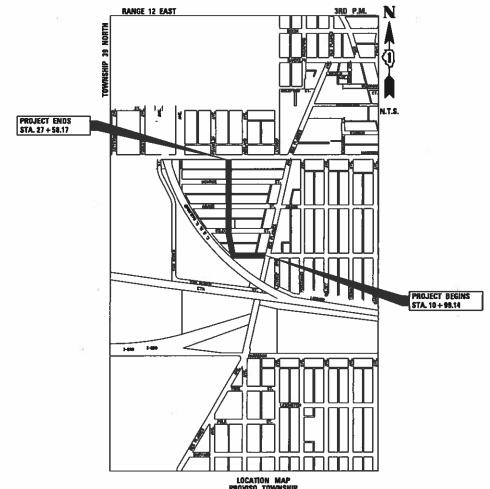
04-29-2022 LETTING ITEM 091

### STATE OF ILLINOIS

**DEPARTMENT OF TRANSPORTATION** 

# PROPOSED PLANS FOR FEDERAL AID HIGHWAY

FAU ROUTE 1462 (JACKSON BOULEVARD) DES PLAINES AVE. TO MADISON ST. **RESURFACING** 



GROSS LENGTH = 1659.03 FT. = 0.314 MILE NET LENGTH = 1659.03 FT. = 0.314 MILE

CHRISTOPHER B. BURKE ENGINEERING, LTD.

PRINTED BY THE AUTHORITY OF THE STATE OF ILLINOIS

LOCATION OF SECTION INDICATED THUS: - -

FEBRUARY 3

ILLINOIS REGISTRATION No. 062-060779 EXPIRATION DATE: II/30/23

JAMES F. AMELIO

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

MOSES AMIDEI

Myss Amda 2/3/2022

VILLAGE OF FOREST PARK, VILLAGE ADMINISTRATO

COUNTY TOTAL SHEET NO.

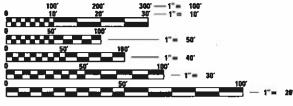
COOK 28 1

SECTION

20-00116-00-RS

FOR INDEX OF SHEETS, SEE SHEET NO. 2

DESIGN DESIGNATION = MAJOR COLLECTOR ADT = 5,900 VPD (2018)
POSTED SPEED LIMIT = 25 MPH



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. 61H38

**SECTION NO.: 20-00116-00-RS** PROJECT NO.: PKQ9(260) VILLAGE OF FOREST PARK **COOK COUNTY** JOB NO. C-91-094-21

PROFESSIONAL DESIGN FIRM NO.: 184-001175 EXPIRATION DATE: APRIL 30, 2023

AID

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### **GENERAL NOTES**

### INDEX OF SHEETS

SHEET NO.	<b>DESCRIPTION</b> COVER SHEET
2	INDEX OF SHEETS, HIGHWAY STANDARDS, AND GENERAL NOTES
3-6	SUMMARY OF QUANTITIES
7	TYPICAL SECTIONS
8-9	EXISTING CONDITIONS AND REMOVAL PLAN
10-11	PROPOSED PLAN
12	EXISTING SIGNAL PLAN – MADISON AT JACKSON
13	DETAIL FOR STRUCTURES TO BE RECONSTRUCTED
14	DETAILS FOR FRAMES AND LIDS ADJUSTMENT WITH MILLING (BD-8)
15	PAVEMENT PATCHING FOR HMA SURFACED PAVEMENT (BD-22)
16	BUTT JOINT AND HMA TAPER DETAILS (BD-32)
17	TRAFFIC CONTROL AND PROTECTION FOR SIDE ROADS, INTERSECTIONS, AND DRIVEWAYS (TC-10)
18	DISTRICT ONE TYPICAL PAVEMENT MARKINGS (TC-13)
19	PAVEMENT MARKING LETTERS AND SYMBOLS FOR TRAFFIC STAGING (TC-16)
20	ARTERIAL ROAD INFORMATION SIGN (TC-22)
21-27	DISTRICT ONE STANDARD TRAFFIC SIGNAL DESIGN DETAILS (TS-05)
28	DISTRICT 1 – DETECTOR LOOP INSTALLATION DETAIL FOR ROADWAY RESURFACING (TS-07)

### **HIGHWAY STANDARDS**

000001-08	STANDARD SYMBOLS, ABBREVIATIONS, AND PATTERNS
442201-03	CLASS C AND D PATCHES
604001-05	FRAME AND LIDS TYPE 1
701006-05	OFF ROAD 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
701901-08	TRAFFIC CONTROL DEVICES
720011-01	METAL POSTS FOR SIGNS, MARKERS & DELINEATORS
729001-01	APPLICATIONS OF TYPES A&B METAL POSTS (FOR SIGNS & MARKERS)
780001-05	TYPICAL PAVEMENT MARKINGS

### SPECIFICATIONS, STANDARDS AND SPECIAL PROVISIONS

ALL CONSTRUCTION SHALL BE DONE IN ACCORDANCE WITH THE "STANDARD SPECIFICATIONS FOR ROAD AND BRIDGE CONSTRUCTION", ADOPTED JANUARY 1, 2022; THE "SUPPLEMENTAL SPECIFICATIONS AND RECURRING SPECIAL PROVISIONS", ADOPTED JANUARY 1, 2022; THE LATEST EDITIONS OF THE "ILLINOIS MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES FOR STREETS AND HIGHWAYS" (IMUTCD) AND "THE STANDARD SPECIFICATIONS FOR WATER AND SEWER MAIN CONSTRUCTION IN ILLINOIS"; THE "DETAILS" IN THE PLANS; AND THE "SPECIAL PROVISIONS" INCLUDED IN THE CONTRACT DOCUMENTS.

ANY REFERENCE TO STANDARDS THROUGHOUT THE PLANS OR SPECIAL PROVISIONS SHALL BE INTERPRETED AS THE LATEST IDOT STANDARD.

### **UTILITIES**

THE CONTRACTOR SHALL COOPERATE WITH THE VILLAGE OF FOREST PARK IN UNDERGROUND UTILITY CONSTRUCTION WHICH THE VILLAGE MAY WANT TO PLACE DURING THE CONTRACTOR'S OPERATIONS.

THE CONTRACTOR SHALL BE RESPONSIBLE FOR CONTACTING THE OWNERS OF ALL EXISTING FACILITIES SO THAT THE UTILITIES AND THEIR APPURTENANCES MAY BE LOCATED AND ADJUSTED OR MOVED, IF NECESSARY, PRIOR TO THE START OF CONSTRUCTION OPERATIONS. THE CONTRACTOR SHALL COOPERATE WITH ALL UTILITY OWNERS AS PROVIDED FOR IN THE STANDARD SPECIFICATIONS.

THE LOCATIONS OF EXISTING DRAINAGE STRUCTURES, STORM AND SANITARY SEWERS, WATER SERVICE LINES AND OTHER UTILITY LINES ARE APPROXIMATE, AND THE VILLAGE AND ENGINEER DO NOT GUARANTEE THEIR ACCURACY. THEIR EXACT HORIZONTAL AND VERTICAL LOCATIONS ARE TO BE DETERMINED IN THE FIELD BY THE CONTRACTOR.

THE CONTRACTOR SHALL BE RESPONSIBLE FOR THE PROTECTION OF ALL UNDERGROUND OR SURFACE UTILITIES EVEN THOUGH THEY MAY NOT BE SHOWN ON THE PLANS. ANY UTILITY THAT IS DAMAGED DURING CONSTRUCTION SHALL BE REPAIRED OR REPLACED TO THE SATISFACTION OF THE ENGINEER.

BEFORE STARTING ANY EXCAVATION, THE CONTRACTOR SHALL CALL "JULIE" AT 8-1-1 FOR FIELD LOCATIONS OF BURIED ELECTRIC, TELEPHONE, GAS AND CABLE TELEVISION FACILITIES (48 HOURS NOTIFICATION IS REQUIRED).

THE CONTRACTOR SHALL CONTACT IDOT'S BUREAU OF MATERIALS (PHONE 847-705-4337) AT LEAST 24 HOURS BEFORE PLACING HOT MIX ASPHALT OR PORTLAND CEMENT CONCRETE.

### <u>STAKING</u>

THE CONTRACTOR SHALL PROTECT AND CAREFULLY PRESERVE ALL SECTION OR SUBSECTION MONUMENTS OR PROPERTY OR REFERENCE MARKERS UNTIL THE VILLAGE, ITS AGENT OR AN AUTHORIZED SURVEYOR HAS WITNESSED OR OTHERWISE REFERENCED THEIR LOCATIONS.

### WATER, STORM SEWER AND SANITARY SEWER

WHENEVER DURING CONSTRUCTION OPERATIONS ANY LOOSE MATERIAL IS DEPOSITED IN THE FLOW LINE OF DRAINAGE STRUCTURES SUCH THAT THE NATURAL FLOW OF WATER IS OBSTRUCTED, IT SHALL BE REMOVED AT THE CLOSE OF EACH WORKING DAY. AT THE CONCLUSION OF CONSTRUCTION OPERATIONS, ALL UTILITY STRUCTURES SHALL BE FREE FROM DIRT AND DEBRIS.

THE CONTRACTOR SHALL NOT OPEN OR SHUT ANY WATER VALVES OR FIRE HYDRANTS. CONTACT THE VILLAGE OF FOREST PARK WATER DEPARTMENT (TEL. NO. 708-615-6268) FOR THEM TO TURN VALVES OR OPERATE HYDRANTS. UNAUTHORIZED USE SHALL SUBJECT THE OFFENDER TO ARREST AND PROSECUTION.

### MISCELLANEOUS

ACCESS: THE CONTRACTOR SHALL PROVIDE ACCESS TO ABUTTING PROPERTY AT ALL TIMES DURING THE CONSTRUCTION OF THIS PROJECT.

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

PATCHING, CURB AND GUTTER REMOVAL AND REPLACEMENT, SIDEWALK REMOVAL AND REPLACEMENT, DRIVEWAY REMOVAL AND REPLACEMENT AND STRUCTURES TO BE ADJUSTED WILL BE DETERMINED BY THE ENGINEER IN THE FIELD.

THE THICKNESSES OF HOT-MIX ASPHALT MIXTURES SHOWN IN THE PLANS ARE NOMINAL. DEVIATIONS MAY OCCUR DUE TO IRREGULARITIES IN THE SURFACES OR BASIS ON WHICH THEY ARE TO BE PLACED. PLAN THICKNESSES SHOULD BE CONSIDERED THE MINIMUM THICKNESS PERMITTED.

DETECTABLE WARNINGS FOR THE HANDICAPPED SHALL BE INSTALLED AT ALL INTERSECTING STREETS, DRIVEWAYS, AND ALLEYS AS DIRECTED BY THE ENGINEER.

PAVEMENT GRADES: THE ELEVATIONS INDICATED ON THE PLANS ARE FINISHED GRADES OF PROPOSED PAVEMENT OR SURFACE COURSE. UNLESS OTHERWISE INDICATED.

RELOCATING EXISTING SIGNS: EXISTING SIGNS WHICH ARE IN CONFLICT WITH PROPOSED IMPROVEMENTS SHALL BE REMOVED AND REINSTALLED UPON COMPLETION OF CONFLICTING IMPROVEMENTS IN ACCORDANCE WITH THE ILLINOIS DEPARTMENT OF TRANSPORTATION "MANUAL OF UNIFORM TRAFFIC CONTROL DEVICES" AND THE "STANDARD SPECIFICATIONS FOR ROAD AND BRIDGE CONSTRUCTION". STOP SIGNS SPEED LIMIT SIGNS, AND STREET NAME SIGNS SHALL BE UP AND VISIBLE AT ALL TIMES.

FRESH OIL SIGNS SHALL BE POSTED AT BOTH ENDS OF THE ROADWAY AND ALL SIDE STREETS AS DIRECTED BY THE ENGINEER. CONSTRUCTION AHEAD SIGNS SHALL BE PLACED AT ALL SIDE STREETS AND BOTH ENDS OF THE ROADWAY WHILE CONSTRUCTION IS IN PROGRESS.

PROPOSED CONCRETE CURB AND GUTTER SHALL BE TRANSITIONED TO EXISTING CURB AND GUTTER OVER A LENGTH OF 5 FEET.

CONTRACTOR SHALL NOT PLACE SOD UNTIL THE TEMPERATURE IS 80° OR LESS AND THE FORECAST FOR THE NEXT 7 DAYS SHOWS TEMPERATURES OF 80° OR LESS. IF ALL OTHER PAY ITEMS ARE COMPLETED, THE CONTRACTOR WILL NOT BE CHARGED WORKING DAYS FOR DELAYS IN PARKWAY RESTORATION DUE TO THE TEMPERATURE.

NO CONSTRUCTION SHALL BEGIN UNTIL ALL PROPER TEMPORARY SIGNS AND BARRICADES HAVE BEEN INSTALLED.

THE VILLAGE WILL PROVIDE THE CONTRACTOR WITH SIGNS NOTIFYING THE PUBLIC OF CONSTRUCTION AND PARKING RESTRICTIONS ALONG MADISON STREET. IT IS THE CONTRACTOR'S RESPONSIBILITY TO POST THESE SIGNS WITHIN THE PROJECT AREA AT LEAST 2 DAYS PRIOR TO CONSTRUCTION.

ALL ROADS MUST HAVE ONLY ONE LONGITUDINAL JOINT WHILE PAVING.

THE CONTRACTOR SHALL CONTACT THE TRAFFIC CONTROL SUPERVISOR AT KALPANA.KANNAN-HOSADURGA@ILLINOIS.GOV MINIMUM OF 72 HOURS IN ADVANCE OF BEGINNING WORK.

THE CONTRACTOR SHALL TAKE PRECAUTION BY PRESERVING EXISTING TREES WITHIN THE RIGHT OF WAY. IF ANY DAMAGE OCCURS, TREES SHALL BE REPLACED IN KIND PER ARTICLE 201.07 REPAIR OR REPLACEMENT OF EXISTING PLANT MATERIAL REQUIREMENTS STATED HEREIN.

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	PLOT DATE = 2/24/2022	DATE -	2/24/2022	REVISED	-

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SCALE:

					CONSTRUCT	ION CODE
					STP FUNDS 80% FED / 20% LOCAL	LOCAL FUNDS 100% LOCAL
SISP	CODE NO.	ПЕМ	UNIT	TOTAL QUANTITY	ROADWAY 0005 URBAN	0043 URBAN
	20201200	REMOVAL AND DISPOSAL OF UNSUITABLE MATERIAL	CU YD	250	250	
	21101615	TOPSOIL FURNISH AND PLACE, 4"	SQ YD	1000	1000	
	25200110	SODDING, SALT TOLERANT	SQ YD	1000	1000	
	25200200	SUPPLEMENTAL WATERING	UNITS	54	54	
	28000250	TEMPORARY EROSION CONTROL SEEDING	POUND	20	20	
	28000510	INLET FILTERS	EACH	25	25	
	31101180	SUBBASE GRANULAR MATERIAL, TYPE B 2"	SQ YD	600	600	
	31101200	SUBBASE GRANULAR MATERIAL, TYPE B 4"	SQ YD	900	900	
	35800100	PREPARATION OF BASE	SQ YD	7000	7000	
	40600275	BITUMINOUS MATERIALS (PRIME COAT)	POUND	15750	15750	
	40600290	BITUMINOUS MATERIALS (TACK COAT)	POUND	3150	3150	
	40600400	MIXTURE FOR CRACKS, JOINTS, AND FLANGEWAYS	TON	2	2	
	40600982	HOT-MIX ASPHALT SURFACE REMOVAL - BUTT JOINT	SQ YD	50	50	
	40603080	HOT-MIX ASPHALT BINDER COURSE, IL-19.0, N50	TON	1000	1000	
	40604060	HOT-MIX ASPHALT SURFACE COURSE, IL-9.5, MIX "D", N50	TON	620	620	
	42300400	PORTLAND CEMENT CONCRETE DRIVEWAY PAVEMENT, 8 INCH	SQ YD	30	30	

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	0, 2011, 19-11, 19-11-19-12-19-12-19-11-19-11-19-11-19-11-19-1	M. ) (2015 Student	DRAWN	F	M	REVISED -	l
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		9_@T_DAT <u>6</u> : 2/4/2∎22	DATE	. 2	2/4/2022	REVISED	

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

	F.A.U. RTE.	SECTION	COUNTY	TOTAL	SHEET NO.
SUMMARY OF QUANTITIES	1462	20-00116-00-RS	COOK	28	3
			CONTRAC	T NO. (	51H38
CALE: SHEET NO. 1 OF 1 SHEETS STA. TO STA.		ILLINOIS FED. A	D PROJECT		

					CONSTRUCT	ION CODE
					STP FUNDS 80% FED / 20% LOCAL	LOCAL FUNDS 100% LOCAL
SP	CODE NO.	ПЕМ	UNIT	TOTAL QUANTITY	ROADWAY 0005	0043
SP	CODE NO.	HEIM	UNII	TOTAL QUANTITY	URBAN	URBAN
	42400200	PORTLAND CEMENT CONCRETE SIDEWALK 5 INCH	SQ FT	5600	5600	
	42400800	DETECTABLE WARNINGS	SQ FT	340	340	
	44000165	HOT-MIX ASPHALT SURFACE REMOVAL, 4"	SQ YD	7000	7000	
	44000165	NOT-WIX ASPRALT SURFACE REWOVAL, 4	5Q 1D	7000	7000	
	44000200	DRIVEWAY PAVEMENT REMOVAL	SQ YD	30	30	
	4.00000		FOOT	070	970	
	44000500	COMBINATION CURB AND GUTTER REMOVAL	FOOT	870	870	
	44000600	SIDEWALK REMOVAL	SQ FT	5600	5600	
-	44201701	CLASS D PATCHES, TYPE I, 5 INCH	SQ YD	20	20	
	44201705	CLASS D PATCHES, TYPE II, 5 INCH	SQ YD	30	30	
	44201709	CLASS D PATCHES, TYPE III, 5 INCH	SQ YD	90	90	
	44201711	CLASS D PATCHES, TYPE IV, 5 INCH	SQ YD	60	60	
	60406000	FRAMES AND LIDS, TYPE 1, OPEN LID	EACH	28	28	
	60603800	COMBINATION CONCRETE CURB AND GUTTER, TYPE B-6.12	FOOT	870	870	
	00003000	CONDINATION CONCRETE CONDINATION CONTENT, THE B-0.12	1001	0,0		
	67100100	MOBILIZATION	LSUM	1	1	
	7040000	TRAFFIG COURTED AND PROTECTION OF AND TRAFFIG	100			
	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	

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REY.	nakagggahar ingsolvedgaalar ikkekalik.	<b>162</b> (1,853%)#15	DRAWN	FM	REVISED -	STATE OF ILLINOIS	SUMMARY OF QUANTITIES	1462	20-00116-00-RS	COOK	28	4
		PLOT SOLUE 40°	CHECKED	JFA	REVISED	DEPARTMENT OF TRANSPORTATION				CONTRAC	CT NO. 61H	138
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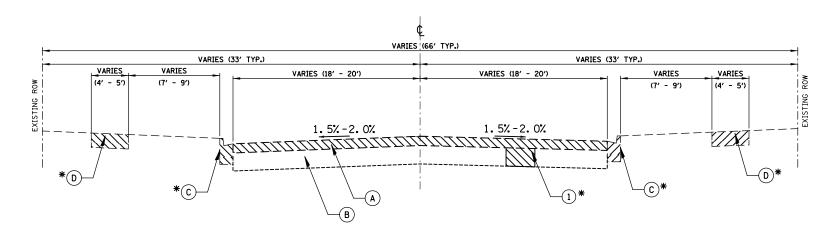
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					STP FUNDS	LOCAL FUNDS
					80% FED / 20% LOCAL	100% LOCAL
					ROADWAY	
I SP	CODE NO.	ITEM	UNIT	TOTAL QUANTITY	0005 URBAN	0043 URBAN
					ONDAN	CADAR
	70300100	SHORT TERM PAVEMENT MARKING	FOOT	300	300	
				**		A WW-
	70300150	SHORT TERM PAVEMENT MARKING REMOVAL	SQ FT	100	100	
					22000 AND TO THE PROPERTY OF T	
	72000100	SIGN PANEL - TYPE 1	SQ FT	220	220	
	72400100	REMOVE SIGN PANEL ASSEMBLY - TYPE A	EACH	8	8	
-	72400310	REMOVE SIGN PANEL - TYPE 1	SQ FT	100	100	
		-				
	72900200	METAL POST - TYPE B	FOOT	330	330	
,	78000100	THERMOPLASTIC PAVEMENT MARKING - LETTERS AND SYMBOLS	SQ FT	150	150	
-	78000200	THERMOPLASTIC PAVEMENT MARKING - LINE 4"	FOOT	3300	3300	
	78000400	THERMOPLASTIC PAVEMENT MARKING - LINE 6"	FOOT	60	60	
	78000600	THERMOPLASTIC PAVEMENT MARKING - LINE 12"	FOOT	1000	1000	
<u>,       </u>	78000650	THERMOPLASTIC PAVEMENT MARKING - LINE 24"	FOOT	125	125	
_   *	9960000	DETECTOR LOOP REPLACEMENT	FOOT	50	50	
	88600600	DETECTOR LOOP REPLACEIVIENT	F001	)		
*	Z0017400	DRAINAGE & UTILITY STRUCTURES TO BE ADJUSTED	EACH	19	19	
*	Z0017500	DRAINAGE & UTILITY STRUCTURE ADJUSTMENT (SPECIAL)	EACH	9	9	
*	Z0017800	DRAINAGE & UTILITY STRUCTURES TO BE RECONSTRUCTED (SPECIAL)	EACH	5	5	
*	X0320050	CONSTRUCTION LAYOUT	L SUM	1	1	
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						ROADWAY	
SI	SP	CODE NO.	ITEM	UNIT	TOTAL QUANTITY	0005	0043
	1					URBAN	URBAN
	*	X5537800	STORM SEWERS TO BE CLEANED 12"	FOOT	2300		2300
		· · · · · · · · · · · · · · · · · · ·					
i	*	X5537900	STORM SEWERS TO BE CLEANED 15"	FOOT	350		350
	*	X5538000	STORM SEWERS TO BE CLEANED 18"	FOOT	350		350
i							

Mar with a	35ER HAME - Jameiro	DESIGNED	FM	REVISED				RTE.	SECTION	COUNTY	SHEETS NO.
BARTETTERSTERSENERALISSES ESTELA.	)#2 1,F03%&-4 1	DRAWN	FM	REVISED -	STATE OF ILLINOIS		SUMMARY OF QUANTITIES	1462	20-00116-00-RS	COOK	28 6
	PLCT SCFLE 4∰	CHECKED	JFA	REVISED	DEPARTMENT OF TRANSPORTATION					CONTRACT	T NO. 61H38
	PLOT DATE : 2>4/2#22	DATE	2/4/2022	REVISED		SCALE:	SHEET NO. 1 OF 1 SHEETS STA. TO STA.		ILLINOIS FED. A	ID PROJECT	

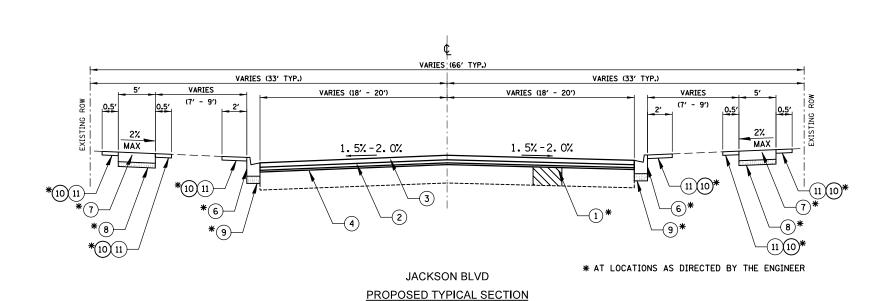


\* AT LOCATIONS AS DIRECTED BY THE ENGINEER

JACKSON BLVD

EXISTING TYPICAL SECTION

STATION 11+00 TO STATION 27+59



STATION 11+00 TO STATION 27+59

### **LEGEND**

### <u>EXISTING</u>

- A HOT-MIX ASPHALT SURFACE REMOVAL, 4"
- B EXISTING HMA PAVEMENT OR CONCRETE BASE OR STONE BASE, SEE CORE DATA
- C COMBINATION CURB AND GUTTER REMOVAL -AT LOCATIONS DIRECTED BY ENGINEER
- D SIDEWALK REMOVAL AT LOCATIONS DIRECTED BY ENGINEER

### PROPOSED

- 1 CLASS D PATCHES, TYPE SPECIFIED, 5"
   AT LOCATIONS DIRECTED BY ENGINEER.
- 2 HOT-MIX ASPHALT BINDER COURSE, IL-19.0, N50, 2 1/2"
- (3) HOT-MIX ASPHALT SURFACE COURSE, MIX "D", IL-9.5, N50, 1 1/2"
- 4 PREPARATION OF BASE
- 5 NOT USED
- 6 COMBINATION CONCRETE CURB AND GUTTER, TYPE B-6.12 AT LOCATIONS DIRECTED BY ENGINEER.
- PORTLAND CEMENT CONCRETE SIDEWALK 5 INCH AT LOCATIONS DIRECTED BY ENGINEER.
- SUBBASE GRANULAR MATERIAL, TYPE B 2" AT LOCATIONS DIRECTED BY ENGINEER
- 9 SUBBASE GRANULAR MATERIAL, TYPE B 4" AT LOCATIONS DIRECTED BY ENGINEER
- 10 TOPSOIL FURNISH AND PLACE, 4" AT LOCATIONS DIRECTED BY ENGINEER
- (1) SODDING AT LOCATIONS DIRECTED BY ENGINEER

### NOTES:

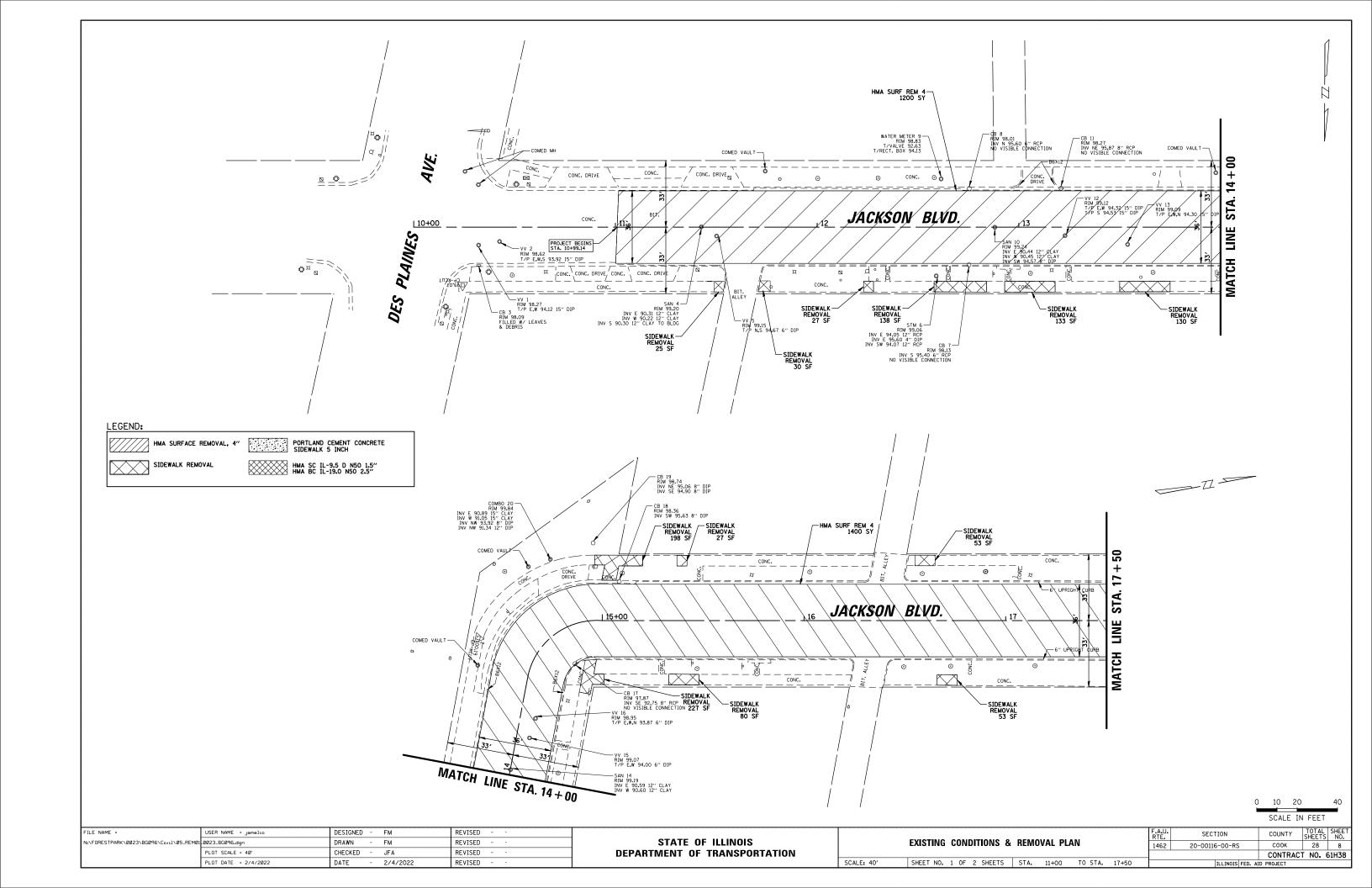
1) CONTRACTOR SHALL MILL PAVEMENT BEFORE PATCHING.

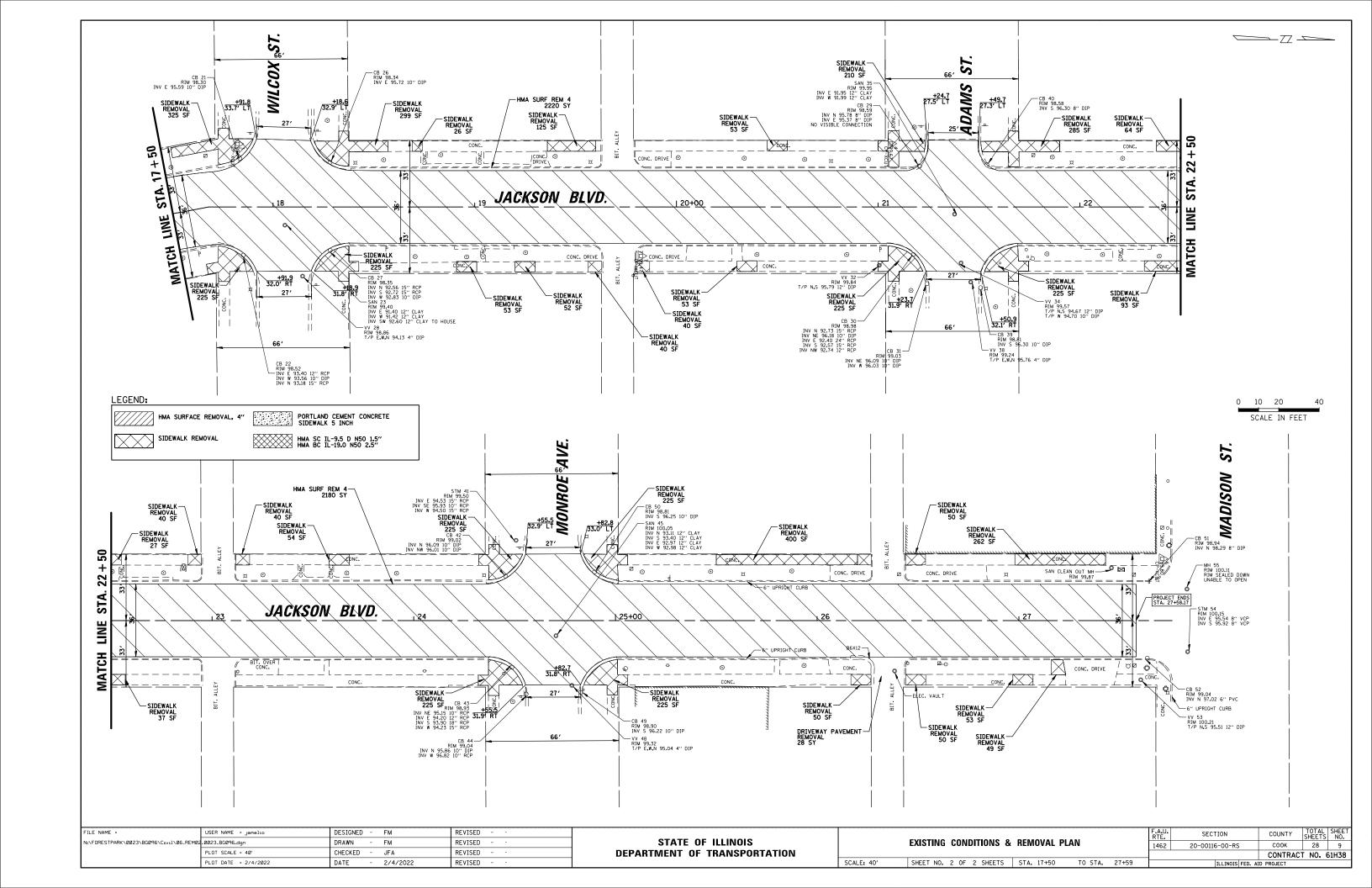
HOT-MIX ASPHALT MIXTURE REQUIREMENTS		
ITEM	AIR VOIDS @Ndes	QMP
HOT-MIX ASPHALT SURFACE COURSE, MIX "D", IL-9.5, N50; 1 1/2"	4% <b>©</b> 50GYR∙	LR1030-2
HOT-MIX ASPHALT BINDER COURSE, IL-19.0, N50; 2 1/2"	4% <b>©</b> 50GYR.	LR1030-2
CLASS D PATCHES, (HMA Binder IL-19.0)	4%@70GYR.	LR1030-2
QMP DESIGNATION: QC/QA PER LOCAL ROADS SPEC	IFICATION LR1030-2	

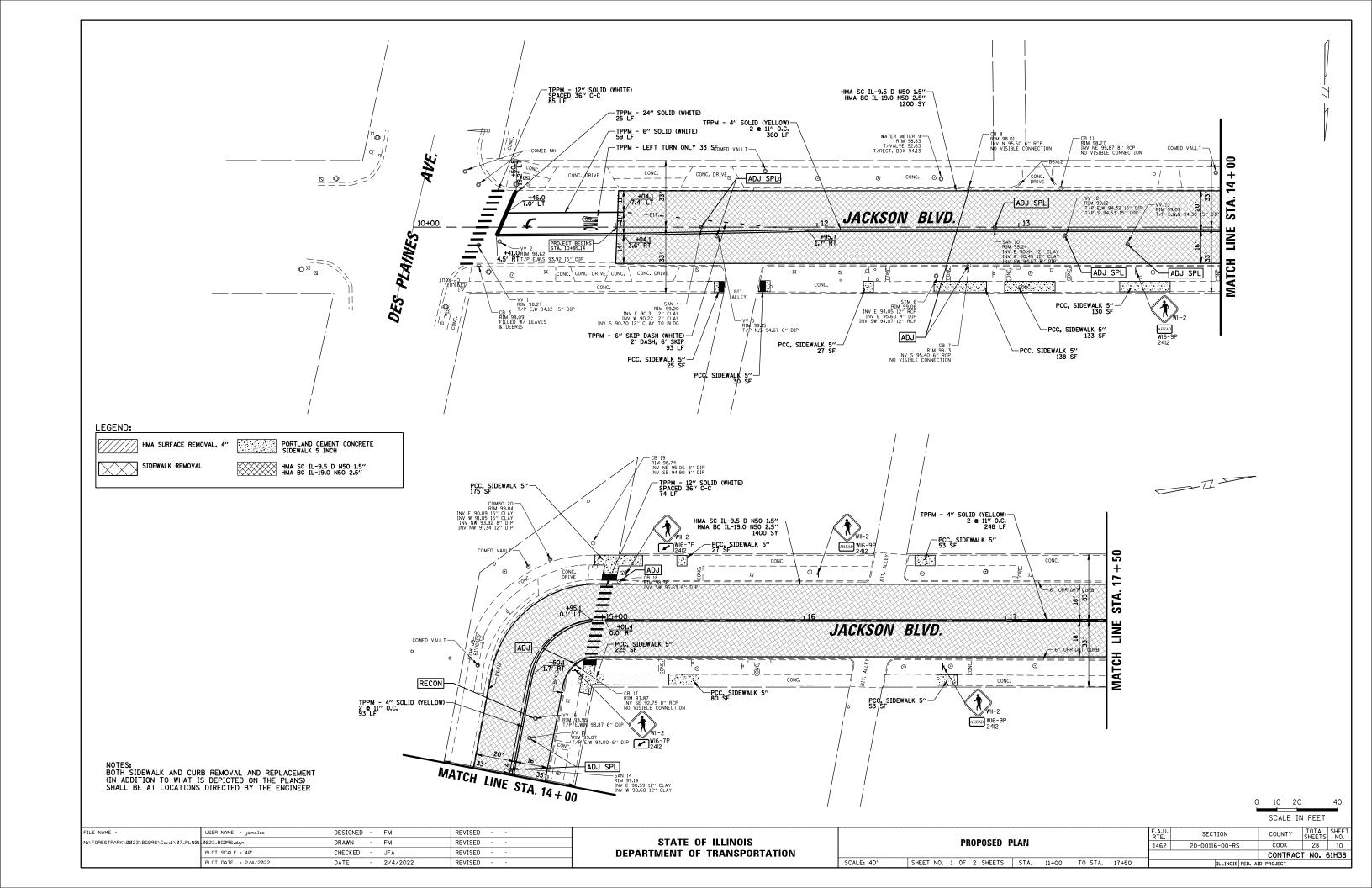
### NOTES:

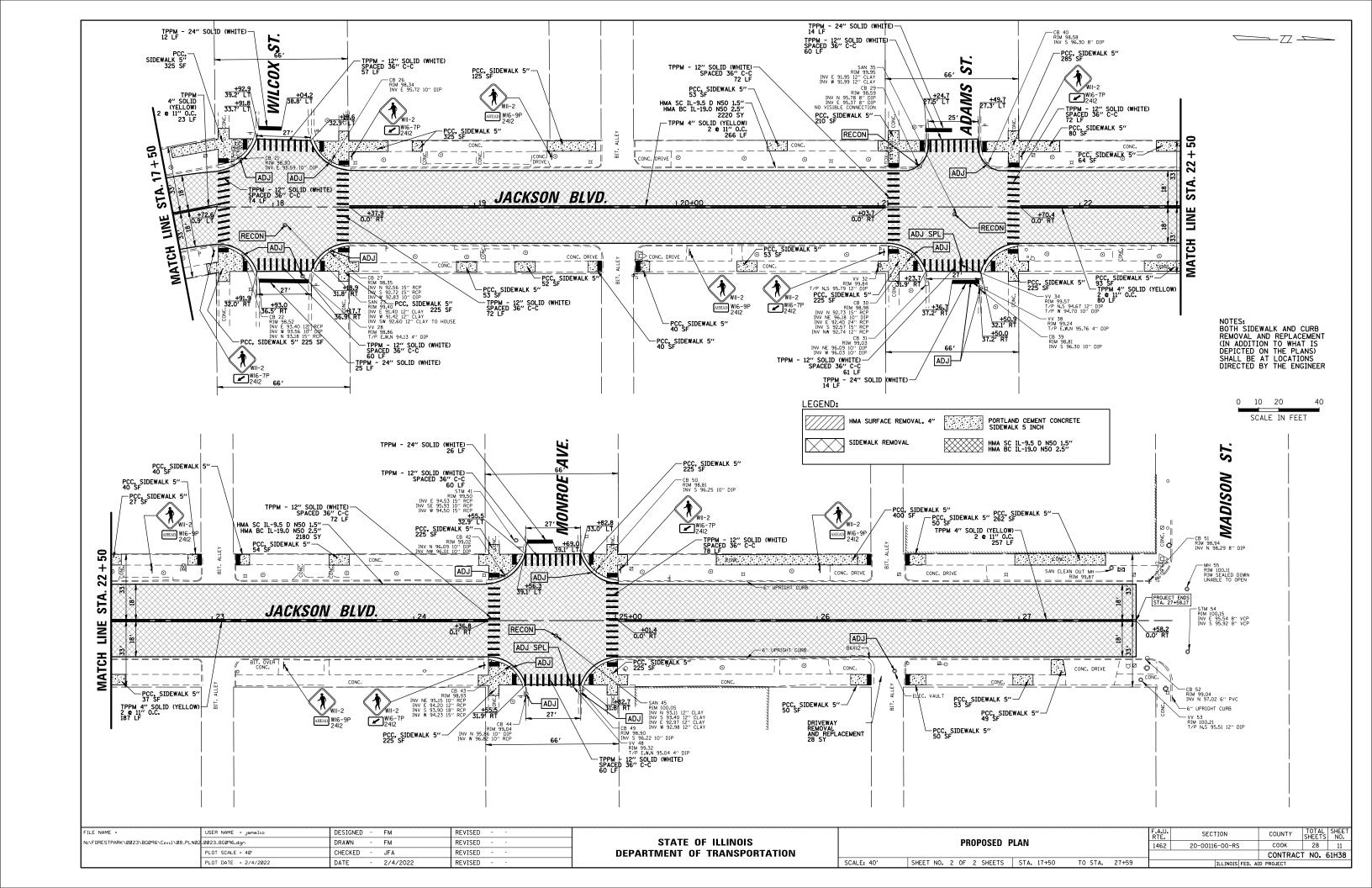
- 1) THE UNIT WEIGHT USED TO CALCULATE ALL HOT-MIX ASPHALT SURFACE MIXTURE QUANTITIES IS 112 LBS/SY/IN.
- 2) THE "AC TYPE" FOR POLYMERIZED HMA MIXES SHALL BE "SBS/SBR PG 76-22" AND FOR NON-POLYMERIZED HMA THE "AC TYPE" SHALL BE "PG 64-22" UNLESS MODIFIED BY RECLAIMED MATERIALS SPECIFICATIONS.

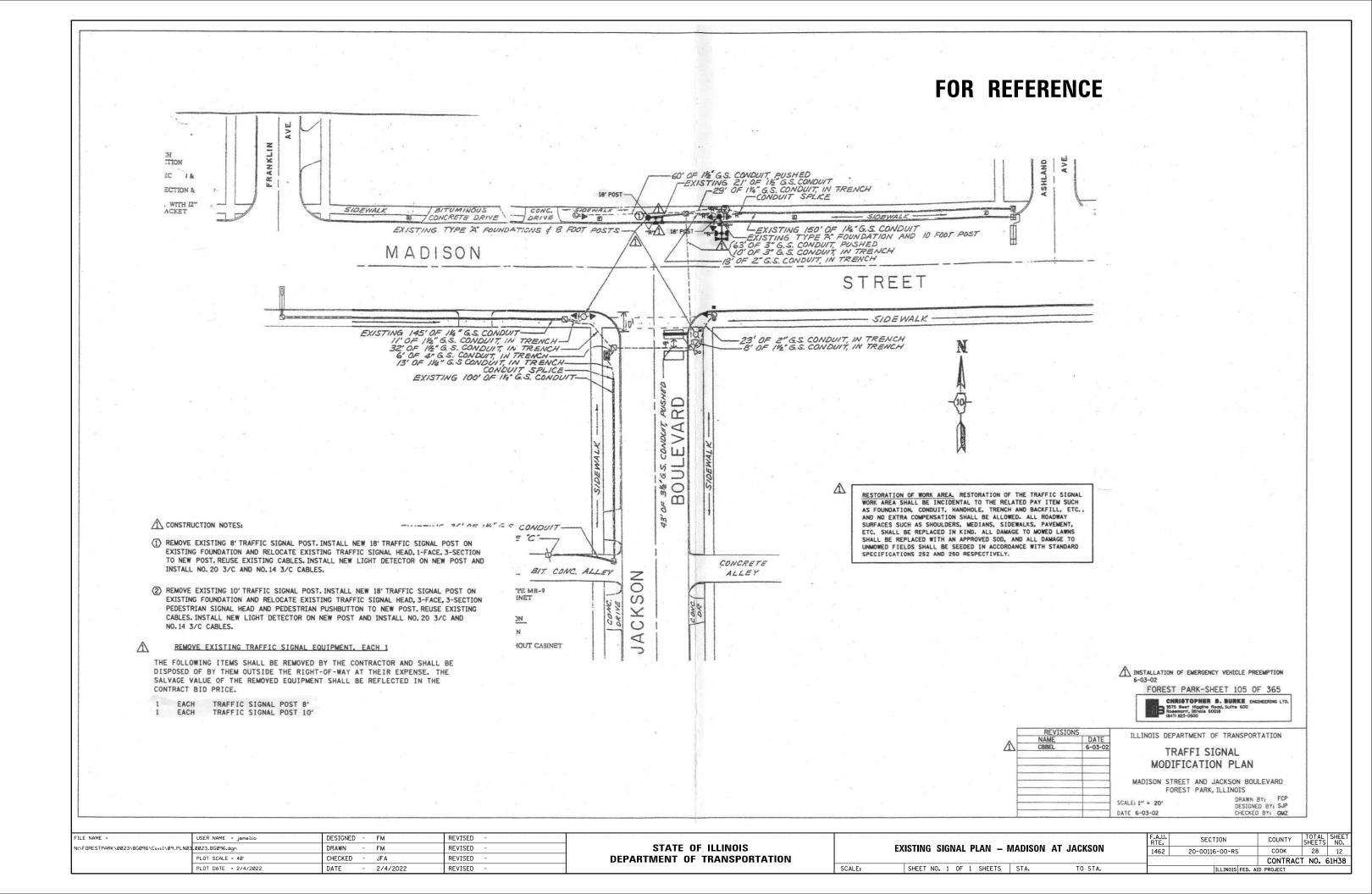
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	PLOT SCALE = 40'	CHECKED - JFA	REVISED -	DEPARTMENT OF TRANSPORTATION							CONTRA	CT NO. 61H38
	PLOT DATE = 2/4/2022	DATE - 2/4/2022	REVISED -		SCALE: NTS	SHEET NO. 1 OF 1 SHEETS	STA.	TO STA.		ILLINOIS FED. A	ID PROJECT	

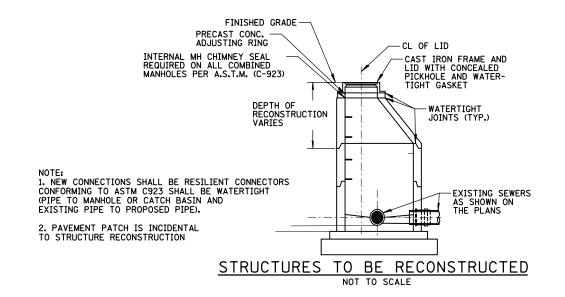




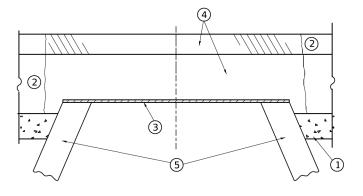


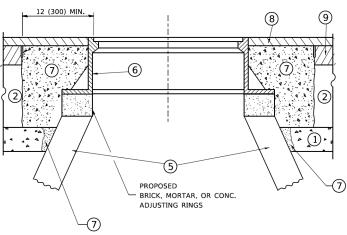






FILE NAME =	USER NAME = jamel10	DESIGNED -	FM	REVISED -			DETAIL FOR	F.A.U.	SECTION	COUNTY	TOTAL SHEET
N:\FORESTPARK\0023\BG096\C1v11\10_CDET	_0023_BG096.sht	DRAWN -	FM	REVISED -	STATE OF ILLINOIS			1462	20-00116-00-RS	соок	28 13
	PLOT SCALE = 40'	CHECKED -	JFA	REVISED -	DEPARTMENT OF TRANSPORTATION		STRUCTURES TO BE RECONSTRUCTED			CONTRAC	CT NO. 61H38
	PLOT DATE = 2/4/2022	DATE -	2/4/2022	REVISED -		SCALE: NONE	SHEET NO. 1 OF 1 SHEETS STA. TO STA.		ILLINOIS FED. A	D PROJECT	





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.

SCALE: NONE

### **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
- 6 FRAME AND LID (SEE NOTES)
- 2 EXISTING PAVEMENT
- 7 CLASS PP-1 \*CONCRETE
- 3 36 (900) DIAMETER METAL PLATE
  4 PROPOSED CRUSHED STONE AND HMA SURFACE MIX
- 8 PROPOSED HMA SURFACE COURSE
- (5) EXISTING STRUCTURE
- 9 PROPOSED HMA BINDER 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 "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

USER NAME = footemj DESIGNED - R. SHAH REVISED - R. WEDEMAN 05-14-04

DRAWN - REVISED - R. BORO 01-01-07

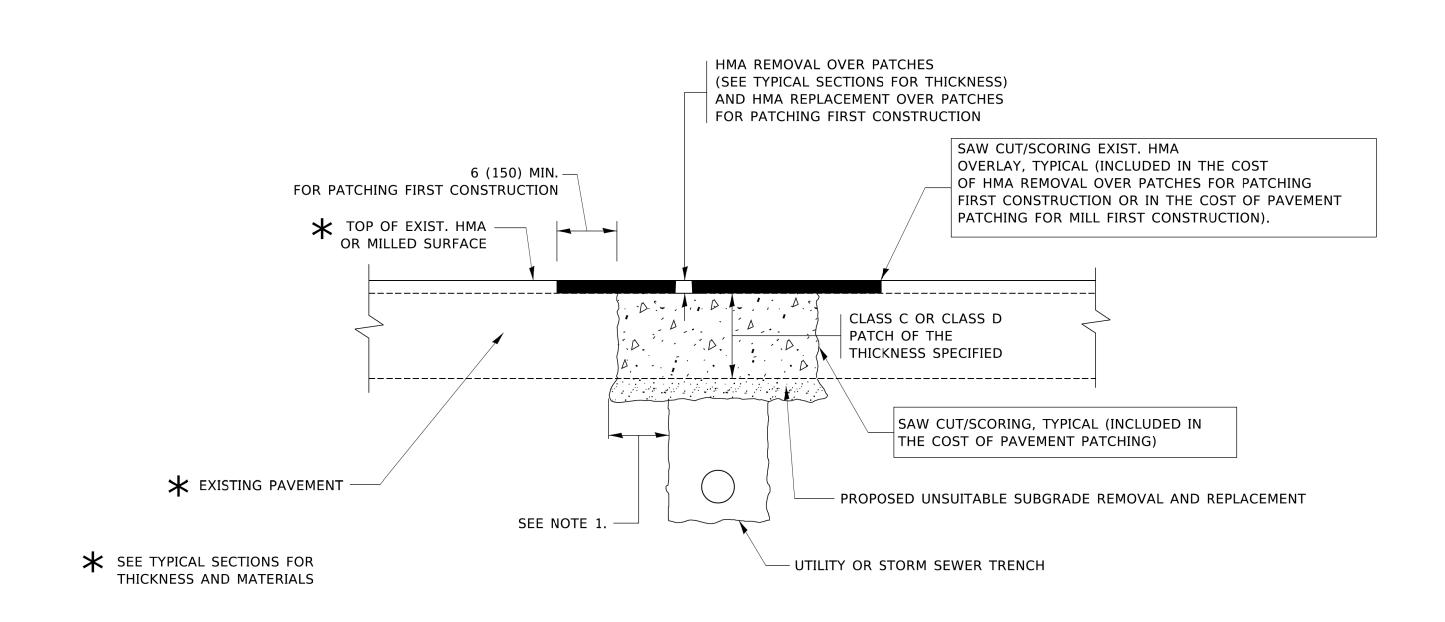
PLOT SCALE = 50.0000 ' / in. CHECKED - REVISED - R. BORO 03-09-11

PLOT DATE = 3/27/2019 DATE - 10-25-94 REVISED - R. BORO 12-06-11

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

FRAMES AND LIDS ADJUSTMENT WITH MILLING

SHEET 1 OF 1 SHEETS STA. TO STA.



- 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)**

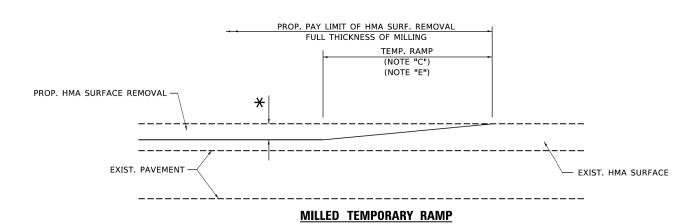
- 1. REMOVE THE EXISTING HMA MATERIAL OVER THE AREA TO BE PATCHED.
- 2. REMOVE AND REPLACE WITH CLASS C OR D PATCH.
- 3. REPLACE HMA MATERIAL OVER THE AREA TO BE PATCHED.

### SEQUENCE OF CONSTRUCTION (MILLING FIRST)

- 1. MILL HMA FIRST IF THERE IS AT LEAST 4½ 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.

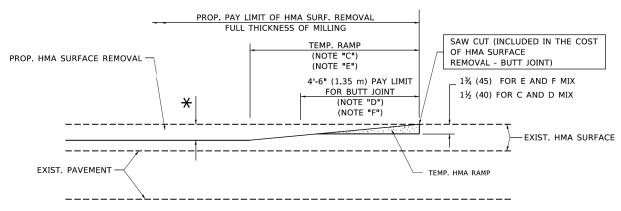
ALL DIMENSIONS ARE IN INCHES (MILLIMETERS) UNLESS OTHERWISE SHOWN.

USER NAME = footemj	DESIGNED - R. SHAH	REVISED - A. ABBAS 04-27-98			PAVEMENT PATCHING FOR		RTE.	SECTION	COUNTY	SHE
	DRAWN -	REVISED - R. BORO 01-01-07	STATE OF ILLINOIS		HMA SURFACED PAVEMENT		1462	20-00116-00-RS	соок	28
PLOT SCALE = 50.0000 ' / in.	CHECKED -	REVISED - R. BORO 09-04-07	DEPARTMENT OF TRANSPORTATION		HIMA SUKFACED PAVEMENT		BI.	D400-04 (BD-22)	CONTRAC	T NO
PLOT DATE = 3/27/2019	DATE - 10-25-94	REVISED - K. ENG 10-27-08		SCALE: NONE	SHEET 1 OF 1 SHEETS STA.	TO STA.		ILLINOIS FED. AI	ID PROJECT	



(FOR BUTT JOINT AND HMA TAPER SEE DETAIL BELOW)

### OPTION 1

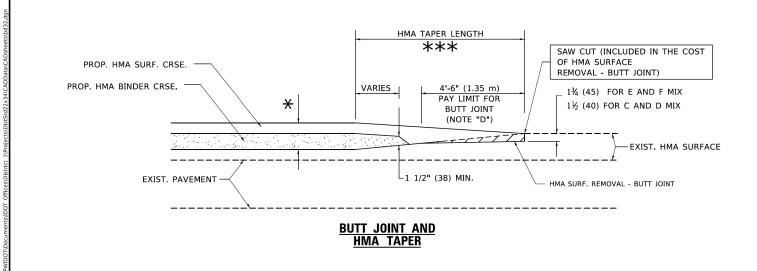


### HMA CONSTRUCTED TEMPORARY RAMP

(FOR BUTT JOINT AND HMA TAPER SEE DETAIL BELOW)

### OPTION 2

### TYPICAL TEMPORARY RAMP



# TYPICAL BUTT JOINT AND HMA TAPER FOR MILLING AND RESURFACING

 USER NAME
 = footemj
 DESIGNED
 M. DE YONG
 REVISED
 R. SHAH 10-25-94

 DRAWN
 REVISED
 A. ABBAS 03-21-97

 PLOT SCALE
 = 50.0000 ' / in.
 CHECKED
 REVISED
 M. GOMEZ 04-06-01

 PLOT DATE
 = 3/27/2019
 DATE
 06-13-90
 REVISED
 R.BORO 01-01-07

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

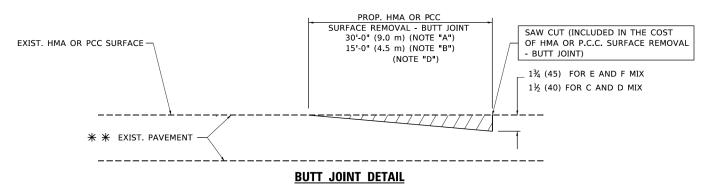
BUTT JOINT AND
HMA TAPER DETAILS

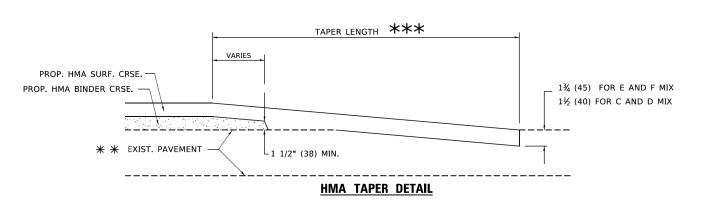
SHEET 1 OF 1 SHEETS STA.

TO STA

F.A.U SECTION COUNTY TOTAL SHI RTE. SECTION COUNTY SHEETS N 1462 20-00116-00-RS COOK 28 16

CONTRACT NO. 61H38





# 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.

  \*\* SEE TYPICAL SECTIONS FOR MILLING THICKNESS.
- G. SEE ARTICLE 406.08 AND 406.14 OF THE STANDARD SPECIFICATIONS FOR "HMA AND/OR PCC SURFACE REMOVAL, BUTT JOINT".
- \*\*\* 20'-0" (6.1 m) PER 1 (25) RESURFACING (NOTE "A") 10'-0" (3.0 m) PER 1 (25) RESURFACING (NOTE "B")

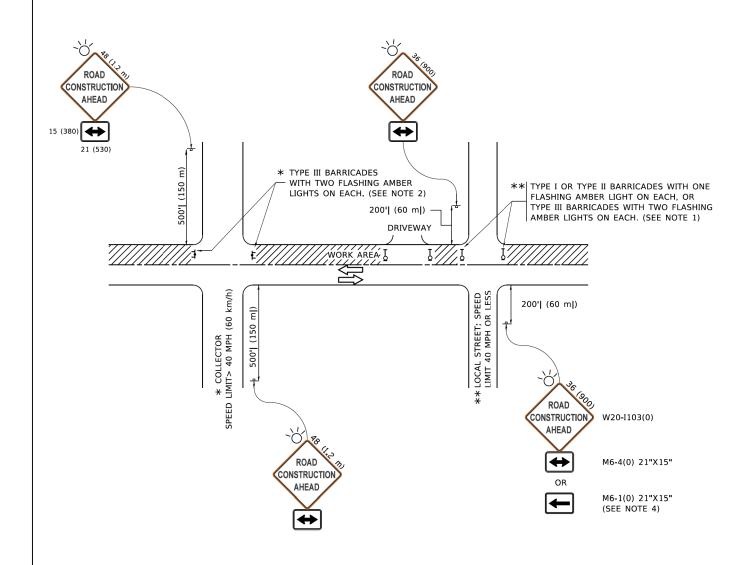
### BASIS OF PAYMENT

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".

SCALE: NONE

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

BD400-05 BD32



- 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.
- 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.
- THE CLOSED PORTION OF THE MAIN ROUTE SHALL BE PROTECTED BY
  b) BLOCKING WITH TYPE III BARRICADES, 1/2 OF THE CROSS SECTION
  OF THE CLOSED PORTION.
- CONES MAY BE SUBSTITUTED FOR BARRICADES OR DRUMS AT HALF THE SPACING DURING DAY OPERATIONS. CONES SHALL BE A MINIMUM OF 28 (710)
- WHEN THE SIDE ROAD LIES BETWEEN THE BEGINNING OF THE MAINLINE
  4. SIGNING AND THE WORK ZONE, A SINGLE HEADED ARROW (M6-1) SHALL
  BE USED IN LIEU OF THE DOUBLE HEADED ARROW (M6-4).

- 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 ENGINEEP
- 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.

 USER NAME
 = footemj
 DESIGNED
 L.H.A.
 REVISED
 A. HOUSEH 10-15-96

 DRAWN
 REVISED
 T. RAMMACHER 01-06-00

 PLOT SCALE
 = 50.0000 '/ in.
 CHECKED
 REVISED
 A. SCHUETZE 07-01-13

 PLOT DATE
 = 3/4/2019
 DATE
 06-89
 REVISED
 A. SCHUETZE 09-15-16

STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION TRAFFIC CONTROL AND PROTECTION FOR SIDE ROADS, INTERSECTIONS, AND DRIVEWAYS

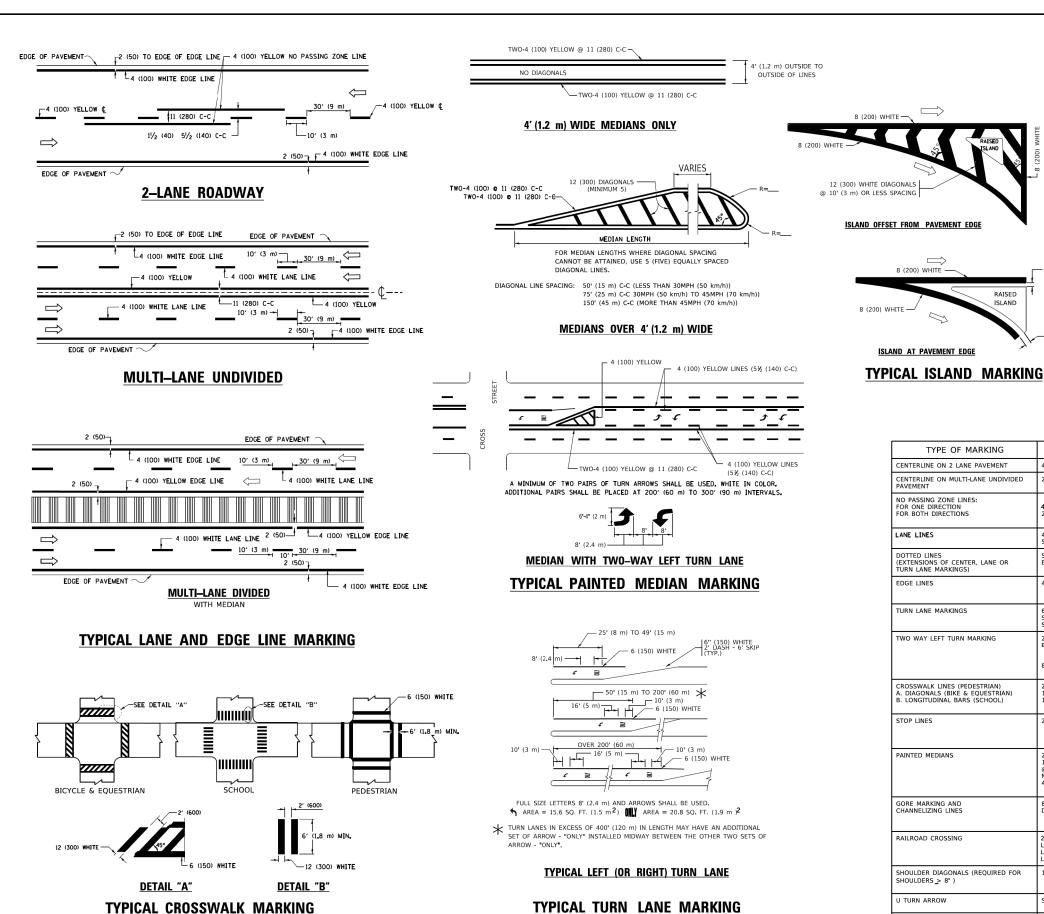
SHEET 1 OF 1 SHEETS STA. TO STA.

 F.A.U. RTE.
 SECTION
 COUNTY SHEETS
 TOTAL SHEETS NO.

 1462
 20-00116-00-RS
 COOK
 28
 17

 TC-10
 CONTRACT NO. 61H38

tc10 dan 3/4/2019 10:27:07 AM



TYPICAL TURN LANE MARKING

D(FT) SPEED LIMIT 665 50 750 **COMBINATION** LEFT AND U-TURN 5'-4" (1620) LANE REDUCTION TRANSITION 40 (1020)

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

TYPE OF MARKING WIDTH OF LINE PATTERN COLOR SPACING / REMARKS CENTERLINE ON 2 LANE PAVEMENT NO PASSING ZONE LINES: FOR ONE DIRECTION FOR BOTH DIRECTIONS 5½ (140) C-C FROM SKIP-DASH CENTERLINE 11 (280) C-C OMIT SKIP-DASH CENTERLINE BETWEEN 4 (100) 2 @ 4 (100) LANE LINES SKIP-DASH SKIP-DASH 10' (3 m) LINE WITH 30' (9 m) SPACE (125) ON FREEWAYS DOTTED LINES SAME AS LINE BEING EXTENDED SKIP-DASH SAME AS LINE BEING EXTENDED 2' (600) LINE WITH 6' (1.8 m) SPACE (EXTENSIONS OF CENTER, LANE OR TURN LANE MARKINGS) EDGE LINES 4 (100) SOLID YELLOW-LEFT WHITE-RIGHT OUTLINE MEDIANS IN YELLOW 6 (150) LINE; FULL SIZE LETTERS & SYMBOLS (8' (2.4m)) TURN LANE MARKINGS SOLID SEE TYPICAL TURN LANE MARKING DETAIL WHITE TWO WAY LEFT TURN MARKING 2 @ 4 (100) EACH DIRECTION YELLOW 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) NOT LESS THAN 6' (1.8 m) APART 2' (600) APART 2' (600) APART SEE TYPICAL CROSSWALK MARKING DETAILS. 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 STOP LINES 24 (600) SOLID WHITE PAINTED MEDIANS 11 (280) C-C FOR THE DOUBLE LINE SEE TYPICAL PAINTED MEDIAN MARKING. 2 @ 4 (100) WITH 12 (300) DIAGONALS SOLID YELLOW: TWO WAY TRAFFIC WHITE: ONE WAY TRAFFIC NO DIAGONALS USED FOR 4' (1.2 m) WIDE MEDIANS 8 (200) WITH 12 (300) DIAGONALS @ 45° SOLID 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)) 24 (600) TRANSVERSE LINES; "RR" IS 6' (1.8 m) LETTERS; 16 (400) LINE FOR "X" RAILROAD CROSSING SOLID WHITE SEE STATE STANDARD 780001 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)) SHOULDER DIAGONALS (REQUIRED FOR SHOULDERS > 8') WHITE - RIGHT YELLOW - LEFT 12 (300) @ 45° U TURN ARROW SEE DETAIL SOL TO WHITE 2 ARROW COMBINATION LEFT AND U TURN 30.4 SF

**U\_TURN** 

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

SCALE: NONE

2 (50)

(50)

RAISED

8 (200) WHITE -

ISLAND AT PAVEMENT EDGE

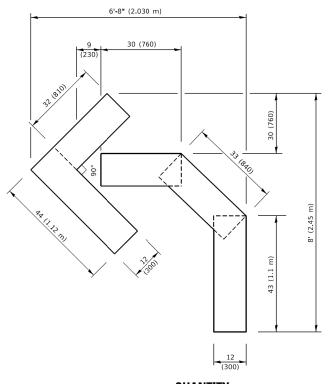
unless otherwise shown.

USER NAME = footemj DESIGNED -EVERS REVISED - C. JUCIUS 09-09-09 DRAWN REVISED - C. JUCIUS 07-01-13 CHECKED REVISED -PLOT SCALE = 50.0000 ' / in C. JUCIUS 12-21-15 DATE

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

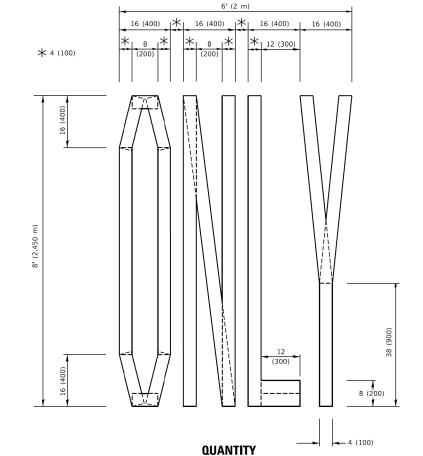
STATE OF ILLINOIS **DEPARTMENT OF TRANSPORTATION** 

TOTAL SHEE NO. 28 18 SECTION COUNTY DISTRICT ONE 1462 20-00116-00-RS COOK TYPICAL PAVEMENT MARKINGS TC-13 CONTRACT NO. OF 2 SHEETS STA. SHEET 1

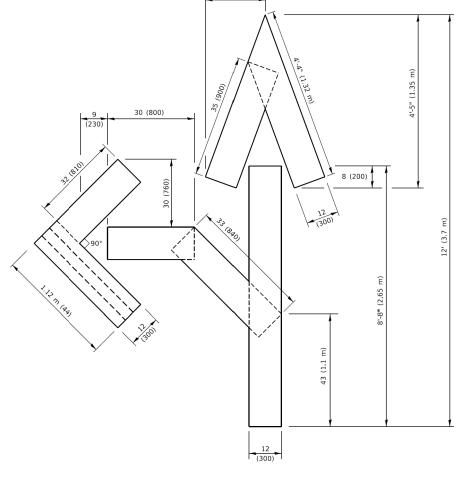


### QUANTITY

4 (100) LINE = 45.5 ft. (13.9 m) 15.2 sq. ft. (1.41 sq. m)



4 (100) LINE = 64.1 ft. (19.5 m)

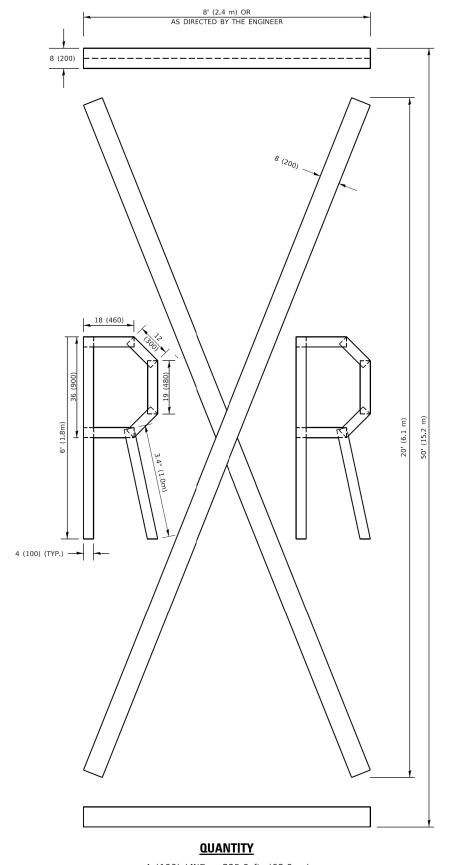


### QUANTITY

4 (100) LINE = 82.5 ft. (25.1 m) 27.5 sq. ft. (2.53 sq. m)

### NOTE:

ALL QUANTITIES OF PLACEMENT ARE REPRESENTED IN LINEAR FEET OF 4" LINES TO MATCH THE 4" TEMPORARY TAPE PAY ITEM AND REPRESENTS THE TOTAL QUANTITY OF 4" TAPE REQUIRED.



4 (100) LINE = 225.9 ft. (68.9 m) 75.3 sq. ft. (6.99 sq. m)

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

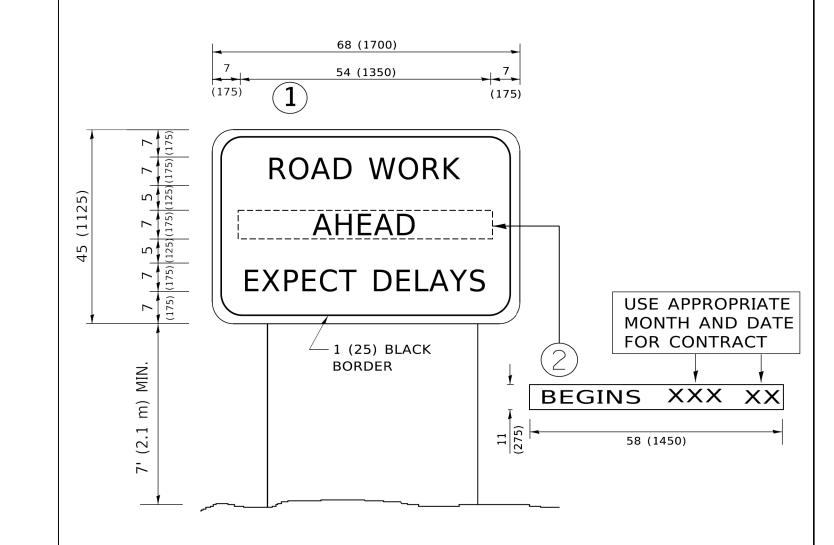
USER NAME = footemj DESIGNED -REVISED - T. RAMMACHER 03-02-98 DRAWN REVISED - E. GOMEZ 08-28-00 CHECKED -REVISED - E. GOMEZ 08-28-00 DATE PLOT DATE = 3/4/2019 - 09-18-94 REVISED - A. SCHUETZE 09-15-16

21.4 sq. ft. (1.99 sq. m)

STATE OF ILLINOIS **DEPARTMENT OF TRANSPORTATION** 

SHORT TERM PAVEMENT MARKING LETTERS AND SYMBOLS SCALE: NONE SHEET 1 OF 1 SHEETS STA.

| COOK | 28 | 19 | CONTRACT NO. 61H38 | TO PROJECT | COIAL SHEETS | SHEETS | NO. 61H38 | CONTRACT NO. 61H38 | CONT SECTION 1462 20-00116-00-RS TC-16



- 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.

USER NAME = footemj	DESIGNED -	REVISED - R. MIRS 09-15-97	27475 25 111111212			ARTEI	RIAL RO	AD		F.A.U. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
	DRAWN -	REVISED - R. MIRS 12-11-97	STATE OF ILLINOIS			INFORM	IATION	CICN		1462	20-00116-00-RS	соок	28	20
PLOT SCALE = 50.0000 ' / in.	CHECKED -	REVISED -T. RAMMACHER 02-02-99	DEPARTMENT OF TRANSPORTATION			INFUNIV	IATIUN	SIGN		<u> </u>	TC-22	CONTRAC	T NO.	61H38
PLOT DATE = 3/4/2019	DATE -	REVISED - C. JUCIUS 01-31-07		SCALE: NONE	SHEET 1	OF 1	SHEETS	STA.	TO STA.			ID PROJECT		

## TRAFFIC SIGNAL LEGEND

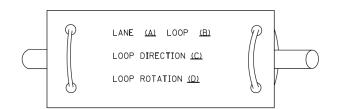
(NOT TO SCALE)

(NOT TO SCALE)								
ITEM	EXISTING	PROPOSED	ITEM	EXISTING	PROPOSED	ITEM	EXISTING	<u>PROPOSED</u>
CONTROLLER CABINET			HANDHOLE -SQUARE			SIGNAL HEAD -(P) PROGRAMMABLE SIGNAL HEAD	RR	R R Y
COMMUNICATION CABINET	ECC	СС	-ROUND HEAVY DUTY HANDHOLE					Y
MASTER CONTROLLER	EMC	MC	-SQUARE -ROUND	$\blacksquare$ $\blacksquare$	H 0			<b>4</b> G <b>4</b> G ₽
MASTER MASTER CONTROLLER	EMMC	ммс	DOUBLE HANDHOLE			SIGNAL HEAD WITH BACKPLATE	(a) (a) (b)	
UNINTERRUPTABLE POWER SUPPLY	4	<b>9</b>	JUNCTION BOX		•	-(P) PROGRAMMABLE SIGNAL HEAD -(RB) RETROREFLECTIVE BACKPLATE		Y Y G G G
SERVICE INSTALLATION -(P) POLE MOUNTED	- <del></del> P	- <mark>■-</mark> P	RAILROAD CANTILEVER MAST ARM	X <del>OX</del> X	X <del>eX X</del>			eg eg
SERVICE INSTALLATION	C CM	C CM	RAILROAD FLASHING SIGNAL	<del>∑⊙</del> ∑	<b>X⊕X</b>		P RB	P RB
-(G) GROUND MOUNTED -(GM) GROUND MOUNTED METERED	$\boxtimes^{G} \boxtimes^{GM}$	<b>⊠</b> <sup>G</sup> <b>⊠</b> <sup>GM</sup>	RAILROAD CROSSING GATE RAILROAD CROSSBUCK	<del>\(\sum_{\sym_{\sum_{\sum_{\sum_{\sum_{\sum_{\sum_{\sum_{\sym_{\sym_{\sym_{\sym_{\sum_{\sym_\}}}}}}}}}}}}}}}}}}}}}}}}}}}}}}}}}}}}</del>	<del>¥•</del>	PEDESTRIAN SIGNAL HEAD AT RAILROAD INTERSECTIONS		<b>₽</b>
TELEPHONE CONNECTION	ET	T	RAILROAD CONTROLLER CABINET		<b>-</b> <b>&gt;</b> ∢			
STEEL MAST ARM ASSEMBLY AND POLE	O	•——	UNDERGROUND CONDUIT (UC).			PEDESTRIAN SIGNAL HEAD WITH COUNTDOWN TIMER	C D	<b>₽</b> C <b>★</b> D
ALUMINUM MAST ARM ASSEMBLY AND POLE	0		GALVANIZED STEEL	<del>===</del>		ILLUMINATED SIGN		
STEEL COMBINATION MAST ARM ASSEMBLY AND POLE WITH LUMINAIRE	o-;X—	•*	TEMPORARY SPAN WIRE, TETHER WIRE, AND CABLE			"NO LEFT TURN"/"NO RIGHT TURN"		
SIGNAL POST -(BM) BARREL MOUNTED - TEMPORARY	0	<ul> <li>● BM</li> </ul>	SYSTEM ITEM INTERSECTION ITEM	S	SP IP	NUMBER OF CONDUCTORS, ELECTRIC CABLE NO. 14, UNLESS NOTED OTHERWISE. ALL DETECTOR LOOP CABLE TO BE SHIELDED		
WOOD POLE	$\otimes$	•	REMOVE ITEM		R	GROUND CABLE IN CONDUIT, NO. 6 SOLID COPPER (GREEN)	1#6	(1#6)
CUY WIRE	>	<b>&gt;</b>	RELOCATE ITEM		RL	ELECTRIC CABLE IN CONDUIT, TRACER	$\sim$	
SIGNAL HEAD		<b>→</b>	ABANDON ITEM		Α	NO. 14 1/C	(1)	
SIGNAL HEAD WITH BACKPLATE	+t> . P P	+ <del></del>	CONTROLLER CABINET AND FOUNDATION TO BE REMOVED		RCF	COAXIAL CABLE	<del>_</del> ©_	<u> </u>
SIGNAL HEAD OPTICALLY PROGRAMMED  FLASHER INSTALLATION	-D' +D' OD OD FS	→ F → FS	MAST ARM POLE AND FOUNDATION TO BE REMOVED		RMF	VENDOR CABLE		
-(FS) SOLAR POWERED	of of FS	F FS	SIGNAL POST AND FOUNDATION TO BE REMOVED		RPF	COPPER INTERCONNECT CABLE, NO. 18, 3 PAIR TWISTED, SHIELDED	6#18	<del></del>
PEDESTRIAN SIGNAL HEAD	-0	-1	DETECTOR LOOP, TYPE I			FIBER OPTIC CABLE -NO. 62.5/125, MM12F		
PEDESTRIAN PUSH BUTTON -(APS) ACCESSIBLE PEDESTRIAN PUSH BUTTON			PREFORMED DETECTOR LOOP	[P] (P)	P P	-NO. 62.5/125, MM12F SM12F -NO. 62.5/125, MM12F SM24F		
RADAR DETECTION SENSOR	R	R	SAMPLING (SYSTEM) DETECTOR	$[\overline{s}]$ $(\widehat{s})$	s s			——————————————————————————————————————
VIDEO DETECTION CAMERA	V	<b>V</b>	INTERSECTION AND SAMPLING (SYSTEM) DETECTOR		IS (S)			
RADAR/VIDEO DETECTION ZONE		<b>III</b>	QUEUE AND SAMPLING (SYSTEM) DETECTOR	[ <u>0</u> 5] ( <u>0</u> \$)	as as	GROUND ROD -(C) CONTROLLER -(M) MAST ARM	<u> </u>	† † † † †
PAN, TILT, ZOOM (PTZ) CAMERA	PTZ	PTZ¶	WIRELESS DETECTOR SENSOR	<b>®</b>	<b>®</b>	-(P) POST -(S) SERVICE		
EMERGENCY VEHICLE LIGHT DETECTOR	$\boxtimes$	<b>~</b>	WIRELESS ACCESS POINT					
CONFIMATION BEACON	<b>○</b> -(]	<b>H</b>						
WIRELESS INTERCONNECT	o <del>∗I   </del>	• <del>••   </del>						
WIRELESS INTERCONNECT RADIO REPEATER	ERR	RR						
FILE NAME = USER NAME = leyso ts05.dgn  PLOT SCALE = 50.0000 '/' Default PLOT DATE = 9/29/2016		IP REVISED -		ATE OF ILLINOIS IT OF TRANSPORTATION		DISTRICT ONE NDARD TRAFFIC SIGNAL DESIGN DETAILS HEET 1 OF 7 SHEETS STA. TO STA.	F.A.U. RTE. SECTIO 1462 20-00116 TS-05	SHEETS NO.

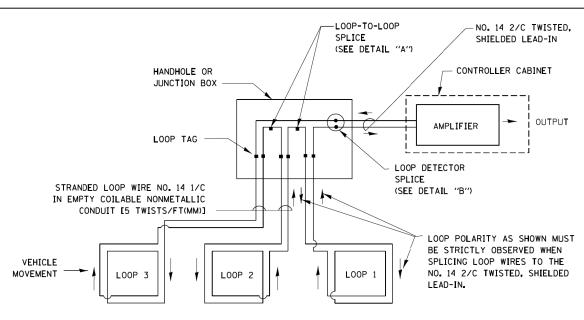
### **LOOP DETECTOR NOTES**

- 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**

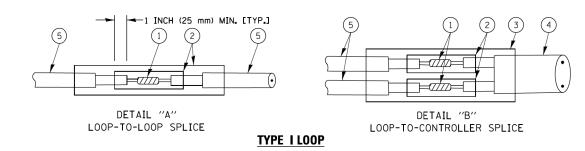


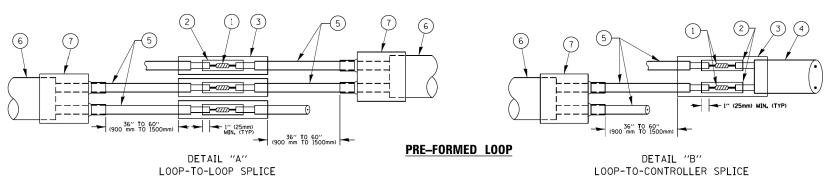
- A. LANE 1 IS THE LANE CLOSEST TO THE CENTERLINE OF THE ROADWAY
- B. LOOP \*1 IS THE LOOP IN THE LANE CLOSEST TO THE INTERSECTION.
- C. LABEL LOOP CABLE "IN" OR LOOP CABLE "OUT".
- D. LABEL LOOP CABLE CLOCKWISE OR LOOP CABLE COUNTERCLOCKWISE.



### **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.





### 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.

SCALE: NONE

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

- (5) LOOP CONDUCTOR WITH FLEXIBLE PLASTIC TUBE.
- 6 PRE-FORMED LOOP
- XL POLYOLEFIN 2 CONDUCTOR BREAKOUT SEALS. TYCO CBR-2 OR APPROVED EQUAL

COUNTY

COOK

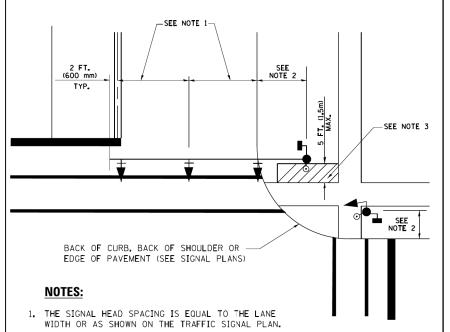
SHEETS 28

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STATE OF ILLINOIS **DEPARTMENT OF TRANSPORTATION** 

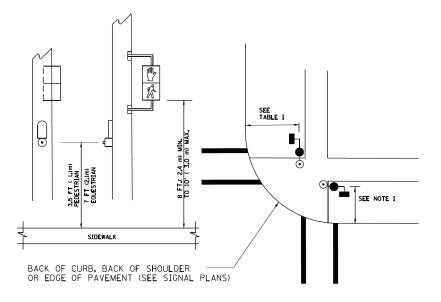
SECTION DISTRICT ONE 20-00116-00-RS STANDARD TRAFFIC SIGNAL DESIGN DETAILS TS-05 CONTRACT NO. SHEET NO. 2 OF 7 SHEETS STA.

# TRAFFIC SIGNAL MAST ARM AND SIGNAL POST MAST ARM MOUNTED SIGNALS IN EXISTING, PROPOSED OR FUTURE SIDEWALKBICYCLE PATH AREA. INTERSECTION SHOWN WITH PEDESTRIAN SIGNALS AND PEDESTRIAN PUSHBUTTON DETECTORS.



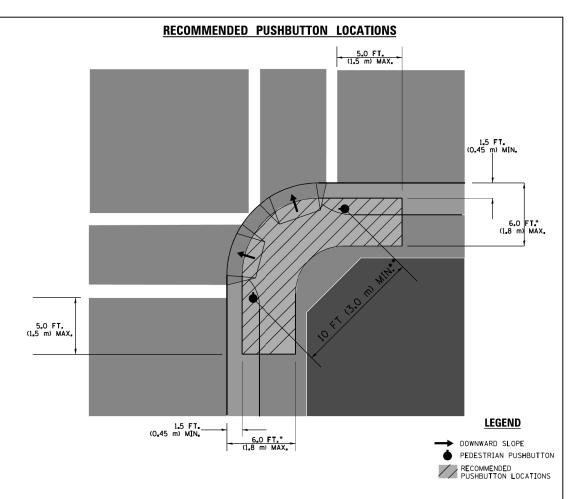
- 2. REFER TO THE TRAFFIC SIGNAL EQUIPMENT OFFSET TABLE.
- PROVIDE A LEVEL ALL-WEATHER SURFACE (CONCRETE SIDEWALK, ASPHALT BICYCLE PATH SURFACE OR MATCHING MATERIAL TO THE ADJACENT SURFACE) UP TO THE MAST ARM SHAFT OR THE SIGNAL POST.
- 4. THE FACE OF THE PEDESTRIAN PUSHBUTTON SHALL BE PARALLEL TO THE CROSSWALK TO BE USED.
- 5. THE LOCATIONS AND INSTALLATION OF PEDESTRIAN SIGNAL HEADS AND PEDESTRIAN PUSHBUTTONS SHALL MEET THE REQUIREMENTS OF THE MUTCD AND INFORMATION FOUND IN THE "AMERICANS WITH DISABILITIES ACT ACCESSIBILITY GUIDELINES FOR BUILDINGS AND FACILITIES."

# <u>PEDESTRIAN SIGNAL POST</u> <u>AND</u> PEDESTRIAN PUSH BUTTON POST



### NOTES:

- 1. REFER TO THE TRAFFIC SIGNAL EQUIPMENT OFFSET TABLE.
- 2. PROVIDE A LEVEL ALL-WEATHER SURFACE (CONCRETE SIDEWALK, ASPHALT BICYCLE PATH SURFACE OR MATCHING MATERIAL TO THE ADJACENT SURFACE) UP TO THE PEDESTRIAN SIGNAL POST OR THE PEDESTRIAN PUSH BUTTON POST.
- 3. THE FACE OF THE PEDESTRIAN PUSHBUTTON SHALL BE PARALLEL TO THE CROSSWALK TO BE USED.
- 4. THE LOCATIONS AND INSTALLATION OF PEDESTRIAN SIGNAL HEADS AND PEDESTRIAN PUSHBUTTONS SHALL MEET THE REQUIREMENTS OF THE MUTCO AND INFORMATION FOUND IN THE "AMERICANS WITH DISABILITIES ACT ACCESSIBILITY GUIDELINES FOR BUILDINGS AND FACILITIES."



- WHERE THERE ARE CONSTRAINTS THAT MAKE IT IMPRACTICAL TO PLACE THE PEDESTRIAN PUSHBUTTON BETWEEN 1.5 FT (0.45 m) AND 6 FT ( 1.8 m) FROM THE EDGE OF THE CURB, SHOULDER, OR PAVEMENT, IT SHOULD NOT BE FURTHER THAN 10 FT (3 m) FROM THE EDGE OF CURB, SHOULDER, OR PAVEMENT.
- •• WHERE THERE ARE CONSTRAINTS ON A PARTICULAR CORNER THAT MAKE IT IMPRACTICAL TO PROVIDE THE 10 FT (3 m) SEPERATION BETWEEN THE TWO PEDESTRIAN PUSHBUTTONS, THE PUSHBUTTONS MAY BE PLACED CLOSER TOGETHER OR ON THE SAME POLE.

### **NOTES:**

- 1. PEDESTRIAN SIGNAL HEADS SHALL BE MOUNTED WITH THE BOTTOM OF THE SIGNAL HOUSING INCLUDING BRACKETS NOT LESS THAN 8 FT (2.4 m) OR MORE THAN 10 FT (3 m) ABOVE SIDEWALK LEVEL, AND SHALL BE POSITIONED AND ADJUSTED TO PROVIDE MAXIMUM VISIBILITY AT THE BEGINNING OF THE CONTROLLED CROSSWALK.
- 2. THE BOTTOM OF THE SIGNAL HOUSING (INCLUDING BRACKETS) OF A VEHICULAR SIGNAL FACE THAT IS NOT LOCATED OVER A HIGHWAY SHALL BE AT LEAST 8 FT (2.4 m) BUT NOT MORE THAN 19 FT (5.8 m) ABOVE THE SIDEWALK OR, IF THERE IS NO SIDEWALK, ABOVE THE PAVEMENT GRADE AT THE CENTER OF THE ROADWAY.
- 3. THE BOTTOM OF THE SIGNAL HOUSING AND ANY RELATED ATTACHMENTS TO A SIGNAL FACE LOCATED OVER ANY PORTION OF A HIGHWAY SHALL BE ACCORDING TO CURRENT STATE STANDARDS 877001, 877002, 877006, 877011 AND 877012 WITH A MINIMUM OF 16 FT (5.0 m) AND A MAXIMUM OF 18 FT. (5.5 m) FROM THE HIGHEST POINT OF PAVEMENT.
- 4. THE BOTTOM OF THE TEMPORARY SPAN WIRE MOUNTED SIGNAL HOUSING AND ANY RELATED ATTACHMENTS TO A SIGNAL FACE LOCATED OVER ANY PORTION OF A HIGHWAY SHALL BE ACCORDING TO CURRENT STATE STANDARD 880001 WITH A MINIMUM OF 17 FT (5.18 m) FROM THE HIGHEST POINT OF PAVEMENT.
- 5. THE TOP OF THE SIGNAL HOUSING OF A SIGNAL FACE LOCATED OVER ANY PORTION OF A HIGHWAY SHALL NOT BE MORE THAN 25.6 FT (7.8 m) ABOVE THE PAVEMENT.

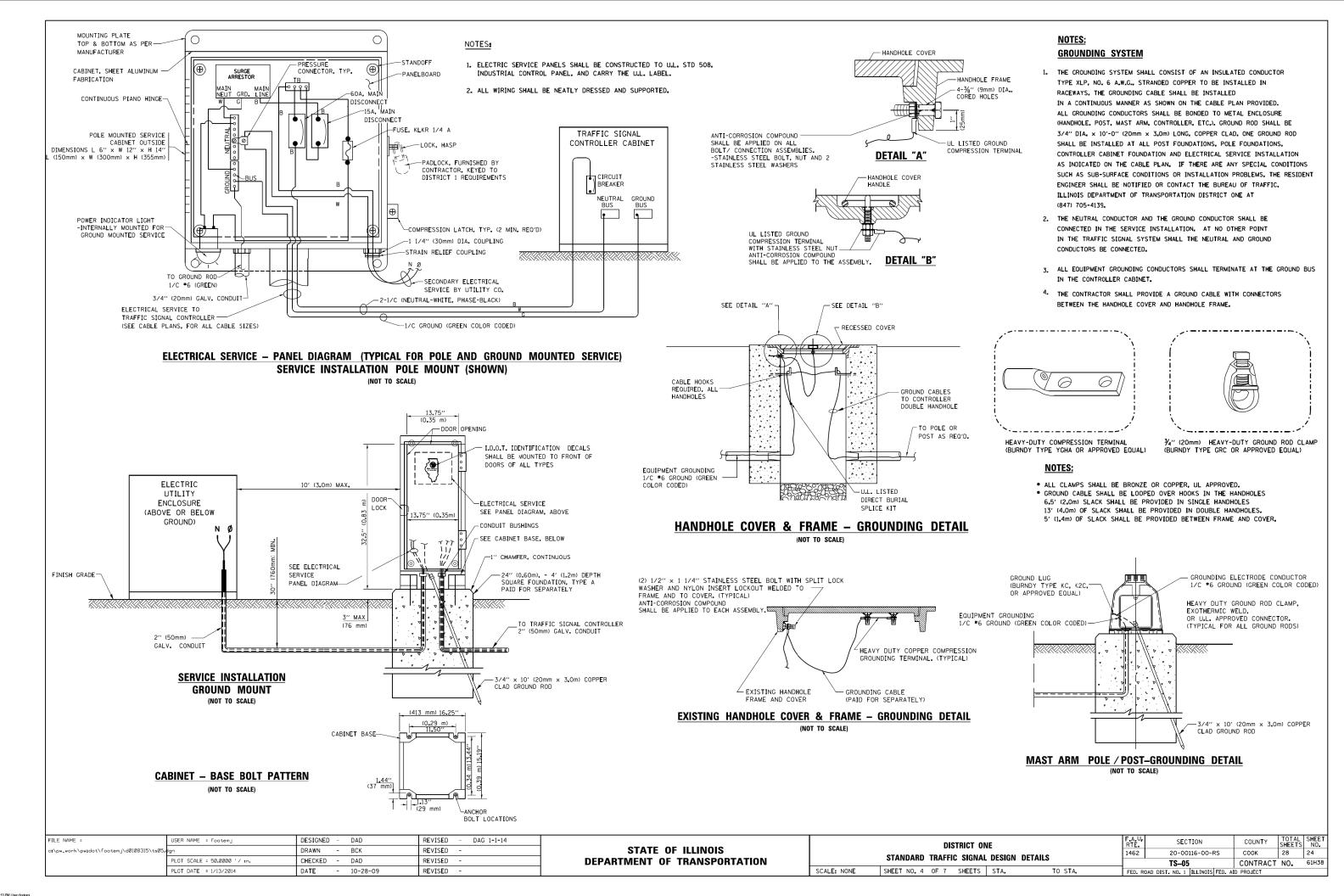
### TRAFFIC SIGNAL EQUIPMENT OFFSET

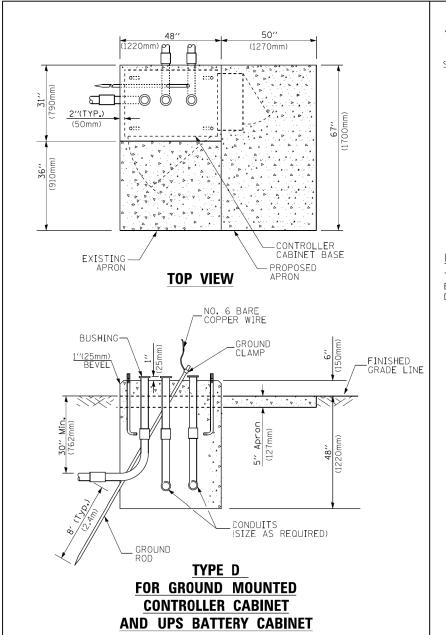
TRAFFIC SIGNAL EQUIPMENT	COMBINATION CONCRETE CURB AND GUTTER (MINIMUM DISTANCE FROM BACK OF CURB TO CENTERLINE OF FOUNDATION)	SHOULDER/NON-CURBED AREA (MINIMUM DISTANCE FROM EDGE OF PAVEMENT TO CENTERLINE OF FOUNDATION)
TRAFFIC SIGNAL MAST ARM POLE	6 FT (1.8m)	SHOULDER WIDTH + 2 FT (0.6m), MINIMUM 10 FT (3.0m)
TRAFFIC SIGNAL POST	4 FT (1.2m)	SHOULDER WIDTH + 2 FT (0.6m), MINIMUM 10 FT (3.0m)
PEDESTRIAN SIGNAL POST	4 FT (1 <u>.</u> 2m)	SHOULDER WIDTH + 2 FT (0.6m), MINIMUM 10 FT (3.0m)
PEDESTRIAN PUSHBUTTON POST	4 FT (1•2m)	SHOULDER WIDTH + 2 FT (0.6m), MINIMUM 10 FT (3.0m)
TEMPORARY WOOD POLE	6 FT (1.8m)	SHOULDER WIDTH + 2 FT (0.6m), MINIMUM 10 FT (3.0m)
CONTROLLER CABINET	6 FT (1.8m) MINIMUM DISTANCE SEE NOTE 2	SHOULDER WIDTH + 6 FT (1.8m), MINIMUM 16 FT (4.9m) SEE NOTE 3.
SERVICE INSTALLATION, GROUND MOUNT	6 FT (1.8m) MINIMUM DISTANCE SEE NOTE 2	SHOULDER WIDTH + 6 FT (1.8m), MINIMUM 16 FT (4.9m) SEE NOTE 3.

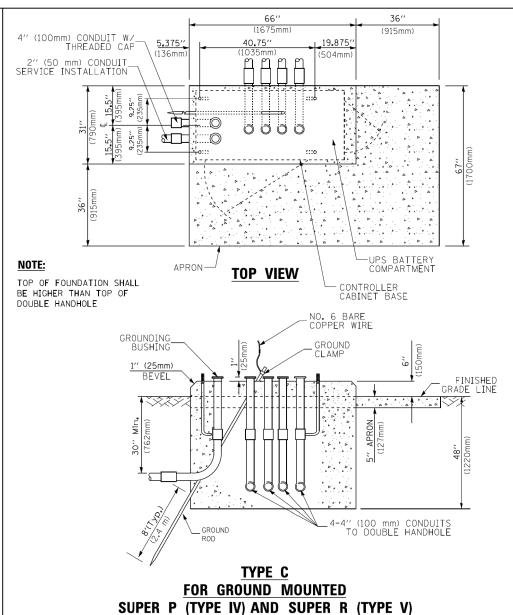
### NOTES:

- 1. CONTACT THE "AREA TRAFFIC SIGNAL MAINTENANCE AND OPERATIONS ENGINEER" FOR ASSISTANCE IN LOCATING THE TRAFFIC SIGNAL EQUIPMENT WHEN THERE ARE CONFLICTS WITH DITCHES OR THE MINIMUM OFFSET DISTANCES CANNOT BE MET.
- 2. MINIMUM DISTANCE FROM THE BACK OF CURB TO THE ROADWAY SIDE OF THE FOUNDATION.
- 3. MINIMUM DISTANCE FROM THE EDGE OF PAVEMENT TOTHE ROADWAY SIDE OF THE FOUNDATION.
- 4. ANY CHANGES TO THE OFFSETS OF THE FOUNDATIONS, FROM THE MINIMUM DISTANCES LISTED IN THE "TRAFFIC SIGNAL EQUIPMENT OFFSET" CHART AND THE TRAFFIC SIGNAL INSTALLATION PLAN, COULD EFFECT THE PLACEMENT OF THE SIGNAL HEADS, PEDESTRIAN SIGNAL HEADS AND THE PEDESTRIAN PUSHBUTTONS. THE SIGNAL HEAD PLACEMENT ON THE MAST ARMS SHALL REMAIN AS PER THE TRAFFIC SIGNAL INSTALLATION PLAN AND THE "TRAFFIC SIGNAL MAST ARM AND SIGNAL POST" DETAIL ABOVE. THE PROPOSED MAST ARM LENGTHS MAY NEED TO BE REVISED TO MEET THE ABOVE REQUIREMENTS. THE PEDESTRIAN SIGNAL HEADS AND PEDESTRIAN PUSHBUTTONS MUST MEET THE REQUIREMENTS UNDER THE DETAILS ON THIS SHEET.

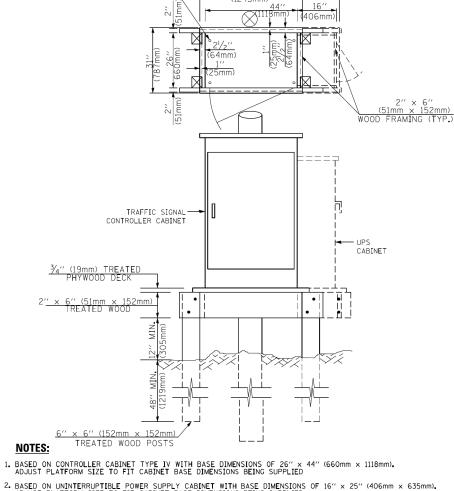
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**CONTROLLER CABINETS** 



65" (SEE NOTE 4) (1651mm)

SEE NOTE 5-

- 2. BASED ON UNINTERRUPTIBLE POWER SUPPLY CABINET WITH BASE DIMENSIONS OF 16" x 25" (406mm x 635mm). ADJUST PLATFORM SIZE TO FIT CABINET BASE DIMENSIONS BEING SUPPLIED.
- 3. PLATFORM SIZE FOR CONTROLLER CABINET TYPE IV.
- 4. PLATFORM SIZE FOR CONTROLLER CABINET TYPE IV AND UNINTERRUPTIBLE POWER SUPPLY CABINET.
- 5. DRILLED HOLES THROUGH THE PLATFORM BASE TO MATCH THE CONTROLLER CABINET BOLT TEMPLATE. FASTEN THE CONTROLLER CABINET TO THE PLATFORM WITH CARRIAGE BOLTS, WASHERS AND NUTS.
- 6. FASTEN ALL SUPPORT WOOD FRAMING TO THE WOOD POSTS WITH 2 LAG SCREWS FOR EACH CONNECTION.

### TEMPORARY SIGNAL CONTROLLER **WOOD SUPPORT PLATFORM**

CABLE SLACK LENGTH	FEET	METER
HANDHOLE	6.5	2.0
DOUBLE HANDHOLE	13.0	4.0
SIGNAL POST	2.0	0.6
MAST ARM	2.0	0.6
CONTROLLER CABINET	1.5	0.5
FIBER OPTIC AT CABINET	13.0	4.0
ELECTRIC SERVICE AT (CABINET OR SERVICE LOCATION)	1.5	0.5
GROUND CABLE (SIGNAL POST, MAST ARM, CABINET)	1.5	0.5
GROUND CABLE (BETWEEN FRAME AND COVER)	5.0	1.6

VERTICAL CABLE LENGTH	FEET	METER
MAST ARM POLE ( MAST ARM MOUNTED SIGNAL HEAD)		
(L = MAST ARM LENGTH - DISTANCE TO SIGNAL HEAD FROM END OF ARM)	20.0+L	6.0+L
BRACKET MOUNTED (MAST ARM POLE OR SIGNAL POLE)	13.0	4.0
PEDESTRIAN PUSH BUTTON	6.0	2.0
SERVICE INSTALLATION POLE MOUNT TO SERVICE DROP	13.5	4.1
SERVICE INSTALLATION POLE MOUNT TO GROUND	13.5	4.1
SERVICE INSTALLATION GROUND MOUNT	6.0	2.0
FOUNDATION (SIGNAL POST, MAST ARM POLE, CONTROLLER CABINET, SERVICE-GROUND MOUNT)	3.0	1.0

### **VERTICAL CABLE LENGTH**

### **CABLE SLACK**

	FEET	METER
RM MOUNTED SIGNAL HEAD)		
DISTANCE TO SIGNAL HEAD FROM END OF ARM)	20.0+L	6.0+L
ARM POLE OR SIGNAL POLE)	13.0	4.0
	6.0	2.0
DLE MOUNT TO SERVICE DROP	13.5	4.1
DLE MOUNT TO GROUND	13.5	4.1
ROUND MOUNT	6.0	2.0
. MAST ARM POLE. CONTROLLER CABINET. SERVICE-GROUND MOUNT)	3.0	1.0

### **DEPTH OF FOUNDATION**

FOUNDATION

TYPE A - Signal Post

TYPE C - CONTROLLER W/ UPS

TYPE D - CONTROLLER

SERVICE INSTALLATION, GROUND MOUNT, TYPE A - SQUARE

Mast Arm Length	① Foundation Depth			Quantity of Rebars	Size of Rebars
Less than 30′ (9.1 m)	10'-0" (3.0 m)	30" (750mm)	24" (600mm)	8	6(19)
Greater than or equal to	13'-6" (4∎1 m)	30" (750mm)	24" (600mm)	8	6(19)
30' (9.1 m) and less than 40' (12.2 m)	11'-0'' (3.4 m)	36" (900mm)	30" (750mm)	12	7(22)
Greater than or equal to 40' (12.2 m) and less than 50' (15.2 m)	13'-0'' (4.0 m)	36" (900mm)	30" (750mm)	12	7(22)
Greater than or equal to 50' (15.2 m) and up to 55' (16.8 m)	15'-0'' (4 <b>.</b> 6 m)	36'' (900mm)	30" (750mm)	12	7(22)
Greater than or equal to 56' (16.8 m) and less than 65' (19.8 m)	21'-0" (6.4 m)	42" (1060mm)	36" (900mm)	16	8(25)
Greater than or equal to 65' (19.8 m) and up to 75' (22.9 m)	25'-0" (7 <b>.</b> 6 m)	42'' (1060mm)	36" (900mm)	16	8(25)
	Less than 30' (9.1 m)  Greater than or equal to 30' (9.1 m) and less than 40' (12.2 m)  Greater than or equal to 40' (12.2 m) and less than 50' (15.2 m)  Greater than or equal to 50' (15.2 m) and up to 55' (16.8 m)  Greater than or equal to 56' (16.8 m) and less than 65' (19.8 m)  Greater than or equal to 65' (19.8 m) and less than 65' (19.8 m)	Less than 30' (9.1 m)   10'-0'' (3.0 m)	Less than 30' (9.1 m)   10'-0" (3.0 m)   30" (750mm)	Depth   Diameter   Diameter   Diameter	Less than 30' (9.1 m)   10'-0'' (3.0 m)   30'' (750mm)   24'' (600mm)   8

4'-0'' (1**.**2m) 4'-0" (1.2m)

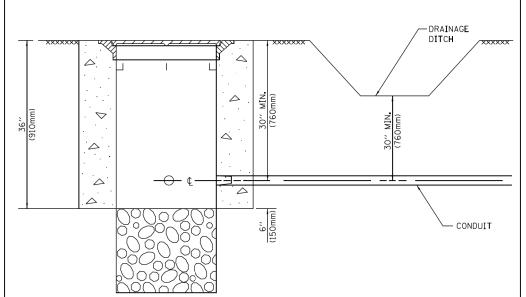
4'-0" (1.2m)

4'-0'' (1.2m)

- 1. These foundation depths are for sites which have cohesive soils (clayey silt, sandy clay, etc.) along the length of the shaft, with an average Unconfined Compressive Strength (Ou) > 1.0 tsf (100 kpa). This strength shall be verified by boring data prior to construction or with testing by the Engineer during foundation drilling. The Bureau of Bridges & structures should be contacted for a revised design if other conditions are encountered.
- 2. Combination mast arm assemblies under 55 feet (16.8 m) shall use 36" (900 mm) diameter foundations.
- 3. Combination mast arm assemblies under 56 feet (16.8 m) through 75 feet (22.9 m) shall use 42" (1060 mm) diameter foundations
- 4. For mast arm assemblies with dual arms refer to state standard 878001.

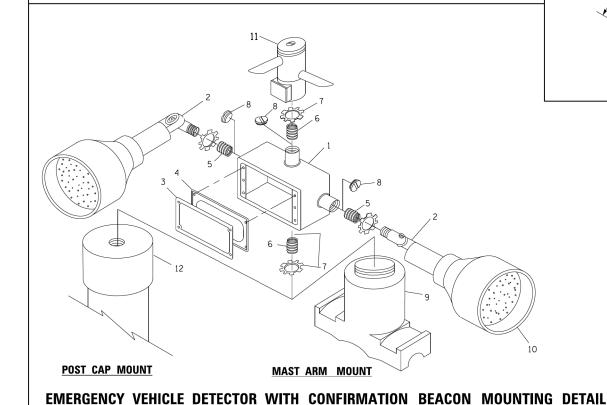
### DEPTH OF MAST ARM FOUNDATIONS, TYPE E

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	PLOT DATE = 1/13/2014	DATE - 10-28-09	REVISED -		SCALE: NONE	SHEET NO. 5 OF 7 SHEETS STA. TO STA.	FED. ROAD		ID PROJECT		



- 1. CONDUIT DEPTH SHALL BE A MINIMUM OF 30" (760mm) BELOW THE BOTTOM OF THE DRAINAGE DITCH OR ANY SLOPING GROUND
- THE MINIMUM CONDUIT DEPTH APPLIES TO ALL CONDUIT PLACED UNDER ROADWAY PAVEMENT, MULTI-USE PATHS, SIDEWALKS AND SOIL SURFACES.
- 3. THE MINIMUM CONDUIT DEPTH APPLIES TO ALL HANDHOLES, HEAVY DUTY HANDHOLES AND DOUBLE HANDHOLES.

### HANDHOLE WITH MINIMUM CONDUIT DEPTH



### (1675mm) (915mm 19.875" 40.75" (136mm (1035mm) (504mm) <del>\_\_</del>\_ PROPOSED -APRON -CONTROLLER CABINET BASE **TOP VIEW** NO. 6 BARE COPPER WIRE \_ NO. 3 DOWEL 18" (450mm) LONG (8 REQ.) | BUSHING -\_GROUND CLAMP / EXISTING ANCHOR BOLTS BEVEL

# MODIFY EXISTING TYPE "D" FOUNDATION TO TYPE "C" FOUNDATION

-EXISTING CONDUITS

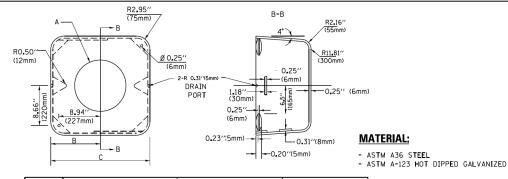
XISTING GROUND ROD

(NOT TO SCALE)

# ITEM NO. IDENTIFICATION 1 OUTLET BOX- GALV, 21 CU,IN. (0,000344 CU-M) 2 LAMP HOLDER AND COVER 3 OUTLET BOX COVER 4 RUBBER COVER GASKET 5 REDUCING BUSHING 6 ¾'(19 mm) CLOSE NIPPLE 7 ¾'(19 mm) LOCKNUT 8 ¾'(19 mm) HOLE PLUG 9 SADDLE BRACKET - GALV. 10 6 WATT PAR 38 LED FLOOD LAMP 11 DETECTOR UNIT 12 POST CAP [18 FT. (5.4 m) POST MIN.]

### NOTES:

- ALL ELECTRICAL ITEMS, EXCEPT ITEMS #2 AND \*11 SHALL BE ALUMINUM OR GALVANIZED
- 2. ITEM #1- OZ/GEDNEY FSX-1-50 OR EQUIVALENT
  ITEM #2- MULBERRY CON-O-SHADE LAMP SHIELD OR EQUIVALENT
  ITEM #9- "BAND-IT" SADDLE BRACKET OR EQUIVALENT
- 3. WHEN POST MOUNTING IS SPECIFIED, ITEM \*9 SHALL NOT BE REQUIRED. THE DETECTION UNIT SHALL BE MOUNTED DIRECTLY ON TOP OF THE CAP BY DRILLING AND TAPPING A 3/4 "(19 mm) HOLE WITH PIPE THREADS. THE POST CAP SHALL EITHER BE SCREWED TO THE TOP OF THE POST OR A MINIMUM OF 3 TIGHTENING SCREWS SHALL BE REQUIRED ON EACH CAP.

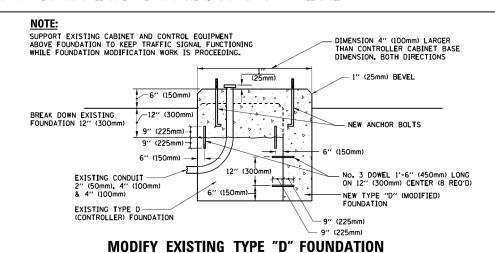


Α	В	С	HEIGHT	WEIGHT
VARIES	9 <b>.</b> 5′′(241mm)	19''(483mm)	7" (178mm) - 12" (300mm)	53 lbs (24kg)
VARIES	10.75"(273mm)	21.5"(546mm)	7" (178mm) - 12" (300mm)	68 lbs (31 kg)
VARIES	13.0"(330mm)	26''(660mm)	7" (178mm) - 12" (300mm)	81 lbs (37 kg)
VARIES	18 <b>.</b> 5''(470mm)	37''(940mm)	7" (178mm) - 12" (300mm)	126 lbs (57 kg)

### **SHROUD**

### NOTES:

- DIMENSION "A" IS EQUAL TO THE DIAMETER OF THE MAST ARM POLE AT THE TOP OF THE SHROUD.
  THE SHROUD SHALL BE TIGHT TO THE MAST ARM POLE.
- 2. THE SUPPLIER SHALL VERIFIED THE ABOVE DIMENSIONS BASED ON MAST ARM REQUIREMENTS.
- 3. THE HEIGHT OF THE SHROUD SHALL COVER THE ANCHOR BOLTS, NUTS AND MAST ARM POLE BASE.



# GALVANIZED STEEL HOOKS 21 1/2 MIN. (545mm) EXISTING CONDUIT TO BE REMOVED CONDUIT TO REMAIN ELEVATION ELEVATION EXISTING CONDUIT TO REMAIN PLAN

### NOTES:

SCALE: NONE

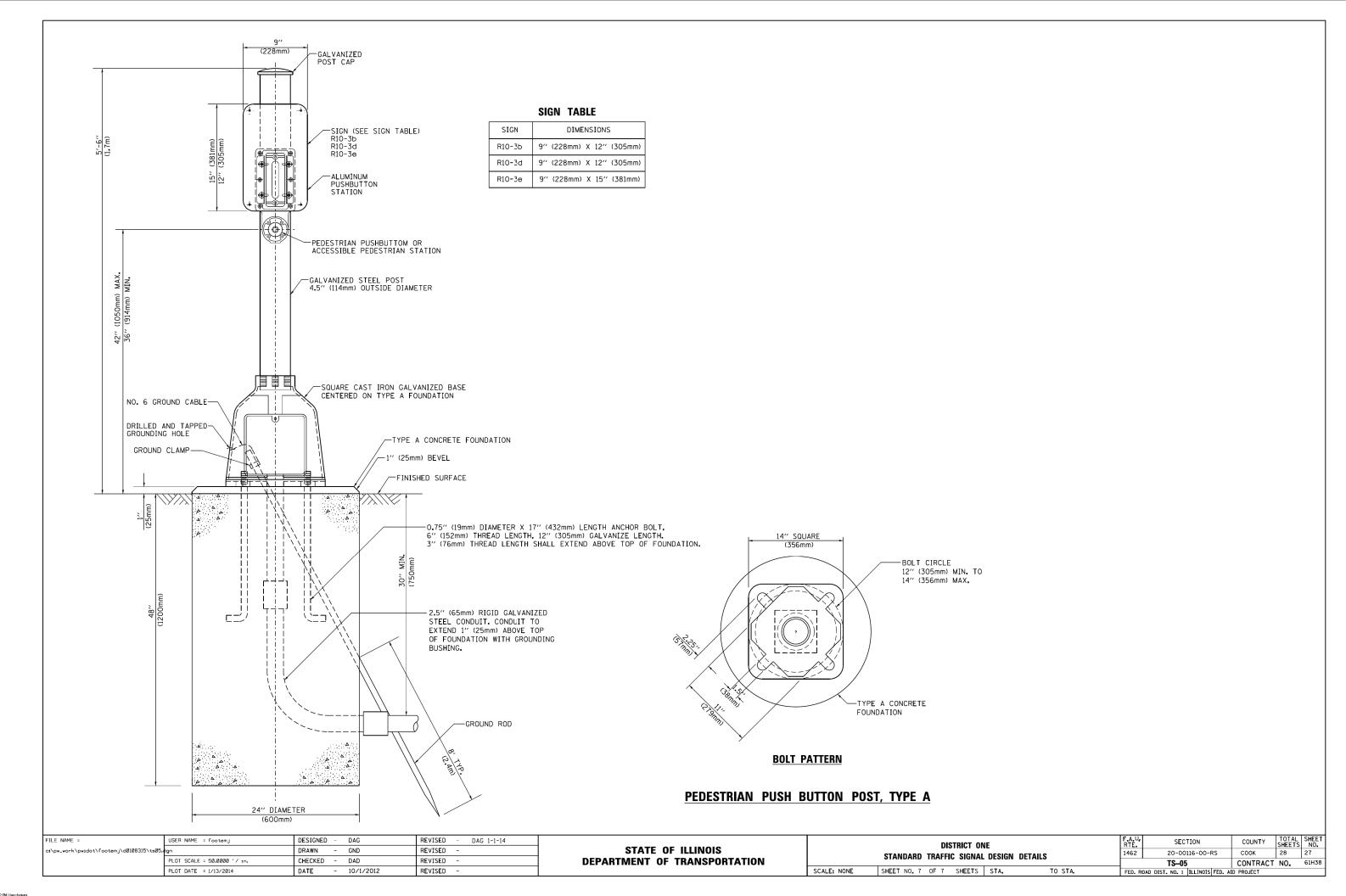
- 1. HANDHOLE CONSTRUCTED PER STATE STANDARD 814001.
- 2. REMOVAL OF THE EXISTING CONDUIT FROM THE HANDHOLE AND THE INSTALLATION OF THE CONDUIT BUSHINGS SHALL BE INCLUDED WITH THE COST OF THE HANDHOLE.

### HANDHOLE TO INTERCEPT EXISTING CONDUIT

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STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

| DISTRICT ONE | F.A. U | SECTION | COUNTY | SHEETS | NO. 1 | STANDARD | TRAFFIC | SIGNAL DESIGN | DETAILS | SHEET | NO. 6 | OF 7 | SHEETS | STA. | TO STA. | FED. ROAD DIST. NO. 1 | ILLINOIS | FED. AID PROJECT | NO. 61P



# LOOPS NEXT TO SHOULDERS PROVIDE A PAVEMENT REPLACEMENT NOTE WHICH SHOULD EQUAL 3' (900 mm) X WIDTH OF PAVED SHOULDER. PAVED OR NON-PAVED SHOULDER $\mathbb{H}$ (1.5 m) (1.8 m) (1.5 m) 1" (25 mm) UNII DUCT-TRENCHED TO E/P •• (3,0 m) \* = (600 mm)\* \* UNIT DUCT IS TO BE SHOWN ON PLAN SHEETS BUT SHALL NOT BE INCLUDED IN THE PAY ITEMS. ARTERIAL-VOLUME DENSITY ("FAR OUT" DETECTION)

# <u>LEFT TURN LANES WITH MEDIANS</u> VOLUME DENSITY ("FAR OUT" DETECTION) ON SAME APPROACH (PROTECTED / PERMITTED LEFT TURN PHASING) HANDHOLF LOCATION MAY 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 TRENCHED 1" (25 mm) UNIT DUCT (3) \* \* \* = (600 mm) STRAIGHT SAW CUTS PERPENDICULAR TO MEDIAN (TYP.) (3.6

(1.8 m)

NOTE: DUAL LEFT TURNS NOT SHOWN REFER TO

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

BUT SHALL NOT BE INCLUDED IN THE PAY ITEMS.

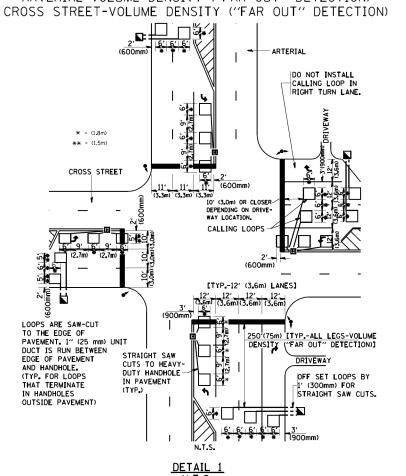
(900 mm)

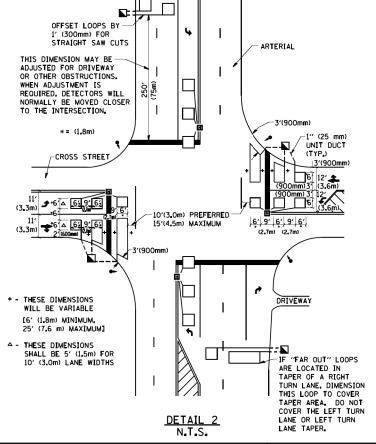
# LEFT TURN LANES WITHOUT MEDIANS VOLUME DENSITY ("FAR OUT" DETECTION) ON SAME APPROACH (PROTECTED / PERMITTED LEFT TURN PHASING) \* = (600 mm) (900 mr (1.8 m) (3.6 m) STRAIGHT SAW CUT TO HEAVY DUTY HANDHOLE (TYP.) PLACE HEAVY DUTY HANDHOLE BETWEEN FIRST AND SECOND LOOP AS SHOWN.

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

SCALE NONE

PLAN SHEET FOR DETECTOR LOOP REPLACEMENT ARTERIAL-VOLUME DENSITY ("FAR OUT" DETECTION) CROSS STREET-NON VOLUME DENSITY ("UPTIGHT" PRESENCE DETECTION)





### NOTES:

### VEHICLES LOOP DETECTORS

- \* ALL LEAD IN CABLE SHALL BE TWO CONDUCTOR NO. 14 TWISTED,
- \* EACH DETECTOR LOOP SHALL HAVE ITS OWN SAW CUT FROM THE LOOP TO THE EDGE OF PAVEMENT OR TO A HANDHOLE IN THE
- \* 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 <u>SEPARATE</u> INDUCTIVE LOOP DETECTOR WHEN NEW CONTROLLERS ARE UTILIZED. THE DESIGNER SHALL LABEL THESE TYPES OF LOOPS AS "INTERSECTION AND SAMPLING (SYSTEM) DETECTORS" ON THE SIGNAL LAYOUT, THE INTERCONNECT PLAN AND THE SYSTEM CABLE PLAN. WHEN AN EXISTING CONTROLLER IS UTILIZED FOR THIS TYPE OF DETECTION, THE PAY ITEM "INDUCTIVE LOOP DETECTOR WITH SYSTEM OUTPUT" SHOULD BE USED.

### PLACEMENT OF DETECTORS

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

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

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

### 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.

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STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION

SECTION COUNTY DISTRICT 1 - DETECTOR LOOP INSTALLATION 1462 20-00116-00-RS COOK 28 28 **DETAILS FOR ROADWAY RESURFACING** CONTRACT NO. TS-07 61H38 SHEET 8 1 OF 8 SHEETS STA. TO STA.