# STATE OF ILLINOIS **DEPARTMENT OF TRANSPORTATION**

FAP 0104 23 SMART LAKE ILLINOIS CONTRACT NO. 62V75

LOCATION OF SECTION INDICATED THUS: -

D-91-053-24

FOR INDEX OF SHEETS, SEE SHEET NO. 2

THE IMPROVEMENT IS LOCATED IN THE VILLAGE OF ANTIOCH

TRAFFIC DATA: ADT = 10,300 (2023)

POSTED\_SPEED\_LIMIT = 35 & 45 MPH

DESIGN DESIGNATION = OTHER PRINCIPAL ARTERIAL

PROPOSED HIGHWAY PLANS

**FAP ROUTE 104: IL 59 (FOX LAKE RD)** 

**IL 173 TO HIGHWOODS DRIVE** 

**SECTION: FAP 0104 23 SMART** 

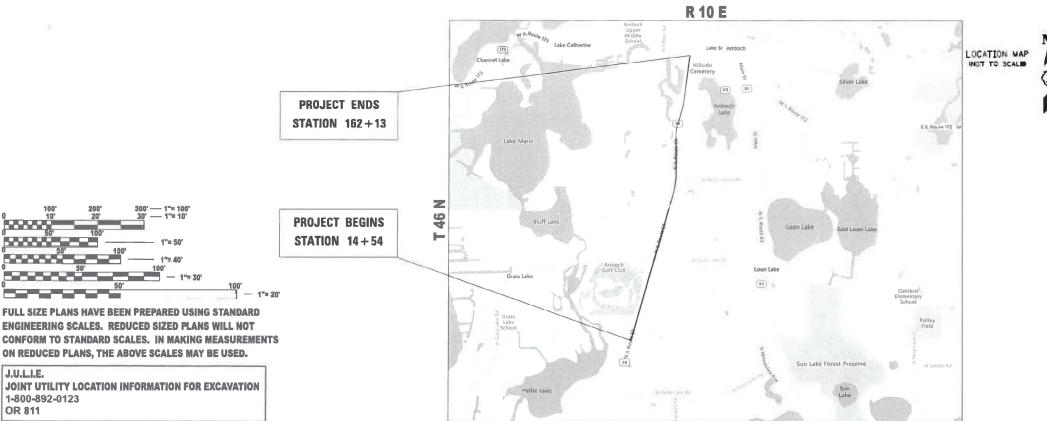
PROJECT: NHPP-E2LY(860)

**SMART OVERLAY, ADA IMPROVEMENTS & TRAFFIC SIGNAL** 

**MODERNIZATION** 

**LAKE COUNTY** 

C-91-061-24



**ANTIOCH TOWNSHIP** 

GROSS LENGTH = 14,759 FEET = 2,80 MILES NET LENGTH = 14,759 FEET = 2.80 MILES

CONTRACT NO. 62V75

PROJECT ENGINEER: DANIEL WILGREEN, P.E. (847)-705-4240 PROJECT MANAGER: J. ALAIN MIDY, P.E. (847)-221-3063

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STATE OF ILLINOIS **DEPARTMENT OF TRANSPORTATION** 

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	INDEX OF SHEETS		STATE STANDARDS
SHEET NO.	DESCRIPTION	STANDARD NO.	DESCRIPTION
1	COVER SHEET	000001-08	STANDARD SYMBOLS, ABBREVIATIONS, AND PATTERNS
2	INDEX OF SHEETS, STATE STANDARDS, AND GENERAL NOTES	424001 <b>-</b> 12	PERPENDICULAR CURB RAMPS FOR SIDEWALKS
3-5 6-7	SUMMARY OF QUANTITIES	424011-05	DEPRESSED CORNER FOR SIDEWALKS
8-13	EXISTING AND PROPOSED TYPICAL SECTIONS ROADWAY AND PAVEMENT MARKING PLANS	424021-07	CORNER PARALLEL CURB RAMPS FOR SIDEWALKS
14-15	DETECTOR LOOP PLANS	604001-05	FRAME AND LIDS TYPE 1
16-19	TRAFFIC SIGNAL MODERNIZATION PLANS	606001-08	CONCRETE CURB TYPE B AND COMBINATION CONCRETE CURB AND GUTTER
20-22	ADA RAMP DESIGNS	606301-04	PC CONCRETE ISLANDS AND MEDIANS
23	DETAILS FOR FRAMES AND LIDS ADJUSTMENT WITH MILLING (BD-08)	701006-05	OFF-RD OPERATIONS, 2L, 2W MORE THAN 15' (4.5 M) TO 24" (600 M) FROM EDGE OF PAVEMENT
24	PAVEMENT PATCHING FOR HMA SURFACED PAVEMENT (BD-22)		
25	CURB AND GUTTER REMOVAL AND REPLACEMENT (BD-24)	701311-03	LANE CLOSURE 2L, 2W MOVING OPERATIONS - DAY ONLY
26	BUTT JOINT AND HMA TAPER DETAILS (BD-32)	701501-06	URBAN LANE CLOSURE 2L, 2W, UNDIVIDED
27	TYPICAL APPLICATIONS RAISED REFLECTIVE PAVEMENT MARKERS (SNOW-PLOW RESISTANT) (TC-11)	701502-09	URBAN LANE CLOSURE, 2L, 2W WITH BIDIRECTIONAL LEFT TURN LANE
28	DISTRICT ONE TYPICAL PAVEMENT MARKINGS (TC-13)	701701-10	URBAN LANE CLOSURE, MULTILANE INTERSECTION
29	PAVEMENT MARKING LETTERS AND SYMBOLS	701801-06	SIDEWALK, CORNER OR CROSSWALK CLOSURE
	FOR TRAFFIC STAGING (TC-16)	701901-10	TRAFFIC CONTOL DEVICES
30	ARTERIAL ROAD INFORMATION SIGN (TC-22)	780001-05	TYPICAL PAVEMENT MARKINGS
31	DRIVEWAY ENTRANCE SIGNING (TC-26)	886001-01	DETECTOR LOOP INSTALLATIONS
32-38	DISTRICT 1 - TRAFFIC SIGNAL DESIGN DETAILS (TS-05)	886006-01	TYPICAL LAYOUTS FOR DETECTION LOOPS
39	DISTRICT 1 - DETECTOR LOOP INSTALLATION DETAILS FOR ROADWAY RESURFACING (TS-07)	000000-01	THI IS ALL EAT GOT ON SET ESTION LEGGT O
40-45	ADA RAMP PD STANDARDS		
			GENERAL NOTES
		1.	BEFORE STARTING ANY EXCAVATION, THE CONTRACTOR SHALL CALL "J.U.L.I.E" AT (800) 892-0123 OR 811 FOR FIELD LOCATIONS OF BURIED ELECTRIC, TELEPHONE AND GAS UTILITIES. 48 HOUR NOTIFICATION IS REQUIRED.
		2.	THE CONTRACTOR SHALL CONTACT THE DISTRICT ONE TRAFFIC CONTROL SUPERVISOR AT KALPANA.KANNAN-HOSADURGA@ILLINOIS.GOV A MINIMUM OF 72 HOURS IN ADVANCE OF BEGINNING WORK.
		3.	ALL DAMAGE TO EXISITING PAVEMENT MARKERS OR RAISED REFLECTIVE PAVEMENT MARKERS OUTSIDE THE REMOVAL LINESHOWN ON THE PLANS SHALL BE REPLACED AT NO ADDITIONAL COST TO THE DEPARTMENT.
		4.	BEFORE BEGINNING ANY WORK, THE CONTRACTOR SHALL RETAIN AND RECORD FOR FUTURE REFERENCE, ALL EXISTING PAVEMENT MARKING LINES (AND RAISED REFLECTIVE PAVEMENT MARKERS) IN ORDER THAT THESE LOCATIONS CAN BE RE-ESTABLISHED FOR STRIPING. EXACT LOCATIONS OF ALL PAVEMENT MARKINGS SHALL BE AS SHOWN ON THE PLANS OR AS DIRECTED BY THE RESIDENT ENGINEER.
		_	

WHEN THE MILLED PAVEMENT IS OPEN TO TRAFFIC, THE MAXIMUM GRADE DIFFERENTIAL BETWEEN PASSES OF THE MILLING MACHINE SHALL NOT EXCEED 11/2 INCHES (40 mm) WHERE THE SPEED LIMIT IS 40 MPH OR LESS THAN LESS THAN 1 INCH (25 mm)WHERE THE SPEED LIMIT IS GREATER THAN 40 MPH, WITH WRITTEN APPROVAL OF THE ENGINEER. A MAXIMUM GRADE DIFFERENTIAL OF 3 INCHES (75 mm) MAY BE ALLOWED IF THE EDGE OF THE MILLING IS SLOPED A MINIMUM 1:3 (V:H).

THE RESIDENT ENGINEER SHALL CONTACT BRANDY KENNEDY, AREA TRAFFIC FIELD ENGINEER, VIA EMAIL AT BRANDY, KENNEDY @ILLINOIS, GOV. A MINIMUM OF TWO (2) WEEKS PRIOR TO THE PLACEMENT OF PERMANENT PAVEMENT

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

ALL MILLED SURFACES SHALL BE A UNIFORM CROSS SLOPE PER LANE AND FREE OF RIDGES BETWEEN PASSES. ANY DEVIATIONS SHALL BE CORRECTED AT NO COST TO THE DEPARTMENT.

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

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

LOCATION OF COMBINATION CONCRETE CURB AND GUTTER REMOVAL AND REPLACEMENT [OR COMBINATION CURB AND GUTTER (THE TYPE SPECIFIED ON THE PLANS)], WILL BE DETERMINED IN THE FIELD BY THE ENGINEER.

TEN (10) FOOT TRANSITIONS SHALL BE USED TO MATCH PROPOSED CURB AND GUTTER AND MEDIAN ITEMS OF WORK TO EXISTING CURBS AND GUTTER AND MEDIANS IN THE FIELD, UNLESS OTHERWISE SHOWN.

SIDEWALK REMOVALAND P.C.C. SIDEWALK 5" LOCATIONS SHALL BE DETERMINED BY THE ENGINEER.

DRAINAGE ADJUSTMENT OR RECONSTRUCTION LOCATIONS WILL BE DETERMINED IN THE FIELD BY THE ENGINEER.

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

FRAMES AND GRATES ADJUSTMENT OF PRIVATE UTILITIES WITHIN THE LIMITS OF THE IMPROVEMENTS SHALL BE DONE BY THEIR RESPECTIVE OWNERS AND ARE NOT PART OF THIS CONTRACT.

THE CONTRACTOR SHALL BE REQUIRED TO KEEP A RECORD OF THE LOCATIONS OF PLATED STRUCTURES BY STATION AND OFFSET LEFT OR RIGHT OF THE CENTERLINE OF PAVEMENT.

THE CONTRACTOR SHALL 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 SHALL DELIVER THE RECORD TO THE ENGINEER.

THE CONTRACTOR SHALL BE RESPONSIBLE FOR THE NOTIFICATION OF ALL EMERGENCY SERVICES, SCHOOL DISTRICTS, I.D.O.T.'S COMMUNICATIONS CENTER, SPRINGFIELD TRUCK PERMIT SECTION AND OTHER AGENCIES AFFECTED BY THE CLOSURE. THE CONTRACTOR SHALL ALSO BE RESPONSIBLE FOR POSTING SIGNS THAT WILL INDICATE THE DATES THE CLOSURE WILL

OVERNIGHT LANE CLOSURES SHALL NOT BE ALLOWED FOR REHABILITATION PROJECTS INVOLVING DAYTIME MILLING AND RESURFACING OPERATIONS AND CLASS D PATCHING UNLESS OTHER CONDITIONS WARRANT EXTENDED LANE CLOSURES AS DETERMINED AND APPROVED IN WRITING BY THE ENGINEER OR AS PROVIDED FOR IN THE CONTRACT SPECIFICATIONS.

THE AGGREGATE GRADATION FOR THE AGGREGATE SUBGRADE IMPROVEMENT 12" LOWER LIFT SHALL BE CS 1 OR RR 1"

GRADING AND SHAPING DITCHES LOCATIONS WILL BE DETERMINED IN THE FIELD BY THE ENGINEER.

THE CONTRACTOR SHALL MAINTAIN PEDESTRIAN ACCESS AT ALL TIMES DURING CONSTRUCTION.

USER NAME = mohammad.hamwi DESIGNED -REVISED -DRAWN REVISED -CHECKED -REVISED -PLOT DATE = 11/23/2024 DATE REVISED -

**STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION** 

AT ALL TIMES DURING CONSTRUCTION OF THIS PROJECT.

DO NOT SCALE PLANS FOR CONSTRUCTION DIMENSIONS.

COMPANIES AND THE VILLAGE OF ANTIOCH.

THE CONTRACTOR SHALL BE REQUIRED TO PROVIDE ACCESS TO ABUTTING PROPERTY

THE CONTRACTOR SHALL COORDINATE CONSTRUCTION ACTIVITIES WITH UTILITY

**INDEX OF SHEETS, STATE STANDARDS & GENERAL NOTES** 104 IL ROUTE 59 (FOX LAKE ROAD) FROM IL 173 TO HIGHWOODS DRIVE SHEET 1 OF 1 SHEETS STA.

SECTION COUNTY FAP 0104 23 SMART LAKE | 45 | 2 CONTRACT NO. 62V75 ILLINOIS FED. AID PROJECT

			TYPE	CODE							TYPE CODE	
		IL-59 IL-59 LAKE LAKE	IL-59 LAKE						IL-59 LAKE		IL-59 LAKE	
SUMMARY OF QUANTITIES		ROADWAY ROADWA	Y TRAFFIC SIGNALS				SUMMARY OF QUANTITIES		ROADWA	AY ROADWA	TRAFFIC SIGNALS	
		80% FED 100%	80% FED				<b>V</b>		80% FEI	D 100%	80% FED	
		20% STATE	20% STATE						20% STATE	STATE	20% STATE	1
CODE NO.	UNIT TOTAL QUANTIT	v 0005 0005	0021			CODE NO.	ITEM	UNIT TOTA	L 0005	0005	0021	
20200100 EARTH EXCAVATION	CU YD 85	85				42400800 DETECTABLE WARNING	S	SQ FT 85	85			
21101615 TOPSOIL FURNISH AND PLACE, 4"	SQ YD 550	550				44000155 HOT-MIX ASPHALT SURF	FACE REMOVAL, 1 1/2"	SQ YD 64257	64257			
21400100 GRADING AND SHAPING DITCHES	FOOT 500	500				44000200 DRIVEWAY PAVEMENT F	REMOVAL	SQ YD 89	89			
25000210 SEEDING, CLASS 2A	ACRE 0.07	0.07				44000600 SIDEWALK REMOVAL		SQ FT 870	870	+		
25000400 NITROGEN FERTILIZER NUTRIENT	POUND 3.2	3.2				44003100 MEDIAN REMOVAL		SQ FT 2050	2050			
25000500 PHOSPHORUS FERTILIZER NUTRIENT	POUND 3.2	3.2				44201835 CLASS D PATCHES, TYP	EI, 16 INCH	SQ YD 50	50	+		
									+	+		
25000600 POTASSIUM FERTILIZER NUTRIENT	POUND 3.2	3.2				44201839 CLASS D PATCHES, TYP	E II. 16 INCH	SQ YD 1000	1000	+	+ + +	
	3.2	-				SE ISS DI AIGIES, ITE		1000	1,000	+		
25100630 EROSION CONTROL BLANKET	SQ YD 334	334				44201843 CLASS D PATCHES, TYP	PF III 16 INCH	SQ YD 1000	1000	+		
23100000 ENOSIGN CONTROL BLANKET	30 10 334	334				44201043 CEAGS DIFATCHES, TTP	E III, TO INGT	30 10 1000	1000			
25200110 SODDING SALTTOLERANT	90 VD 345	215				44201845 CLASS D PATCHES, TYP	PEN 16 INCH	SQ YD 1000	1000	+		$\overline{}$
25200110 SODDING, SALT TOLERANT	SQ YD 215	215				44201040 CLASS D PATCHES, TYP	LIV, IUIKO⊓	SQ YD 1000	1000			$\overline{}$
ASSOCIATE AND SHEATH WATERING	LINIT	0.0				40400400 ACODECATE WEDGE OF	IQUIDED TYPE D	TON 404	404			
25200200 SUPPLEMENTAL WATERING	UNIT 3.2	3.2				48102100 AGGREGATE WEDGE SH	HOULDER, TYPE B	TON 424	424			
20000004 ACCREATE SURGRADE MODOVEMENT	0117/2	40				COSTORO CATOURAGINO TO DE A	DUINTED	F40U 0		+		
30300001 AGGREGATE SUBGRADE IMPROVEMENT	CU YD 10	10				60250200 CATCH BASINS TO BE A	DJ051ED	EACH 2	2	+		
25504000 HOT NIV ADDIANT DAGE COURSE OF	00.70	24				COCCOACE EDAMEC AND COATEC	TO DE AD HOTED	FAOU 5				
35501308 HOT-MIX ASPHALT BASE COURSE, 6"	SQ YD 34	34				60300105 FRAMES AND GRATES T	O BE ADJUSTED	EACH 5	5			
GEFFACE USE THE VIOLENT DATE COURSE OF	00.70	50				SOCIONAL CONODETE MEDIAN CIT	DELOS ANON	00.57	2050			
35501316 HOT-MIX ASPHALT BASE COURSE, 8"	SQ YD 56	56				60618300 CONCRETE MEDIAN SU	RPACE, 4 INCH	SQ FT 2050	2050			
							2, 2, 1, 1, 2, 1, 1, 1, 1, 1, 1, 1, 1, 1, 1, 1, 1, 1,					$\overline{}$
40600290 BITUMINOUS MATERIALS (TACK COAT)	POUND 28916	28916				60920015 PIPE CULVERTS TO BE	CLEANED 15"	FOOT 200	200	+		
40000070 LONGITUDNALIONITICS VIANT	F007 1000	40205				# ccoocaea Nov ap=2:::	Inners	CILVE	.=	_		
40600370 LONGITUDINAL JOINT SEALANT	FOOT 16235	16235				* 66900200 NON-SPECIAL WASTE D	IDPUDAL	CU YD 85	85	+	+ + + + + +	
ASSOCIATE AND ADDRESS AND STATE AND		0.7				h 00000500 000 000	10	540::				
40600400 MIXTURE FOR CRACKS, JOINTS, AND FLANGEWAYS	TON 97	97				★ 66900530 SOIL DISPOSAL ANALYS	10	EACH 3	3	+		
ACCORDED HOT ANY ACCUMATION OF STREET STREET	2007	070				h 00004004 DEGUI	NES PRE CONSTRUCTION DE M	1.017	-	+	+ + + + + +	
40600982 HOT-MIX ASPHALT SURFACE REMOVAL - BUTT JOINT	SQ YD 370	370				* 66901001 REGULATED SUBSTANC	ES PRE-CONSTRUCTION PLAN	L SUM 1	1			
		15					ASS PRO A CONSTRUCTION DEPOSE	1.015		+		
40604060 HOT-MIX ASPHALT SURFACE COURSE, IL-9.5, MIX "D", N50	TON 10	10				★ 66901003 REGULATED SUBSTANC	ES FINAL CONSTRUCTION REPORT	L SUM 1	1	+		
		5050					DISC MONTOPING	0115:		+		
40604062 HOT-MIX ASPHALT SURFACE COURSE, IL-9.5, MIX "D", N70	TON 5398	5398				* 66901006 REGULATED SUBSTANC	ES MUNITUKING	CAL DA 5	5	+		
								1.005				
42001300 PROTECTIVE COAT	SQ YD 556	556				67100100 MOBILIZATION		L SUM 1	1			$\overline{}$
		05-						1.015	+	+		
42400200 PORTLAND CEMENT CONCRETE SIDEWALK 5 INCH	SQ FT 650	650				70100450 TRAFFIC CONTROL AND	PROTECTION, STANDARD 701201	L SUM 1	1			
				* = SPE	CIALTY ITEM						* = SPECIALTY IT	TEM
LICED NAME - mehaning homoid DECIONED	REVISED -	Т				<u> </u>			F.A.P	25.5	TOTA	AL SHEET
	REVISED -				STATE OF ILL		SUMMARY OF QUANTITES	ne ne	F.A.P RTE.	SECT FAP 0104 2		SAL SHEET ETS NO.
DRAWN -   CHECKED -   PLOT DATE = 2/4/2025   DATE -	REVISED -			DEPA	RTMENT OF TRA	NSPORTATION	IL ROUTE 59 (FOX LAKE RD) FROM IL 173 TO HIGHWOO  SCALE: SHEET 1 OF 3 SHEETS STA. TO S				CONTRACT NO. 6	
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							TYPE	CODE						TYPE CODE	
						IL-59 IL-59 LAKE LAKE	IL-59 LAKE					IL-59 II	IL-59 -AKE	IL-59 LAKE	
			SUMMARY OF QUANTITIES			DADWAY ROADWAY	TRAFFIC				SUMMARY OF QUANTITIES	ROADWAY ROA		TRAFFIC	
			COMMAND OF QUANTITIES				SIGNALS				COMMANT OF QUANTIFIED			SIGNALS	
					80	0% FED 100% 20% STATE STATE	80% FED 20% STATE					80% FED 1 20% S STATE S	100% STATE	80% FED 20%	
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	CODE NO.		ITEM UN	IT TOTA	AL HTV	0005 0005	0021			CODE NO.	ITEM UNIT TOTAL QUANTIT	0005	0005	0021	
H				QOAN							QOATTI	+ +			
$\vdash$												++			
	70102620	TRAFFIC CONTROL AND	PROTECTION, STANDARD 701501 L SI	JM 1		1				* 81028200 UNDERGROUND CONDU	UIT, GALVANIZED STEEL, 2" DIA. FOOT 217			217	
	70102622	TRAFFIC CONTROL AND	PROTECTION, STANDARD 701502 L SI	JM 1		1				* 81028220 UNDERGROUND CONDU	UIT, GALVANIZED STEEL, 3" DIA. FOOT 143			143	
$\vdash$					+							+			
-												++			
L	70102635	TRAFFIC CONTROL AND	PROTECTION, STANDARD 701701 L SI	JM 1		1				* 81028240 UNDERGROUND CONDU	UIT, GALVANIZED STEEL, 4" DIA. FOOT 556			556	
	70102640	TRAFFIC CONTROL AND	PROTECTION, STANDARD 701801 L SI	JM 1		1				* 81400100 HANDHOLE	EACH 2			2	
H												++			
$\vdash$												++			
	70300100	SHORT TERM PAVEMENT	MARKING FO	OT 1670	00	16700				★ 81400200 HEAVY-DUTY HANDHOLE	E EACH 4			4	
F	70300150	SHORT TERM PAVEMENT	MARKING REMOVAL SQ	FT 5600	0	5600				* 85000200 MAINTENANCE OF EXIST	TING TRAFFIC SIGNAL INSTALLATION EACH 1	+ +		1	
$\vdash$					-							+			
	70300211	TEMPORARY PAVEMENT	MARKING LETTERS AND SYMBOLS - PAINT SQ	FT 1440	0	1440				★ 87301225 ELECTRIC CABLE IN COI	ONDUIT, SIGNAL NO. 14 3C FOOT 361			361	
F	70300221	TEMPORARY PAVEMENT	MARKING - LINE 4"- PAINT FO	OT 12260	00 1	122600				★ 87301245 ELECTRIC CABLE IN COI	NDUIT, SIGNAL NO. 14 5C FOOT 2059	+		2059	
⊢	70000221	TENI OTALLITAVEMENT	MANAGO - LINE T - I AINT	72200	-	122000				2 07301243 EEEOTTIG GABLE IIV GOI	1001, GOLVAL NO. 14 30	+		2000	
L															
	70300241	TEMPORARY PAVEMENT	MARKING - LINE 6"- PAINT FO	OT 6000	0	6000				* 87301255 ELECTRIC CABLE IN COI	ONDUIT, SIGNAL NO. 14 7C FOOT 1941			1941	
┝	70300261	TEMPODADY DAVEMENT	MARKING - LINE 12"- PAINT FO	OT 1600	<u> </u>	1600				★ 87301305 ELECTRIC CABLE IN COI	NDUIT, LEAD-IN, NO. 14 1 PAIR FOOT 3126	+		3126	
-	70300201	TEINFORART FAVEINENT	MARKING - LINE 12 - FAINT	31 1600	_	1600				* 87301305 ELECTRIC CABLE IN COI	NDUIT, LEAD-IN, NO. 14   FAIR	++		3120	
L															
	70300281	TEMPORARY PAVEMENT	MARKING - LINE 24"- PAINT FO	OT 1400	0	1400				* 87301900 ELECTRIC CABLE IN COI	NDUIT, EQUIPMENT GROUNDING CONDUCTOR, NO. 6 1C FOOT 773			773	
<u>                                   </u>	72000400	SIGN PANEL - TYPE 1	sq	FT 45			15			* 87502500 TRAFFIC SIGNAL POST,	GALVANIZED STEEL 16 FT. EACH 4	+		4	
*	72000100	SIGN PANEL - ITPE I	50	FT 15	_		15			* 6/302300 TRAFFIC SIGNAL POST,	GALVANIZED STEEL 10 FT.	+		4	
*	72000200	SIGN PANEL - TYPE 2	SQ	FT 33			33			* 87700240 STEEL MAST ARM ASSEM	MBLY AND POLE, 40 FT. EACH 1			1	
	72400500	RELOCATE SIGN PANEL	SSEMBLY - TYPE A EA	CH 2		2				* 87700300 STEEL MAST ARM ASSE	MBLY AND POLE, 52 FT. EACH 1	+		1	
$\vdash$	72400000	RELOCATE SIGN FANCE	OSEMBEI - ITTEA	2		2				STEEL WAS TAKWASSE	INDEL AND LOCK, 3211.	++		'	
*	78000100	THERMOPLASTIC PAVEN	ENT MARKING - LETTERS AND SYMBOLS SQ	FT 720		720				* 87700340 STEEL MAST ARM ASSE	MBLY AND POLE, 58 FT. EACH 1			1	
_	78000200	THERMOPLASTIC PAVEN	ENT MARKING - LINE 4" FO	OT 6130	00	61300				* 87702960 STEEL COMBINATION MA	IAST ARM ASSEMBLY AND POLE 46 FT. EACH 1	+		1	
*	7.0000200	LINIOFLASTIC PAVEN	FUI	0130	.~   '	0.000				5 01102000 STEEL COMBINATION MA	MACHINIAN ROCEMBEL AND LOCE TO LIT.	+		1	
												$\perp$			
*	78000400	THERMOPLASTIC PAVEN	ENT MARKING - LINE 6" FO	O000	0	3000				* 87800100 CONCRETE FOUNDATIO	DN, TYPEA FOOT 16			16	
Q 7	79000000	THERMORI ACTIC DAVEN	ENT MADIANO LINE 12"	OT 800		800				th 97900445 CONCRETE FOLINDATIO	DN, TYPE E 36-INCH DIAMETER FOOT 41	+		41	
)t-SC	78000600	THERMOPLASTIC PAVEN	ENT MARKING - LINE 12" FO	OO8 TC		800				* 87800415 CONCRETE FOUNDATIO	DN, TYPE E 36-INCH DIAMETER FOOT 41	+		71	+
24-sl															
*	78000650	THERMOPLASTIC PAVEN	ENT MARKING - LINE 24" FO	OT 700		700				* 87800420 CONCRETE FOUNDATIO	ON, TYPE E 42-INCH DIAMETER FOOT 21			21	
225\E															
0826.	78400400	PAISED PEEL COTAGE SA	(EMENT MADKED	~L 745	+	745				★ 87900200 DRILL EXISTING HANDH	IOLE FACEL OF	+		20	
vim/d	76100100	RAISED REFLECTIVE PAY	EMENT MARKER EAR	CH 745		745				A 07900200 DRILL EXISTING HANDHO	IOLE EACH 29	+		29	
hamv															
vidot	78300200	RAISED REFLECTIVE PAY	EMENT MARKER REMOVAL EAR	CH 745	;	745				* 88030020 SIGNAL HEAD, LED, 1-FA	ACE, 3-SECTION, MAST-ARM MOUNTED EACH 6			6	
ork\pv						1	1		'					1	'
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AME.			USER NAME         = mohammad.hamwi         DESIGNED         -         REVIS           DRAWN         -         REVIS	SED -					STATE OF I	LLINOIS		IXIL.	SECTIO		TOTAL SHEET NO.
ラー									J.A. = V. I		II DOLITE 50 (EOV I AKE DD) EDOM II 472 TO HIGHWOODS DD	104 FAP 0	0104 23 8	MART LAKE	45 4

MODEL: final soq-2 [Sh

CHECKED -

DATE -

PLOT DATE = 2/4/2025

REVISED -

REVISED -

STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION

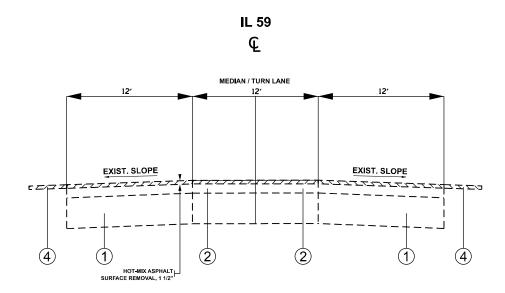
SUMMARY OF QUANTITES
IL ROUTE 59 (FOX LAKE RD) FROM IL 173 TO HIGHWOODS DR

SHEET 2 OF 3 SHEETS STA. TO STA.

							TYPE CODE	-									TYPE	CODE	
					IL-59 LAKE	IL-59 LAKE	IL-59 LAKE								IL-59 LAKE	IL-59 LAKE	IL-59 LAKE		
		SUMMARY OF QUANTITIES			ROADWA	V DOADWAY	TRAFFIC SIGNALS					SUMMARY OF QUANTITIES			ROADWAY	ROADWAY	TRAFFIC SIGNALS		
					2007 EEB													$\longrightarrow$	
					80% FED 20% STATE	100% STATE	80% FED 20% STATE								80% FED 20% STATE	100% STATE	80% FED 20% STATE		
CODE	NO.	ПЕМ	UNIT	TOTAL QUANTITY	0005	0005	0021			CODE NO.		ITEM	UNIT	TOTAL QUANTITY	, 0005	0005	0021		
* 88030	050 SIGNAL HEAD, LE	ED, 1-FACE, 3-SECTION, BRACKET MOUNTED	EACH	3			3			X6030310	FRAMES AND LIDS TO I	BE ADJUSTED (SPECIAL)	EACH	5	5				
<b>*</b> 88030	100 SIGNAL HEAD, LE	ED, 1-FACE, 5-SECTION, BRACKET MOUNTED	EACH	6			6			X6700407	ENGINEER'S FIELD OFF	FICE, TYPE A (D1)	CAL MO	12	12				
* 88030	110 SIGNAL HEAD, LE	ED, 1-FACE, 5-SECTION, MAST-ARM MOUNTED	EACH	4			4			X7200061	TEMPORARY INFORMA	ATION SIGNING	SQ FT	105	105				
* 88200	410 TRAFFIC SIGNAL	BACKPLATE, LOUVERED, FORMED PLASTIC	EACH	10			10			★ X8620310	REMOVE AND REPLACE	CE BATTERIES FOR UNINTERUPTABLE POWER SUPPLY, EXTENDED	EACH	1			1		
* 88500	100 INDUCTIVE LOOF	P DETECTOR	EACH	10			10			* X8809005	LED SIGNAL FACE, LEN	NS COVER	EACH	19			19		
<b>*</b> 88600	100 DETECTOR LOOK	P, TYPE I	FOOT	691			691			* X8860105	DETECTOR LOOP REPL	PLACEMENT	FOOT	897			897		
<b>*</b> 89501	250 RELOCATE EXIS	TING TRAFFIC SIGNAL EQUIPMENT	EACH	1			1			* Z0010688	CAMERA MOUNTING AS	ASSEMBLY	EACH	1			1		
<b>*</b> 89502	300 REMOVE ELECTI	RIC CABLE FROM CONDUIT	FOOT	5158			5158			Z0018500	DRAINAGE STRUCTUR	RES TO BE CLEANED	EACH	20		20			
	DELLOWE EVICTIN	NO TRAFFIC CIONAL FOURNISHT	FAOU																
89502	SIS REMOVE EXISTIF	NG TRAFFIC SIGNAL EQUIPMENT	EACH	1	1		1												
<b>*</b> 89502	376 REBUILD EXISTIN	NG HANDHOLE	EACH	9			9												
<b>*</b> 89502	385 REMOVE EXISTIN	NG CONCRETE FOUNDATION	EACH	7			7												
X0320	050 CONSTRUCTION	LAYOUT (SPECIAL)	L SUM	1	1														
* X0324	085 EMERGENCY VE	HICLE PRIORITY SYSTEM LINE SENSOR CABLE, NO. 20 3/C	FOOT	370			370												
X0327	611 REMOVE AND RE	EINSTALL BRICK PAVER	SQ FT	100	100														
VOE 10	nnn RPICK DAVEDO		90.57	60	60														
X0540	000 BRICK PAVERS		SQ FT	60	60														
* X1400	102 OUTDOOR RATE	D NETWORK CABLE	FOOT	240			240												
<b>*</b> X1400	215 REMOTE CONTR	ROLLED VIDEO SYSTEM	EACH	1			1												
ugb.;																			
X2020	110 GRADING AND S	HAPING SHOULDERS	UNIT	234	234														
#					1														
X4400	501 COMBINATION C	URB AND GUTTER REMOVAL AND REPLACEMENT LESS THAN OR EQUAL TO 10 FEET	FOOT	560	560									+					
X4400	503 COMBINATION C	URB AND GUTTER REMOVAL AND REPLACEMENT GREATER THAN 10 FEET	FOOT	1050	1050														
X5537800         STORM SEWERS TO BE CLEANED 12*         FOOT         300         300				300															
							* = :	SPECIALTY	ITEM									* = SPE	CIALTY ITEM
i		USER NAME = mohammad.hamwi DESIGNED -	REVISED	-								CHAMADY OF CHANTEES		F	A.P RTE.	SECTIO	N	COUNTY	, TOTAL SHEE
	DRAWN - REVISED -								ATE OF IL							AP 0104 23 S		LAKE	
4	CHECKED - REVISED -						DI	EPARTME	NT OF TR	ANSPORTATI	ON			<u> </u>	-			CONTRA	ACT NO. 62V75
<u> </u>	PLOT DATE = 2/4/2025											SCALE: SHEET 3 OF 3 SHEETS STA.	TO STA.			ILL	INOIS FED. AI	) PROJECT	

#### **LEGEND - EXISTING**

- 1) PORTLAND CEMENT CONCRETE PAVEMENT 6"±
- 2 HOT MIX ASPHALT PAVEMENT 11"±
- **③ EXISTING CONCRETE CURB AND GUTTER**
- **4) EXISTING AGGREGATE WEDGE SHOULDER**



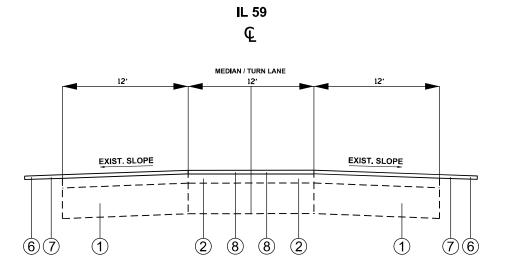
#### **EXISTING TYPICAL SECTION**

#### STATION: 14+54 TO 155+65

LOCATION	HOT-MIX ASPHALT MIXTURE REQUIRE	MENTS	QUALITY MANAGEMENT			
	MIXTURE TYPE	AIR VOIDS @ Ndesign	PROGRAM (QMP)			
	PAVEMENT RESURFACING	AVEMENT RESURFACING				
IL-59	HMA SURFACE COURSE, MIX "D", IL-9.5, N70, 1 1/2	QCP				
	PATCHING					
IL-59	CLASS D PATCHES (HMA BINDER IL-19.0 MM:16")	4% @ 70 GYR	QC/QA			
	COMMERCIAL DRIVEWAYS					
IL-59	HMA SURFACE COURSE, MIX "D", IL-9.5, N50: 2"	4% @ 50 GYR	QC/QA			
IL-59	HMA ASPHALT BASE COURSE, 8" (HMA BINDER - IL-19.0)	4% @ 50 GYR	QC/QA			
	RESIDENTIAL DRIVEWAYS					
IL-59	HMA SURFACE COURSE, MIX "D", IL-9.5, N50: 2"	QC/QA				
IL-59	HMA ASPHALT BASE COURSE, 6" (HMA BINDER - IL-19.0)	QC/QA				
	QMP DESIGNATIONS: QUALITY CONTROL/QUALITY ASSURANCE (QC/QA); QUALITY CONTROL FOR PERFORMANCE (QCP); PAY FOR PERFORMANCE (PFP)					

#### **LEGEND - PROPOSED**

- (5) COMBINATION CURB AND GUTTER (REMOVAL AND REPLACEMENT DETERMINED BY RE)
- **6 GRADING AND SHAPING SHOULDERS**
- 7 AGGREGATE WEDGE SHOULDER, TYPE B
- (8) PROPOSED HOT-MIX ASPHALT SURFACE COURSE, MIX "D", IL-9.5, N70, 1 1/2



#### PROPOSED TYPICAL SECTION

STATION: 14+54 TO 155+65

#### NOTES:

SCALE:

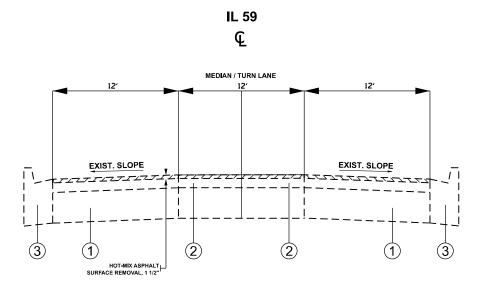
- 1. THE UNIT WEIGHT USED TO CALCULATE ALL HMA SURFACE COURSE MIXTURES IS 112 LBS/SQYD/IN.
- 2. THE "AC TYPE" FOR POLYMERIZED HMA MIXES SHALL BE "SBS/SBR PG 76-22" AND FOR NON-POLYMERIZED HMA THE "AC TYPE" SHALL BE "PG 64-22" UNLESS MODIFIED BY RECLAIMED MATERIALS SPECIFICATIONS.
- 3. THE LONGITUDINAL JOINT SEALANT SHALL BE PLACED OVER THE MILL SURFACE.
- 4. THE CONTRACTOR SHALL MILL BEFORE PATCHING.

USER NAME = mohammad.hamwi	DESIGNED -	REVISED -
	DRAWN -	REVISED -
	CHECKED -	REVISED -
PLOT DATE = 11/23/2024	DATE -	REVISED -

		TYF	PICA	L SEC1	ION		F.A.P RTE	SECTION		COUNTY	TOTAL SHEETS	SHEET NO.
I POLITE	50 (FOY I	<b>AKE</b>	PN\	EROM I	1 173 1	O HIGHWOODS DR	104	FAP 0104 23 SMAR	Г	LAKE	45	6
L NOO!	- 33 (I OX L	ANL	IND)	I IXOM I	E 173 1	O IIIOIIWOODS DK				CONTRACT	NO. 62\	/75
	SHEET 1	OF	2	SHEETS	STA.	TO STA.		ILLINOIS	FED AL	D PROJECT		

#### **LEGEND - EXISTING**

- 1) PORTLAND CEMENT CONCRETE PAVEMENT 6"±
- 2 HOT MIX ASPHALT PAVEMENT 11"±
- **③ EXISTING CONCRETE CURB AND GUTTER**
- (4) EXISTING AGGREGATE WEDGE SHOULDER

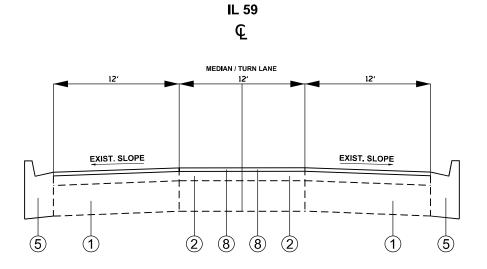


#### **EXISTING TYPICAL SECTION**

STATION: 155+65 TO 162+13

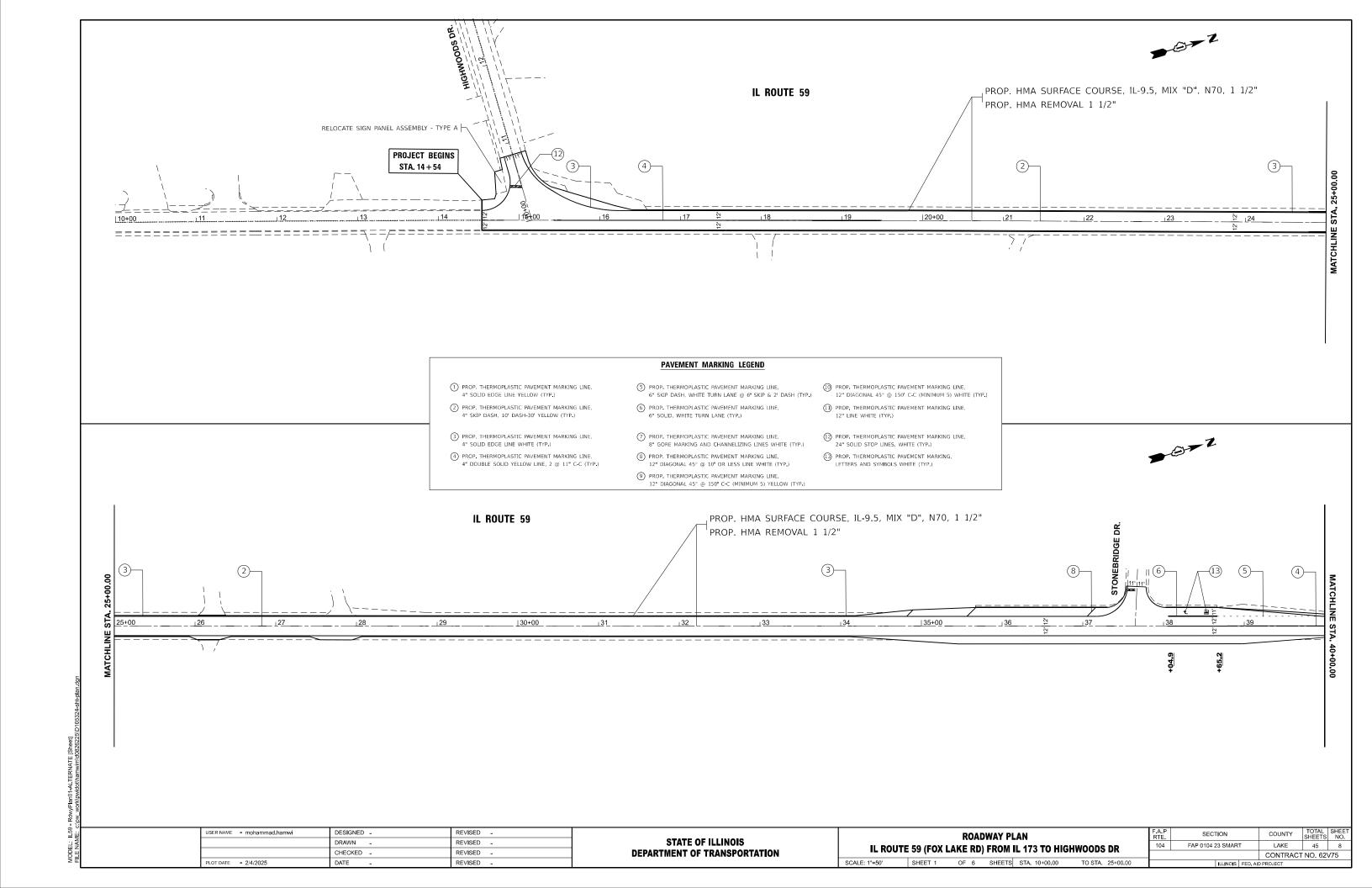
#### **LEGEND - PROPOSED**

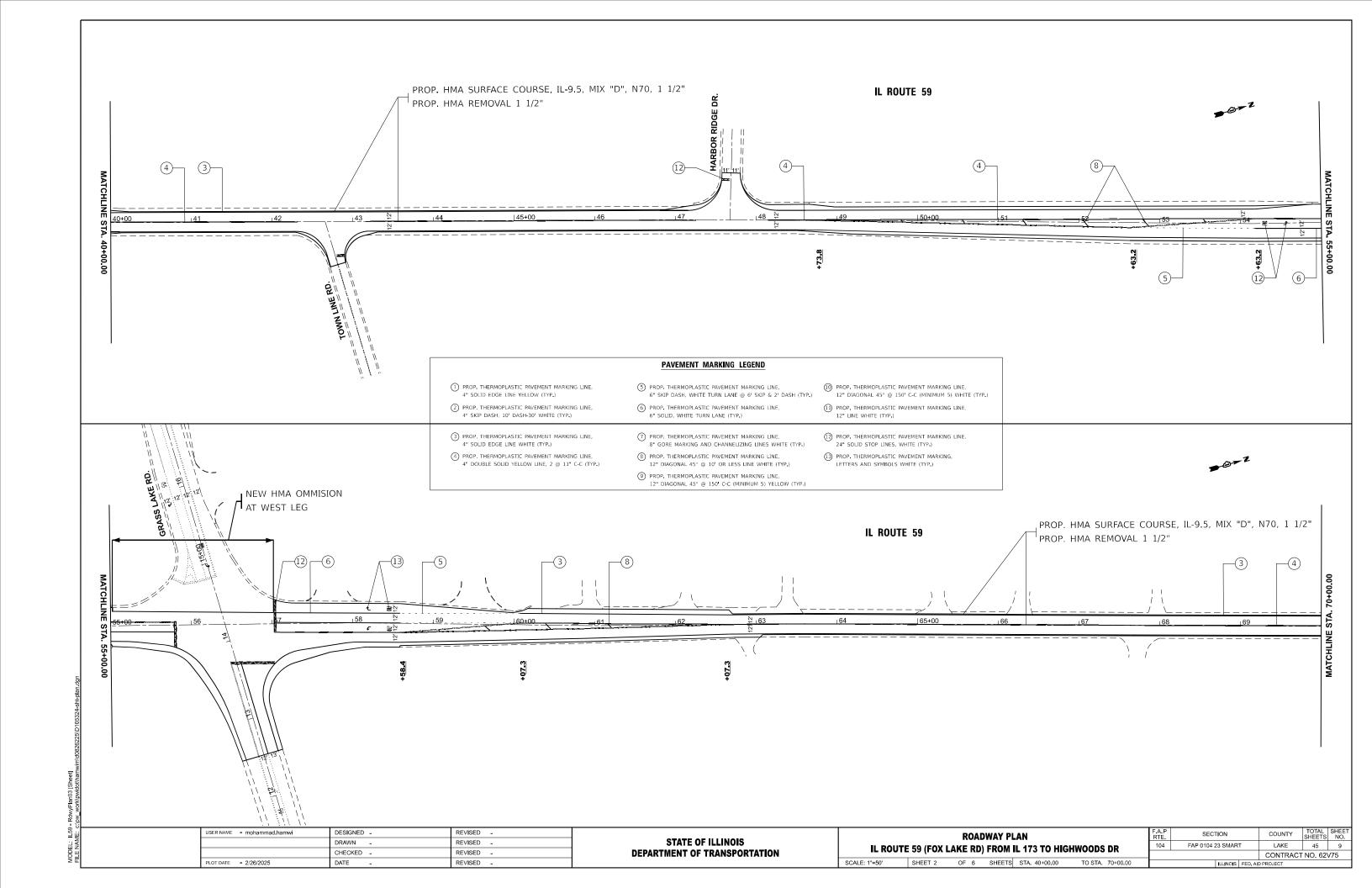
- **(5) COMBINATION CURB AND GUTTER (REMOVAL AND REPLACEMENT DETERMINED BY RE)**
- **6 GRADING AND SHAPING SHOULDERS**
- 7 AGGREGATE WEDGE SHOULDER, TYPE B
- (8) PROPOSED HOT-MIX ASPHALT SURFACE COURSE, MIX "D", IL-9.5, N70, 1 1/2

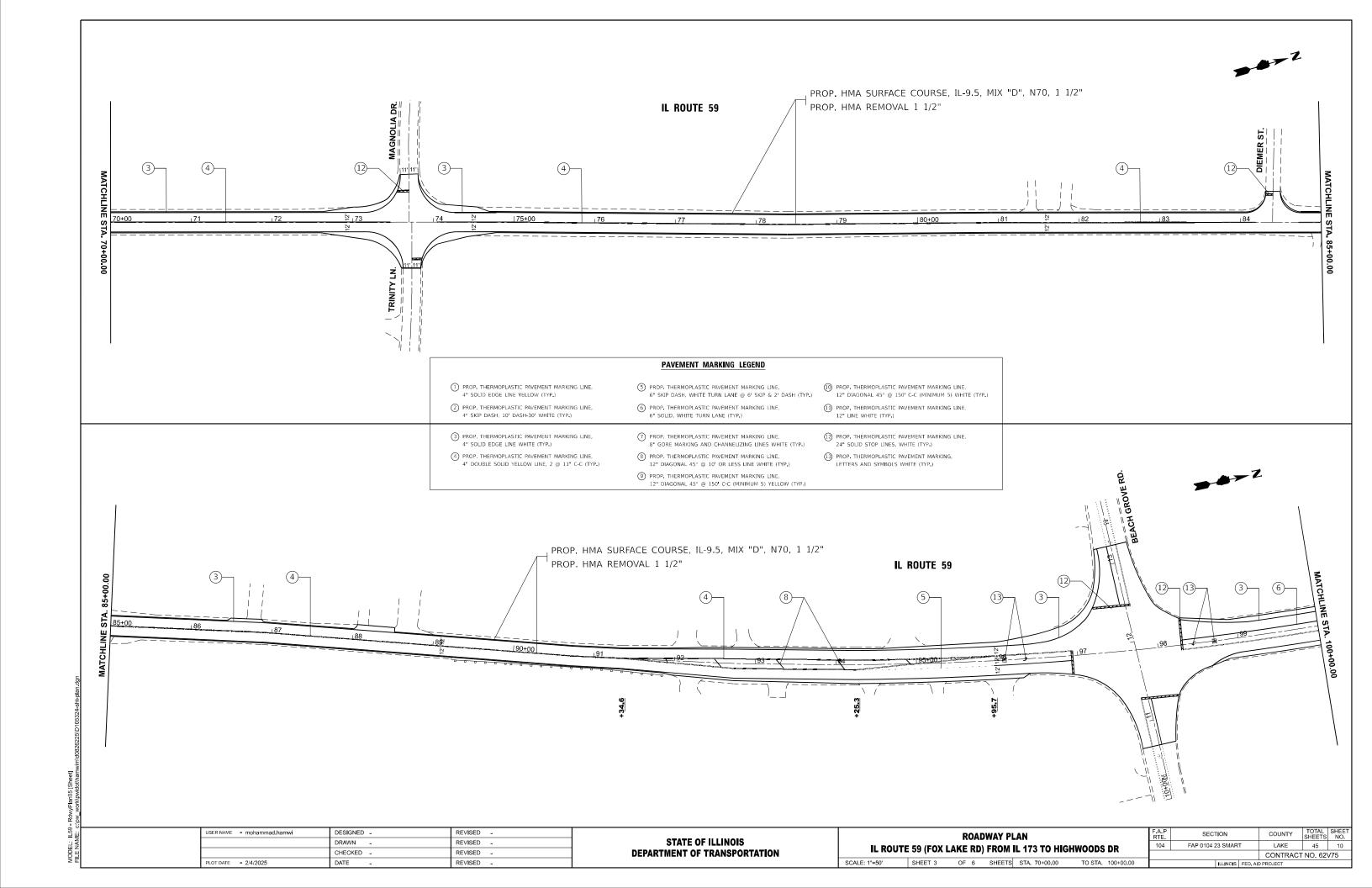


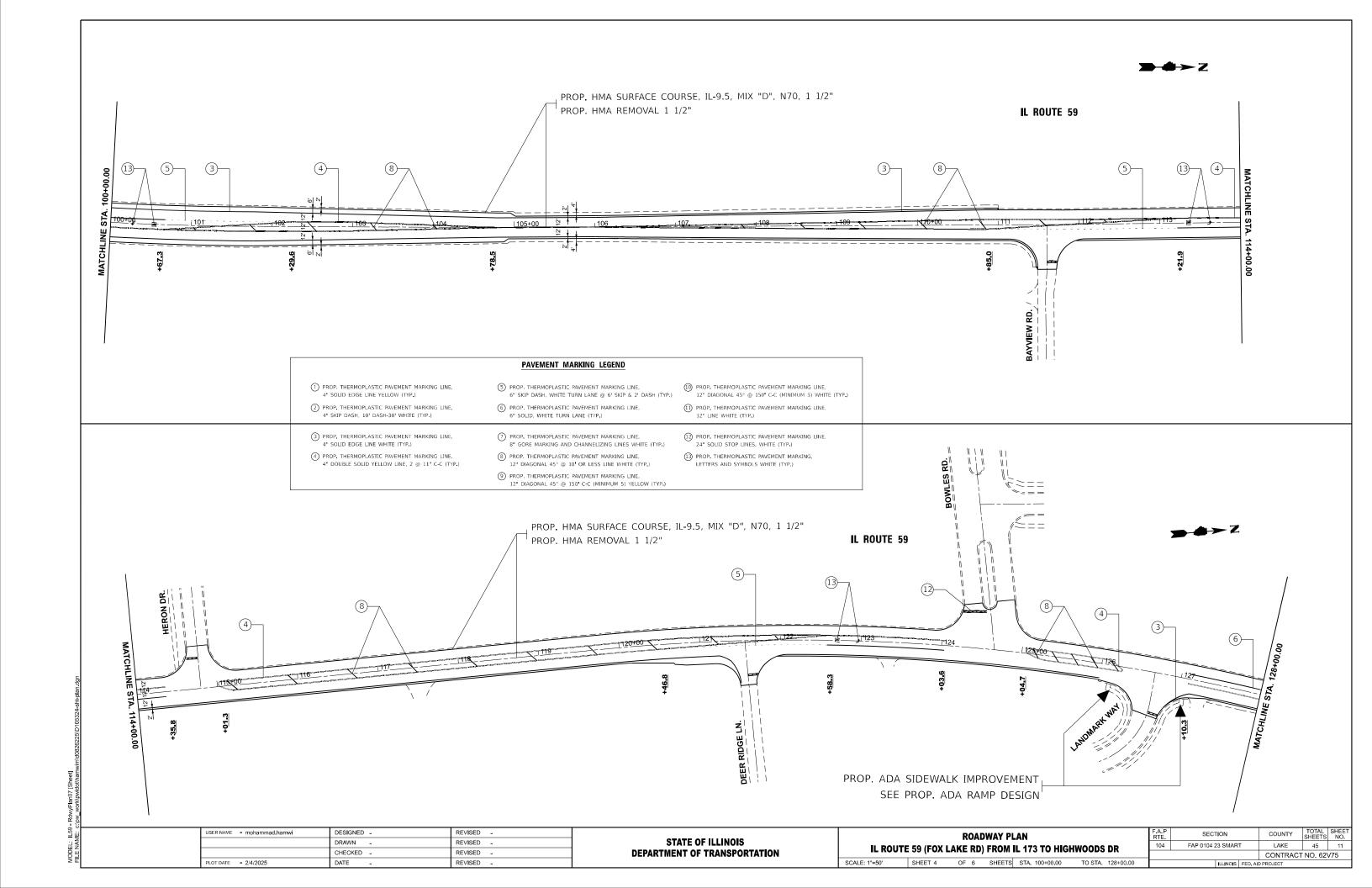
#### PROPOSED TYPICAL SECTION

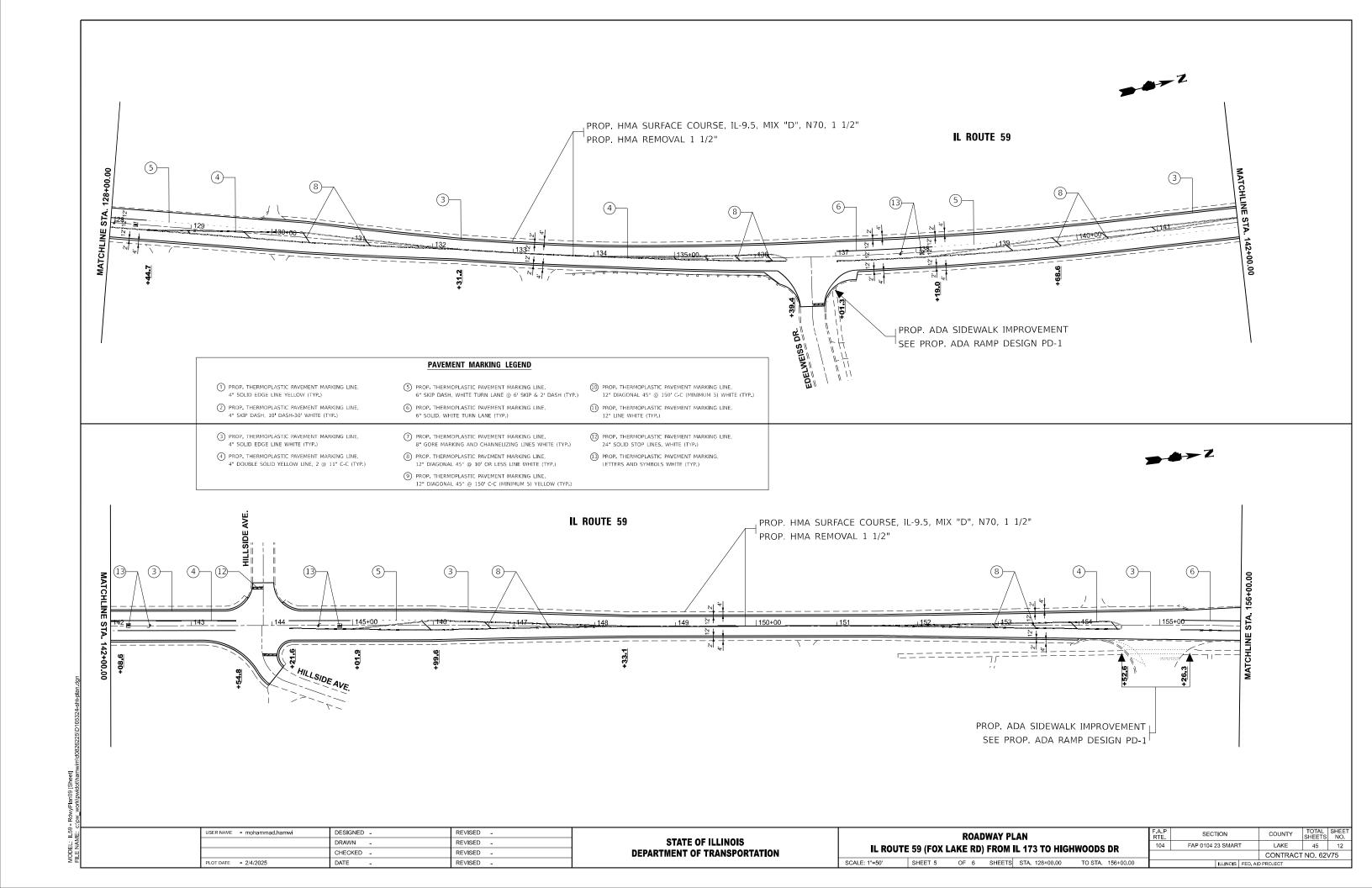
STATION: 155+65 TO 162+13

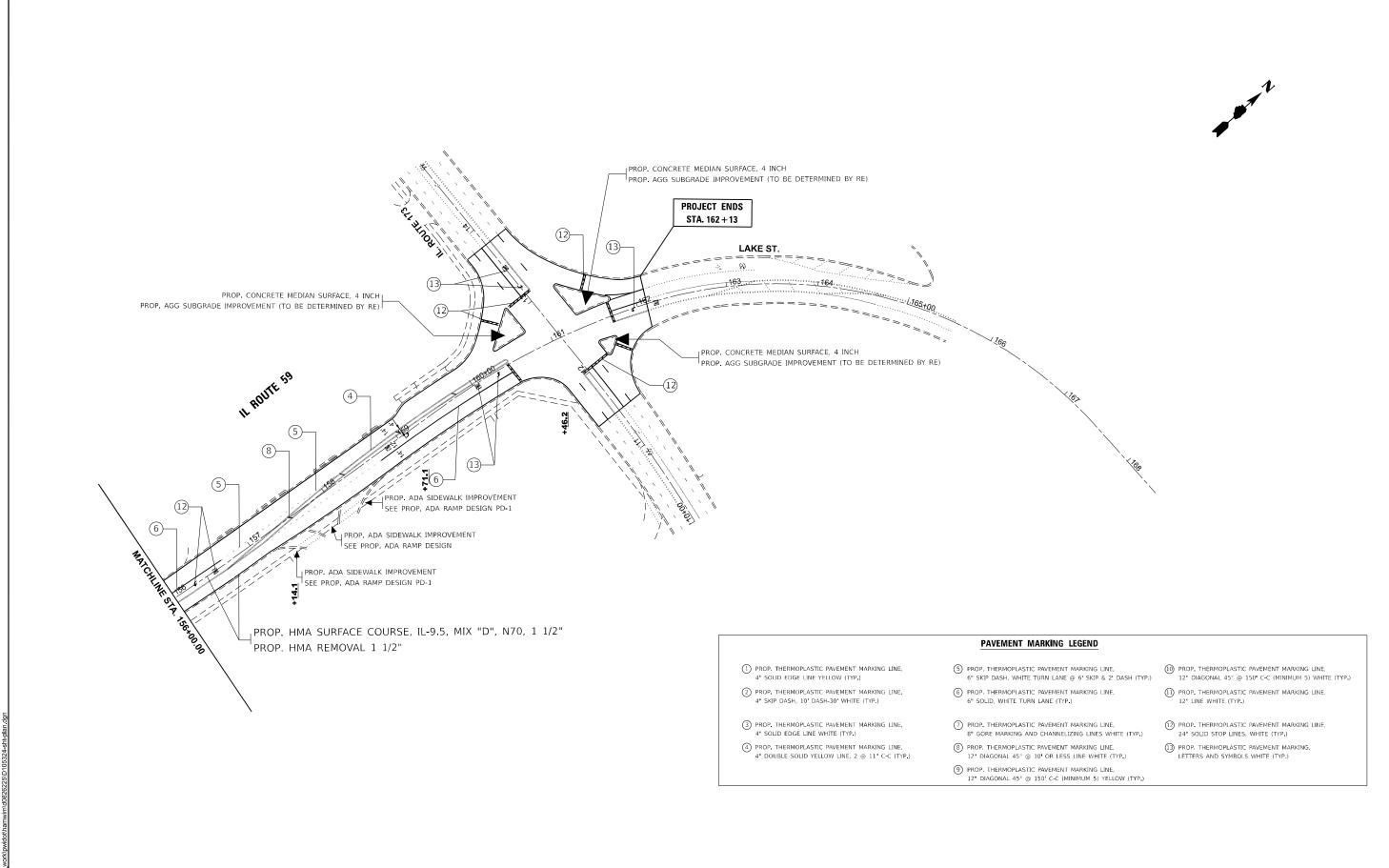












USER NAME = mohammad.hamwi

PLOT DATE = 2/4/2025

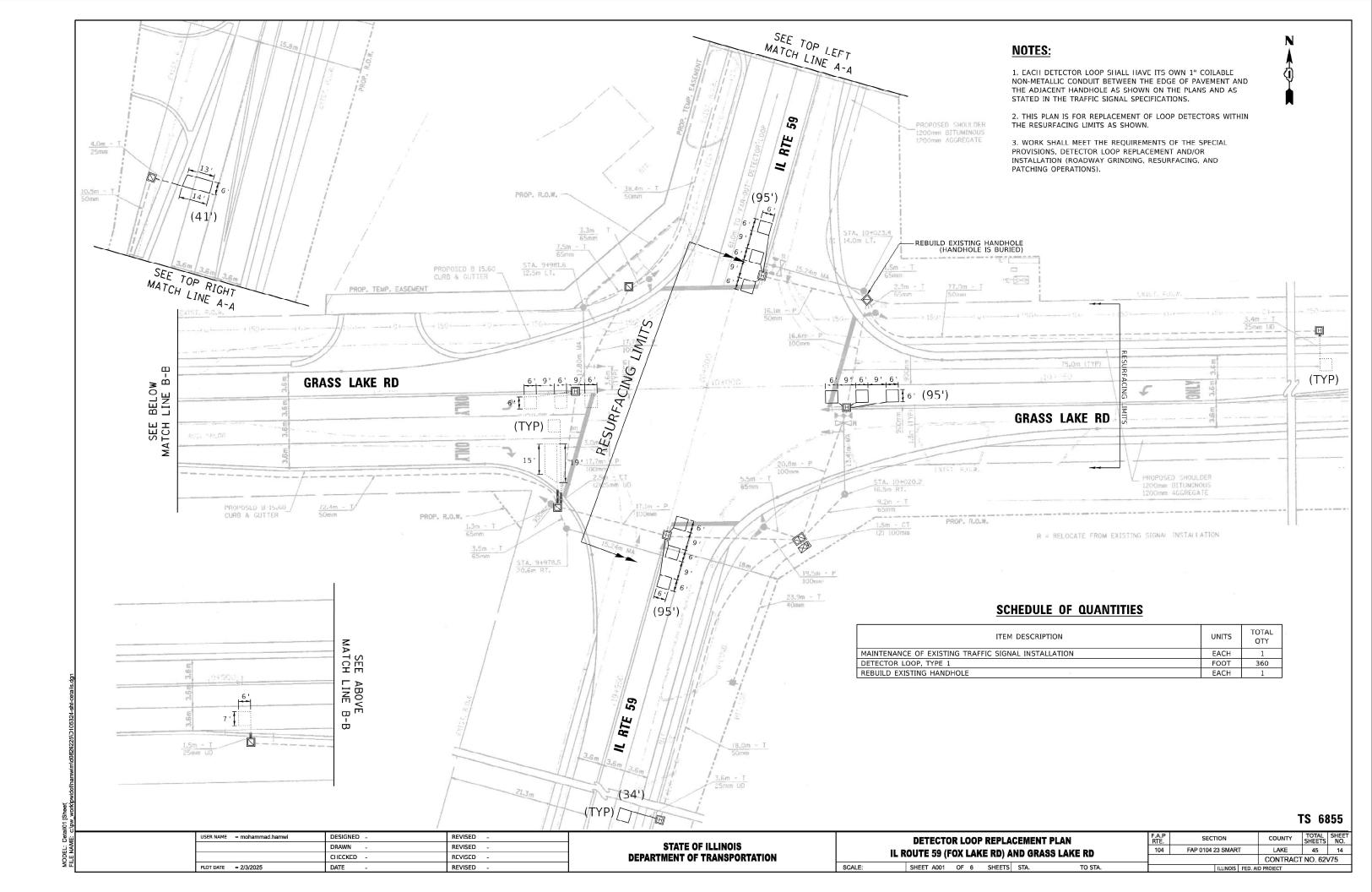
DESIGNED -

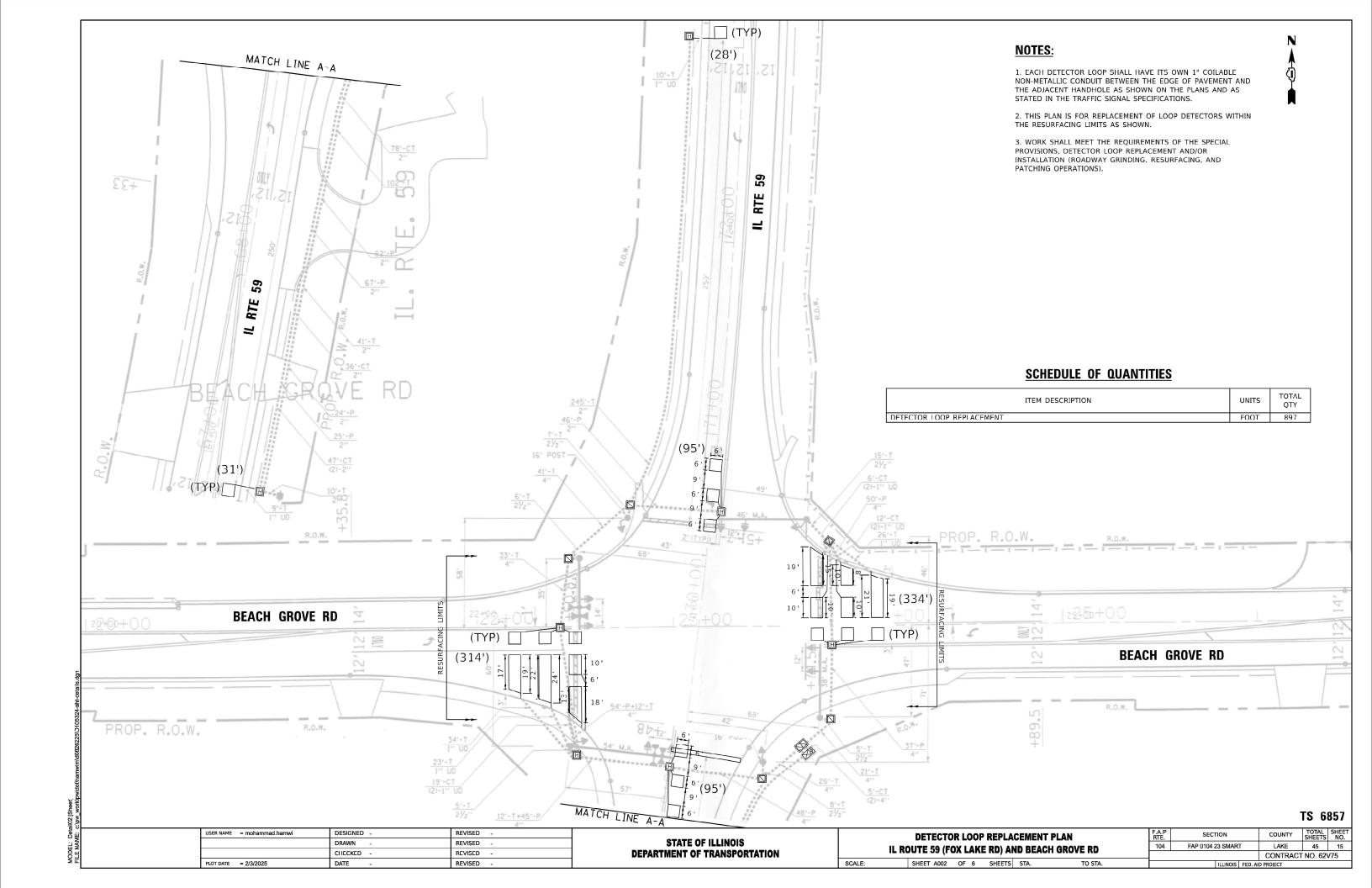
REVISED -DRAWN REVISED CHECKED -REVISED DATE REVISED -

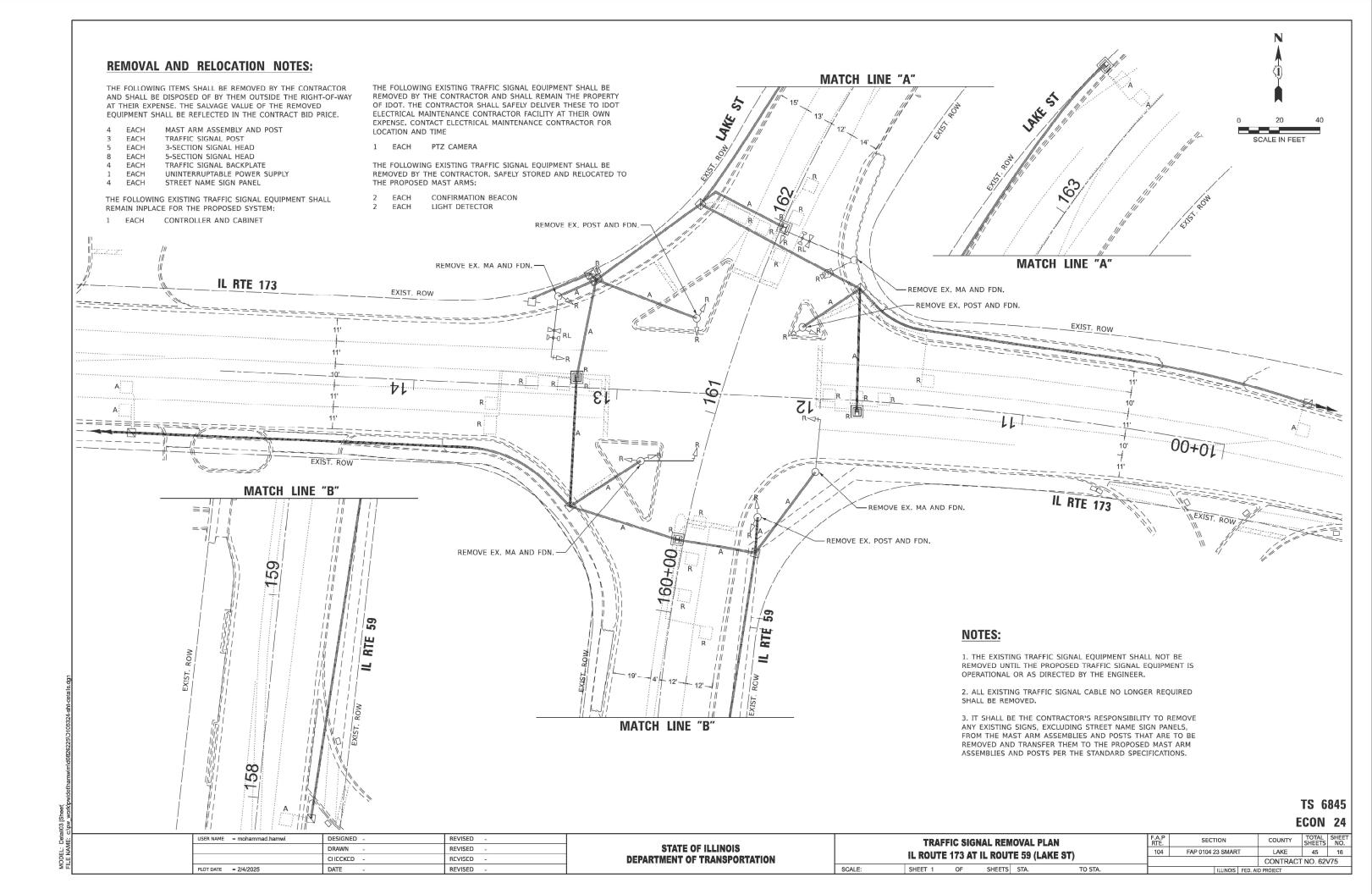
STATE OF ILLINOIS **DEPARTMENT OF TRANSPORTATION** 

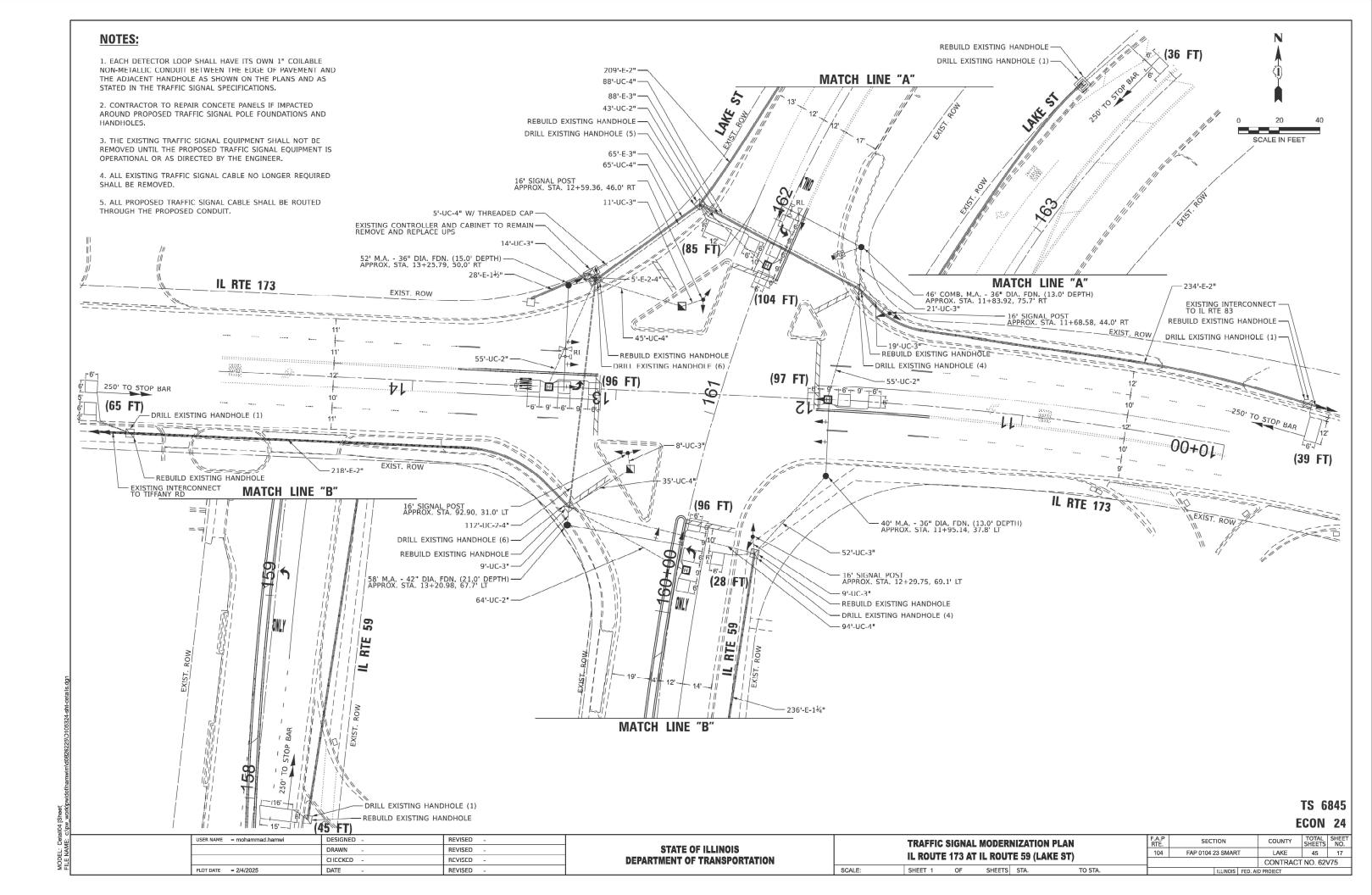
**ROADWAY PLAN** IL ROUTE 59 (FOX LAKE RD) FROM IL 173 TO HIGHWOODS DR SCALE: 1"=50' SHEET 6 OF 6 SHEETS STA. 156+00.00 TO STA. 170+00.00

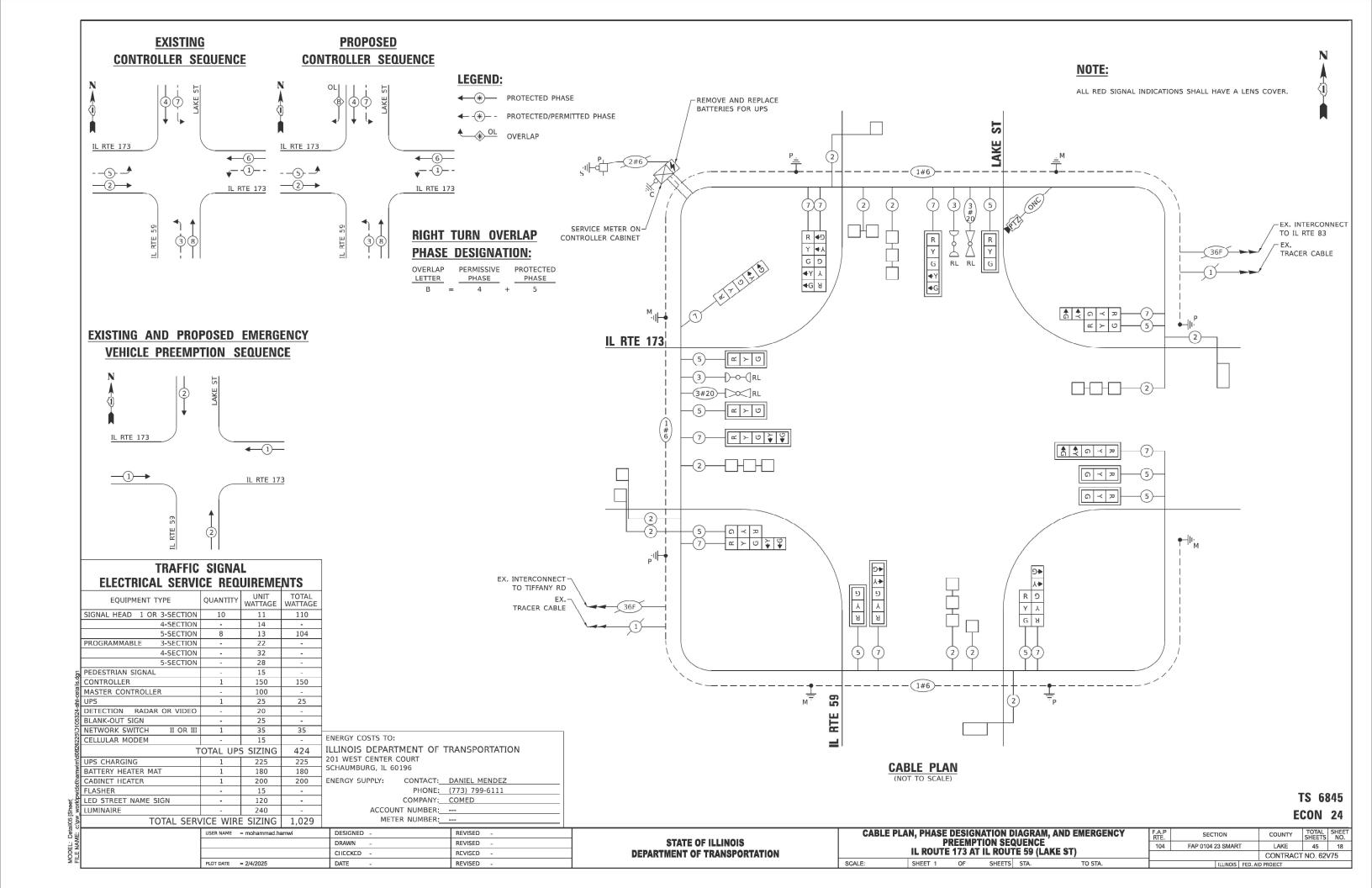
SECTION COUNTY 104 LAKE 45 13 FAP 0104 23 SMART CONTRACT NO. 62V75





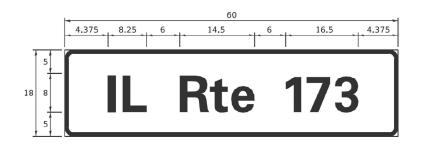




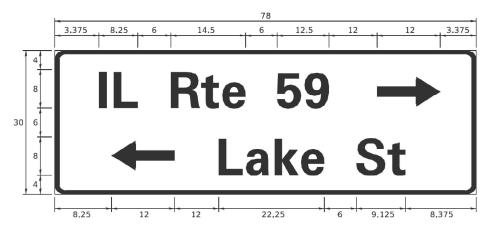


#### SIGN PANEL - TYPE 1 OR TYPE 2

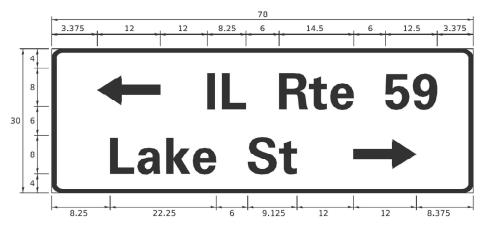
ALL DIMENSIONS ARE IN INCHES UNLESS NOTED OTHERWISE



DESIGN	AREA	SIGN PANEL	SHEETING	QTY
SERIES	(SQ FT)	TYPE	TYPE	REQUIRED
D	7.5	1	ZZ	



DESIGN	AREA	SIGN PANEL	SHEETING	QTY
SERIES	(SQ FT)	TYPE	TYPE	REQUIRED
D	16.25	2	ZZ	1



DESIGN	AREA	SIGN PANEL	SHEETING	QTY
SERIES	(SQ FT)	TYPE	TYPE	REQUIRED
D	16.25	2	ZZ	

NOTE: FOR ADDITIONAL DESIGN AND INSTALLATION INFORMATION PLEASE SEE DISTRICT ONE MAST ARM MOUNTED STREET NAME SIGNS DETAIL.

USER NAME = mohammad.hamwi	DESIGNED -	REVISED -
	DRAWN -	REVISED -
	CHECKED -	REVISED -
PLOT DATE = 2/4/2025	DATE -	REVISED -

## **DEPARTMENT OF TRANSPORTATION**

MAST ARM MOUNTED STREET NAME SIGNS AND											
SCHEDULE OF QUANTITIES											
	IL ROUTE 173 AT IL ROUTE 59 (LAKE ST)										
	15 170	011	IIJAI	IL KOO	E 00	(LAKE OI)					
	CHEET	000	OF	CHEETC	CTA	TO STA					

REMOVE AND REPLACE BATTERIES FOR UNINTERUPTABLE POWER SUPPLY, EXTENDED

OUTDOOR RATED NETWORK CABLE

LED SIGNAL FACE, LENS COVER

CAMERA MOUNTING ASSEMBLY

SCALE:

REMOTE CONTROLLED VIDEO SYSTEM

E	CON	24						
OUNTY	TOTAL SHEETS	SHEET NO.						
LAKE	45	19						
NTRACT NO. 62V75								

TS 6845

ITEM DESCRIPTION	UNIT	QUANTITY
SIGN PANEL - TYPE 1	SQ FT	15
SIGN PANEL - TYPE 2	SQ FT	33
UNDERGROUND CONDUIT, GALVANIZED STEEL, 2° DIA.	FOOT	217
UNDERGROUND CONDUIT, GALVANIZED STEEL, 3° DIA.	FOOT	143
UNDERGROUND CONDUIT, GALVANIZED STEEL, 4° DIA.	FOOT	556
HANDHOLE	EACH	2
HEAVY-DUTY HANDHOLE	EACH	4
MAINTENANCE OF EXISTING TRAFFIC SIGNAL INSTALLATION	EACH	1
ELECTRIC CABLE IN CONDUIT, SIGNAL NO. 14 3C	FOOT	361
ELECTRIC CABLE IN CONDUIT, SIGNAL NO. 14 5C	FOOT	2059
ELECTRIC CABLE IN CONDUIT, SIGNAL NO. 14 7C	FOOT	1941
ELECTRIC CABLE IN CONDUIT, LEAD-IN, NO. 14 1 PAIR	FOOT	3126
ELECTRIC CABLE IN CONDUIT, EQUIPMENT GROUNDING CONDUCTOR, NO. 6 1C	FOOT	773
TRAFFIC SIGNAL POST, 16 FT.	EACH	4
STEEL MAST ARM ASSEMBLY AND POLE, 40 FT	EACH	1
STEEL MAST ARM ASSEMBLY AND POLE, 52 FT	EACH	1
STEEL MAST ARM ASSEMBLY AND POLE, 58 FT	EACH	1
STEEL COMBINATION MAST ARM ASSEMBLY AND POLE, 46 FT	EACH	1
CONCRETE FOUNDATION, TYPE A	FOOT	16
CONCRETE FOUNDATION, TYPE E 36-INCH DIAMETER	FOOT	41
CONCRETE FOUNDATION, TYPE E 42-INCH DIAMETER	FOOT	21
DRILL EXISTING HANDHOLE	EACH	29
SIGNAL HEAD, LED, 1-FACE, 3-SECTION, MAST-ARM MOUNTED	EACH	6
SIGNAL HEAD, LED, 1-FACE, 3-SECTION, BRACKET MOUNTED	EACH	3
SIGNAL HEAD, LED, 1-FACE, 5-SECTION, BRACKET MOUNTED	EACH	6
SIGNAL HEAD, LED, 1-FACE, 5-SECTION, MAST-ARM MOUNTED	EACH	4
TRAFFIC SIGNAL BACKPLATE, LOUVERED, FORMED PLASTIC	EACH	10
INDUCTIVE LOOP DETECTOR	EACH	10
DETECTOR LOOP, TYPE I	FOOT	691
RELOCATE EXISTING TRAFFIC SIGNAL EQUIPMENT	EACH	1
REMOVE ELECTRIC CABLE FROM CONDUIT	FOOT	5158
REMOVE EXISTING TRAFFIC SIGNAL EQUIPMENT	EACH	1
REBUILD EXISTING HANDHOLE	EACH	9
REMOVE EXISTING CONCRETE FOUNDATION	EACH	7
EMERGENCY VEHICLE PRIORITY SYSTEM LINE SENSOR CABLE, NO. 20 3/C	FOOT	370

FOOT

EACH

EACH

EACH

EACH

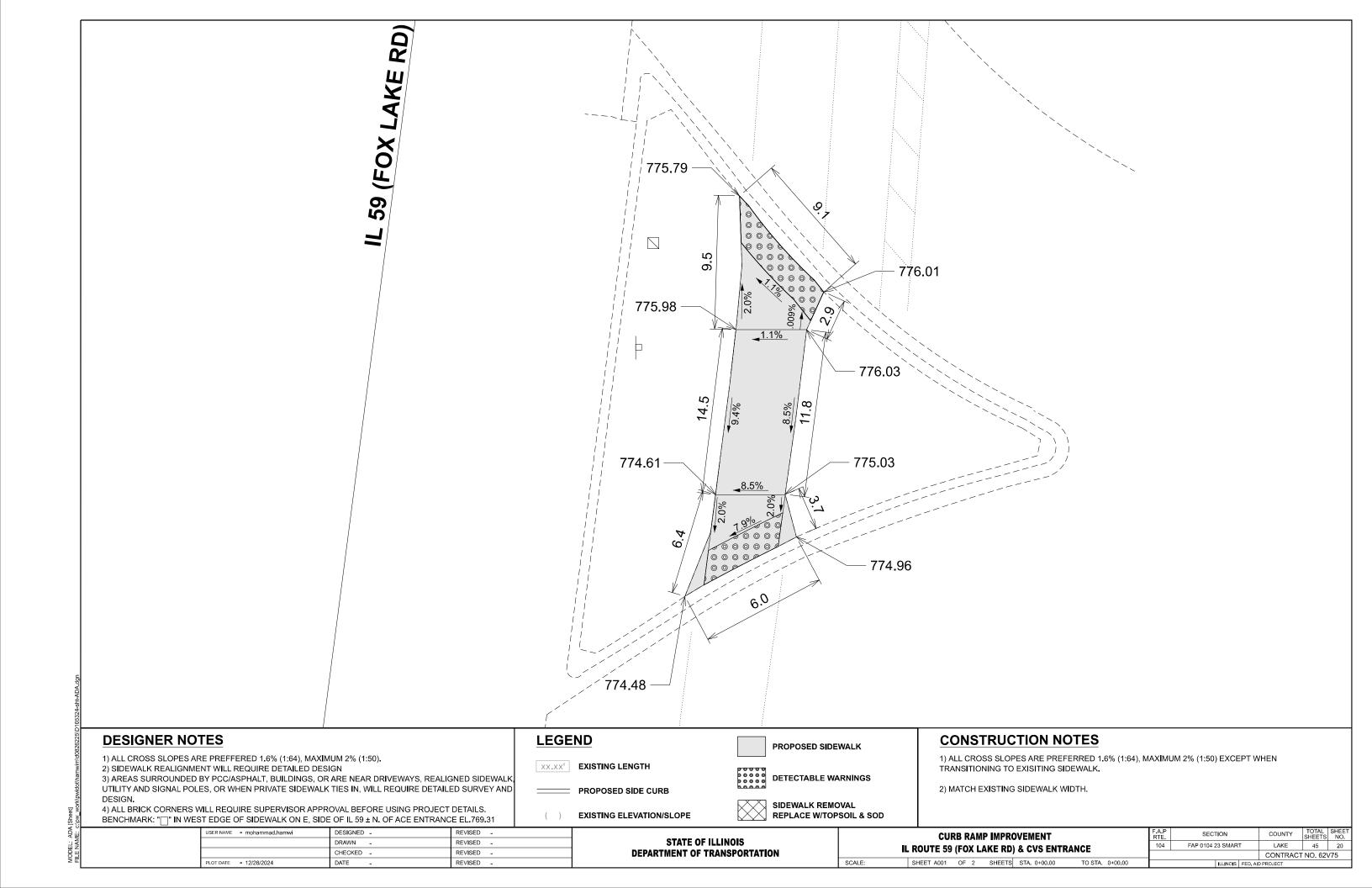
SECTION

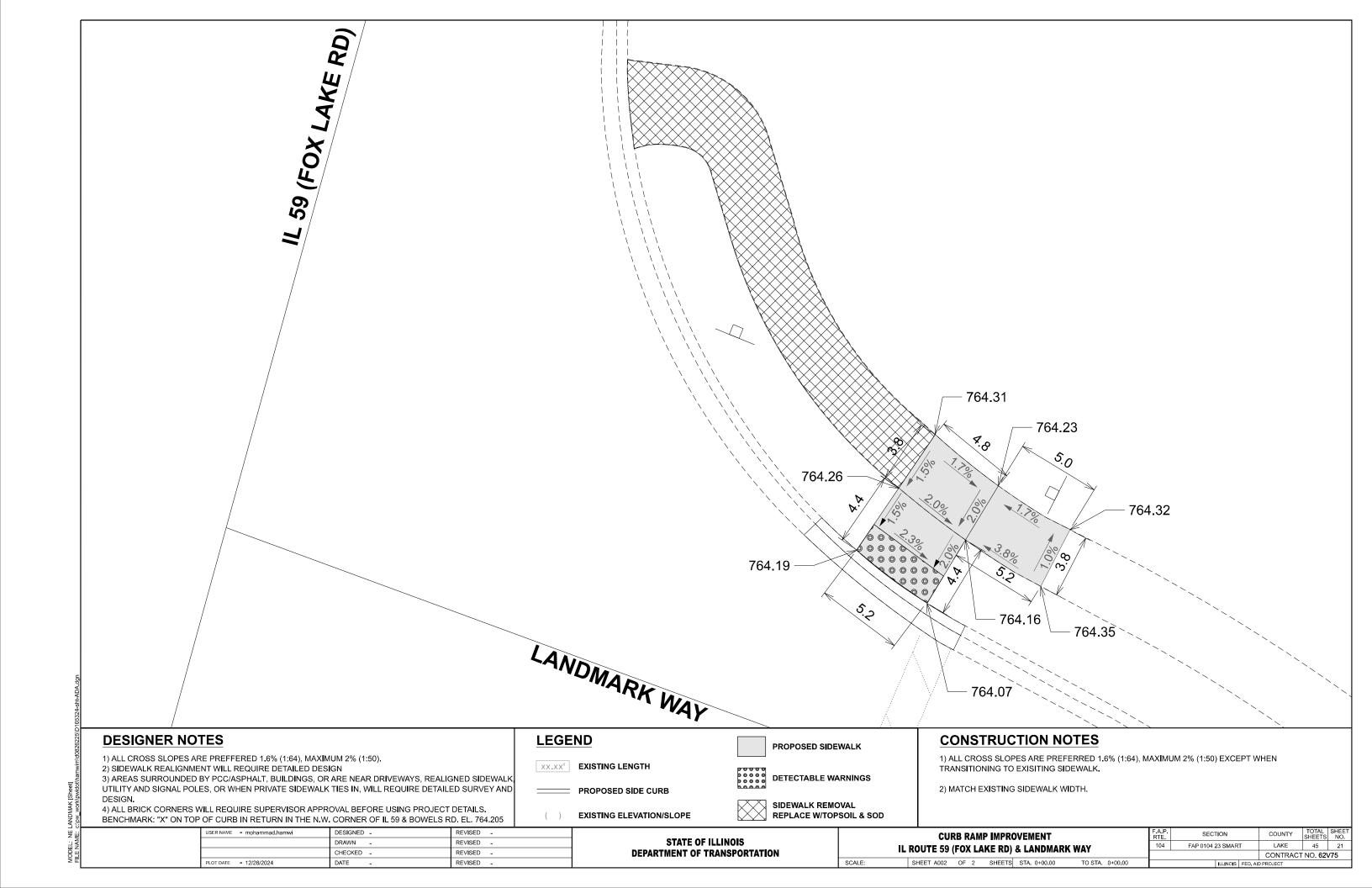
FAP 0104 23 SMART

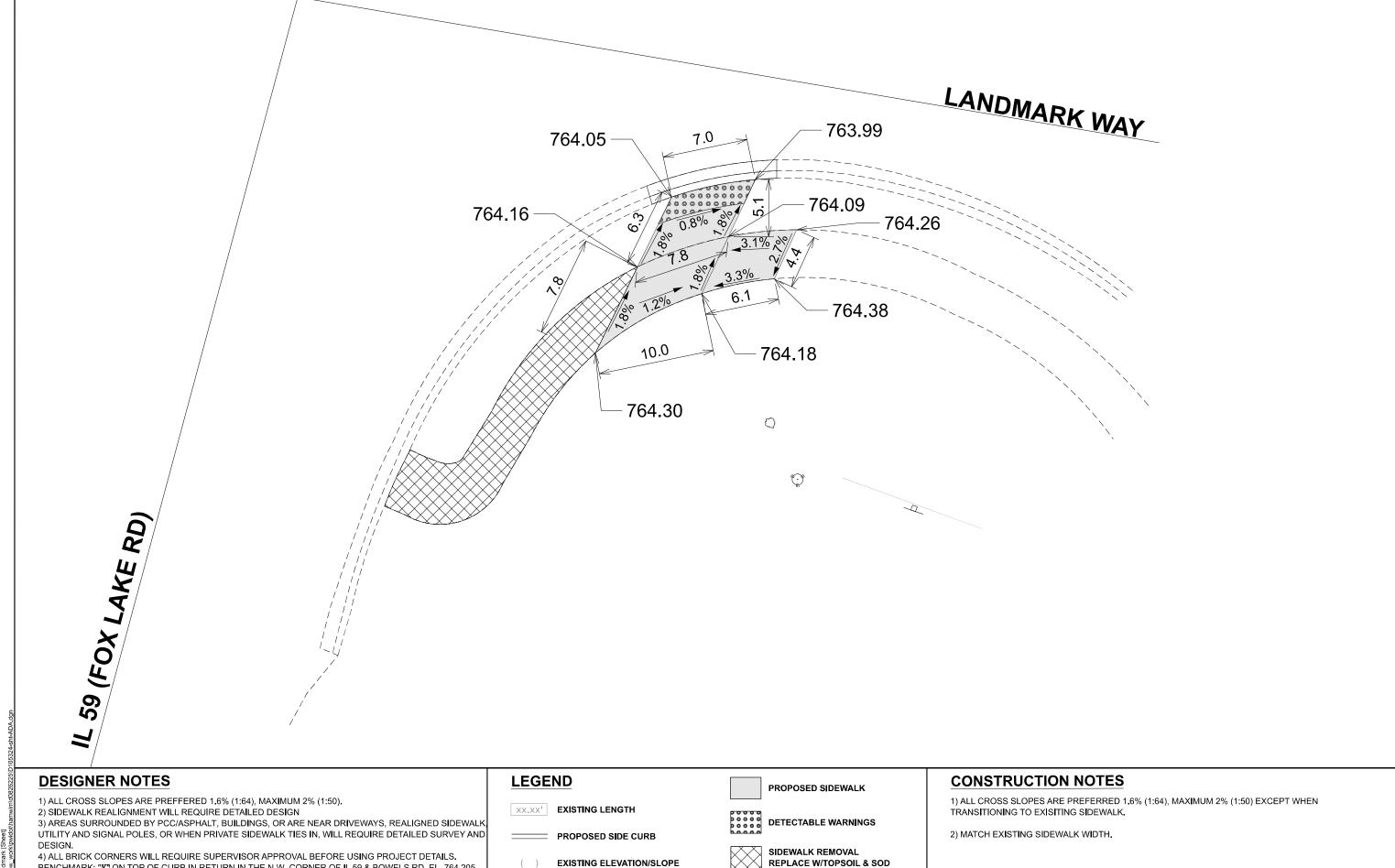
240

SCHEDULE OF QUANTITIES

**STATE OF ILLINOIS** 







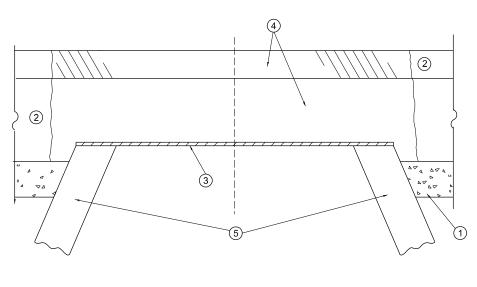
DESIGNED REVISED -DRAWN REVISED -CHECKED -REVISED -PLOT DATE = 2/4/2025 DATE REVISED -

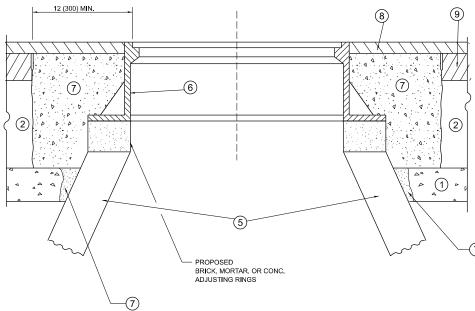
BENCHMARK: "K"] ON TOP OF CURB IN RETURN IN THE N.W. CORNER OF IL 59 & BOWELS RD. EL. 764.205

STATE OF ILLINOIS **DEPARTMENT OF TRANSPORTATION** 

**CURB RAMP IMPROVEMENT** IL ROUTE 59 (FOX LAKE RD) & LANDMARK WAY SHEET A003 OF 3 SHEETS STA. 0+00.00

SECTION FAP 0104 23 SMART LAKE 45 22 CONTRACT NO. 62V75





# **WITH MILLING**

#### **NOTES**

- 1. 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.
- 2. 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.
- 3. CITY OF CHICAGO CASTINGS ARE THE PROPERTY OF THE CITY AND THE CONTRACTOR SHALL NOTIFY THE CITY FOR REMOVAL AND DISPOSITION OF THE CASTINGS.
- 4. THE METAL PLATE USED TO COVER THE STRUCTURE SHALL REMAIN THE PROPERTY OF THE CONTRACTOR.
- 5. THE CONTRACTOR SHALL REMOVE ALL TRAFFIC CONTROL DEVICES BY THE END OF EACH WORK SHIFT.

## **DETAILS FOR FRAMES AND LIDS ADJUSTMENT**

#### **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 HMA SURFACE MIX APPROVED BY THE ENGINEER. (MIN. 3 (80) HMA TO REMAIN AFTER MILLING).

#### **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-2\*  $\,$ 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-2\* CONCRETE
- (3) 36 (900) DIAMETER METAL PLATE
- (8) PROPOSED HMA SURFACE COURSE
- 4 PROPOSED CRUSHED STONE AND HMA SURFACE MIX
- 9 PROPOSED HMA BINDER COURSE
- (5) EXISTING STRUCTURE

#### **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**

- 1. 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)."
- 2. THIS WORK WILL NOT BE PAID FOR WHEN DRAINAGE AND UTILITY STRUCTURES ARE SPECIFIED FOR PAYMENT AS STRUCTURE RECONSTRUCTION.
- 3. NEW FRAMES AND LIDS, WHEN SPECIFIED, WILL BE PAID FOR SEPARATELY.
- 4. 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.

ALL DIMENSIONS ARE IN INCHES (MILLIMETERS) UNLESS OTHERWISE SHOWN

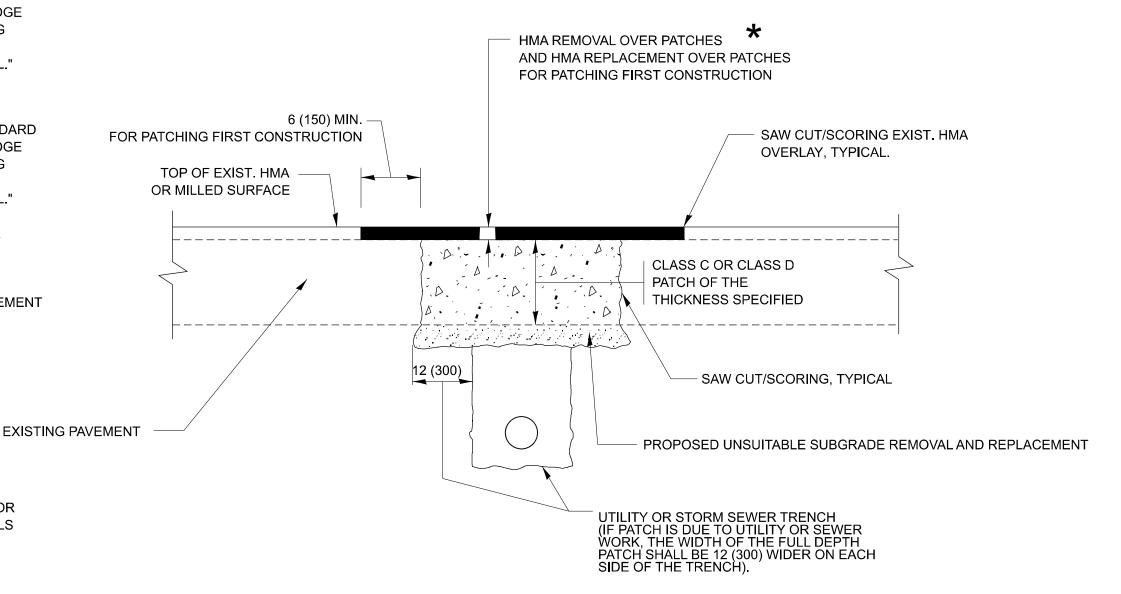
JSER NAME = mohammad.hamwi DESIGNED - R. SHAH REVISED - R. BORO 03-09-11 COUNTY **DETAILS FOR** STATE OF ILLINOIS DRAWN REVISED - R. BORO 12-06-11 FAP 0104 23 SMART LAKE 45 23 FRAMES AND LIDS ADJUSTMENT WITH MILLING HECKED -REVISED - K. SMITH 11-18-22 **DEPARTMENT OF TRANSPORTATION** BD600-03 (BD-08) CONTRACT NO. 62V75 SCALE: NONE SHEET A001 OF 23 SHEETS STA. PLOT DATE = 2/4/2025 REVISED - K. SMITH 09-15-23 DATE 10-25-94

#### **METHOD OF MEASUREMENT**

REFER TO SECTION 442 OF THE STANDARD SPECIFICATIONS FOR ROAD AND BRIDGE CONSTRUCTION AND THE RECURRING SPECIAL PROVISION "PATCHING WITH HOT-MIX ASPHALT OVERLAY REMOVAL."

#### **BASIS OF PAYMENT**

- 1. REFER TO SECTION 442 OF THE STANDARD SPECIFICATIONS FOR ROAD AND BRIDGE CONSTRUCTION AND THE RECURRING SPECIAL PROVISION "PATCHING WITH HOT-MIX ASPHALT OVERLAY REMOVAL."
- 2. SAW CUT/SCORING OF EXISTING HMA OVERLAY IS INCLUDED IN THE COST OF PAVEMENT PATCHING,
- 3. SAW CUT/SCORING OF EXISTING PAVEMENT IS INCLUDED IN THE COST OF PAVEMENT PATCHING.



## **SEQUENCE OF CONSTRUCTION (PATCHING FIRST)**

1. REMOVE THE EXISTING HMA MATERIAL OVER THE AREA TO BE PATCHED.

SEE TYPICAL SECTIONS FOR

THICKNESS AND MATERIALS

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

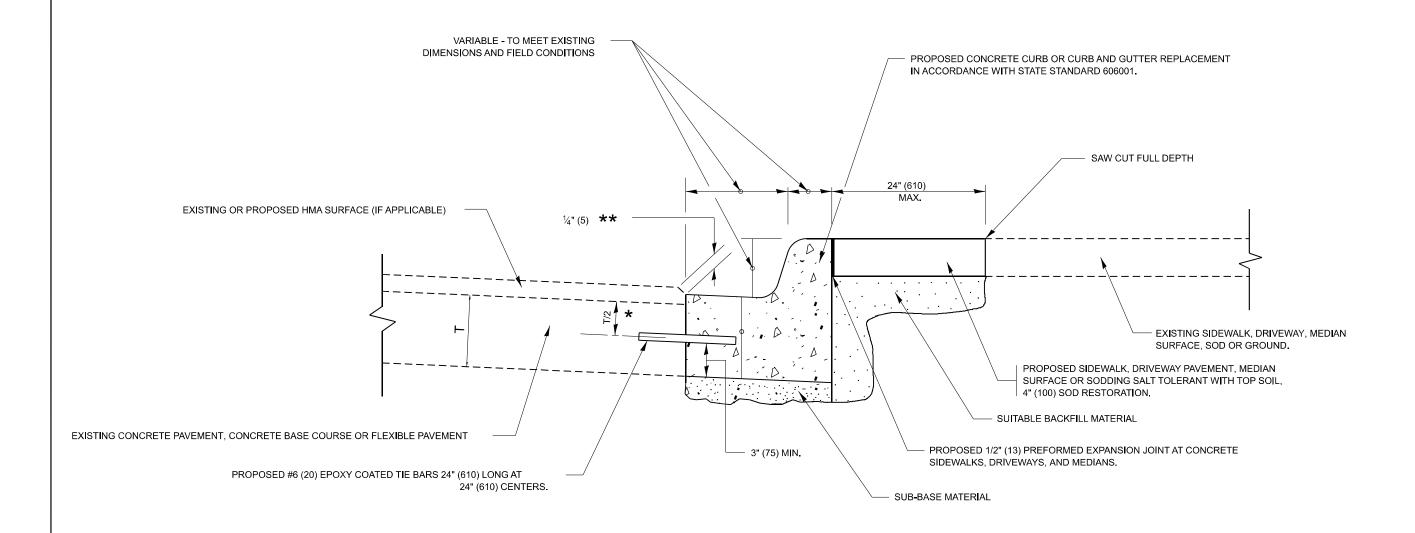
## **SEQUENCE OF CONSTRUCTION (MILLING FIRST)**

- 1. MILL HMA FIRST IF THERE IS AT LEAST 4 ½ 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 = mohammad.hamwi	DESIGNED - R. SHAH	REVISED - R. BORO 01-01-07		PAVEMENT PATCHING FOR HMA SURFACED PAVEMENT		<u> </u>	F.A.P RTF	SECTION	COUNTY TO	TAL SHEET		
	DRAWN -	REVISED - R. BORO 09-04-07	STATE OF ILLINOIS							FAP 0104 23 SMART	LAKE 4	45 24
	CHECKED -	REVISED - K. ENG 10-27-08	DEPARTMENT OF TRANSPORTATION			TIMA SURFACED PAVEMENT				BD400-04 (BD-22)	CONTRACT NO	0. 62V75
PLOT DATE = 2/4/2025	DATE - 10-25-94	REVISED - K. SMITH 11-18-22		SCALE: NONE	SHEET A002 OF 23 SHEETS STA.	TO STA.		ILLINOIS FED. AI	D PROJECT			

MODEL: BD-22 [Sheet]

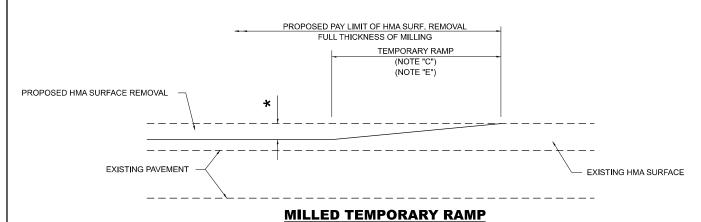


- \* 3" (75) MINIMUM FROM TOP AND BOTTOM OF THE CONCRETE PAVEMENT OR BASE COURSE.

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

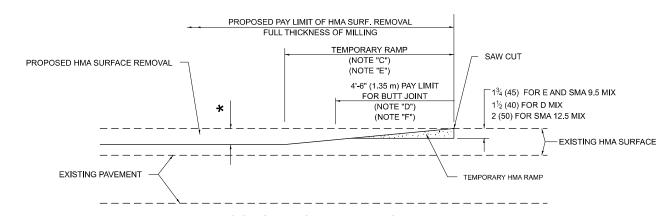
ALL DIMENSIONS ARE IN INCHES (MILLIMETERS) UNLESS OTHERWISE SHOWN.

USER NAME = mohammad.hamwi	DESIGNED - A. HOUSEH	REVISED - A. ABBAS 03-21-97			CURB OR CURB AND GUTTER		F.A.P SECTION 104 FAP 0104 23 SMART BD600-06 (BD-24)	ı	COUNTY	TOTAL SHEETS	SHEET NO.	
	DRAWN -	REVISED - M. GOMEZ 01-22-01	STATE OF ILLINOIS	REMOVAL AND REPLACEMENT			104	FAP 0104 23 SM	MART	LAKE	45	25
	CHECKED -	REVISED - R. BORO 12-15-09	DEPARTMENT OF TRANSPORTATION	REMOVAL	REMOVAL AND REPLACEMENT		E	BD600-06 (BD-2	24)	CONTRACT	NO. 62V	75
PLOT DATE = 2/4/2025	DATE - 03-11-94	REVISED - K. SMITH 07-11-19		SCALE: NONE	SHEET A003 OF 23 SHEETS STA.	TO STA.		ILLING	NOIS FED. AID PR	ROJECT		



#### (FOR BUTT JOINT AND HMA TAPER SEE DETAIL BELOW)

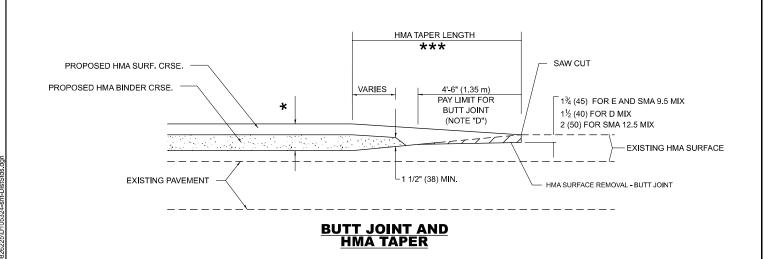
#### **OPTION 1**



#### **HMA CONSTRUCTED TEMPORARY RAMP**

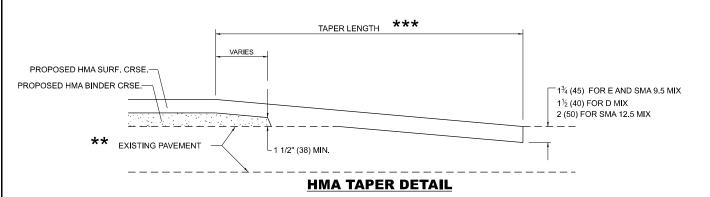
(FOR BUTT JOINT AND HMA TAPER SEE DETAIL BELOW)

## **OPTION 2 TYPICAL TEMPORARY RAMP**



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

PROPOSED HMA OR PCC SURFACE REMOVAL - BUTT JOINT 30'-0" (9.0 m) (NOTE "A") EXISTING HMA OR PCC SURFACE SAW CUT 15'-0" (4.5 m) (NOTE "B") (NOTE "D") 40'-0" (12.0M) (NOTE "A1")  $-1\frac{3}{4}$  (45) FOR E AND SMA 9.5 MIX 1½ (40) FOR D MIX 2 (50) FOR SMA 12.5 MIX EXISTING PAVEMENT **BUTT JOINT DETAIL** 



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

PC CONCRETE, HMA OR HMA RESURFACED PAVEMENT

#### **GENERAL NOTES**

- A. MAINLINE ARTERIAL ROADWAYS AND MAJOR SIDE ROADS.
- A1. INTERSTATES
- B. MINOR SIDE ROADS.
- 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' 4" (1.02m) PER 1 INCH (25 mm) OF MILLING THICKNESS.
  - \* SEE TYPICAL SECTIONS FOR MILLING THICKNESS.
- F. SEE ARTICLE 406.08 AND 406.14 OF THE STANDARD SPECIFICATIONS FOR "HMA AND/OR PCC SURFACE REMOVAL, BUTT JOINT".

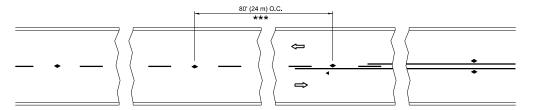
20'-0" (6.1 m) PER 1 (25) RESURFACING (NOTE "A") 10'-0" (3.0 m) PER 1 (25) RESURFACING (NOTE "B")

#### **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"
- 2. THE TEMPORARY RAMP AND SAW CUT SHALL BE INCLUDED IN THE UNIT COST FOR HMA OR PCC SURFACE REMOVAL-BUTT JOINT

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

DESIGNED - M. DE YONG USER NAME = mohammad.hamwi **BUTT JOINT AND STATE OF ILLINOIS** REVISED -DRAWN M. GOMEZ 04-06-01 FAP 0104 23 SMART LAKE 45 **HMA TAPER DETAILS** CHECKED -**DEPARTMENT OF TRANSPORTATION** CONTRACT NO. 62V75 BD400-05 BD-32 SHEET A004 OF 23 SHEETS STA. PLOT DATE = 2/4/2025 DATE REVISED - K. SMITH 11-18-22 TO STA.

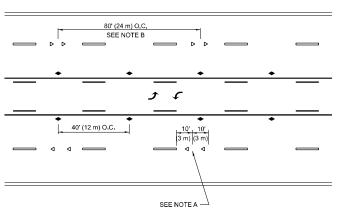


\*\*\* REDUCE TO 40' (12 m) O.C. ON CURVES WITH POSTED OR ADVISORY SPEED 45 M.P.H. (70 km/h) OR LESS.

# 3 @ 40' (12 m) O.C. $\Rightarrow$

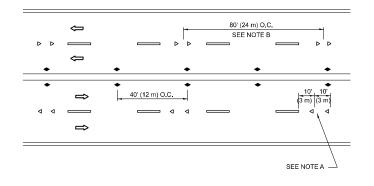
SEE FIGURE 3B-14 MUTCO

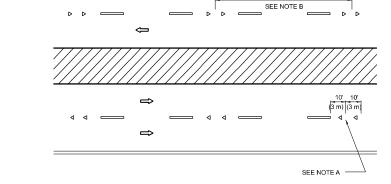
**LANE REDUCTION TRANSITION** 



**TWO-WAY LEFT TURN** 

#### **TWO-LANE/TWO-WAY**

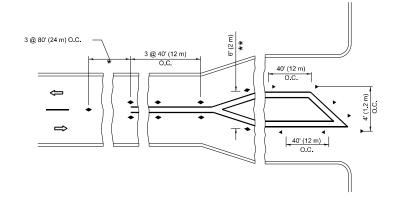


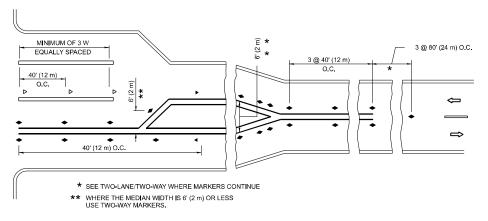


80' (24 m) O.C.

#### **MULTI-LANE/UNDIVIDED**







#### **TURN LANES**

#### **GENERAL NOTES**

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

#### **SYMBOLS**

YELLOW STRIPE

WHITE STRIPE

- ONE-WAY AMBER MARKER
- ONE-WAY CRYSTAL MARKER (W/O)
- TWO-WAY AMBER MARKER

#### **LANE MARKER NOTES**

A. USE DOUBLE LANE LINE MARKERS SPACED AS SHOWN.

B. REDUCE TO 40' (12 m) O.C. ON CURVES WHERE ADVISORY SPEEDS ARE 10 M.P.H (20 km/h) LOWER THAN POSTED SPEEDS.

#### **DESIGN NOTES**

- 1. DOUBLE LANE LINE MARKERS SHALL BE USED UNLESS SPECIFIED OTHERWISE.
- 2. EXCEPT AS SHOWN ON THE LANE REDUCTION TRANSITION AND FREEWAY EXIT RAMP DETAIL, MARKERS ARE NOT TO BE SPECIFIED ON RIGHT EDGE LINES.
- 3. THE EXACT MARKER LIMITS, SPACING, AND COLOR SHALL BE INCLUDED IN THE PLANS WHEN STANDARD SPECIFICATIONS ARE NOT BEING USED.
- 4. MARKERS SHOULD NOT BE USED ALONGSIDE CURBS EXCEPT FOR EXTREMELY SHORT SECTIONS OF CURBS WHERE NOT MORE THAN TWO MARKERS WOULD BE INVOLVED.

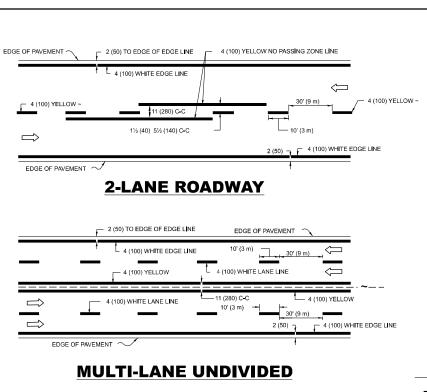
All dimensions are in inches (millimeters) unless otherwise shown.

JSER NAME = mohammad.hamwi DESIGNED -REVISED - T. RAMMACHER 03-12-99 REVISED - T. RAMMACHER 01-06-00 DRAWN CHECKED . PLOT DATE = 2/4/2025 DATE REVISED - C. JUCIUS 07-01-13

STATE OF ILLINOIS **DEPARTMENT OF TRANSPORTATION** 

**TYPICAL APPLICATIONS** RAISED REFLECTIVE PAVEMENT MARKERS (SNOW-PLOW RESISTANT) SHEET A005 OF 23 SHEETS STA.

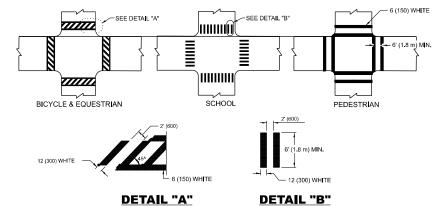
SECTION COUNTY FAP 0104 23 SMART LAKE 45 27 TC-11 CONTRACT NO. 62V75



# EDGE OF PAVEMENT - 4 (100) WHITE EDGE LINE 10' (3 m) 4 (100) WHITE LANE LINE EDGE OF PAVEMENT ~ 4 (100) WHITE EDGE LINE

# **MULTI-LANE DIVIDED**

## **TYPICAL LANE AND EDGE LINE MARKING**



**TYPICAL CROSSWALK MARKING** 

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

#### TWO-4 (100) YELLOW @ 11 (280) C-C 4' (1.2 m) OUTS DE TO NO DIAGONALS TWO-4 (100) YELLOW @ 11 (280) C-C

@ 10' (3 m) OR LESS SPACING

8 (200) WHITE -

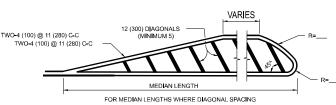
ISLAND OFFSET FROM PAVEMENT EDGE

8 (200) WHITE -

**ISLAND AT PAVEMENT EDGE** 

RAISED

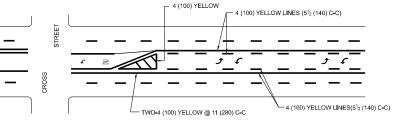
#### 4' (1.2 m) WIDE MEDIANS ONLY



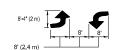
CANNOT BE ATTAINED, USE 5 (FIVE) EQUALLY SPACED DIAGONAL LINES.

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))

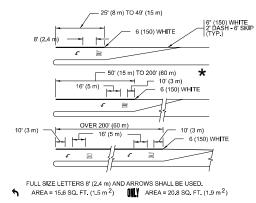
#### MEDIANS OVER 4' (1.2 m) WIDE



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.



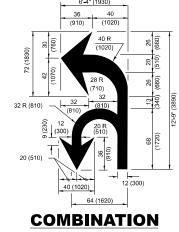
#### **MEDIAN WITH TWO-WAY LEFT TURN LANE TYPICAL PAINTED MEDIAN MARKING**



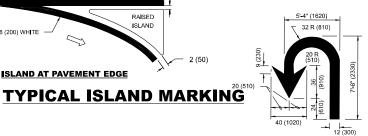
TURN LANES IN EXCESS OF 400' (120 m) IN LENGTH MAY HAVE AN ADDITIONAL SET OF ARROW - "ONLY" INSTALLED MIDWAY BETWEEN THE OTHER TWO SETS OF

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

**TYPICAL TURN LANE MARKING** 



# **LEFT AND U-TURN**



## LANE REDUCTION **TRANSITION**

**U-TURN** 

★ LANE REDUCTION ARROWS REQUIRED AT SPEEDS OF 45 MPH OR

D(FT)

SPEED LIMIT

		_	· OIXII	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	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	PILAGE 4" (1.2 m) N ADVANCE OF AND PARALLEL TO CROSSWALK, IF PRESENT, OTHERWISE, PLACE AT DESIRED STOPPING POINT, PARALLEL TO CROSSROAD CENTERLINE, WHERE POSSIBLE
PAINTED MEDIANS	2 @ 4 (100) WITH 12 (300) DIAGONALS @ 45° NO DIAGONALS USED FOR 4' (1.2 m) WIDE MEDIANS	SOLID	YELLOW: TWO WAY TRAFFIC WHITE: ONE WAY TRAFFIC	11 (280) C-C FOR THE DOUBLE LINE SEE TYPICAL PAINTED MEDIAN MARKING.
GORE MARKING AND CHANNELIZING LINES	8 (200) WITH 12 (300) DIAGONALS @ 45°	SOLID	WHITE	DIAGONALS: 15' (4.5 m) C-C (LESS THAN 30MPH (50 km/h)) 20' (6 m) C-C 30MPH (50 km/h) TO 45MPH (70 km/h)) 30' (9 m) C-C (OVER 45MPH (70 km/h))
RAILROAD CROSSING	24 (600) TRANSVERSE LINES; "RR" IS 6' (1.8 m) LETTERS; 16 (400) LINE FOR "X"	SOLID	WHITE	SEE STATE STANDARD 780001 AREA OF: *R*=3.6 SQ. FT. (0.33 m <sup>2</sup> ) EACH *X*=54.0 SQ. FT. (5.0 m <sup>2</sup> )
SHOULDER DIAGONALS (REQUIRED FOR SHOULDERS $\geq$ 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.

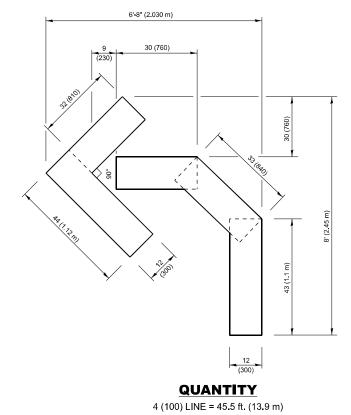
SCALE: NONE

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

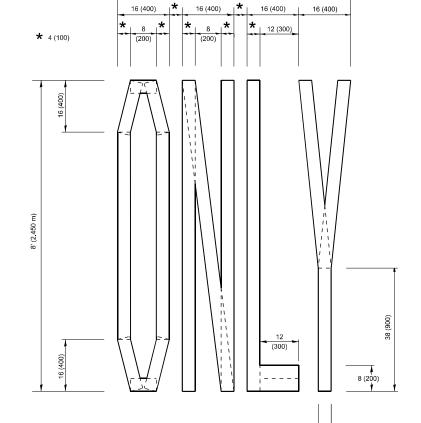
JSER NAME = Nedal.Qarut DESIGNED - EVERS REVISED - C. JUCIUS 09-09-09 REVISED -DRAWN C. JUCIUS 07-01-13 CHECKED -PLOT DATE = 2/4/2025 DATE

**STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION** 

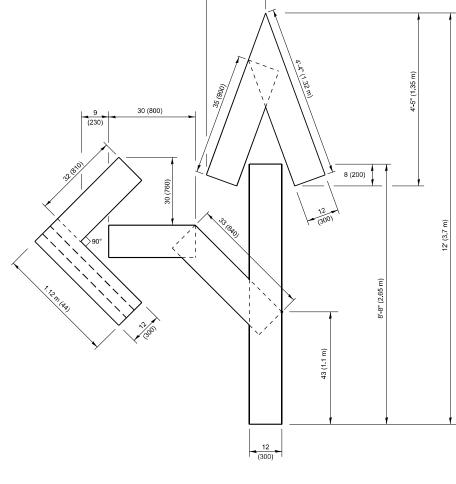
	DISTRICT ONE		F.A.P RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
TYPICAL PAVEMENT MARKINGS				104 FAP 0104 23 SMART		45	28
			TC-13	CONTRACT NO. 62V75			
	SHEET ALOOG OF \$3 SHEETS STA	TO STA		ILLINOIS EED AL	) DDO IECT		



15.2 sq. ft. (1.41 sq. m)



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

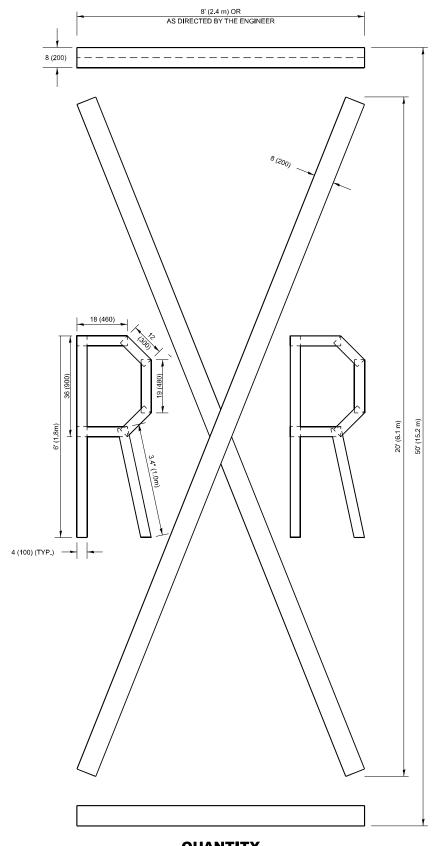


#### **QUANTITY**

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.



#### **QUANTITY**

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

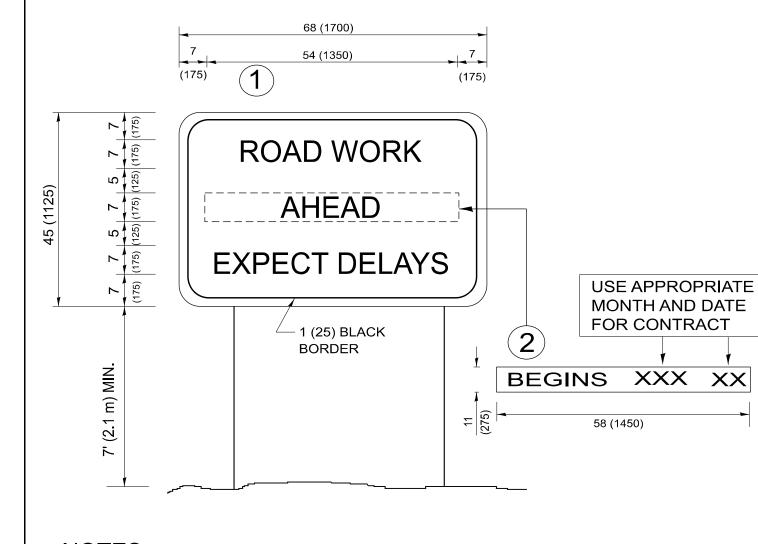
> All dimensions are in inches (millimeters) unless otherwise shown.

USER NAME = Nedal.Qarut	DESIGNED -	REVISED	- T. RAMMACHER 03-02-98
	DRAWN -	REVISED	- E. GOMEZ 08-28-00
	CHECKED -	REVISED	- E. GOMEZ 08-28-00
PLOT DATE = 2/4/2025	DATE - 09-18-94	REVISED	- A. SCHUETZE 09-15-16

21.4 sq. ft. (1.99 sq. m)

STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION

	SHORT TE	SHORT TERM PAVEMENT MARKING LETTERS AND SYMBOLS						F.A.P RTE	SECT	TION		COUNTY	TOTAL SHEETS	SHEET NO.
ı								104	FAP 0104 2	23 SMART		LAKE	45	29
ı									TC-16	3		CONTRAC	T NO. 62	√75
ı	SCALE: NONE	SHEET A1007	OF	23	SHEETS	STA.	TO STA.			ILLINOIS	FED. AID	PROJECT		



## NOTES:

- 1. USE BLACK LETTERING ON ORANGE BACKGROUND.
- 2. ERECT SIGNS IN ADVANCE OF THE LOCATION FOR THE "ROAD CONSTRUCTION AHEAD" SIGN AT LOCATIONS AS DIRECTED BY THE ENGINEER.
- 3. ERECT SIGN 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.)

SCALE: NONE

7. SHALL BE PAID FOR AS TEMPORARY INFORMATION SIGNING.

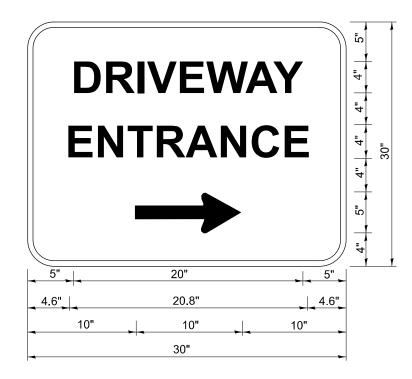
ALL DIMENSIONS ARE IN INCHES (MILLIMETERS) UNLESS OTHERWISE SHOWN.

TOTAL SHEET NO. 45 30

USER NAME = Nedal.Qarut	DESIGNED -	REVISED	<ul> <li>R. MIRS 09-15-97</li> </ul>
	DRAWN -	REVISED	- R. MIRS 12-11-97
	CHECKED -	REVISED	- T. RAMMACHER 02-02-99
PLOT DATE = 2/4/2025	DATE -	REVISED	- C. JUCIUS 01-31-07

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

	ARTERIAL ROAD INFORMATION SIGN				F.A.P RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEE NO.	
					104	FAP 0104 23 SMART	LAKE	45	30	
INFORMATION SIGN				TC-22 CONTRACT NO			NO. 62	√75		
	SHEET A1008	OF 23	SHEETS	STA.	TO STA.		ILLINOIS FED. AI	D PROJECT		



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

#### **NOTES:**

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

USER NAME = Nedal.Qarut	DESIGNED -	REVISED	-	C. JUCIUS 02-15-07
	DRAWN -	REVISED	-	
	CHECKED -	REVISED	-	
PLOT DATE = 2/4/2025	DATE -	REVISED	-	

								F.A.P RTE	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
ı							104	FAP 0104 23 SMART	LAKE	45	31	
ļ								TC-26	CONTRACT	NO. 62\	<i>J</i> 75	
l	SCALE: NONE	SHEET A009	OF 3	3 SHEETS	STA.	TO STA.		ILLINOIS FED. AID PROJECT				

E: c:\pw\_work\pwidot\qarutnn\d0826225\D105324-sht-DistStds.

# TRAFFIC SIGNAL LEGEND

(NOT TO SCALE)

Married Processing   Married	<u>ITEM</u>		<u>EXISTING</u>	PROPOSED	<u>ITEM</u>		EXISTING	PROPOSED	ITEM	EXISTING	PROPOSED
	CONTROLLER CABINET				-SQUARE					R R Y Y	Y
	COMMUNICATION CABINET		ECC	СС		NDHOLE					G G ←Y
AND CONTROL OF THE PARTY OF THE	MASTER CONTROLLER		EMC	MC	-SQUARE		H (H)	<b>H (4)</b>		F P	<b>∢</b> G <b>∢</b> G P
AND THE PROPERTY OF THE PROPER	MASTER MASTER CONTROLLER		EMMC	ммс	DOUBLE HANDH	OLE			SIGNAL HEAD WITH BACKPLATE		RRR
MORE PROPERTY OF STATE	ININTERRUPTABLE POWER SUPF	PPLY	<b>4</b>	<b>4</b>	JUNCTION BOX			0			
Part			-D- <sup>P</sup>	- <del>■</del> -P	RAILROAD CANT	ILEVER MAST ARM	$X \bigcirc X \longrightarrow X$	X <del>CX</del> X			4Y 4Y 4Y 4G 4G
PARTICIPATION OF THE PARTICIPA					RAILROAD FLAS	HING SIGNAL	<del>∑⊙</del> ∑	X <del>+</del> X			P RB
	(G) GROUND MOUNTED	RED	$\boxtimes^{G} \boxtimes^{GM}$	<b>⊠</b> <sup>G</sup> <b>⊠</b> <sup>GM</sup>	RAILROAD CROS	SSING GATE	₹0₹>	X•X-	PEDESTRIAN SIGNAL HEAD		
AMERICAN CONTINUES   C   C   C   C   C   C   C   C   C	ELEPHONE CONNECTION		ET	T	RAILROAD CROS	SSBUCK	☆	*		<b>Ø</b>	Ŕ
AND ALL CONTROL OF THE CONTROL OF TH	STEEL MAST ARM ASSEMBLY AND	D POLE	O	•	RAILROAD CONT	FROLLER CABINET		₽⋖		C C	<b>₩</b> C
THE PRINTED AND ADDRESS   1	LUMINUM MAST ARM ASSEMBLY	Y AND POLE							WITH COUNTDOWN TIMER		
STEPLY TEMPORARY   C			o <del>`</del> X—	•*							
NOTICE TRANSITION  IN THE STATE OF THE STATE		ODADV	0	● ● BM	SYSTEM ITEM		S	SP			
MACHINE		ORART			INTERSECTION	TEM	1	IP			
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INTERSECTION AND SAMPLING SYSTEM DETECTOR  MACRANIDED DETECTION ZONE  INTERSECTION AND SAMPLING SYSTEM DETECTOR  MACRANIDED DETECTOR  M		N PUSH BUTTON			PREFORMED DE	TECTOR LOOP	PP	PP			
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DONFINATION BEACON  ON O	PAN, TILT, ZOOM (PTZ) CAMERA		PTZ	PTZ					-(P) POST		
WIRELESS INTERCONNECT RADIO REPEATER RRS RR RR BRS INTERCONNECT RADIO REPEATER RRS RR BRS RRS RRS RRS RRS RRS RRS RRS	EMERGENCY VEHICLE LIGHT DET	TECTOR	$\bowtie$	<b>~</b>	WIRELESS ACCE	ESS POINT	<u> </u>				
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USER NAME = Nedal Clarut DESIGNED - IP REVISED - STATE OF ILLINOIS DISTRICT ONE RIE SECTION COUNTY   STATE OF ILLINOIS	WIRELESS INTERCONNECT		<b>○++  </b>	•							
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DRAWN - IP REVISED - STANDARD TRAFFIC SIGNAL DESIGN DETAILS  OUT OF TRANSPORTATION STANDARD TRAFFIC SIGNAL DESIGN DETAILS  OUT OF TRANSPORTATION STANDARD TRAFFIC SIGNAL DESIGN DETAILS		USER NAME = Nedal.Qarut					STATE OF ILLINOIS				SHEE

DATE - 9/29/2016

PLOT DATE = 2/4/2025

REVISED -

SHEET 1 OF 7 SHEETS STA.

SCALE: NONE

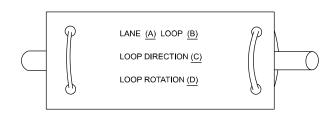
FAP 0104 23 SMART **TS-05** 

05 CONTRACT NO. 62V75
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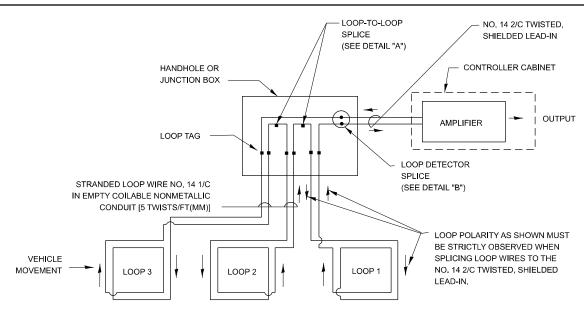
#### **LOOP DETECTOR NOTES**

- 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
- 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.
- PREFORMED DETECTOR LOOPS SHALL BE USED, AS SHOWN ON THE PLANS, WHERE NEW CONCRETE 7. 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**

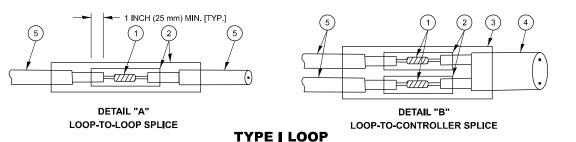


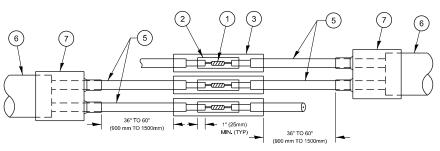
- A. LANE 1 IS THE LANE CLOSEST TO THE CENTERLINE OF THE ROADWAY
- B. LOOP #1 IS THE LOOP IN THE LANE CLOSEST TO THE INTERSECTION.
- C. LABEL LOOP CABLE "IN" OR LOOP CABLE "OUT".
- D. LABEL LOOP CABLE CLOCKWISE OR LOOP CABLE COUNTERCLOCKWISE.

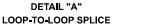


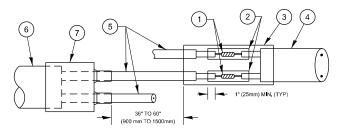
#### **DETECTOR LOOP WIRING SCHEMATIC**

- 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.









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.
- NO. 14 2/C TWISTED, SHIELDED CABLE.

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

USER NAME = Nedal.Qarut	DESIGNED -	REVISED -
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PLOT DATE = 2/4/2025	DATE -	REVISED -

**STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION** 

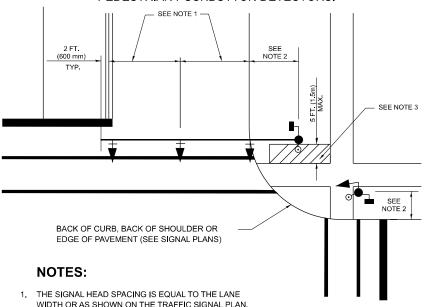
**DISTRICT ONE** STANDARD TRAFFIC SIGNAL DESIGN DETAILS SHEET 2 OF 7 SHEETS STA.

SECTION COUNTY 104 FAP 0104 23 SMART LAKE 45 CONTRACT NO. 62V75

#### TRAFFIC SIGNAL MAST ARM AND SIGNAL POST

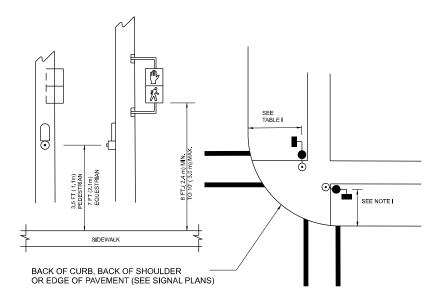
MAST ARM MOUNTED SIGNALS IN EXISTING, PROPOSED OR FUTURE SIDEWALK/BICYCLE PATH AREA. INTERSECTION SHOWN WITH PEDESTRIAN SIGNALS AND

PEDESTRIAN PUSHBUTTON DETECTORS.



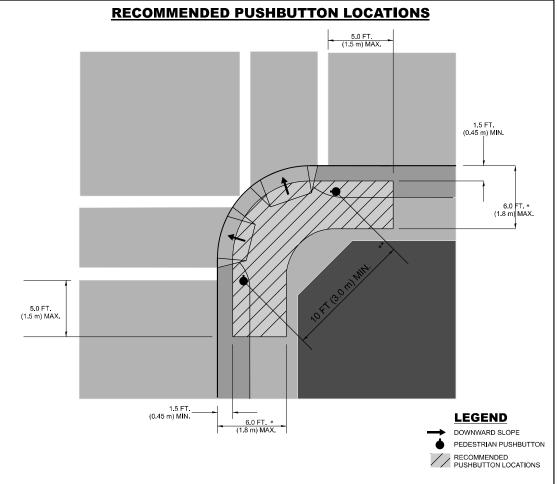
- 2. REFER TO THE TRAFFIC SIGNAL EQUIPMENT OFFSET TABLE.
- 3. PROVIDE A LEVEL ALL-WEATHER SURFACE (CONCRETE SIDEWALK, ASPHALT BICYCLE PATH SURFACE OR MATCHING MATERIAL TO THE ADJACENT SURFACE) UP TO THE MAST ARM SHAFT OR
- 4. THE FACE OF THE PEDESTRIAN PUSHBUTTON SHALL BE PARALLEL TO THE CROSSWALK TO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

#### **PEDESTRIAN SIGNAL POST** AND **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 MUTCD AND INFORMATION FOUND IN THE "AMERICANS WITH DISABILITIES ACT ACCESSIBILITY GUIDELINES FOR



- 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 (1.2m)	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:

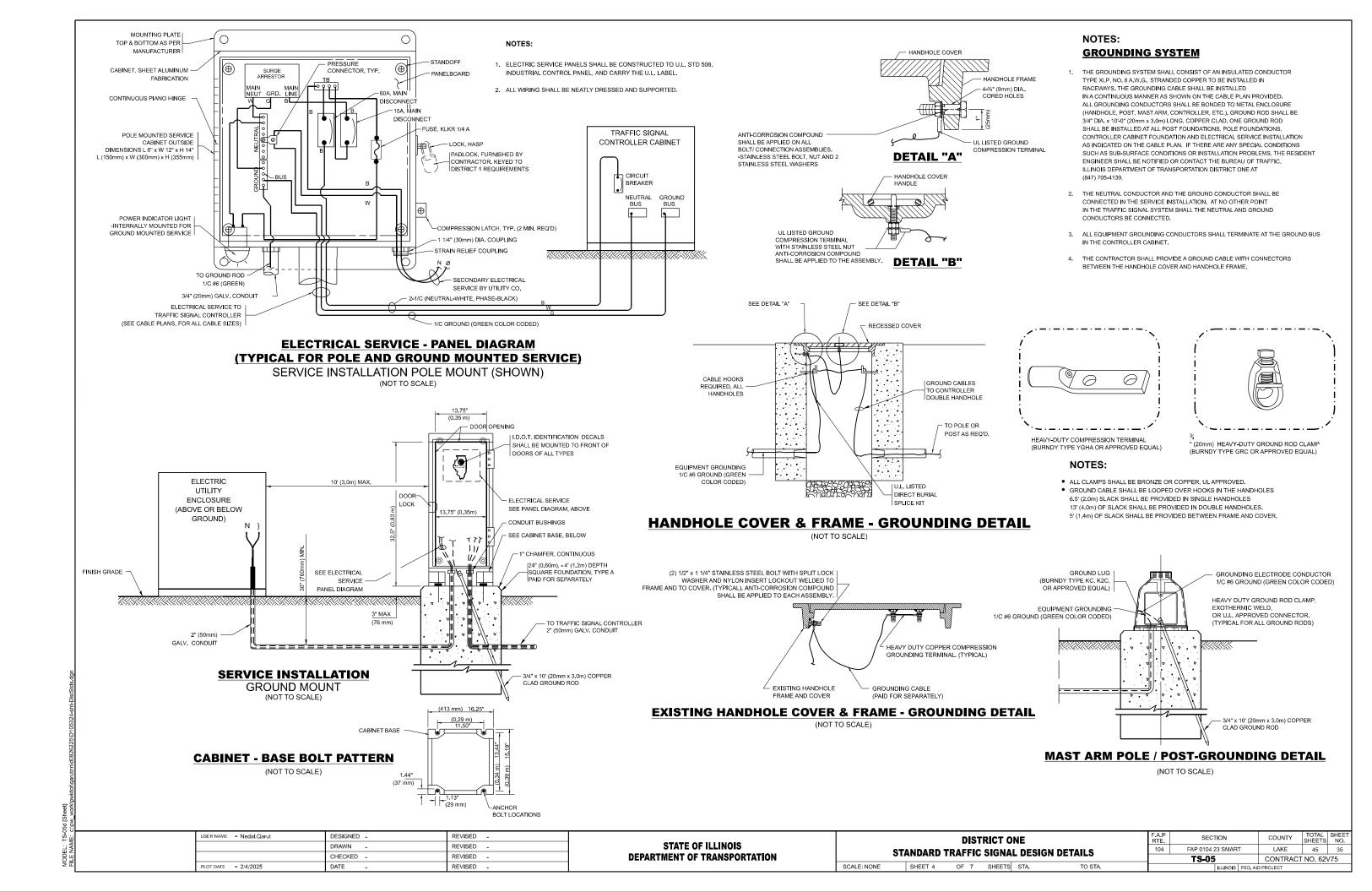
- CONTACT THE "AREA TRAFFIC SIGNAL MAINTENANCE AND OPERATIONS ENGINEER" FOR ASSISTANCE IN LOCATING THE TRAFFIC SIGNAL EQUIPMENT WHEN THERE ARE CONFLICTS WITH DITCHES OR THE MINIMUM OFFSET DISTANCES CANNOT BE MET.
- 2. MINIMUM DISTANCE FROM THE BACK OF CURB TO THE ROADWAY SIDE OF THE FOUNDATION
- 3. MINIMUM 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.

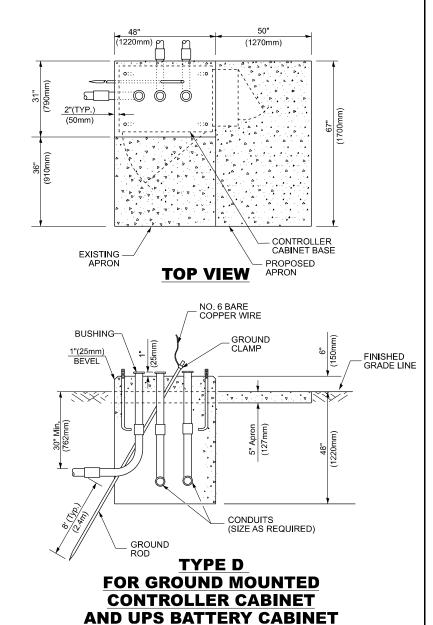
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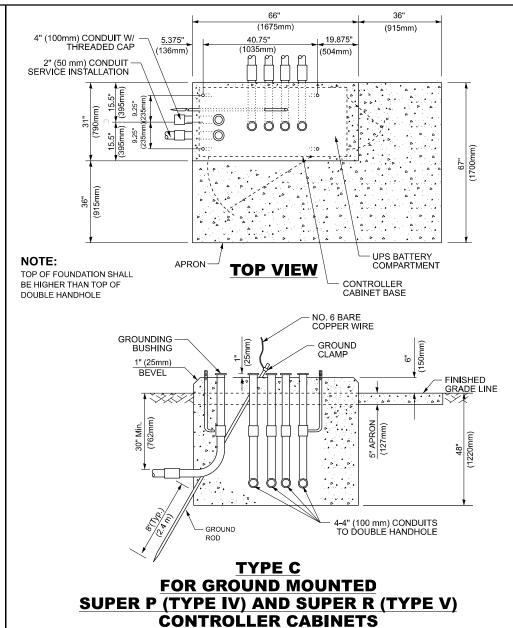
USER NAME = Nedal.Qarut	DESIGNED -	REVISED -
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PLOT DATE = 2/4/2025	DATE -	REVISED -

**STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION** 

SECTION COUNTY DISTRICT ONE 104 FAP 0104 23 SMART LAKE 45 STANDARD TRAFFIC SIGNAL DESIGN DETAILS TS-05 CONTRACT NO. 62V75 SHEET 3 OF 7 SHEETS STA.







49" (SEE NOTE 3) (1245mm) 2" x 6" (51mm x 152mm) WOOD FRAMING (TYP.) TRAFFIC SIGNAL -CONTROLLER CABINET CABINET 3/4" (19mm) TREATED PHYWOOD DECK 2" x 6" (51mm x 152mm) TREATED WOOD 6" x 6" (152mm x 152mm) TREATED WOOD POSTS BASED ON CONTROLLER CABINET TYPE IV WITH BASE DIMENSIONS OF 26" x 44" (660mm x 1118mm). ADJUST PLATFORM SIZE TO FIT CABINET BASE DIMENSIONS BEING SUPPLIED

65" (SEE NOTE 4)

- 2. BASED ON UNINTERRUPTIBLE POWER SUPPLY CABINET WITH BASE DIMENSIONS OF  $16" \times 25"$  ( $406 mm \times 635 mm$ ). 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
MASTARM	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**

FOUNDATION	DEPTH
TYPE A - Signal Post	4'-0" (1.2m)
TYPE C - CONTROLLER W/ UPS	4'-0" (1.2m)
TYPE D - CONTROLLER	4'-0" (1.2m)
SERVICE INSTALLATION, GROUND MOUNT, TYPE A - SQUARE	4'-0" (1.2m)

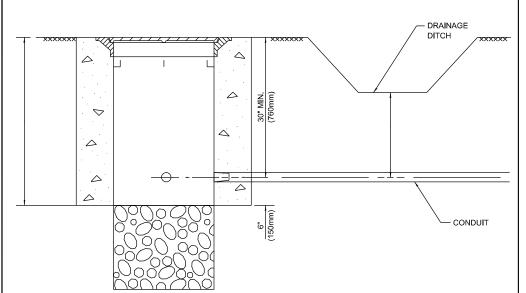
#### **DEPTH OF FOUNDATION**

Mast Arm Length	<ol> <li>Foundation Depth</li> </ol>	Foundation Diameter	Spiral Diameter	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" (4.6 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" (7.6 m)	42" (1060mm)	36" (900mm)	16	8(25)

- 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 (Qu) > 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
- 2. Combination mast arm assemblies under 55 feet (16.8 m) shall use 36" (900 mm) diameter foundations.
- 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**

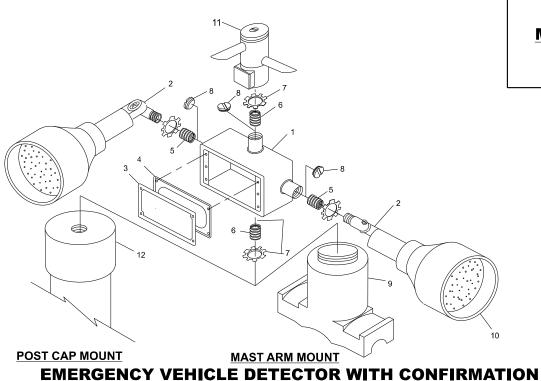
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USER NAME = Nedal.Qarut	DESIGNED -	REVISED -			DISTRICT ONE	PTE	SECTION	COUNTY	SHEETS	NO
	DRAWN -	REVISED -	STATE OF ILLINOIS	.=		104	FAP 0104 23 SMART	LAKE	45	36
	CHECKED -	REVISED -	DEPARTMENT OF TRANSPORTATION	STA	ANDARD TRAFFIC SIGNAL DESIGN DETAILS		TS-05	CONTRAC	T NO. 62\	/75
PLOT DATE = 2/4/2025	DATE -	REVISED -		SCALE: NONE	SHEET 5 OF 7 SHEETS STA. TO STA.		ILLINOIS FED. AI	D PROJECT		

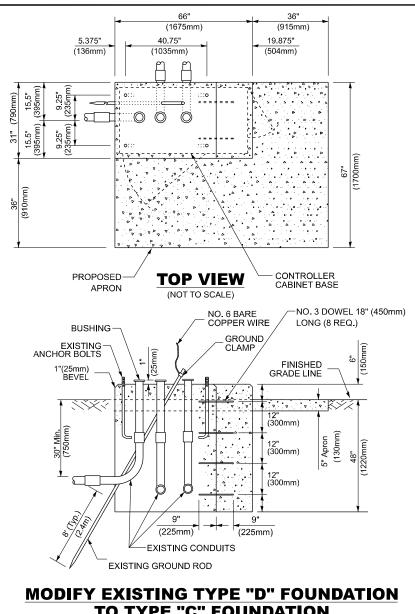


- 1. CONDUIT DEPTH SHALL BE A MINIMUM OF 30" (760mm) BELOW THE BOTTOM OF THE DRAINAGE DITCH OR ANY SLOPING GROUND
- 2. THE MINIMUM CONDUIT DEPTH APPLIES TO ALL CONDUIT PLACED UNDER ROADWAY PAVEMENT, MULTI-USE PATHS, SIDEWALKS AND SOIL SURFACES.
- 3. THE MINIMUM CONDUIT DEPTH APPLIES TO ALL HANDHOLES,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

#### HANDHOLE WITH MINIMUM CONDUIT DEPTH

(NOT TO SCALE)



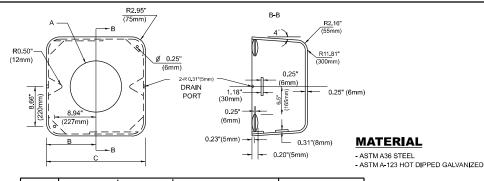


# TO TYPE "C" FOUNDATION

(NOT TO SCALE)

## IDENTIFICATION 1 OUTLET BOX- GALV. 21 CU.IN. (0.000344 CU-M) 2 LAMP HOLDER AND COVER 3 OUTLET BOX COVER 3/4" (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 DETECTOR UNIT 12 POST CAP [18 FT. (5.4 m) POST MIN.]

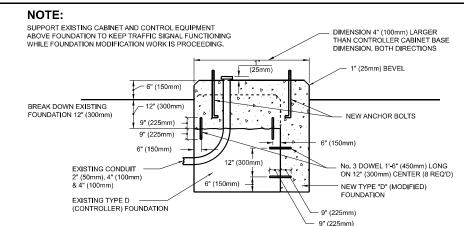
- 1. ALL ELECTRICAL ITEMS, EXCEPT ITEMS #2 AND #11 SHALL BE ALUMINUM OR
- 2. ITEM #1- OZ/GEDNEY FSX-1-50 OR EQUIVALENT ITEM #2- MULBERRY CON-O-SHADE LAMP SHIELD OR EQUIVALENT ITEM #9- "BAND-IT" SADDLE BRACKET OR EQUIVALENT
- 3. WHEN POST MOUNTING IS SPECIFIED, ITEM #9 SHALL NOT BE REQUIRED. THE DETECTION 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.



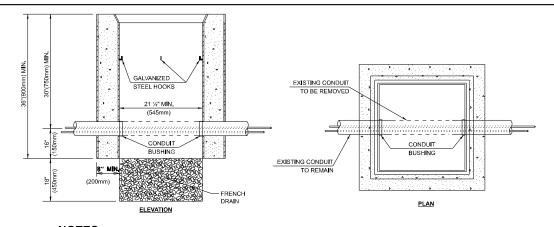
1				
Α	ВС		HEIGHT	WEIGHT
VARIES	9.5"(241mm)	19"(483mm)	7" (178mm) - 12" (300mm)	53 lbs (24kg)
VARIES	10.75"(273mm)	21.5"(546mm)	7" (178mm) - 12" (300mm)	68 lbs (31 kg)
VARIES	13.0"(330mm)	26"(660mm)	7" (178mm) - 12" (300mm)	81 lbs (37 kg)
VARIES 18.5"(470mm)		37"(940mm)	7" (178mm) - 12" (300mm)	126 lbs (57 kg)

#### **SHROUD**

- . 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.



#### **MODIFY EXISTING TYPE "D" FOUNDATION**



- 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.

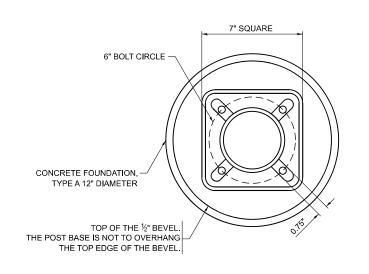
## HANDHOLE TO INTERCEPT EXISTING CONDUIT

DESIGNED -JSER NAME = Nedal.Qarut REVISED DRAWN REVISED CHECKED REVISED DATE

**BEACON MOUNTING DETAIL** 

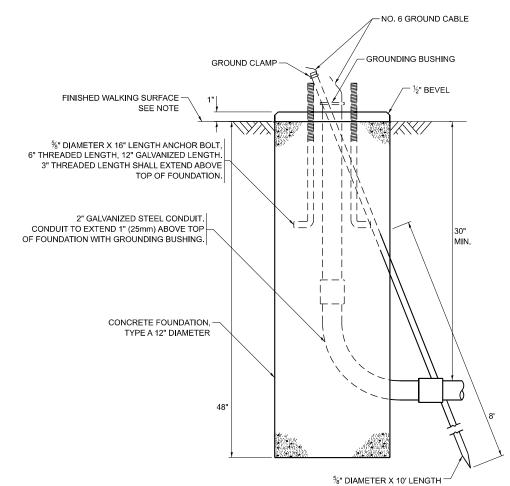
**STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION** 

DISTRICT ONE FAP 0104 23 SMART LAKE STANDARD TRAFFIC SIGNAL DESIGN DETAILS CONTRACT NO. 62V75 SHEET 6 OF 7 SHEETS STA.



#### **BOLT PATTERN**

1. IF THE PEDESTRIAN SIGNAL POST FOUNDATION IS INSTALLED WITHIN OR BEHIND A BARRIER CURB, THE TOP OF THE FOUNDATION SHALL BE INSTALLED FLUSH WITH THE TOP OF THE BARRIER CURB.



# **TYPE A 12-INCH DIAMETER**

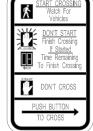
## PEDESTRIAN SIGNAL POST, 10 FT.



- PEDESTRIAN SIGNAL HEAD

- COUNTDOWN PEDESTRIAN SIGNAL HEADS ARE NOT TO BE USED AT RAILROAD INTERSECTIONS





R10-3b

R10-3d

R10-3e

#### **SIGN TABLE**

DIMENSIONS
9" X 12"
9" X 12"
9" X 12"

#### NOTES:

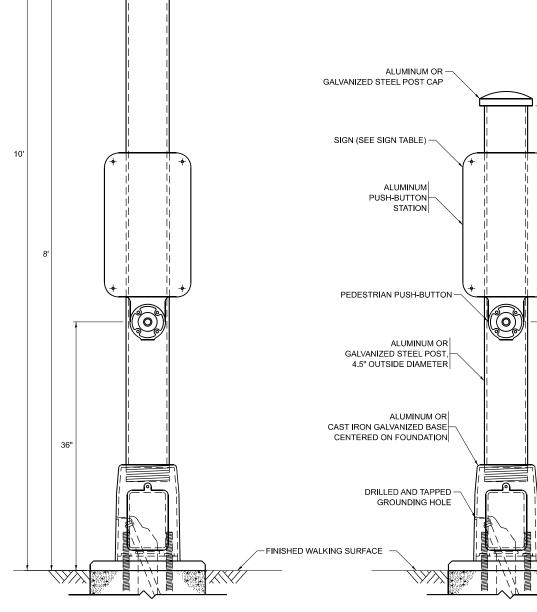
- 1. THE SIGN PANELS SHALL BE TYPE AP SHEETING.
- 2. THE ARROW ON SIGNS FOR PUSH-BUTTONS SERVING TWO DIRECTIONS ON THE SAME PHASE SHALL BE
- 3. THE SIGN FOR DUAL-CALL PUSH-BUTTONS SHALL HAVE NO ARROW.

FAP 0104 23 SMART

LAKE

45

CONTRACT NO. 62V75



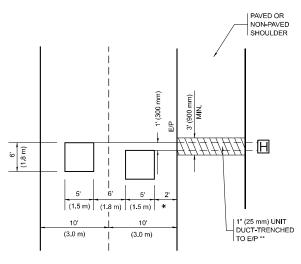
**CONCRETE FOUNDATION,** 

GROUND ROD

JSER NAME = Nedal.Qarut REVISED - 10-15-2020 DESIGNED - IP DISTRICT ONE **STATE OF ILLINOIS** DRAWN - IP REVISED STANDARD TRAFFIC SIGNAL DESIGN DETAILS REVISED **DEPARTMENT OF TRANSPORTATION** SHEET 7 OF 7 SHEETS STA. PLOT DATE = 2/4/2025 - 10-15-2018 REVISED

## **LOOPS NEXT TO SHOULDERS**

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



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

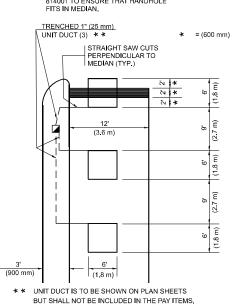
\* = (600 mm)

VOLUME DENSITY ("FAR OUT" DETECTION) ON SAME APPROACH

**LEFT TURN LANES WITH MEDIANS** 

(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



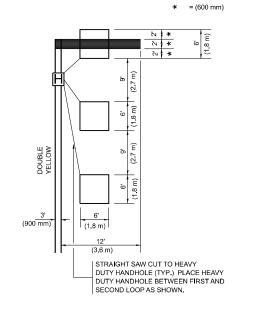
NOTE: DUAL LEFT TURNS NOT SHOWN REFER TO

PLAN SHEET FOR DETECTOR LOOP REPLACEMENT

#### **LEFT TURN LANES WITHOUT MEDIANS**

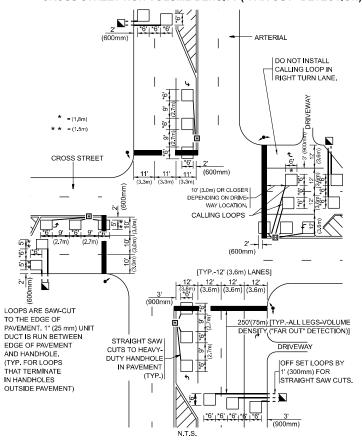
VOLUME DENSITY ("FAR OUT" DETECTION) ON SAME APPROACH

(PROTECTED / PERMITTED LEFT TURN PHASING)

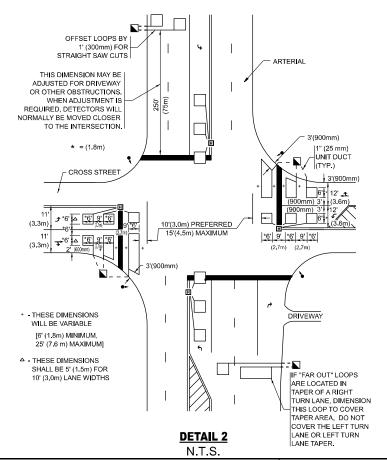


NOTE: DUAL LEFT TURNS NOT SHOWN REFER TO PLAN SHEET FOR DETECTOR LOOP REPLACEMENT

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



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
- \* 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.

#### SER NAME = Nedal.Qarut DESIGNED -REVISED DRAWN REVISED HECKED -R.K.F REVISED PLOT DATE = 2/4/2025 REVISED DATE

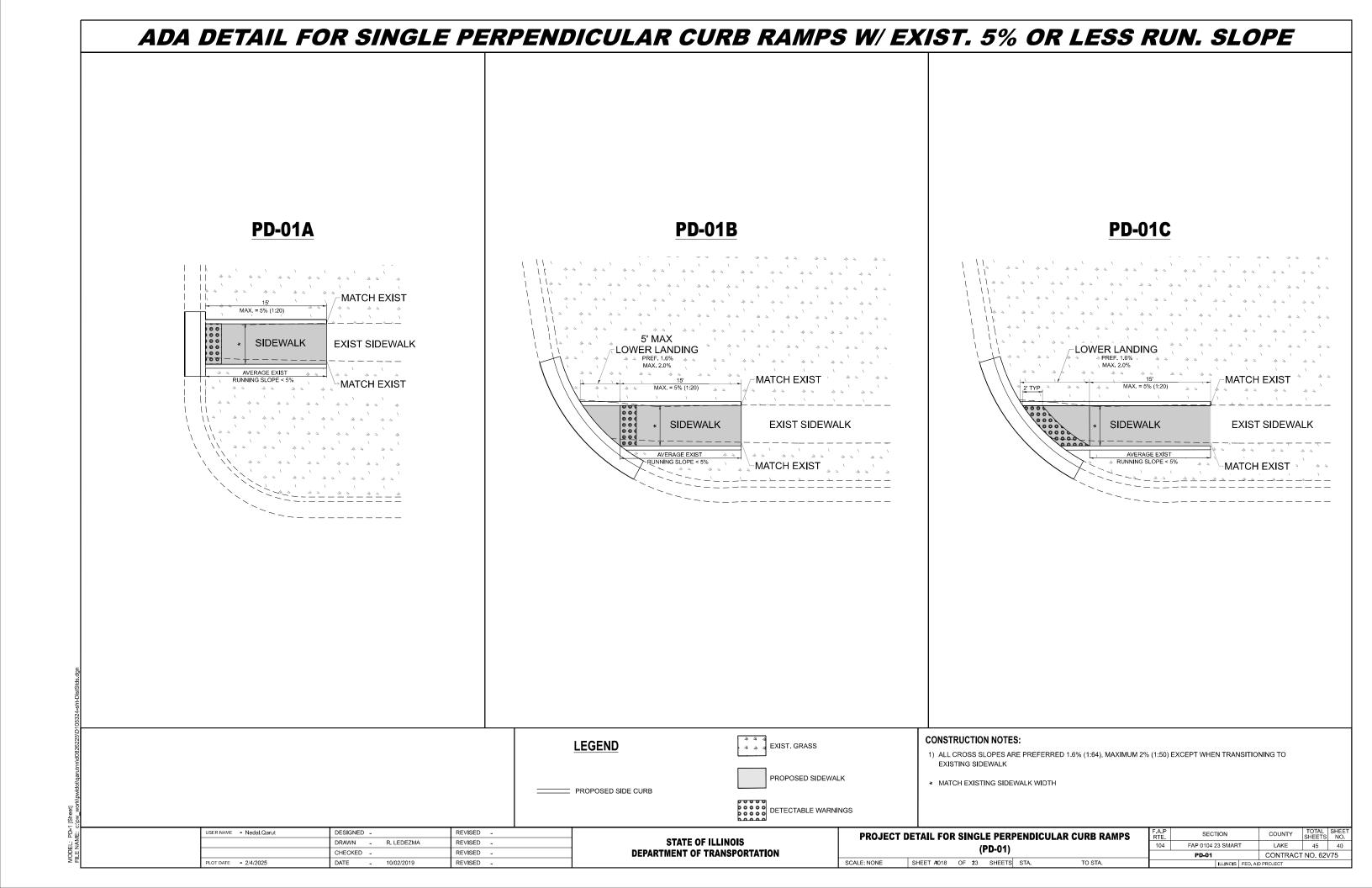
**DETAIL 1** 

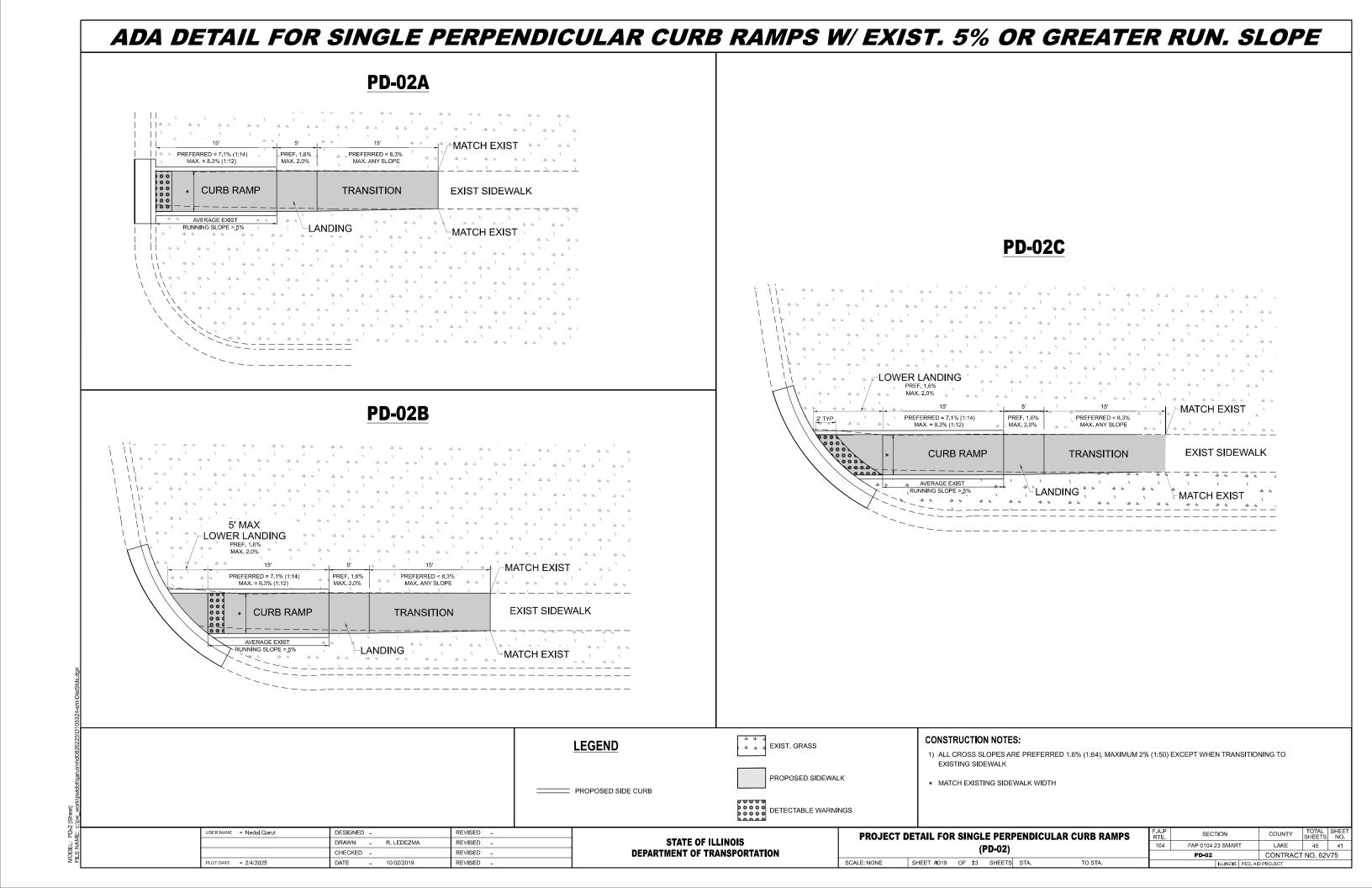
N.T.S.

**STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION** 

**DISTRICT 1 - DETECTOR LOOP INSTALLATION DETAILS FOR ROADWAY RESURFACING** SHEET A017 OF 23 SHEETS STA. SCALE: NONE TO STA.

SECTION COUNTY 104 FAP 0104 23 SMART LAKE 45 TS-07 CONTRACT NO. 62V75





#### ADA DETAIL FOR DOUBLE PERPENDICULAR CURB RAMPS PD-03A **PD-03B** LOWER LANDING LOWER LANDING **CURB RAMP** PREFERRED = 7.1% (1:14) MAX. = 8.3% (1:12) LANDSCAPE OR PCC AREA LANDSCAPE OR PCC AREA -LANDING LOWER LANDING LOWER LANDING PREF. 1.6% MAX. 2.0% ★ MATCH EXIST ↓ 44 44 44 TRANSITION **TRANSITION** EXIST SIDEWALK **EXIST SIDEWALK** MAX. ANY SLOPE MAX. ANY SLOPE MATCH EXIST 🐧 🗒 MATCH EXIST CURB RAMP | CURB RAMP PREFERRED = 7.1% (1:14) MAX. = 8.3% (1:12) PREFERRED = 7.1% (1:14) 2' MIN GRASS BUFFER 16, MATCH EXIST SIDEWALK MATCH EXIST MATCH EXIST MATCH EXIST SIDEWALK 44 44 " " " 4 4 MUST BE EXIST. LANDSCAPED MUST BE EXIST. LANDSCAPED SURFACE. EXIST. CONCRETE SURFACE SURFACE. EXIST. CONCRETE SURFACE WILL REQUIRE DETAILED DESIGN WILL REQUIRE DETAILED DESIGN EXIST. GRASS **CONSTRUCTION NOTES: LEGEND** 1) ALL CROSS SLOPES ARE PREFERRED 1.6% (1:64), MAXIMUM 2% (1:50) EXCEPT WHEN TRANSITIONING TO PROPOSED SIDEWALK \* MATCH EXISTING SIDEWALK WIDTH PROPOSED SIDE CURB DETECTABLE WARNINGS USER NAME = Nedal.Qarut DESIGNED -REVISED -PROJECT DETAIL FOR DOUBLE PERPENDICULAR CURB RAMPS SECTION COUNTY **STATE OF ILLINOIS** DRAWN R. LEDEZMA REVISED FAP 0104 23 SMART LAKE 45 42 104 CHECKED -REVISED **DEPARTMENT OF TRANSPORTATION** CONTRACT NO. 62V75 SHEET A020 OF 23 SHEETS STA. SCALE: NONE PLOT DATE = 2/4/2025 DATE 10/02/2019 REVISED \_

