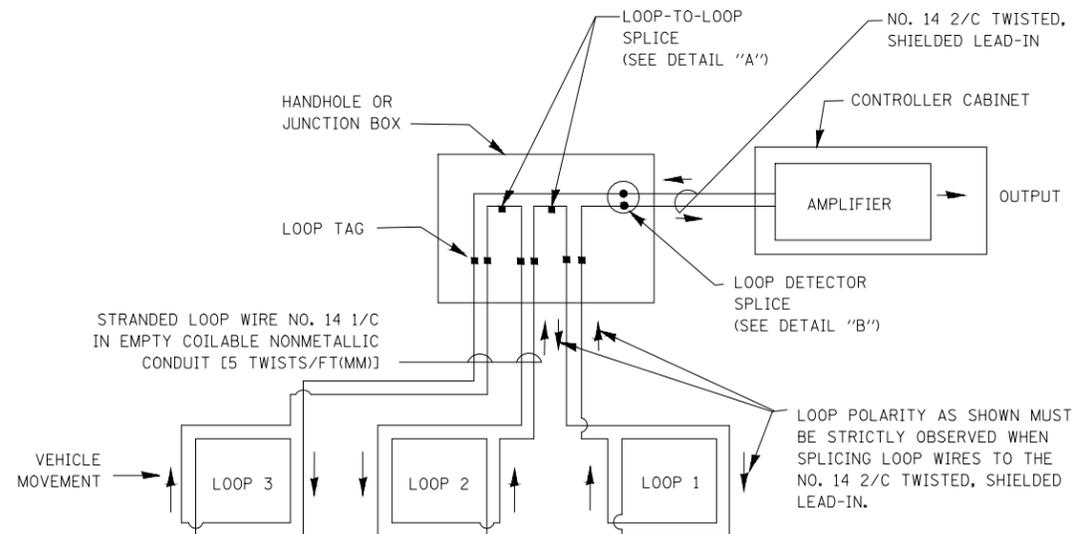
**LOOP DETECTOR NOTES**

1. EACH PAIR OF LOOP WIRES SHALL BE PLACED IN A SEPARATE EMPTY COILABLE NONMETALLIC CONDUIT FROM THE EDGE OF PAVEMENT TO THE HANDHOLE. SPACING BETWEEN THE HOLES DRILLED IN THE PAVEMENT SHALL NOT BE LESS THAN 6" (150 mm). EMPTY COILABLE NONMETALLIC CONDUIT SHALL BE INCLUDED IN THE COST OF THE LOOP WIRE.
2. THE NUMBER OF LOOP TURNS SHALL BE AS RECOMMENDED BY THE AMPLIFIER MANUFACTURER. ALL ADJACENT SIDES OF THE LOOPS SHALL BE INSTALLED IN SUCH A WAY THAT THE CURRENT FLOW IS IN THE SAME DIRECTION TO REINFORCE ITS MAGNETIC FIELDS FOR SMALL VEHICLE DETECTION.
3. EACH LOOP LEAD-IN SHALL BE IDENTIFIED AND PERMANENTLY TAGGED IN THE HANDHOLE. EACH LEAD-IN CABLE TAG SHALL INDICATE THE LOCATION OF THE LOOP, LOOP ROTATION (CLOCKWISE/COUNTERCLOCKWISE), LOOP LEAD-IN DIRECTION (IN OR OUT), LOOP CABLE NUMBER AND LOCATION IN CABINET, AND NUMBER OF TURNS IN THE DETECTOR LOOPS IN WATER PROOF INK AS INDICATED ON THE DISTRICT 1 STANDARD TRAFFIC SIGNAL DESIGN DETAIL. THE CONTRACTOR SHALL MARK LOOP LOCATIONS ON RECORD DRAWINGS AND PRESENT TO THE ENGINEER AFTER FINAL INSPECTION. LOOPS SHALL BE MARKED BY LANE AND LOOP NUMBER. SEE DETAIL BELOW.
4. ALL LOOP CABLE SHALL BE FASTENED WITH PLASTIC TIE WRAP TO THE HANDHOLE HOOKS.
5. IN ASPHALT PAVEMENT, LOOPS SHOULD BE PLACED IN THE BINDER AND DIVEHOLES MARKED AT THE CURB WITH A SAW-CUT. THE SAW-CUT SHALL BE CUT IN ACCORDANCE WITH LOCAL AND E.P.A. DUST CONTROL REQUIREMENTS. DETECTOR LOOP(S) SHALL NOT BE INSTALLED IN WET CONDITIONS AND THE SAW-CUTS MUST BE FREE OF DEBRIS AND RESIDUE SUCH AS DUST AND WATER WHICH IS TO BE ACHIEVED BY THE USE OF COMPRESSED AIR, WIRE BRUSHING AND HEAT DRYING ACCORDING TO SEALANT MANUFACTURER REQUIREMENTS. THE DETECTOR WIRE SHALL BE HELD IN PLACE BY THE USE OF FORM WEDGES. WEDGES SHALL BE SPACED NO MORE THAN 18" (450 mm) APART.
6. LOOP SPLICES SHALL BE SOLDERED USING A SOLDERING IRON. BLOW TORCHES OR OTHER DEVICES WHICH OXIDIZE COPPER CABLE SHALL NOT BE ALLOWED FOR SOLDERING OPERATIONS. SEE DETAIL BELOW RIGHT.
7. PREFORMED DETECTOR LOOPS SHALL BE USED, AS SHOWN ON THE PLANS, WHERE NEW CONCRETE PAVEMENT IS PROPOSED. THE INSTALLATION OF PREFORMED LOOPS SHALL BE IN ACCORDANCE WITH THE DISTRICT 1 SPECIFICATIONS OR AS DIRECTED BY THE ENGINEER.

**LOOP LEAD-IN CABLE TAG**

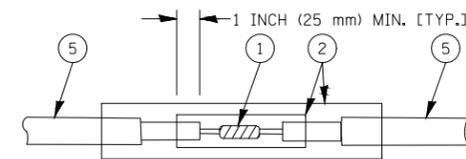


- A. LANE 1 IS THE LANE CLOSEST TO THE CENTERLINE OF THE ROADWAY
- B. LOOP #1 IS THE LOOP IN THE LANE CLOSEST TO THE INTERSECTION.
- C. LABEL LOOP CABLE "IN" OR LOOP CABLE "OUT".
- D. LABEL LOOP CABLE CLOCKWISE OR LOOP CABLE COUNTERCLOCKWISE.

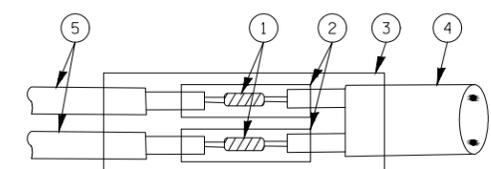


**DETECTOR LOOP WIRING SCHEMATIC**

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

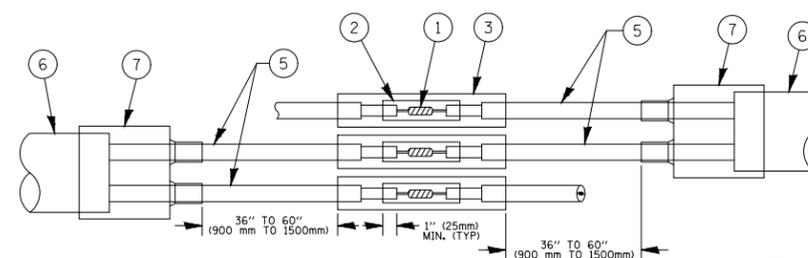


DETAIL "A"  
LOOP-TO-LOOP SPLICE

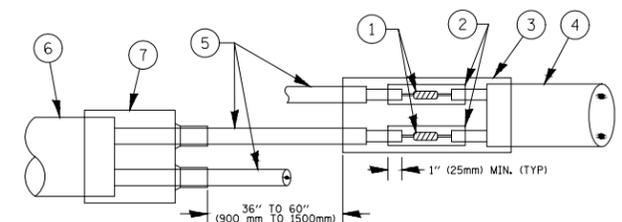


DETAIL "B"  
LOOP-TO-CONTROLLER SPLICE

**TYPE I LOOP**



DETAIL "A"  
LOOP-TO-LOOP SPLICE



DETAIL "B"  
LOOP-TO-CONTROLLER SPLICE

**PREFORMED LOOP**

**LOOP DETECTOR SPLICE**

- 1 WESTERN UNION SPLICE SOLDERED WITH ROSIN CORE FLUX. ALL EXPOSED SURFACES OF THE SOLDER SHALL BE SMOOTH. THE WESTERN UNION SPLICES SHALL BE STAGGERED.
- 2 WCSMW 30/100 HEAT SHRINK TUBE, MINIMUM LENGTH 3" (75 mm), UNDERWATER GRADE.
- 3 WCS 200/750 HEAT SHRINK TUBE, MINIMUM LENGTH 6" (150 mm), UNDERWATER GRADE.
- 4 NO. 14 2/C TWISTED, SHIELDED CABLE.
- 5 LOOP CONDUCTOR WITH FLEXIBLE PLASTIC TUBE.
- 6 PREFORMED LOOP
- 7 XL POLYOLEFIN 2 CONDUCTOR BREAKOUT SEALS. TYCO CBR-2 OR APPROVED EQUAL

FILE NAME = 18R0909-DTLS-01 - TS-05

USER NAME =	DESIGNED — SK	REVISED —
	CHECKED — JCP	REVISED —
PLOT SCALE =	DRAWN — RG	REVISED —
PLOT DATE = 01-08-20	CHECKED — AG	REVISED —

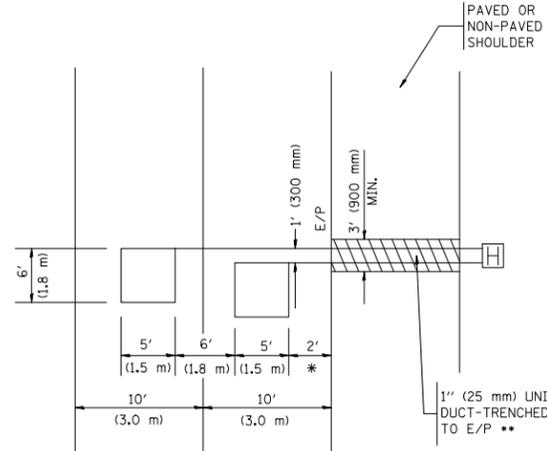
STATE OF ILLINOIS  
DEPARTMENT OF TRANSPORTATION

<b>DISTRICT ONE</b>	
<b>STANDARD TRAFFIC SIGNAL DESIGN DETAILS</b>	
SCALE:	SHEET NO. 22 OF 23 SHEETS
STA.	TO STA.

F.A.U. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
	17-00174-00-RS	COOK	23	22
<b>TS-05</b>		CONTRACT NO. 61G39		
FED. ROAD DIST. NO. 1	ILLINOIS	FED. AID PROJECT PL1E (411)		

LOOPS NEXT TO SHOULDERS

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

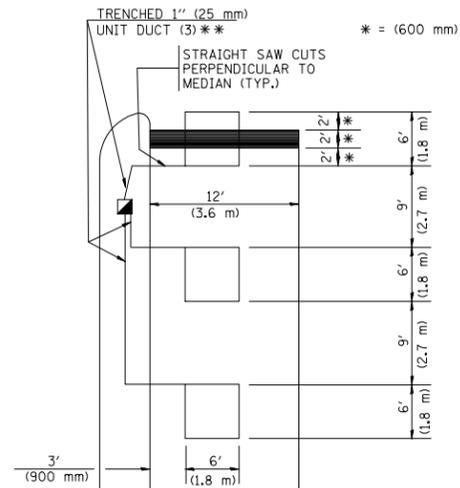


\* = (600 mm)

\*\* 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-DUTY HANDHOLES TO BE USED WHEN THE MEDIAN IS MOUNTABLE. REFER TO STANDARD 814001 TO ENSURE THAT HANDHOLE FITS IN MEDIAN.

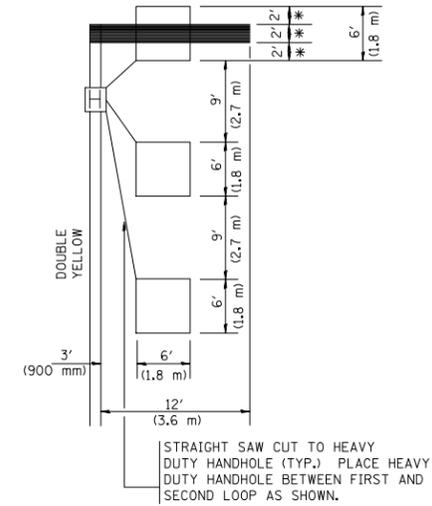


\*\* UNIT DUCT IS TO BE SHOWN ON PLAN SHEETS BUT SHALL NOT BE INCLUDED IN THE PAY ITEMS.

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

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

\* = (600 mm)



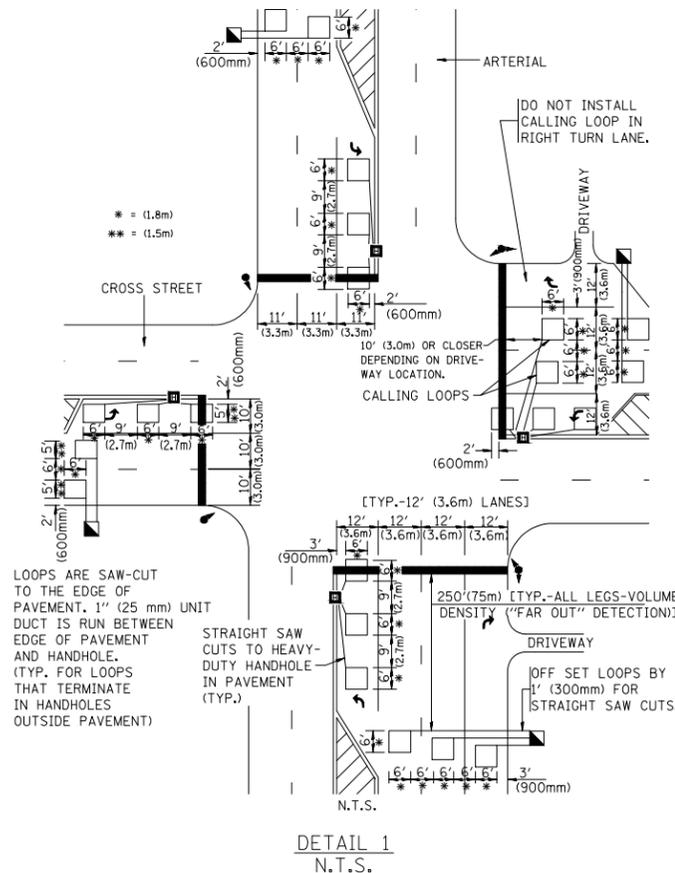
NOTE: DUAL LEFT TURNS NOT SHOWN REFER TO PLAN SHEET FOR DETECTOR LOOP REPLACEMENT

NOTES:

VEHICLES LOOP DETECTORS

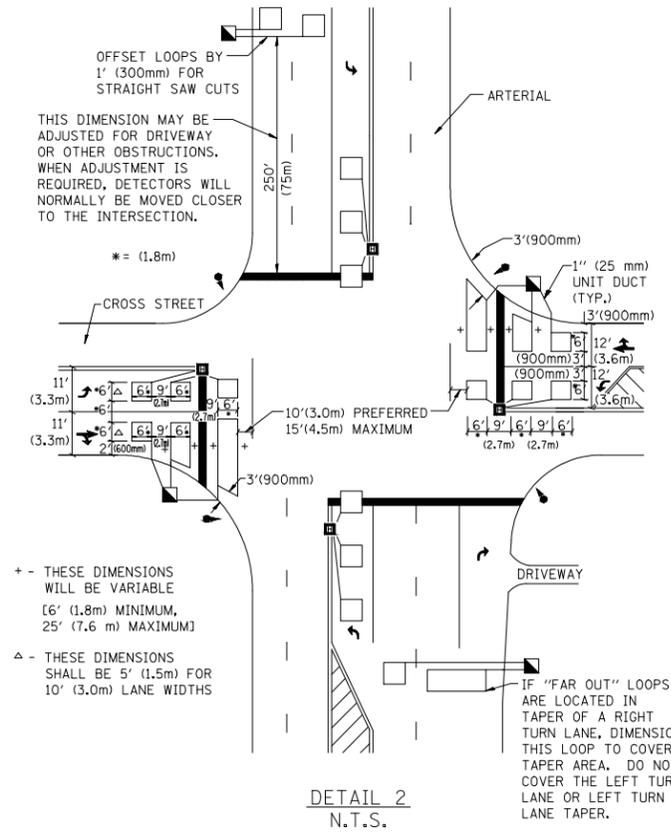
- \* ALL LEAD IN CABLE SHALL BE TWO CONDUCTOR NO. 14 TWISTED, SHIELDED.
- \* EACH DETECTOR LOOP SHALL HAVE ITS OWN SAW CUT FROM THE LOOP TO THE EDGE OF PAVEMENT OR TO A HANDHOLE IN THE PAVEMENT.
- \* EACH DETECTOR LOOP SHALL HAVE ITS OWN ONE INCH (25 mm) UNIT DUCT BETWEEN THE EDGE OF PAVEMENT AND THE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

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



DETAIL 1  
N.T.S.

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



DETAIL 2  
N.T.S.

PLACEMENT OF DETECTORS

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

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

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

NOTE:

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

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

FILE NAME = 18R0909-DTLS-01 - TS-07

USER NAME =	DESIGNED -- SK	REVISED --
	CHECKED -- JCP	REVISED --
PLOT SCALE =	DRAWN -- ACAD	REVISED --
PLOT DATE = 01-08-20	CHECKED -- ACAD	REVISED --

STATE OF ILLINOIS  
DEPARTMENT OF TRANSPORTATION

DISTRICT 1 - DETECTOR LOOP INSTALLATION  
DETAILS FOR ROADWAY RESURFACING

SCALE: SHEET NO. 23 OF 23 SHEETS STA. TO STA.

F.A.U. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
	17-00174-00-RS	COOK	23	23
TS-07		CONTRACT NO. 61G39		
FED. ROAD DIST. NO. 1	ILLINOIS	FED. AID PROJECT	PL1E (411)	