F. A. U. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO
1714	16–00047–00–RS	COOK	13	01
STA.		TO STA.		
FED. ROAD DIST. NO. 1		ILLINOIS	FED. AID PROJECT M–4003(883)	

CONTRACT #61D88

06-16-2017 LETTING ITEM 227

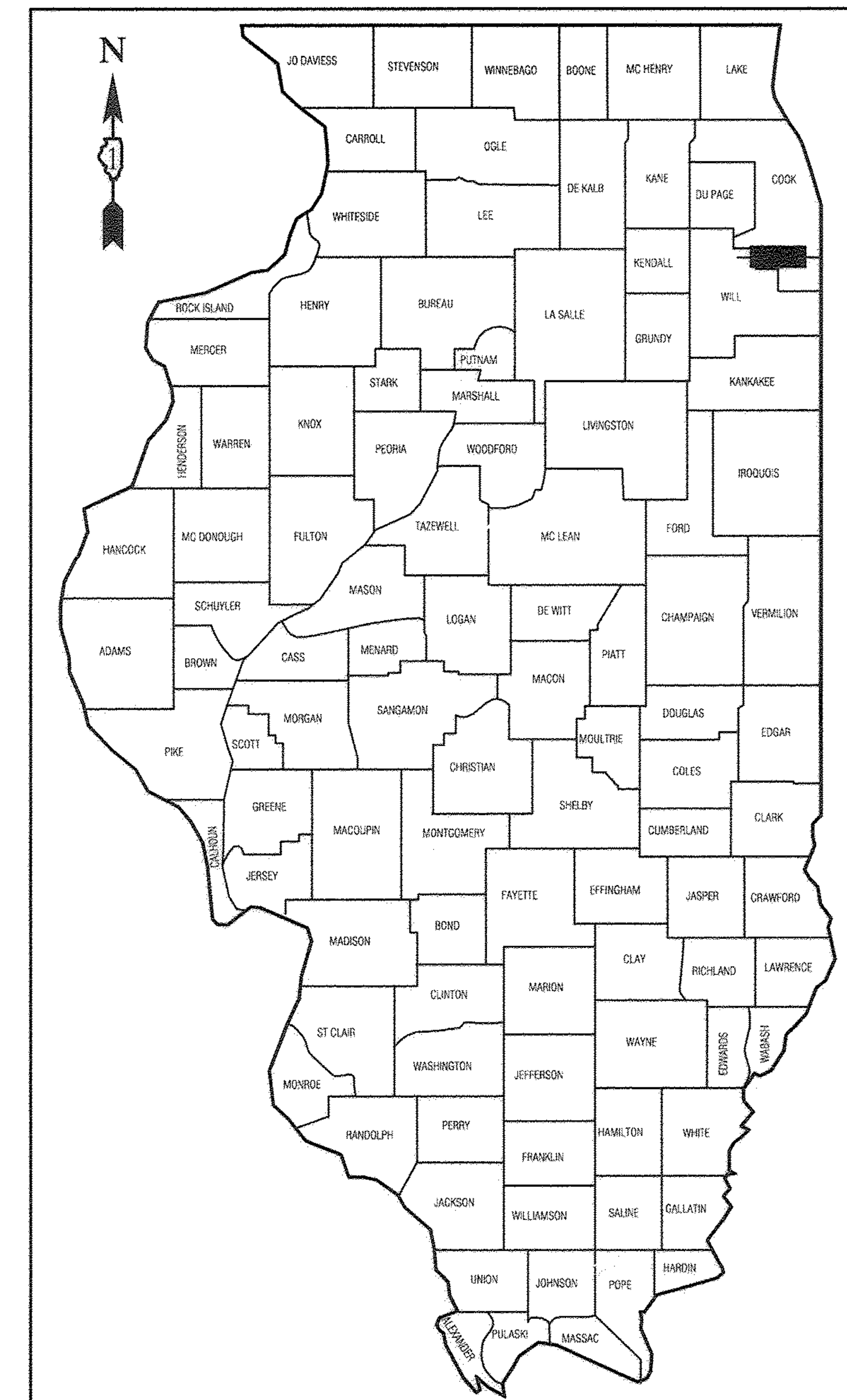
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

PLANS FOR PROPOSED FEDERAL AID HIGHWAY

FAU 1714 (163RD STREET)
DIXIE HIGHWAY TO SOUTH PARK AVENUE
RESURFACING
PROJECT NO.: M-4003(883)
SECTION NO.: 16-00047-00-RS
CITY *of* MARKHAM
COOK COUNTY
JOB NO.: C-91-165-17

SEE SHEET 2 FOR INDEX OF SHEETS.

	163RD STREET
2016 ADT –	1,300
2040 ADT –	1,300
POSTED SPEED LIMIT –	20 mph
DESIGN PERIOD –	20 YEARS
DESIGN SPEED LIMIT –	25 mph
STREET CLASSIFICATION –	MAJOR COLLECTOR



LOCATION OF SECTION INDICATED THUS: -

STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION	
Approved	March 15th ST.
	David W[signature] Mayor, City of Markham
Passed	MARCH 24, 2017
	C. Holt [signature] CHRISTOPHER HOLT District 1 Engineer of Local Roads & Streets
Released for Bid Based on Limited Review	MARCH 24, 2017
	Anthony J. Quigley Jr. [signature] Regional Engineer

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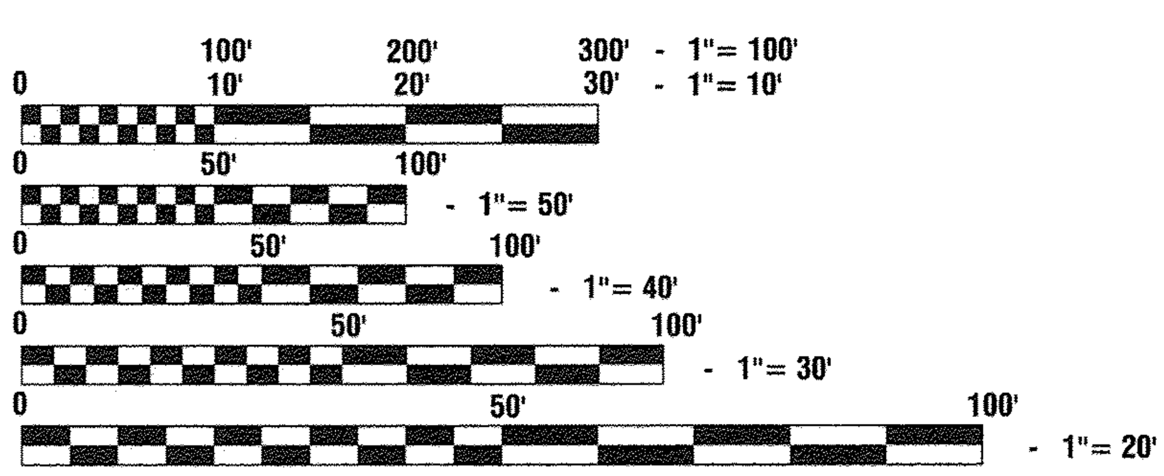
SCALES
- PLAN - 1"=50'
- PROFILE HORIZ. - 1"=50'
- PROFILE VERT. - 1"=5'
- CROSS SECTIONS - 1"=10'

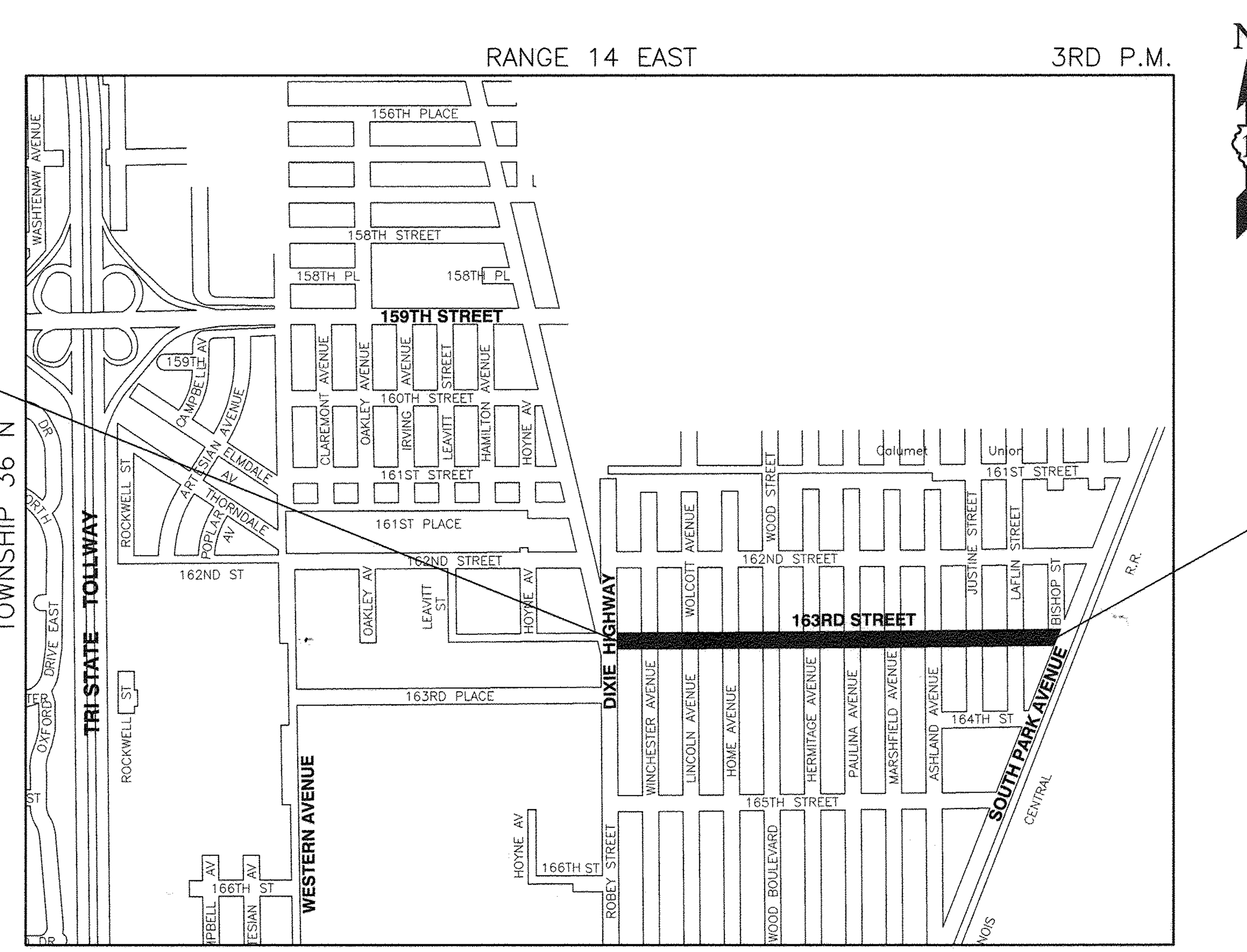


FULL SIZE PLANS HAVE BEEN PREPARED USING STANDARD ENGINEERING SCALES, REDUCED SIZED PLANS WILL NOT CONFORM TO STANDARD SCALES, IN MAKING MEASUREMENTS ON REDUCED PLANS, THE ABOVE SCALES MAY BE USED.

J. U. L. I. E.
JOINT UTILITY LOCATION INFORMATION FOR EXCAVATION
1 - 800 - 892 - 0123 or 811

BEGIN IMPROVEMENTS
163RD ST STA 300+40.08

RANGE 14 EAST 3RD P.M.



THORNTON TOWNSHIP

END OF IMPROVEMENTS
163RD ST STA 337+25.28

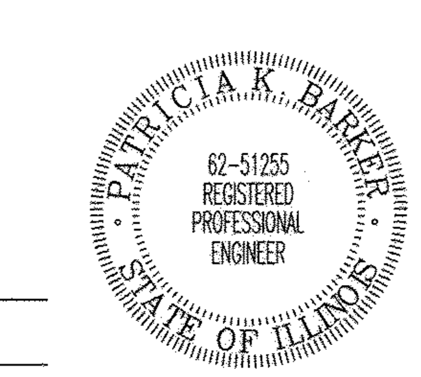
LOCATION MAP

GROSS LENGTH=3685.20 FEET=0.70 MILES
NET LENGTH=3685.20 FEET=0.70 MILES

CONTRACT NO. 61D88

PREPARED BY OR UNDER THE DIRECT SUPERVISION OF:

[signature]
3-20-2017



LICENSE EXPIRES: 11/30/17

PROGRAM AND OFFICE ENGINEER: CHARLES F. RIDDLE, P.E. 847-705-4406 SCHAUMBURG, IL
CONSULTANTS: ROBINSON ENGINEERING, LTD. 708-331-6700

INDEX OF SHEETS

1. COVER SHEET, INDEX OF SHEETS & STATE STANDARDS
2. INDEX OF SHEETS, HIGHWAY STANDARDS AND GENERAL NOTES
3. SUMMARY OF QUANTITIES
4. TYPICAL CROSS SECTIONS & GENERAL NOTES
5. PAVEMENT PLAN
6. PAVEMENT MARKING PLAN

7.-13. IDOT DISTRICT 1 STANDARD DETAILS

HIGHWAY STANDARDS

000001-06	STANDARD SYMBOLS, ABBREVIATIONS AND PATTERNS
424001-09	PERPENDICULAR CURB RAMPS
442201-03	CLASS C AND D PATCHES
606001-06	CONCRETE CURB TYPE B AND COMBINATION CONCRETE CURB AND GUTTER
701006-05	OFF-RD OPERATIONS, 2L, 2W, 15' TO 24" FROM PAVEMENT EDGE
701301-04	LANE CLOSURE, 2L, 2W, SHORT TIME OPERATIONS
701311-03	LANE CLOSURE, 2L, 2W, MOVING OPERATIONS-DAY ONLY
701501-06	URBAN LANE CLOSURE, 2L, 2W, UNDIVIDED
701701-10	URBAN LANE CLOSURE, MULTILANE INTERSECTION
701801-06	SIDEWALK, CORNER OR CROSSWALK CLOSURE
701901-06	TRAFFIC CONTROL DEVICES
886001-01	DETECTOR LOOP INSTALLATIONS

GENERAL NOTES

1. THE ROBINSON ENGINEERING, LTD. FIELD OFFICE (708–331–6700), AND THE PUBLIC WORKS DIRECTOR, AT THE CITY OF MARKHAM, 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. ANY LOOSE MATERIAL DEPOSITED IN THE FLOW LINE OF DITCHES, GUTTERS OR OTHER DRAINAGE STRUCTURES SHALL BE REMOVED BY THE END OF EACH DAY BY THE CONTRACTOR AT THEIR EXPENSE.
7. CLASS D PATCHING QUANTITIES FOR THIS CONTRACT SHALL BE PERFORMED AT THE DIRECTION OF THE ENGINEER AFTER PAVEMENT MILLING.
8. 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.

FILE NAME = 16R0607-INDX-01 - IDOT P01	USER NAME =	DESIGNED — SK	REVISED —	STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION	FAU 1714 (163RD STREET) ROADWAY RESURFACING INDEX OF SHEETS, HIGHWAY STANDARDS AND GENERAL NOTES			F.A.U RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
		CHECKED — ----	REVISED —					1714	16-00047-00-RS	COOK	13	02
	PLOT SCALE =	DRAWN — RG	REVISED —							CONTRACT NO. 61D88		
	PLOT DATE = 03-17-17	CHECKED — LTL	REVISED —		SCALE: NONE	SHEET NO. 02 OF 13 SHEETS	STA. TO STA.	FED. ROAD DIST. NO. 1	ILLINOIS	FED. AID PROJECT		

SUMMARY OF QUANTITIES

S.I.	CODE NO.	ITEM	UNIT	TOTAL QUANTITY	CONSTRUCTION TYPE CODE ROADWAY 0005	CONSTRUCTION TYPE CODE SAFETY 0021
	20200100	EARTH EXCAVATION	CU YD	32		32
	21101615	TOPSOIL FURNISH AND PLACE, 4"	SQ YD	650	650	
	25000210	SEEDING, CLASS 2A	ACRE	0.15	0.15	
	25000400	NITROGEN FERTILIZER NUTRIENT	POUND	15	15	
	25000500	PHOSPHORUS FERTILIZER NUTRIENT	POUND	15	15	
	25000600	POTASSIUM FERTILIZER NUTRIENT	POUND	15	15	
	35101600	AGGREGATE BASE COURSE, TYPE B 4"	SQ YD	305		305
	40201000	AGGREGATE FOR TEMPORARY ACCESS	TON	70	70	
	40600290	BITUMINOUS MATERIALS (TACK COAT)	POUND	9450	9450	
	40600827	POLYMERIZED LEVELING BINDER (MACHINE METHOD), IL-4.75, N50	TON	590	590	
	40600982	HOT-MIX ASPHALT SURFACE REMOVAL - BUTT JOINT	SQ YD	410	410	
	40603335	HOT-MIX ASPHALT SURFACE COURSE, MIX "D", N50	TON	1180	1180	
	42300300	PORTLAND CEMENT CONCRETE DRIVEWAY PAVEMENT, 7 INCH	SQ YD	125	125	
	42400200	PORTLAND CEMENT CONCRETE SIDEWALK 5 INCH	SQ FT	8710		8710
	42400800	DETECTABLE WARNINGS	SQ FT	720		720
	44000157	HOT-MIX ASPHALT SURFACE REMOVAL, 2"	SQ YD	13950	13950	
	44000200	DRIVEWAY PAVEMENT REMOVAL	SQ YD	185	185	
	44000500	COMBINATION CURB AND GUTTER REMOVAL	FOOT	2500	2500	
	44000600	SIDEWALK REMOVAL	SQ FT	7575		7575
	44201717	CLASS D PATCHES, TYPE II, 6 INCH	SQ YD	100	100	
	44201721	CLASS D PATCHES, TYPE III, 6 INCH	SQ YD	100	100	
	44201723	CLASS D PATCHES, TYPE IV, 6 INCH	SQ YD	50	50	
	60250200	CATCH BASINS TO BE ADJUSTED	EACH	10	10	
	60255500	MANHOLES TO BE ADJUSTED	EACH	16	16	

* – INDICATES SPECIALTY ITEMS

SUMMARY OF QUANTITIES

S.I.	CODE NO.	ITEM	UNIT	TOTAL QUANTITY	CONSTRUCTION TYPE CODE ROADWAY 0005	CONSTRUCTION TYPE CODE SAFETY 0021
	60260100	INLETS TO BE ADJUSTED	EACH	22	22	
	60265700	VALVE VAULTS TO BE ADJUSTED	EACH	1	1	
	60266600	VALVE BOXES TO BE ADJUSTED	EACH	11	11	
	67100100	MOBILIZATION	LSUM	1	1	
	70102620	TRAFFIC CONTROL AND PROTECTION, STANDARD 701501	LSUM	1	1	
	70102635	TRAFFIC CONTROL AND PROTECTION, STANDARD 701701	LSUM	1	1	
	70102640	TRAFFIC CONTROL AND PROTECTION, STANDARD 701801	LSUM	1	1	
*	78000400	THERMOPLASTIC PAVEMENT MARKING - LINE 6"	FOOT	150		150
*	78000650	THERMOPLASTIC PAVEMENT MARKING - LINE 24"	FOOT	30		30
*	88600600	DETECTOR LOOP REPLACEMENT	FOOT	290		290
	Z0004522	HOT-MIX ASPHALT DRIVEWAY PAVEMENT, 6"	SQ YD	60	60	
	X6061815	COMBINATION CONCRETE CURB AND GUTTER, TYPE M (SPECIAL)	FOOT	2500	2500	

* – INDICATES SPECIALTY ITEMS

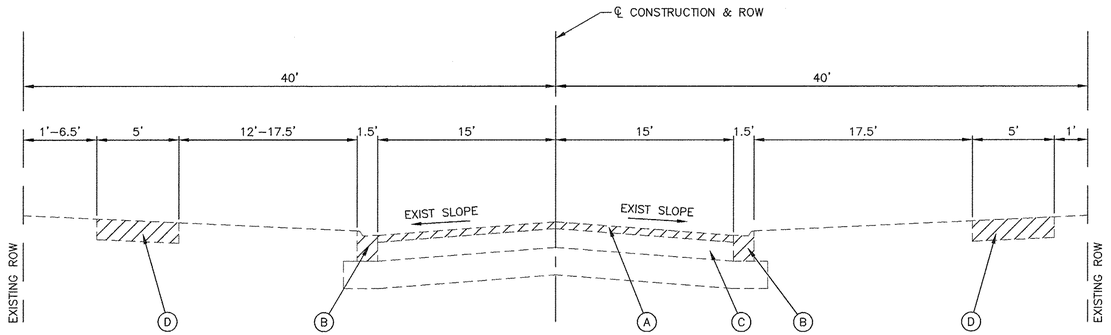
FILE NAME = 16R0607-QUAN-01 - IDOT P01	USER NAME =	DESIGNED – SK	REVISED –
		CHECKED – ----	REVISED –
	PLOT SCALE =	DRAWN – KWM	REVISED –
	PLOT DATE = 03-17-17	CHECKED – AG	REVISED –

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

FAU 1714 (163RD STREET)
ROADWAY RESURFACING
SUMMARY OF QUANTITIES

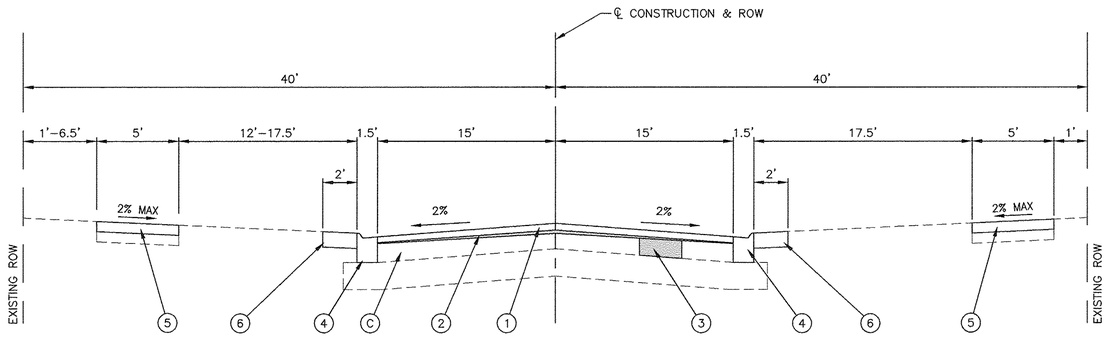
SCALE: NONE | SHEET NO. 03 OF 13 SHEETS | STA. | TO STA.

F.A.U RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
1714	16-00047-00-RS	COOK	13	03
		CONTRACT NO. 61D88		
FED. ROAD DIST. NO. 1	ILLINOIS	FED. AID PROJECT		



EXISTING TYPICAL SECTION

163RD STREET
DIXIE HIGHWAY TO SOUTH PARK AVENUE



PROPOSED TYPICAL SECTION

163RD STREET
DIXIE HIGHWAY TO SOUTH PARK AVENUE

NOTES:

1. PATCHING SHALL BE DONE AFTER MILLING THE PAVEMENT.
2. A MINIMUM OF TWO INCHES (2") OF HMA PAVEMENT SHALL REMAIN AFTER MILLING.

EXISTING LEGEND

- (A) HOT MIX ASPHALT SURFACE REMOVAL, 2"
- (B) EXISTING CURB & GUTTER, REMOVAL AT LOCATIONS SHOWN ON PLANS OR DIRECTED BY ENGINEER
- (C) EXISTING HOT–MIX ASPHALT PAVEMENT, ±4"
- (D) 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", N50, 1 1/2"
- (2) POLYMERIZED LEVELING BINDER (MACHINE METHOD), IL–4.75, N50, 3/4"
- (3) CLASS D PATCH, 6", AT LOCATIONS SHOWN ON PLANS OR DIRECTED BY ENGINEER
- (4) PROPOSED CURB AND GUTTER, TYPE M (SPECIAL), TO BE INSTALLED AT LOCATIONS SHOWN ON PLAN OR DIRECTED BY ENGINEER (IN KIND)
- (5) PROPOSED PORTLAND CEMENT CONCRETE SIDEWALK 5" (REPLACEMENT AT LOCATIONS DIRECTED BY THE ENGINEER)
- (6) TOPSOIL FURNISH AND PLACE, 4" AND SEEDING, CLASS 2A AS INDICATED ON THE PLANS OR AS DIRECTED BY THE ENGINEER

HOT-MIX ASPHALT MIXTURE REQUIREMENTS

(CONTRACTOR SHALL MILL BEFORE PATCHING)

MIXTURE TYPE	AIR VOIDS @ Ndes
ROADWAY RESURFACING	
HOT–MIX ASPHALT SURFACE COURSE, N50, 1–1/2"	4% @ 50 Gyr.
POLYMERIZED LEVELING BINDER (MACHINE METHOD), IL–4.75, N50, 3/4"	3.5% @ 50 Gyr.
PATCHING	
CLASS D PATCHES, (HMA BINDER IL–19.0mm): 6" (IN 2 LIFTS)	4% @ 70 Gyr.
HOT–MIX ASPHALT DRIVEWAY PAVEMENT, 6"	
HOT–MIX ASPHALT SURFACE COURSE, MIX "D", N50, (IL 9.5 MM), 2"	4% @ 50 Gyr.
HOT–MIX ASPHALT BINDER COURSE, IL–19.0, N50; PE–4"	4% @ 50 Gyr.

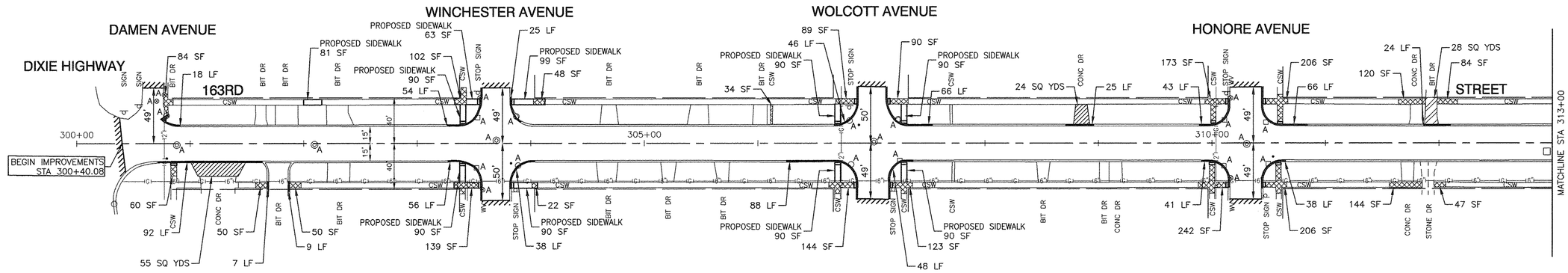
THE UNIT WEIGHT USED TO CALCULATE ALL HMA SURFACE MIXTURE QUANTITIES IS 112 LBS/SY/IN.

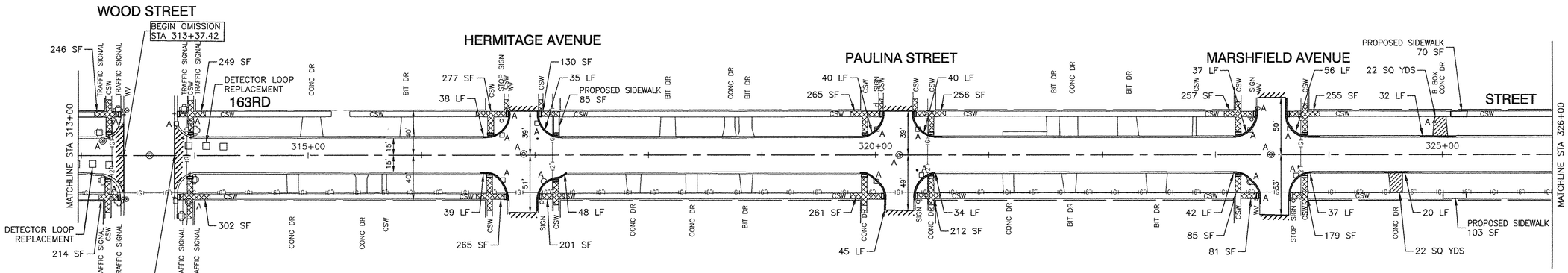
THE "AC TYPE" FOR POLYMERIZED HMA MIXES SHALL BE "SBS/SBR PG 76–22" AND FOR NON–POLYMERIZED HMA THE "AC TYPE" SHALL BE "PG 64–22" UNLESS MODIFIED BY DISTRICT ONE SPECIAL PROVISIONS, FOR USE OF RECYCLED MATERIALS SEE SPECIAL PROVISIONS.

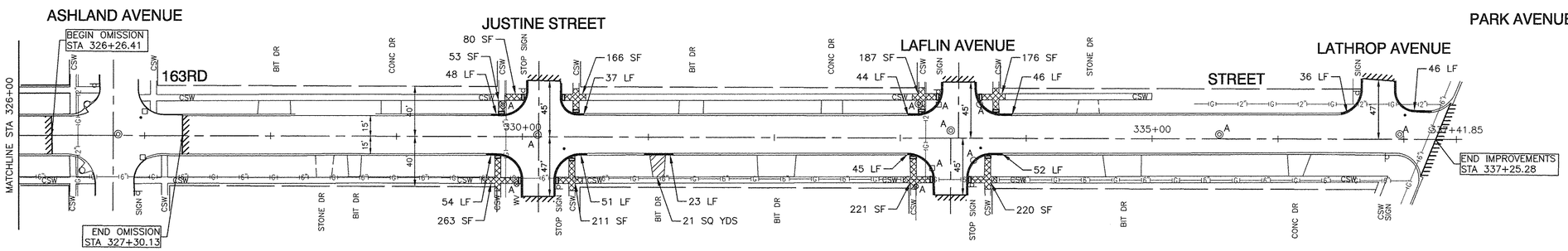
FILE NAME = 16R0607-TYPX-01 - IDOT P01	USER NAME =	DESIGNED – SK	REVISED –	STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION	FAU 1714 (163RD STREET) ROADWAY RESURFACING TYPICAL CROSS SECTIONS & GENERAL NOTES			F.A.U RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
		CHECKED – ----	REVISED –					1714	16-00047-00-RS	COOK	13	04
	PLOT SCALE =	DRAWN – RG	REVISED –							CONTRACT NO. 61D88		
PLOT DATE = 03-17-17		CHECKED – LTL	REVISED –		SCALE: NONE	SHEET NO. 04 OF 13 SHEETS	STA. TO STA.	FED. ROAD DIST. NO. 1	ILLINOIS	FED. AID PROJECT		

PLOT SAVED BY: SKAMINSKY ON 6/9/17
PLOTTED BY: KEVIN SULLIVAN ON 6/9/17

SECTION 19, TOWNSHIP 36, RANGE 14







N

NOTE

AGGREGATE BASE COURSE, TYPE B, 4" SHALL BE USED AT PROPOSED SIDEWALK AND AS DIRECTED BY THE ENGINEER TO REPAIR THE DRIVEWAY PAVEMENT BASE.

LEGEND

- CONCRETE SIDEWALK REMOVAL AND REPLACEMENT
- CONCRETE DRIVEWAY REMOVAL AND REPLACEMENT
- HMA DRIVEWAY REMOVAL AND REPLACEMENT
- DETECTABLE WARNINGS
- BUTT JOINTS
- COMBINATION CONCRETE CURB AND GUTTER REMOVAL AND REPLACEMENT
- "A" STRUCTURE TO BE ADJUSTED
- DETECTOR LOOP TO BE REPLACED

FILE NAME = 16R0607-PLAN-01 - IDOT P01	USER NAME =	DESIGNED — SK	REVISED —
		CHECKED — ----	REVISED —
	PLOT SCALE =	DRAWN — ACAD	REVISED —
	PLOT DATE = 03-17-17	CHECKED — ACAD	REVISED —

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

DIXIE HIGHWAY TO SOUTH PARK AVENUE
163RD STREET
PAVEMENT PLAN

SCALE: | SHEET NO. 05 OF 13 SHEETS | STA. | TO STA.

F.A.U RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
1714	16-00047-00-RS	COOK	13	05
		CONTRACT NO. 61D88		
FED. ROAD DIST. NO. 1	ILLINOIS	FED. AID PROJECT		

SECTION 19, TOWNSHIP 36, RANGE 14

N

DAMEN AVENUE

DIXIE HIGHWAY

WINCHESTER AVENUE

WOLCOTT AVENUE

HONORE AVENUE

STREET

163RD

BEGIN IMPROVEMENTS STA 300+40.08

300+00

305+00

310+00

MATCHLINE STA 313+00

DETECTOR LOOP REPLACEMENT DETAIL

WOOD STREET

BEGIN OMISSION STA 313+37.42

END OMISSION STA 313+82.15

HERMITAGE AVENUE

PAULINA STREET

MARSHFIELD AVENUE

315+00

320+00

325+00

MATCHLINE STA 326+00

ASHLAND AVENUE

JUSTINE STREET

LAFLIN AVENUE

LATHROP AVENUE

PARK AVENUE

BEGIN OMISSION STA 326+26.41

END OMISSION STA 327+30.13

330+00

335+00

END IMPROVEMENTS STA 337+25.28

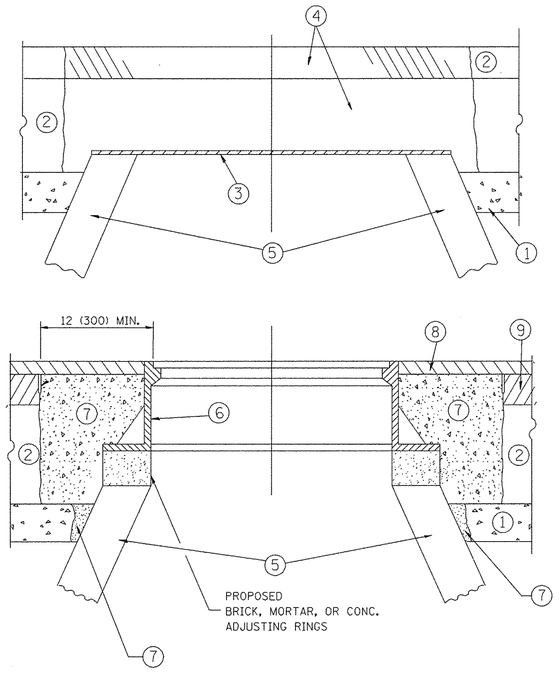
LEGEND

(1) 24" WHITE STOP BAR

(2) 6" WHITE CROSSWALK LINE

FILE NAME = 16R0607-PLAN-01 - IDOT P01 (3)	USER NAME =	DESIGNED — SK	REVISED —	STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION	DIXIE HIGHWAY TO SOUTH PARK AVENUE 163RD STREET PAVEMENT MARKING PLAN
		CHECKED — ----	REVISED —		
	PLOT SCALE =	DRAWN — ACAD	REVISED —		
	PLOT DATE = 03-17-17	CHECKED — ACAD	REVISED —		SCALE: SHEET NO. 06 OF 13 SHEETS STA. TO STA.

F.A.U RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
1714	16-00047-00-RS	COOK	13	06
		CONTRACT NO. 61D88		
FED. ROAD DIST. NO. 1	ILLINOIS	FED. AID PROJECT		



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 1½ (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

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.

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 "FRAMES AND LIDS TO BE ADJUSTED (SPECIAL)."

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.

DETAILS FOR FRAMES AND LIDS ADJUSTMENT WITH MILLING

ALL DIMENSIONS ARE IN INCHES (MILLIMETERS) UNLESS OTHERWISE SHOWN

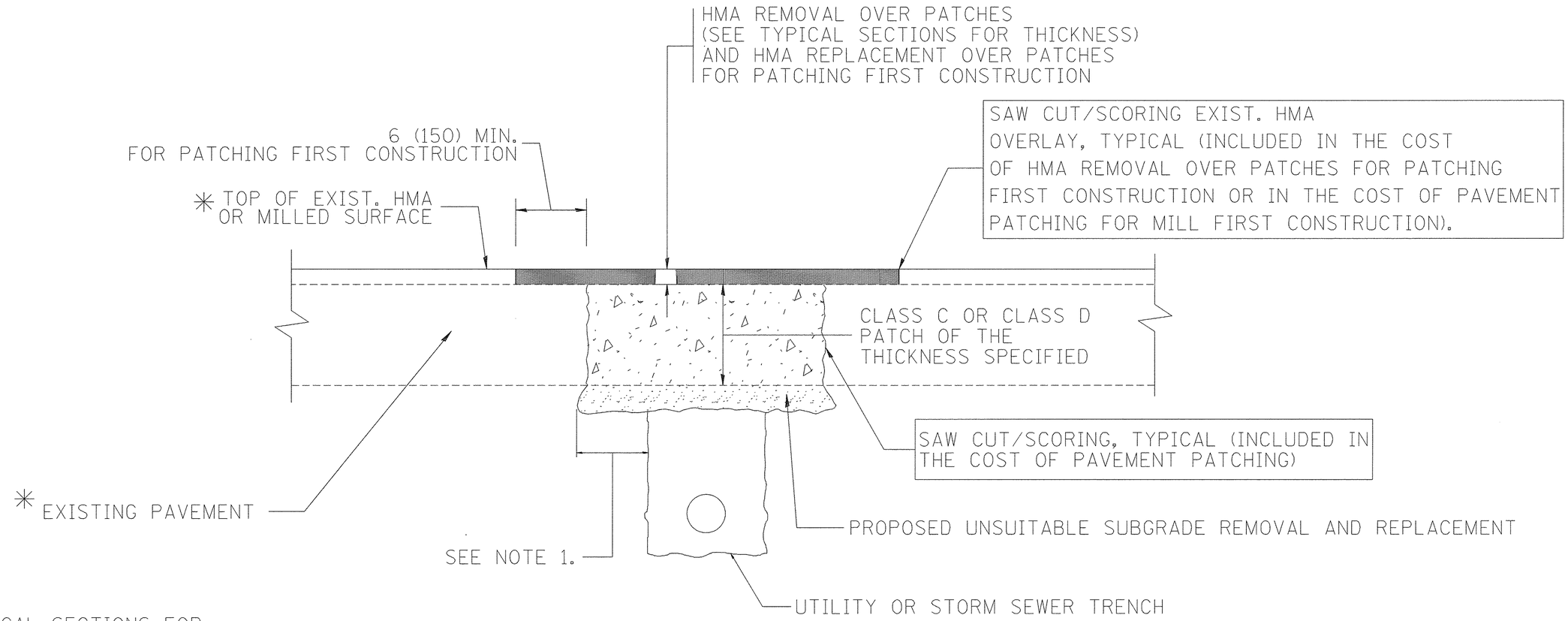
FILE NAME = 16R0607-DTLS-01 - BD08	USER NAME = bauerdl	DESIGNED — R. SHAH	REVISED — R. WIEDEMAN 05-14-04
		CHECKED —	REVISED — R. BORO 01-01-07
	PLOT SCALE = 1968.5000 ' / m	DRAWN —	REVISED — R. BORO 03-09-11
	PLOT DATE = 12/6/2011	CHECKED — 10-25-94	REVISED — R. BORO 12-06-11

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

DETAILS FOR
FRAMES AND LIDS ADJUSTMENT WITH MILLING

SCALE: NONE | SHEET NO. 07 OF 13 SHEETS | STA. | TO STA.

F.A.U RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
1714	16-00047-00-RS	COOK	13	07
	BD600-03 (BD-8)	CONTRACT NO. 61D88		
FED. ROAD DIST. NO. 1	ILLINOIS	FED. AID PROJECT		



* 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)

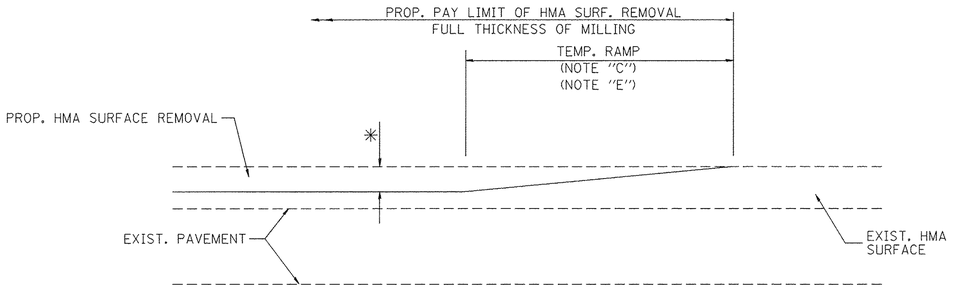
1. REMOVE THE EXISTING HMA MATERIAL OVER THE AREA TO BE PATCHED.
2. REMOVE AND REPLACE WITH CLASS C OR D PATCH.
3. REPLACE HMA MATERIAL OVER THE AREA TO BE PATCHED.

SEQUENCE OF CONSTRUCTION (MILLING FIRST)

1. MILL HMA FIRST IF THERE IS AT LEAST $4\frac{1}{2}$ 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.

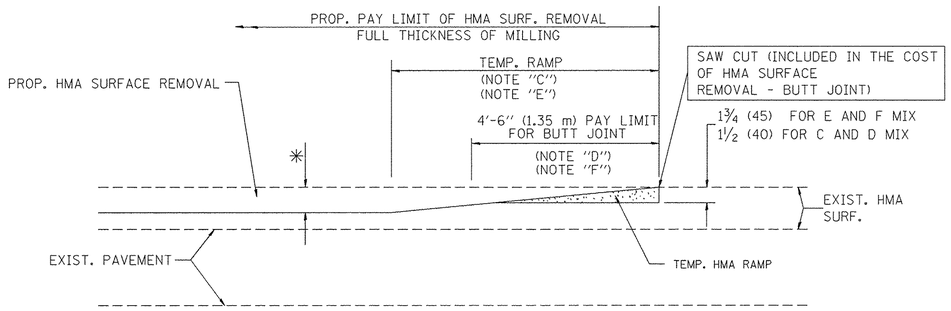
FILE NAME = 16R0607-DTLS-01 - BD22	USER NAME = bauerdl	DESIGNED — R. SHAH	REVISED — A. ABBAS 04-27-98	STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION	PAVEMENT PATCHING FOR HMA SURFACED PAVEMENT			F.A.U RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
		CHECKED —	REVISED — R. BORO 01-01-07					1714	16-00047-00-RS	COOK	13	08
	PLOT SCALE = 50.000 ' / IN.	DRAWN —	REVISED — R. BORO 09-04-07						BD400-04 (BD-22)		CONTRACT NO. 61D88	
	PLOT DATE = 10/27/2008	CHECKED — 10-25-94	REVISED — K. ENG 10-27-08		SCALE: NONE	SHEET NO. 08 OF 13 SHEETS	STA. TO STA.	FED. ROAD DIST. NO. 1	ILLINOIS	FED. AID PROJECT		



MILLED TEMPORARY RAMP

(FOR BUTT JOINT AND HMA TAPER SEE DETAIL BELOW)

OPTION 1

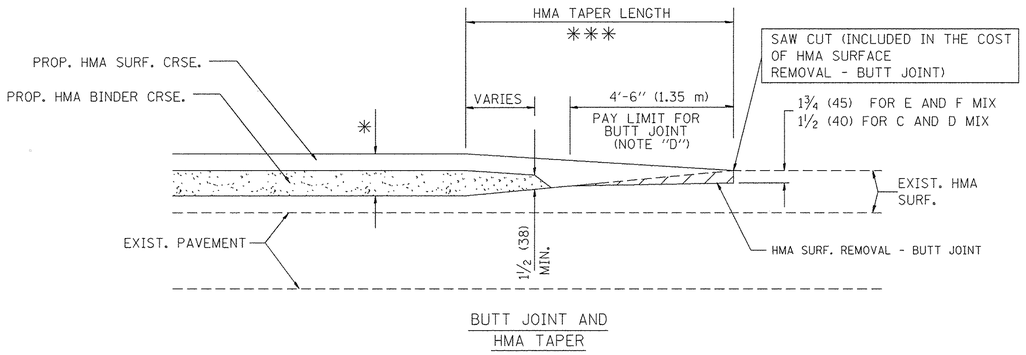


HMA CONSTRUCTED TEMPORARY RAMP

(FOR BUTT JOINT AND HMA TAPER SEE DETAIL BELOW)

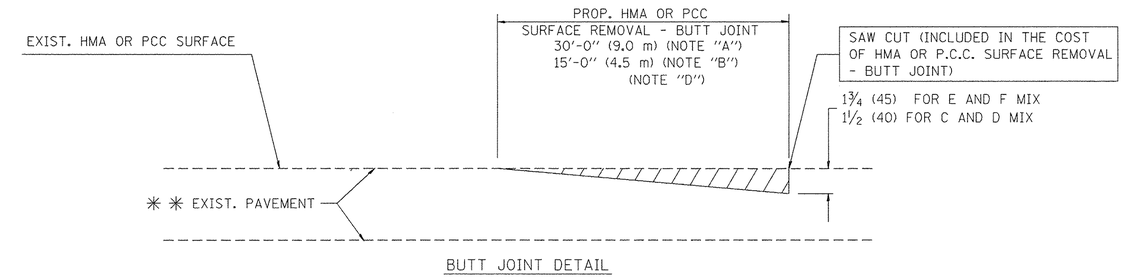
OPTION 2

TYPICAL TEMPORARY RAMP

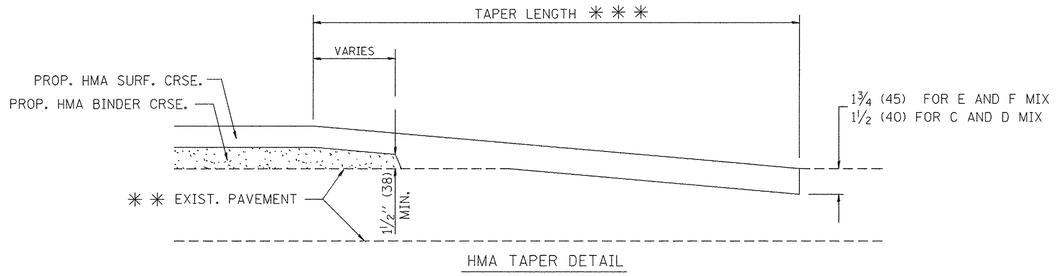


BUTT JOINT AND HMA TAPER

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")

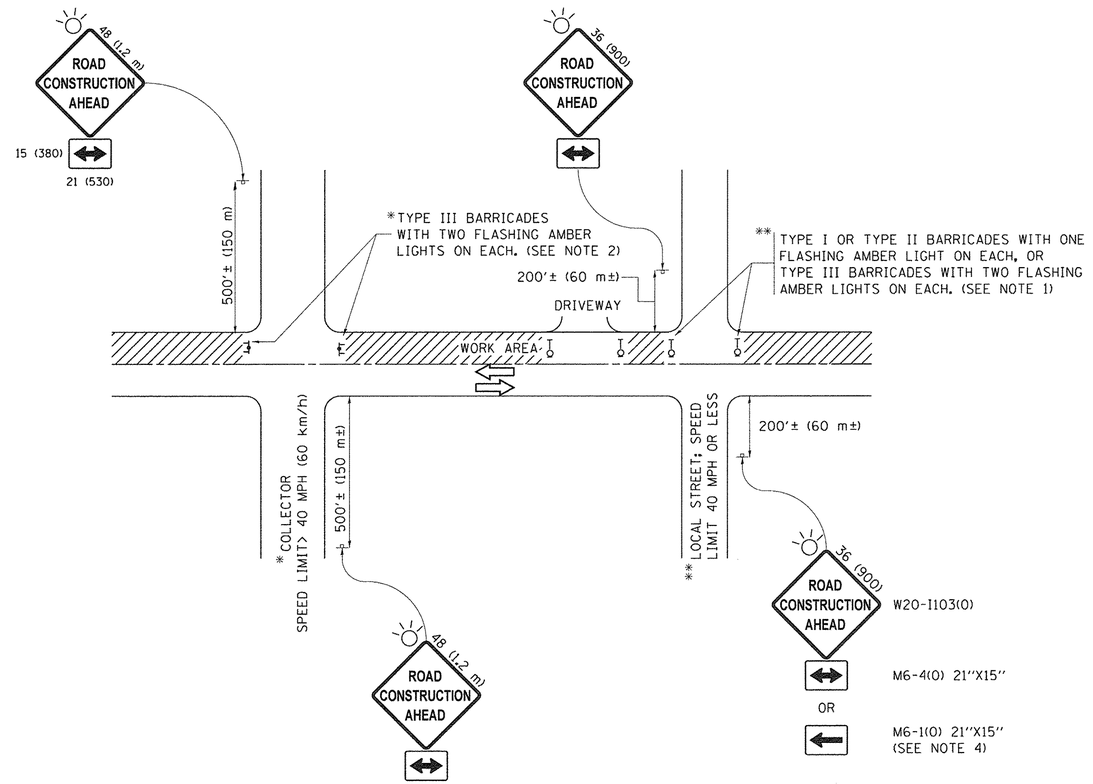
BASIS OF PAYMENT:

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 = 16R0607-DTLS-01 - BD32	USER NAME = gaglianobt	DESIGNED — M. DE YONG	REVISED — R. SHAH 10-25-94	STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION	BUTT JOINT AND HMA TAPER DETAILS
		CHECKED —	REVISED — A. ABBAS 03-21-97		
	PLOT SCALE = 50.0000 ' / IN.	DRAWN —	REVISED — M. GOMEZ 04-06-01		
	PLOT DATE = 1/4/2008	CHECKED — 06-13-90	REVISED — R. BORO 01-01-07		SCALE: NONE | SHEET NO. 09 OF 13 SHEETS | STA. | TO STA.

F.A.U RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
1714	16-00047-00-RS	COOK	13	09
	BD400-05 BD32	CONTRACT NO. 61D88		
FED. ROAD DIST. NO. 1	ILLINOIS	FED. AID PROJECT		



NOTES:

1. SIDE ROAD WITH A SPEED LIMIT OF 40 MPH (60 km/h) OR LESS AS SHOWN ON THE DRAWING AND AS DIRECTED BY THE ENGINEER:
   a) ONE "ROAD CONSTRUCTION AHEAD" SIGN 36 x 36 (900x900) WITH A FLASHER MOUNTED ON IT APPROXIMATELY 200' (60 m) IN ADVANCE OF THE MAIN ROUTE.
   b) THE CLOSED PORTION OF THE MAIN ROUTE SHALL BE PROTECTED BY BLOCKING WITH TYPE I, TYPE II OR TYPE III BARRICADES, 1/3 OF THE CROSS SECTION OF THE CLOSED PORTION.
2. SIDE ROAD WITH A SPEED LIMIT GREATER THAN 40 MPH (60 km/h) AS SHOWN ON THE DRAWING AND AS DIRECTED BY THE ENGINEER:
   a) ONE "ROAD CONSTRUCTION AHEAD" SIGN 48 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.
   b) THE CLOSED PORTION OF THE MAIN ROUTE SHALL BE PROTECTED BY BLOCKING WITH TYPE III BARRICADES, 1/2 OF THE CROSS SECTION OF THE CLOSED PORTION.
3. 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.
4. 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).
5. WHEN WORK IS BEING PERFORMED ON A SIDE ROAD OR DRIVEWAY, FOLLOW THE APPLICABLE STANDARD(S). THE DIRECTIONAL ARROW (M6-1 OR M6-4) SHALL BE COVERED OR REMOVED WHEN NO LONGER CONSISTENT WITH THE TRAFFIC CONTROL SET-UP.
6. ADVANCE WARNING SIGNS ARE TO BE OMITTED ON DRIVEWAYS UNLESS OTHERWISE SPECIFIED IN THE PLANS OR BY THE ENGINEER.
7. THE TRAFFIC CONTROL AND PROTECTION FOR SIDE ROADS, INTERSECTIONS, AND DRIVEWAYS SHALL BE INCLUDED IN THE COST OF SPECIFIED TRAFFIC CONTROL STANDARDS OR ITEMS.

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

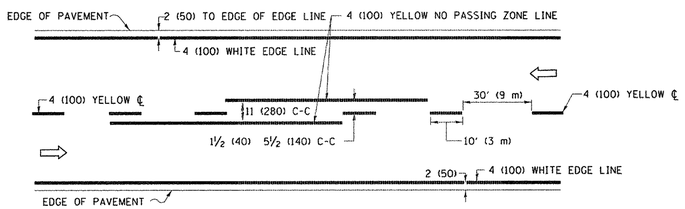
FILE NAME = 16R0607-DTLS-01 - TC10	USER NAME = footemj	DESIGNED — L.H.A.	REVISED — A. HOUSEH 10-15-96
	'ices\District 1\Projects\D1	CHECKED — \CADsheets\tc10.dgn	REVISED —. RAMMACHER 01-06-00
	PLOT SCALE = 50.000 '/ in.	DRAWN —	REVISED — A. SCHUETZE 07-01-13
	PLOT DATE = 9/15/2016	CHECKED — 06-89	REVISED — A. SCHUETZE 09-15-16

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

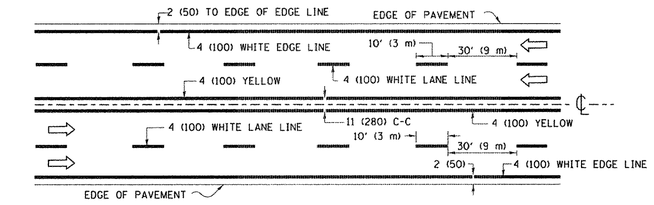
TRAFFIC CONTROL AND PROTECTION FOR SIDE ROADS, INTERSECTIONS, AND DRIVEWAYS

SCALE: NONE | SHEET NO. 10 OF 13 SHEETS | STA. | TO STA.

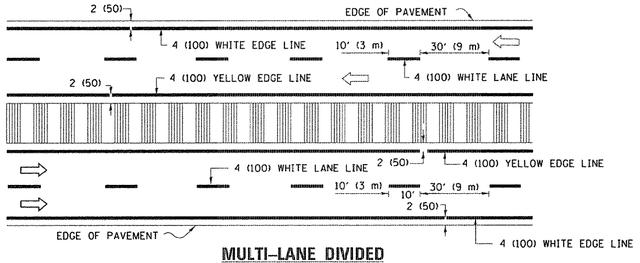
F.A.U RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
1714	16-00047-00-RS	COOK	13	10
	TC-10	CONTRACT NO. 61D88		
FED. ROAD DIST. NO. 1	ILLINOIS	FED. AID PROJECT		



2–LANE ROADWAY

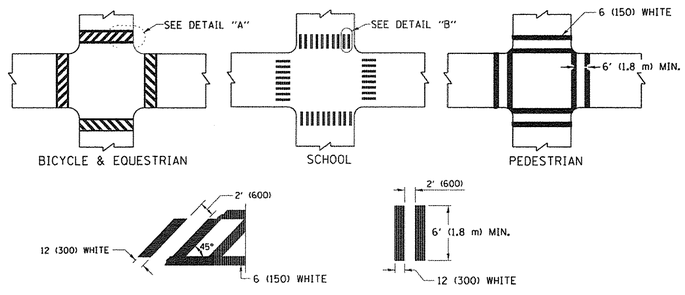


MULTI–LANE UNDIVIDED



MULTI–LANE DIVIDED
WITH MEDIAN

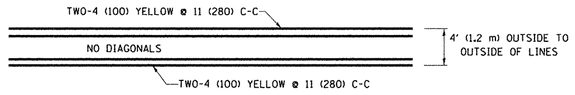
TYPICAL LANE AND EDGE LINE MARKING



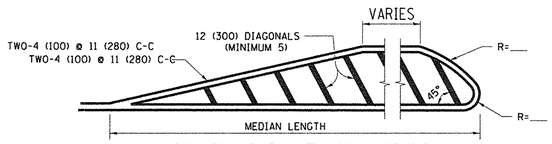
DETAIL "A" **DETAIL "B"**

TYPICAL CROSSWALK MARKING

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



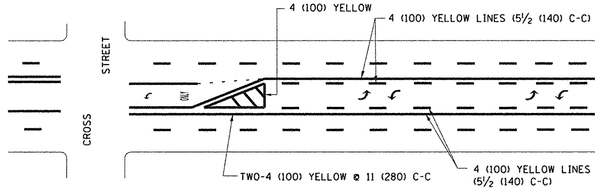
4' (1.2 m) WIDE MEDIANS ONLY



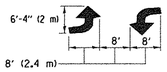
FOR MEDIAN LENGTHS WHERE DIAGONAL SPACING CANNOT BE ATTAINED, USE 5 (FIVE) EQUALLY SPACED DIAGONAL LINES.

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

MEDIANS OVER 4' (1.2 m) WIDE

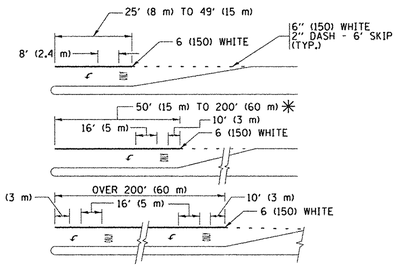


A MINIMUM OF TWO PAIRS OF TURN ARROWS SHALL BE USED. WHITE IN COLOR. ADDITIONAL PAIRS SHALL BE PLACED AT 200' (60 m) TO 300' (90 m) INTERVALS.



MEDIAN WITH TWO–WAY LEFT TURN LANE

TYPICAL PAINTED MEDIAN MARKING

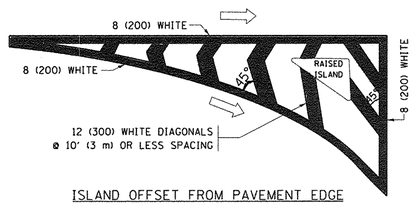


FULL SIZE LETTERS 8' (2.4 m) AND ARROWS SHALL BE USED.
↰ AREA = 15.6 SQ. FT. (1.5 m^2) **ONLY** AREA = 20.8 SQ. FT. (1.9 m^2)

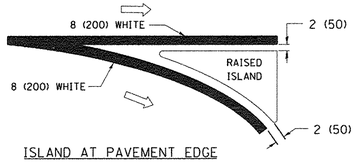
✳ TURN LANES IN EXCESS OF 400' (120 m) IN LENGTH MAY HAVE AN ADDITIONAL SET OF ARROW - "ONLY" INSTALLED MIDWAY BETWEEN THE OTHER TWO SETS OF ARROW - "ONLY".

TYPICAL LEFT (OR RIGHT) TURN LANE

TYPICAL TURN LANE MARKING

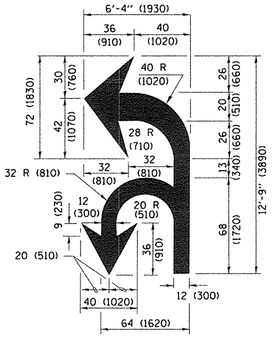


ISLAND OFFSET FROM PAVEMENT EDGE

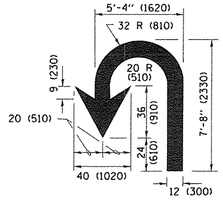


ISLAND AT PAVEMENT EDGE

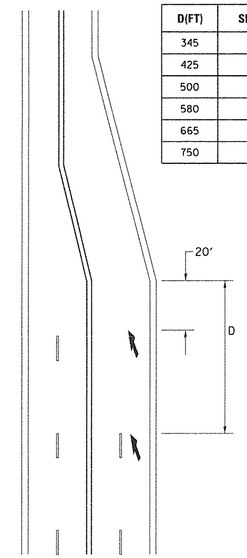
TYPICAL ISLAND MARKING



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 FOR BOTH DIRECTIONS	4 (100) 2 ⌀ 4 (100)	SOLID SOLID	YELLOW YELLOW	5½ (140) C-C FROM SKIP-DASH CENTERLINE 11 (280) C-C OMIT SKIP-DASH CENTERLINE BETWEEN
LANE LINES	4 (100) 5 (125) ON FREEWAYS	SKIP-DASH SKIP-DASH	WHITE WHITE	10' (3 m) LINE WITH 30' (9 m) SPACE
DOTTED LINES (EXTENSIONS OF CENTER, LANE OR TURN LANE MARKINGS)	SAME AS LINE BEING EXTENDED	SKIP-DASH	SAME AS LINE BEING EXTENDED	2' (600) LINE WITH 6' (1.8 m) SPACE
EDGE LINES	4 (100)	SOLID	YELLOW-LEFT WHITE-RIGHT	OUTLINE 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; 5½ (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^2) EACH "X"=54.0 SQ. FT. (5.0 m^2)
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 = 16R0607-DTLS-01 - TC13

USER NAME = footemj	DESIGNED — EVERS	REVISED — C. JUCIUS 09-09-09	
'fices\District 1\Projects\D	CHECKED —.CADsheets\tc13.dgn	REVISED — C. JUCIUS 07-01-13	
PLOT SCALE = 50.200 '/ in.	DRAWN —	REVISED — C. JUCIUS 12-21-15	
PLOT DATE = 4/13/2016	CHECKED — 03-19-90	REVISED — C. JUCIUS 04-12-16	

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

DISTRICT ONE
TYPICAL PAVEMENT MARKINGS

SCALE: NONE | SHEET NO. 11 OF 13 SHEETS | STA. | TO STA.

F.A.U RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
1714	16-00047-00-RS	COOK	13	11
	TC–13	CONTRACT NO. 61D88		
FED. ROAD DIST. NO. 1	ILLINOIS	FED. AID PROJECT		

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.

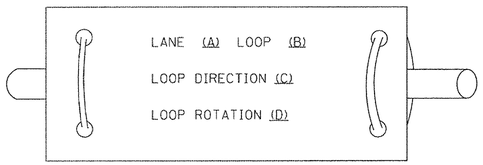
4. ALL LOOP CABLE SHALL BE FASTENED WITH PLASTIC TIE WRAP TO THE HANDHOLE HOOKS.

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

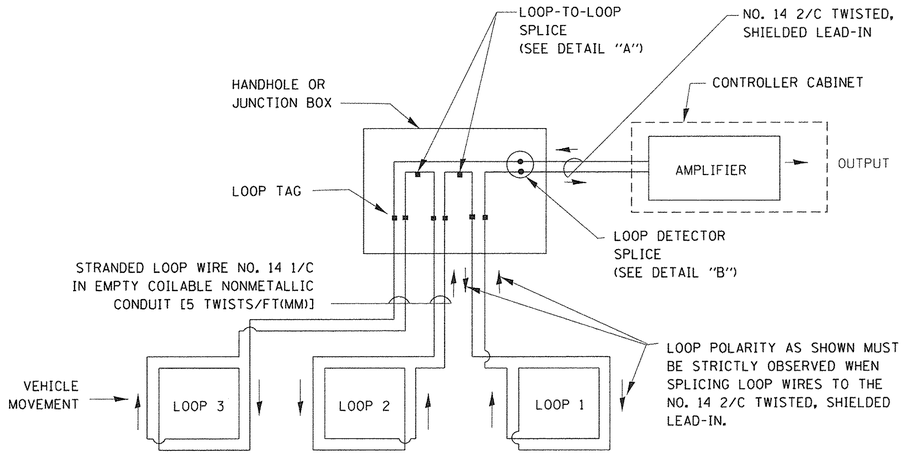


A. LANE 1 IS THE LANE CLOSEST TO THE CENTERLINE OF THE ROADWAY

B. LOOP #1 IS THE LOOP IN THE LANE CLOSEST TO THE INTERSECTION.

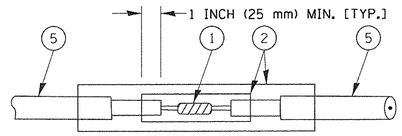
C. LABEL LOOP CABLE "IN" OR LOOP CABLE "OUT".

D. LABEL LOOP CABLE CLOCKWISE OR LOOP CABLE COUNTERCLOCKWISE.

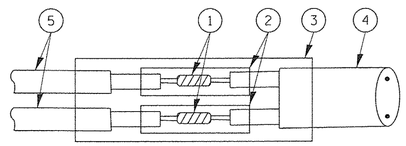


DETECTOR LOOP WIRING SCHEMATIC

- 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.

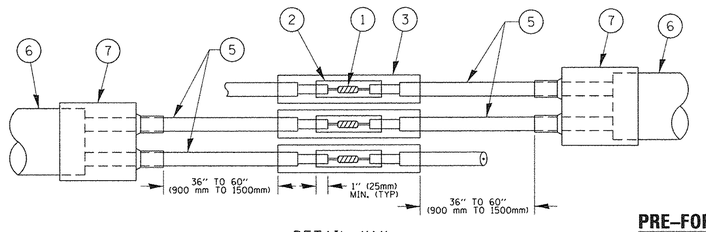


DETAIL "A"
LOOP-TO-LOOP SPLICE



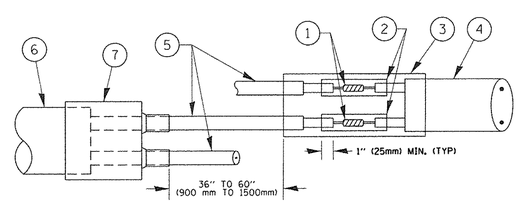
DETAIL "B"
LOOP-TO-CONTROLLER SPLICE

TYPE I LOOP



DETAIL "A"
LOOP-TO-LOOP SPLICE

PRE-FORMED LOOP



DETAIL "B"
LOOP-TO-CONTROLLER SPLICE

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 LENGHT 6" (150 mm), UNDERWATER GRADE.

(4) NO. 14 2/C TWISTED, SHIELDED CABLE.

(5) LOOP CONDUCTOR WITH FLEXIBLE PLASTIC TUBE.

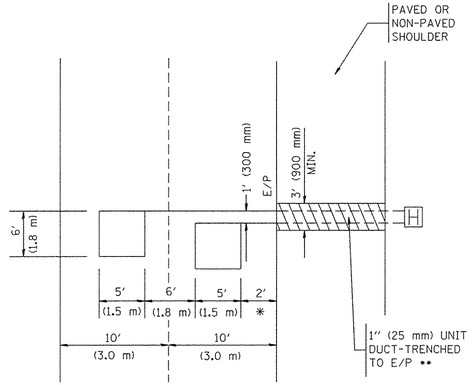
(6) PRE-FORMED LOOP

(7) XL POLYOLEFIN 2 CONDUCTOR BREAKOUT SEALS. TYCO CBR-2 OR APPROVED EQUAL

FILE NAME = 16R0607-DTLS-01 - TS05	USER NAME = Footsmj	DESIGNED —	REVISED — DAG 1-1-14	STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION	DISTRICT ONE STANDARD TRAFFIC SIGNAL DESIGN DETAILS			F.A.U RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
		CHECKED —	REVISED —					1714	16-00047-00-RS	COOK	13	12
	PLOT SCALE = 50.0000 ' / in.	DRAWN —	REVISED —						TS-05	CONTRACT NO. 61D88		
	PLOT DATE = 1/13/2014	CHECKED —	REVISED —		SCALE: NONE	SHEET NO. 12 OF 13 SHEETS	STA. TO STA.	FED. ROAD DIST. NO. 1	ILLINOIS	FED. AID PROJECT		

LOOPS NEXT TO SHOULDERS

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

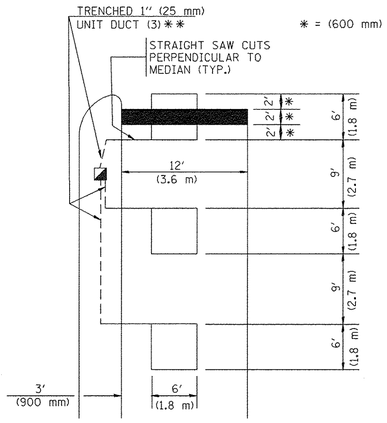


* = (600 mm)

** 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)

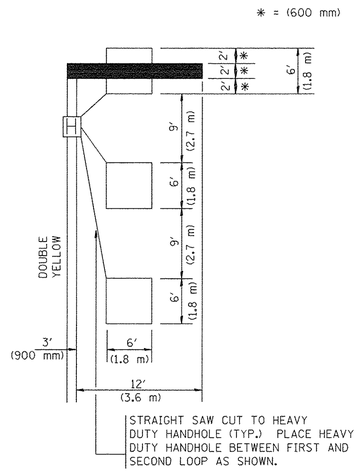
HANDHOLE LOCATION MAY VARY DEPENDING ON GEOMETRICS AND DESIGN OF TRAFFIC SIGNALS. HEAVY-DUTY HANDHOLES TO BE USED WHEN THE MEDIAN IS MOUNTABLE. REFER TO STANDARD 814001 TO ENSURE THAT HANDHOLE FITS IN MEDIAN.



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

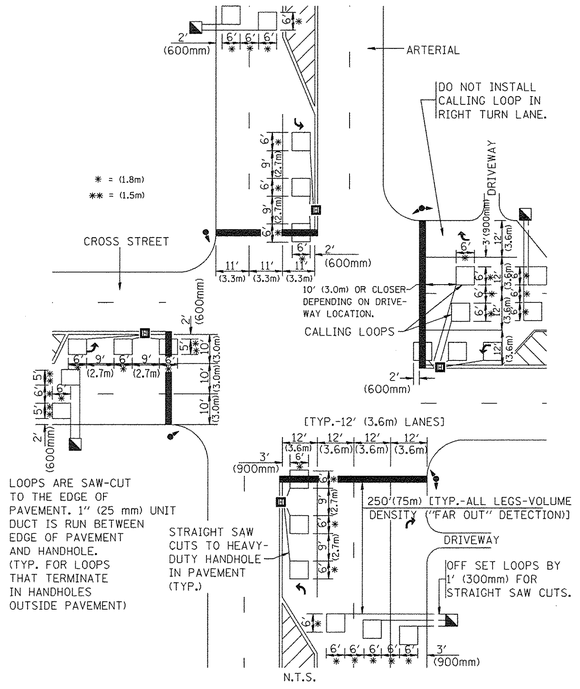
NOTE: DUAL LEFT TURNS NOT SHOWN REFER TO PLAN SHEET FOR DETECTOR LOOP REPLACEMENT

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



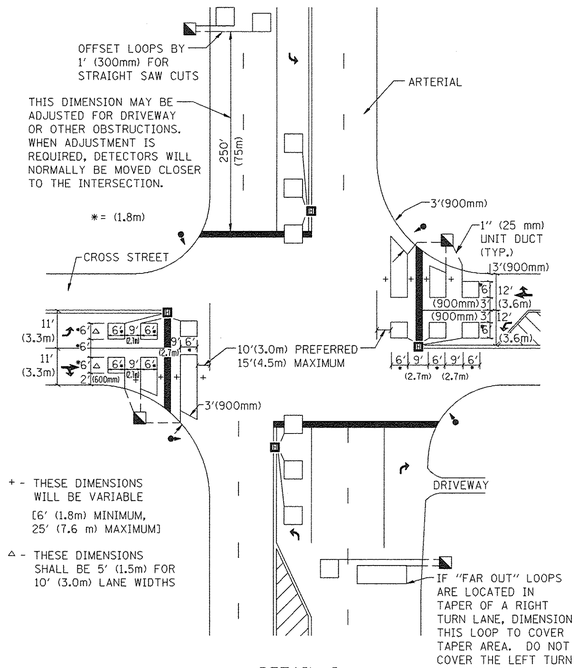
NOTE: DUAL LEFT TURNS NOT SHOWN REFER TO PLAN SHEET FOR DETECTOR LOOP REPLACEMENT

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.

NOTES:

VEHICLES LOOP DETECTORS

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

PLACEMENT OF DETECTORS

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

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

"FAR OUT" DETECTION REFERS TO LOCKING, PRESENCE TYPE DETECTION LOCATED IN THRU LANES, RIGHT TURN LANES, AND RIGHT TURN LANE TAPER AREAS (IF APPLICABLE), USUALLY 250' (75 m) IN ADVANCE OF STOP BARS. "UPTIGHT" DETECTION REFERS TO NON-LOCKING PRESENCE TYPE DETECTION LOCATED IN ALL LANES AND 10'-15' (3.0 m-4.5 m) BEHIND THE CROSSING STREET'S EDGE OF 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 = 16R0607-DTLS-01 - TS07	USER NAME = gaglianobt	DESIGNED —	REVISED —
		CHECKED —	REVISED —
	PLOT SCALE = 50.0000 ' / IN.	DRAWN —	REVISED —
	PLOT DATE = 1/4/2008	CHECKED —	REVISED —

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

DISTRICT 1 – DETECTOR LOOP INSTALLATION DETAILS FOR ROADWAY RESURFACING

SCALE: NONE | SHEET NO. 13 OF 13 SHEETS | STA. | TO STA.

F.A.U RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
1714	16-00047-00-RS	COOK	13	13
	TS-07	CONTRACT NO. 61D88		
FED. ROAD DIST. NO. 1	ILLINOIS	FED. AID PROJECT		