

ITEM 632 - LOOP DETECTOR TIE-IN, AS PER PLAN

THIS ITEM SHALL CONSIST OF THE WORK NECESSARY TO SPLICE A NEW DETECTOR WIRE TO EXISTING LOOP LEAD-IN CABLE IN A PULL BOX AT A DETECTOR LOOP REPLACEMENT LOCATION. THE CONTRACTOR SHALL CAREFULLY REMOVE AN EXISTING EPOXY INSULATED SPLICE KIT TO MINIMIZE ANY DAMAGE AND TO PRESERVE THE AMOUNT OF SLACK IN THE EXISTING LOOP LEAD-IN CABLE. THE CONTRACTOR SHALL ALSO REMOVE THE EXISTING DETECTOR WIRE IN THE PULL BOX AND IN THE CONDUIT TO THE PAVEMENT EDGE. THIS ITEM SHALL ALSO INCLUDE THE SOLDERING AND SPLICING OF THE WIRE TOGETHER WITH THE CABLE AND INSTALLING A NEW EPOXY INSULATED SPLICE KIT AS DESCRIBED IN CMS 632.23.

THE DEPARTMENT WILL MEASURE ITEM 632 - LOOP DETECTOR TIE-IN, AS PER PLAN, BY THE NUMBER OF EACH COMPLETE TIE-IN INSTALLED AND ACCEPTED. THIS WILL ALSO INCLUDE ALL LABOR, MATERIALS, AND EQUIPMENT NECESSARY TO COMPLETE THIS ITEM OF WORK.

ITEM 632 - COMBINATION STRAIN POLE, TYPE TC-81.11, DESIGN 12, AS PER PLAN

THE CONTRACTOR WILL BE REQUIRED TO PURCHASE DESIGN 12, 32' AND 34', SIGNAL STRAIN POLES WITH ANCHOR BOLTS FOR THIS CONTRACT. IN ADDITION TO CMS 732.12, ALL POLES WILL REQUIRE BOTH A 3-INCH BLIND COUPLING AT 1-FOOT DOWN FROM THE TOP OF THE POLE AT 180 DEGREES FROM THE HANDHOLE, A 1.5-INCH BLIND COUPLING AT 1-FOOT ABOVE AND AT 90 DEGREES FROM THE HANDHOLE, AND A 2-INCH BLIND HALF COUPLING AT 1-FOOT ABOVE THE BOTTOM OF THE POLE AT 270 DEGREES FROM THE HANDHOLE.

IT MAY BE NECESSARY TO CUT DOWN A 32' OR 34' SUPPLIED POLE TO ACCOMMODATE OVERHEAD UTILITIES OR OTHER SITE CONSTRAINTS. SIGNAL PLANS WILL INDICATE WHERE THIS IS REQUIRED. ALL LABOR, MATERIALS, AND EQUIPMENT REQUIRED TO CUT DOWN THE STRAIN POLE WILL BE INCLUDED IN THE COST OF THE STRAIN POLE.

THE COMBINATION STRAIN POLES ARE INTENDED FOR USE AT THE INTERSECTION OF BYPASS 4 AND PRINCETON RD IN BUTLER COUNTY. DESIGN DETAILS AND REQUIREMENTS WILL BE GIVEN TO THE CONTRACTOR AT THE PRE-CONSTRUCTION MEETING.

ITEM 608 - CURB RAMP, AS PER PLAN

THIS ITEM WILL CONSIST OF INSTALLING A CURB RAMP(S) ON A CORNER AT AN INTERSECTION IN ACCORDANCE WITH CMS 608.07. INCLUDED IN THIS ITEM WILL BE THE REMOVAL OF ANY EXISTING CURB AND NON-COMPLIANT CURB RAMPS, ACCORDING TO CMS 202.05, THAT IS NECESSARY TO INSTALL THE CURB RAMP.

THE PROPOSED CURB RAMP SHALL CONFORM TO STANDARD CONSTRUCTION DRAWING BP-7.1 AND MAY BE A TYPE A1, A2, B1, B2, C1, C2 OR D CURB RAMP. ALSO INCLUDED IN THIS PAY ITEM SHALL BE NEW CURB NECESSARY TO REPLACE THE CURB REMOVED FOR THE INSTALLATION OF THE CURB RAMP. CURB MAY BE EITHER TYPE 2 OR TYPE 6.

IF IT IS NECESSARY TO REMOVE ANY PAVEMENT TO FACILITATE INSTALLATION OF THE CURB RAMP, THE REMOVAL SHALL NOT BE MORE THAN 2 FEET FROM THE FACE OF CURB, OR EDGE OF PAVEMENT. THE PAVEMENT SHALL BE RESTORED WITH FULL DEPTH ASPHALT ON 304 AGGREGATE BASE. ALL LABOR, MATERIALS AND EQUIPMENT NEEDED FOR THE REMOVAL OF ANY PAVEMENT AND SUBSEQUENT RESTORATION FOR THE INSTALLATION OF A CURB RAMP SHALL BE INCLUDED WITH THIS ITEM FOR PAYMENT.

ANY WALK NECESSARY TO INSTALL THE CURB RAMP WILL BE PAID UNDER A SEPARATE PAY ITEM.

PAYMENT FOR CURB RAMP, AS PER PLAN SHALL INCLUDE THE REMOVAL AND DISPOSAL OF ANY EXISTING CURB OR CURB RAMPS, RESTORATION OF SURFACES, BASE COURSE MATERIAL, EXPANSION JOINT MATERIAL, GRADING, FORMING, FINISHING, TRUNCATED DOMES, MATERIALS, LABOR AND EQUIPMENT NECESSARY TO INSTALL A CURB RAMP(S) ON A CORNER AT AN INTERSECTION.

ITEM 631 - SCHOOL SPEED LIMIT SIGN ASSEMBLY, SOLAR POWERED, AS PER PLAN

THIS SPECIFICATION APPLIES TO SCHOOL SPEED LIMIT SIGN FLASHERS POWERED BY BATTERIES AND RECHARGED BY SOLAR PANELS.

THE ENTIRE SCHOOL ZONE FLASHER AND SIGN ASSEMBLY SHALL CONFORM TO THE CONTRACT DOCUMENTS AND MEET THE REQUIREMENTS SET FORTH IN THE ODOT. THE SIGN SIZE FOR THE SCHOOL ZONE SPEED LIMIT SHALL BE 24"x48".

THE FLASHER CONTROL AND BATTERY WILL BE HOUSED IN ONE OR MORE STAINLESS STEEL OR ALUMINUM ENCLOSURES WITH A NEMA RATING OF AT LEAST 3X. SEAL ENCLOSURE CONDUIT ENTRIES TO PREVENT INSECT AND/OR RODENT ENTRY. ENCLOSURE EXTERIOR SURFACES SHALL BE BARE OR POWDER COAT ALUMINUM OR STAINLESS STEEL. THE ENCLOSURE INTERIOR SURFACES SHALL BE THE SAME AS THE EXTERIOR.

IF CONTAINED IN A SINGLE ENCLOSURE, THE CONTROL ELECTRONICS AND BATTERY SHALL BE SEPARATED IN A MANNER TO PREVENT DAMAGE TO THE CONTROL ELECTRONICS IF THE BATTERY ENVELOPE IS COMPROMISED.

PROVIDE A LOCKING ENCLOSURE USING EITHER AN INTEGRATED LOCKING MECHANISM OR A PADLOCK PER CMS 631.06. PROVIDE SEALED GEL-CELL AGM (ABSORBED GLASS MAT) LEAD-ACID BATTERIES FOR ALL INSTALLATIONS WITH INSTANTANEOUS LOAD REQUIREMENTS OF 4 WATTS OR ABOVE, REGARDLESS OF DUTY CYCLE. A PAIR OF LED SIGNAL BEACONS ABOVE THE SCHOOL ZONE SPEED LIMIT SIGN, MEETING THE CURRENT ITE VEHICLE TRAFFIC CONTROL SIGNAL HEADS STANDARD WILL BE USED UNLESS OTHERWISE SPECIFIED. THE MANUFACTURER OF THE SIGNAL BEACON SHALL BE LISTED ON THE DEPARTMENT'S QUALIFIED PRODUCTS LIST FOR LED SIGNAL LAMPS.

THE SOLAR PANEL AND/OR CONTROLLER MANUFACTURER WILL PROVIDE SIGNED COPIES OF CALCULATIONS USED TO SIZE THE SOLAR PANEL AND BATTERIES. INCLUDED IN THESE CALCULATIONS WILL BE THE INSOLATION VALUE USED AND ITS SOURCE, THE SOLAR PANEL EFFICIENCY, CHARGER/CONTROLLER EFFICIENCY, PROPOSED LED LAMP LOAD AND A FIGURE REPRESENTING ANTICIPATED MISCELLANEOUS LOSSES.

SOLAR PANEL MANUFACTURER MUST TEST PANEL ACCORDING TO IEC61215 OR EQUIVALENT APPROVED STANDARD. SOLAR PANEL MOUNTING MUST BE RATED FOR 90MPH DESIGN WIND AND DESIGNED TO RESIST VANDALISM. RUN REQUIREMENTS ARE 4 HOURS PER DAY FOR 2 WEEKS UNDER CONTINUOUS WORST-CASE (MINIMUM) INSOLATION FIGURES (USUALLY DECEMBER) FOR THE APPROVED GEOGRAPHIC LOCATION. USING A PANEL ELEVATION ANGLE APPROPRIATE TO THE SITE LATITUDE, AT A SUSTAINED TEMPERATURE OF 25 DEGREES FAHRENHEIT (-4 DEGREES CELSIUS).

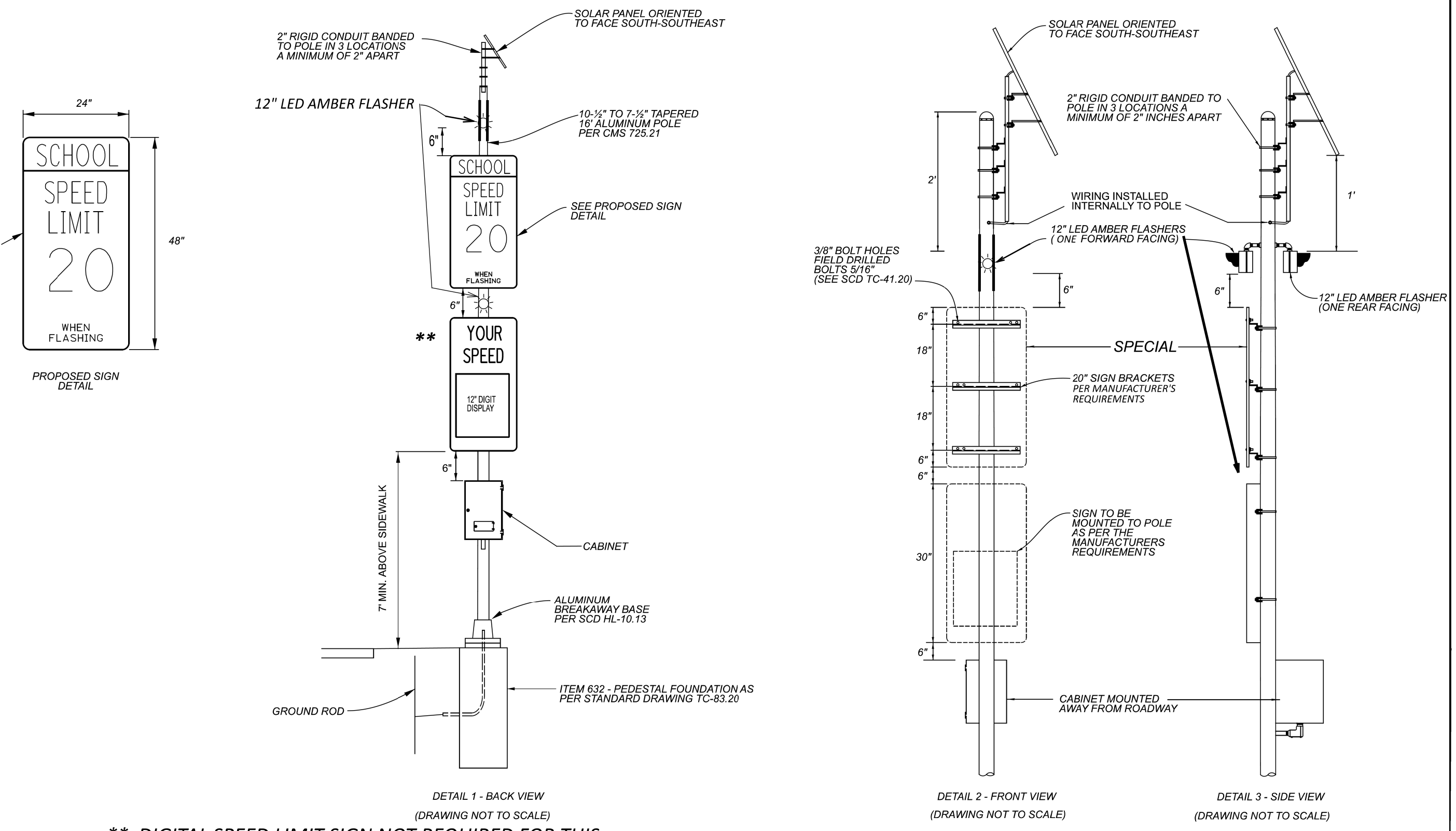
IF VOLTAGES OVER 50V AC OR DC ARE PRESENT, GROUNDING AND BONDING REQUIREMENTS SPECIFIED IN THE ODOT CMS WILL BE FOLLOWED.

PROVIDE AN AP21 GPS TIMER THAT SATISFIES THE REQUIREMENTS OF CMS 731.10 AND IS LISTED ON THE ODOT QUALIFIED PRODUCTS LIST.

PAYMENT FOR ITEM 631 SCHOOL SPEED LIMIT SIGN ASSEMBLY, SOLAR POWERED, AS PER PLAN, SHALL BE MADE AT THE CONTRACT UNIT PRICE BID PER EACH. PAYMENT SHALL BE FULL COMPENSATION FOR ALL LABOR, MATERIALS, TOOLS, EQUIPMENT, TESTING, CERTIFICATIONS AND OTHER INCIDENTALS NECESSARY TO FURNISH THE SOLAR POWERED SCHOOL ZONE FLASHER COMPLETE IN PLACE, INCLUDING THE SIGN, SUPPORT, BEACONS, GPS TIMER, ALL CONNECTIONS MADE, WIRING COMPLETE, TESTED AND ACCEPTED.

ITEM 632 - INTERCONNECT CABLE, MISC.: RADAR CABLE

THIS ITEM WILL CONSIST OF SUPPLYING A CABLE THAT IS COMPATIBLE WITH THE WAVETRONIX RADAR UNITS THAT ARE TO BE REWIRED. PAYMENT WILL BE MADE PER FOOT OF CABLE INSTALLED ON THE PROJECT.



** DIGITAL SPEED LIMIT SIGN NOT REQUIRED FOR THIS PROJECT. PEDESTAL POLE MAY BE SHORTENED AS LONG AS THE MINIMUM SIGN MOUNTING IS PROVIDED PER TC-85.10

LOCATION SPECIFIC NOTES:

BUT-747 AT TYLERSVILLE: WORK AT THIS LOCATION WILL CONSIST OF RELAMPING LED'S AND THE REPLACEMENT OF ALL CABLE TO SIGNAL HEADS AND RADARS. EXISTING CABLE WILL BE REMOVED AND DISPOSED.

CLE-125 AT AMELIA SCHOOL: WORK AT THIS LOCATION WILL INCLUDE THE REMOVAL OF THE CANTILEVER SCHOOL SPEED LIMIT SIGN, SUPPORT AND FOUNDATION AT THE CORNER OF SR 125 AND FLORAL AVE. THIS WILL ALSO INCLUDE THE REMOVAL OF ANY ELECTRIC SERVICE CABLES FEEDING THE SIGN. ONCE THE SIGN SUPPORT IS REMOVED, THE SIDEWALK/CURB RAMP WILL NEED TO BE RESTORED. IT IS THE INTENT TO REMOVE THE AFFECTED WALK TO THE NEAREST JOINT.

THE CANTILEVER SIGN INSTALLATION WILL BE REPLACED BY A SCHOOL FLASHER ASSEMBLY (HARDWIRED AERIALY AT THE NEAREST TRANSFORMER), AND IS TO BE PLACED BETWEEN THE CURB AND SIDEWALK, NEAR THE UTILITY POLE. DO NOT REMOVE THE EXISTING SCHOOL FLASHER UNTIL THE NEW FLASHER IS INSTALLED AND OPERATIONAL. THE NEW INSTALLATION WILL BE BE PAID PER THE PAY ITEMS IN THE SUBSUMMARY.

CLE-232 AT BICK ELEMENTARY: REMOVE EXISTING SET OF SCHOOL FLASHERS AND ALL ASSOCIATED ELECTRICAL CABLES. EXISTING FLASHERS ARE TO BE REPLACED WITH SOLAR POWERED SCHOOL FLASHERS INSTALLED IN SAME VICINITY. DO NOT REMOVE EXISTING SCHOOL FLASHERS UNTIL THE NEW SOLAR POWERED FLASHERS ARE INSTALLED AND OPERATIONAL.

CLE-50 AT CLERMONT NORTHEASTERN HIGH SCHOOL: EXISTING SIGNS WITH ILLUMINATED 20MPH SECTION IS TO BE REMOVED AND DISPOSED. REPLACE WITH STANDARD 24" X 48" FLAT SHEET SCHOOL SPEED LIMIT SIGN (S5-H1). EXISTING YELLOW BEACONS ARE TO REMAIN, BUT LED MODULES WILL BE REPLACED.

LOCATION SPECIFIC NOTES (CONT):

WAR-48 AT LEBANON/ARROW SPRINGS: WORK AT THIS LOCATION WILL CONSIST OF REMOVING THE EXISTING POLE MOUNTED CABINET AND UPS IN THE NORTH EAST CORNER AND REPLACING IT WITH A NEW GROUND MOUNTED CABINET ON THE SOUTHEAST CORNER. A NEW CABINET, FOUNDATION, WORK PAD AND NEW SIGNAL CABLE WILL BE INSTALLED. REPLACE LOOP DETECTORS WITH RADAR. ALL CURRENT DETECTION ZONES ARE TO BE MAINTAINED. REMOVE ALL LOOP LEAD-IN CABLE AND PULL BOXES SERVING LOOPS AND DISPOSE. SEE SHEET 40 FOR MORE DETAILS.

CCTV CAMERA INSTALLATIONS: IT IS THE INTENT TO INSTALL THE CCTV ON THE SIGNAL SUPPORT NEAREST THE CABINET. WHERE THIS IS NOT FEASIBLE (DUE TO INSUFFICIENT POLE HEIGHT, OTHER SIGNAL EQUIPMENT TAKING UP THE SPACE, OR IN LIEU OF A BETTER VANTAGE POINT ON ANOTHER POLE), AN ADDITIONAL LENGTH OF ETHERNET CABLE HAS BEEN PROVIDED IN THE PLANS TO INSTALL ON A DIFFERENT SUPPPORT.

HAM-74 EB AND WB RAMPS AT NEW HAVEN RD: WORK AT THESE LOCATIONS WILL CONSIST OF REPLACING ALL CABLE TO ALL SIGNAL HEADS AND RADARS. SIGNAL CABLE IS TO BE HOMERUN FROM EACH HEAD TO THE CONTROLLER. DISPOSE ALL REMOVED CABLE.

PAY ITEMS FOR THE WORK DESCRIBED IN THIS SECTION CAN BE FOUND IN THE ESTIMATED QUANTITIES SECTION.

ITEM 631 - TIMER WITH ENCLOSURE, AS PER PLAN

THIS ITEM WILL CONSIST OF FURNISHING AND INSTALLING A TIMER WITH ENCLOSURE. THE TIMER TO BE SUPPLIED IS AN AP21 SERIES GPS TIMER THAT SATISFIES THE REQUIREMENTS OF CMS 731.10 AND IS LISTED ON THE ODOT TAP LIST.

ITEM 630 - REMOVAL OF OVERHEAD SIGN SUPPORT AND DISPOSAL, AS PER PLAN

THIS ITEM WILL CONSIST OF THE REMOVAL OF THE CANTILEVER SIGN SUPPORT AT THE INTERSECTION OF SR 125 AND FLORAL AVE. THIS WORK WILL ALSO INCLUDE THE DISCONNECTION AND REMOVAL OF THE ELECTRIC SERVICE TO THE SCHOOL FLASHER SIGN AND ANY NECESSARY SITE RESTORATION. CONCRETE WALK/CURB RAMP RESTORATION WILL BE PAID UNDER SEPARATE ITEM.

DESIGN AGENCY



DESIGNER	TCS
REVIEWER	MAG
PROJECT ID	105514
SHEET	3
TOTAL	40

D08-TSG-FY23/FY24

MODEL: Sheet_SurvFl_PAPER SIZE: 34x22 (in.) DATE: 3/8/2023 TIME: 3:24:41 PM USER: tscanlon
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SHEET NUM.												PART.	ITEM	ITEM	GRAND	UNIT	DESCRIPTION	SEE SHEET NO.
5	9	10	14	16	17	18	25	26	33	34	40	1/SAE/21	EXT	TOTAL				
				17								17	202	23000	17	SY	ROADWAY PAVEMENT REMOVED	
												200	202	30000	200	SF	WALK REMOVED	
												50	202	32000	50	FT	CURB REMOVED	
				8								8	203	10000	8	CY	EXCAVATION	
				5								5	203	20000	5	CY	EMBANKMENT	
30												230	608	10000	230	SF	4" CONCRETE WALK	
				530								530	608	52000	530	SF	CURB RAMP	
												250	608	52001	250	SF	CURB RAMP, AS PER PLAN	3
																	EROSION CONTROL	
				50								50	659	10000	50	SY	SEEDING AND MULCHING	
																	DRAINAGE	
			100									100	611	00400	100	FT	4" CONDUIT, TYPE E	
																	LIGHTING	
					4		4		2			16	625	00450	16	EACH	CONNECTION, FUSED PULL APART	
					1		2					3	625	18100	3	EACH	BRACKET ARM, 12'	
					1				1			2	625	18500	2	EACH	BRACKET ARM, 25'	
												3	625	18510	3	EACH	BRACKET ARM, 30'	
					528		654		721			2,403	625	23304	2,403	FT	NO. 8 AWG 600 VOLT DISTRIBUTION CABLE	
					180		154		104			618	625	23400	618	FT	NO. 10 AWG POLE AND BRACKET CABLE	
					2		2		1			8	625	26253	8	EACH	LUMINAIRE, CONVENTIONAL, SOLID STATE (LED), AS PER PLAN, IES-III-M, LED, 10,000-12,000 LUMENS, WITH PHOTOCCELL	12
					125		174		66			365	625	36010	365	FT	UNDERGROUND WARNING/MARKING TAPE	
																	TRAFFIC CONTROL	
												100	630	03100	100	FT	GROUND MOUNTED SUPPORT, NO. 3 POST	
15												15	630	08520	15	FT	STREET NAME SIGN SUPPORT, NO. 3 POST	
									4			4	630	75000	4	EACH	SIGN ATTACHMENT ASSEMBLY	
												5	630	79100	5	EACH	SIGN HANGER ASSEMBLY, MAST ARM	
					1		3		1			5	630	79200	5	EACH	SIGN ATTACHMENT ASSEMBLY, MAST ARM	
					7		2					19	630	79500	19	EACH	SIGN SUPPORT ASSEMBLY, POLE MOUNTED	
16					21		12		8			157	630	80100	157	SF	SIGN, FLAT SHEET	
									140			140	630	80224	140	SF	SIGN, OVERHEAD EXTRUSHEET	
							2					2	630	80510	2	EACH	SIGN, STREET NAME	
												10	630	84900	10	EACH	REMOVAL OF GROUND MOUNTED SIGN AND DISPOSAL	
												10	630	86002	10	EACH	REMOVAL OF GROUND MOUNTED POST SUPPORT AND DISPOSAL	
1									1			2	630	87400	2	EACH	REMOVAL OF OVERHEAD MOUNTED SIGN AND DISPOSAL	
												5	630	87500	5	EACH	REMOVAL OF POLE MOUNTED SIGN AND DISPOSAL	
4												4	630	87501	4	EACH	REMOVAL OF POLE MOUNTED SIGN AND DISPOSAL, AS PER PLAN	2
2					1							3	630	87520	3	EACH	REMOVAL OF POLE MOUNTED SIGN AND REERECTION	
												1	630	89703	1	EACH	REMOVAL OF OVERHEAD SIGN SUPPORT AND DISPOSAL, AS PER PLAN	3
									1			1	630	89706	1	EACH	REMOVAL OF OVERHEAD SIGN SUPPORT AND DISPOSAL, TYPE TC-12.30	
												1	631	93000	1	EACH	SCHOOL SPEED LIMIT SIGN ASSEMBLY, 24" X 48"	
												2	631	93241	2	EACH	SCHOOL SPEED LIMIT SIGN ASSEMBLY, SOLAR-POWERED, AS PER PLAN	3
												1	631	93301	1	EACH	TIMER WITH ENCLOSURE, AS PER PLAN	3
												0.25	642	00300	0.25	MILE	CENTER LINE, TYPE 1	
				55								50	644	00400	50	FT	CHANNELIZING LINE, 8"	
				384								155	644	00500	155	FT	STOP LINE	
												984	644	00630	984	FT	CROSSWALK LINE, 24"	
												100	644	00700	100	FT	TRANSVERSE/DIAGONAL LINE	
				181								181	644	00900	181	SF	ISLAND MARKING	
				2								4	644	01300	4	EACH	LANE ARROW	
												2	644	01410	2	EACH	WORD ON PAVEMENT, 96"	
				267								467	644	30000	467	FT	REMOVAL OF PAVEMENT MARKING	
				181								181	644	30010	181	SF	REMOVAL OF PAVEMENT MARKING	
				4								6	644	30020	6	EACH	REMOVAL OF PAVEMENT MARKING	

GENERAL SUMMARY

DESIGN AGENCY



DESIGNER
TCS

REVIEWER
MAG

PROJECT ID

105514


SHEET

TOTAL

6 40


SHEET NUM.												PART.	ITEM	ITEM	GRAND	UNIT	DESCRIPTION	SEE SHEET NO.	
5	9	10	14	16	17	18	25	26	33	34	40	1/SAE/21	EXT	TOTAL					
					52		44		51		7		404	625	25408	404	FT	CONDUIT, 2", 725.051	
					73		145		39		7		364	625	25604	364	FT	CONDUIT, 4", 725.051	
					303		122		270				895	625	25900	895	FT	CONDUIT, JACKED OR DRILLED, 725.052, 4"	
					125		174		66		7		822	625	29000	822	FT	TRENCH	
													100	625	29400	100	FT	TRENCH IN PAVED AREA	
													8	625	30700	8	EACH	PULL BOX, 725.08, 18"	
					5		5		5		1		22	625	30706	22	EACH	PULL BOX, 725.08, 24"	
					4		2		2		8		21	625	31510	21	EACH	PULL BOX REMOVED	
	3				7		6		6		1		44	625	32000	44	EACH	GROUND ROD	
													2	632	04816	2	EACH	VEHICULAR SIGNAL HEAD, (LED), 1-SECTION, 12" LENS, 4-WAY, ALUMINUM, BLACK	
		7											7	632	04910	7	EACH	VEHICULAR SIGNAL HEAD, (LED), 3-SECTION, 12" LENS, 1-WAY, ALUMINUM, BLACK, WITHOUT BACKPLATE	
					11		7		9				43	632	05006	43	EACH	VEHICULAR SIGNAL HEAD, (LED), 3-SECTION, 12" LENS, 1-WAY, POLYCARBONATE, BLACK	
													2	632	05064	2	EACH	VEHICULAR SIGNAL HEAD, (LED), 4-SECTION, 12" LENS, 1-WAY, POLYCARBONATE, BLACK	
													2	632	05080	2	EACH	VEHICULAR SIGNAL HEAD, (LED), 5-SECTION, 12" LENS, 1-WAY, ALUMINUM, BLACK, WITHOUT BACKPLATE	
					1		1		1				11	632	05086	11	EACH	VEHICULAR SIGNAL HEAD, (LED), 5-SECTION, 12" LENS, 1-WAY, POLYCARBONATE, BLACK	
	92	182											182	632	10101	182	EACH	RELAMP EXISTING SIGNAL SECTION WITH LED LAMP UNIT, AS PER PLAN, CIRCULAR RED	2
		179											271	632	10101	271	EACH	RELAMP EXISTING SIGNAL SECTION WITH LED LAMP UNIT, AS PER PLAN, CIRCULAR YELLOW	2
	34												34	632	10101	34	EACH	RELAMP EXISTING SIGNAL SECTION WITH LED LAMP UNIT, AS PER PLAN, CIRCULAR YELLOW, LOW VOLTAGE	2
		161											161	632	10101	161	EACH	RELAMP EXISTING SIGNAL SECTION WITH LED LAMP UNIT, AS PER PLAN, CIRCULAR GREEN	2
		28											28	632	10101	28	EACH	RELAMP EXISTING SIGNAL SECTION WITH LED LAMP UNIT, AS PER PLAN, RED ARROW	2
		55											55	632	10101	55	EACH	RELAMP EXISTING SIGNAL SECTION WITH LED LAMP UNIT, AS PER PLAN, YELLOW ARROW	2
		72											72	632	10101	72	EACH	RELAMP EXISTING SIGNAL SECTION WITH LED LAMP UNIT, AS PER PLAN, GREEN ARROW	2
		50											50	632	10101	50	EACH	RELAMP EXISTING SIGNAL SECTION WITH LED LAMP UNIT, AS PER PLAN, WALKING PERSON/UPRAISED HAND	2
					4		4						14	632	20731	14	EACH	PEDESTRIAN SIGNAL HEAD (LED), TYPE D2, COUNTDOWN, AS PER PLAN	13
					3		4						13	632	20750	13	EACH	ACCESSIBLE PEDESTRIAN PUSHBUTTON	
						1							1	632	20751	1	EACH	ACCESSIBLE PEDESTRIAN PUSHBUTTON, AS PER PLAN	13
					12		8		10				67	632	25000	67	EACH	COVERING OF VEHICULAR SIGNAL HEAD	
					4		4						14	632	25010	14	EACH	COVERING OF PEDESTRIAN SIGNAL HEAD	
													1	632	26501	1	EACH	DETECTOR LOOP, AS PER PLAN	2
													1	632	27004	1	EACH	LOOP DETECTOR UNIT	
													1	632	27201	1	EACH	LOOP DETECTOR TIE IN, AS PER PLAN	3
													750	632	30200	750	FT	MESSENGER WIRE, 7 STRAND, 3/8" DIAMETER WITH ACCESSORIES	
													750	632	30600	750	FT	TETHER WIRE, WITH ACCESSORIES	
		5,940				447	550						1,497	632	40500	1,497	FT	SIGNAL CABLE, 5 CONDUCTOR, NO. 14 AWG	
						1,813		931	1,518		1,175		14,377	632	40700	14,377	FT	SIGNAL CABLE, 7 CONDUCTOR, NO. 14 AWG	
		1,800											1,800	632	62810	1,800	FT	INTERCONNECT CABLE, MISC.: RADAR CABLE	3
													11	632	64000	11	EACH	STRAIN POLE FOUNDATION	
						3		3	2				8	632	64010	8	EACH	SIGNAL SUPPORT FOUNDATION	
	3					3		1		2			15	632	64020	15	EACH	PEDESTAL FOUNDATION	
						417		516					1,733	632	65300	1,733	FT	LOOP DETECTOR LEAD-IN CABLE, 2 CONDUCTOR, NO. 14 AWG	
								98		97			539	632	68300	539	FT	POWER CABLE, 3 CONDUCTOR, NO. 6 AWG	
											60		160	632	68400	160	FT	POWER CABLE, 4 CONDUCTOR, NO. 6 AWG	
													200	632	69800	200	FT	SERVICE CABLE, 3 CONDUCTOR, NO. 6 AWG	
											107		107	632	69910	107	FT	SERVICE CABLE, 3 CONDUCTOR, WITH GROUND, NO. 4 AWG	
	1					1		1		1	1		7	632	70001	7	EACH	POWER SERVICE, AS PER PLAN	11
													6	632	70400	6	EACH	CONDUIT RISER, 2" DIAMETER	
								2					2	632	72110	2	EACH	SIGNAL SUPPORT, TYPE TC-81.22, DESIGN 4	
					1					1			2	632	72140	2	EACH	SIGNAL SUPPORT, TYPE TC-81.22, DESIGN 13	
								1					1	632	79100	1	EACH	COMBINATION SIGNAL SUPPORT, TYPE TC-81.22, DESIGN 2	
						2							2	632	79140	2	EACH	COMBINATION SIGNAL SUPPORT, TYPE TC-81.22, DESIGN 13	
										1			1	632	80700	1	EACH	SIGNAL SUPPORT, MISC.: SIGNAL SUPPORT TC-12.31 DESIGN 10 WITH TC-81.22 DESIGN 12 AND DESIGN 13 ARMS, WITH SIGN SUPPORT TC-9.11 DESIGN 2 ARMS	13
													4	632	86141	4	EACH	STRAIN POLE, TYPE TC-81.11, DESIGN 12, AS PER PLAN, (32')	3

GENERAL SUMMARY

DESIGN AGENCY	
	
DESIGNER	TCS
REVIEWER	MAG
PROJECT ID	105514
SHEET	7
TOTAL	40

SHEET NUM.												PART.	ITEM	ITEM	GRAND	UNIT	DESCRIPTION	SEE SHEET NO.	
5	9	10	14	16	17	18	25	26	33	34	40	1/SAE/21	EXT	TOTAL					
												4	632	86141	4	EACH	STRAIN POLE, TYPE TC-81.11, DESIGN 12, AS PER PLAN, (34')	3	
												3	632	87140	3	EACH	COMBINATION STRAIN POLE, TYPE TC-81.11, DESIGN 12		
												2	632	89301	2	EACH	WOOD POLE, AS PER PLAN	2	
												2	632	89400	2	EACH	DOWN GUY		
												2	632	89401	2	EACH	DOWN GUY, AS PER PLAN	2	
						2						8	632	89900	8	EACH	PEDESTAL, 8', TRANSFORMER BASE		
						1		1				2	632	90010	2	EACH	PEDESTAL, MISC.: 15' PEDESTAL	13	
												2	632	90010	2	EACH	PEDESTAL, MISC.: 21' PEDESTAL	13	
	1										2	1	632	90010	1	EACH	PEDESTAL, MISC.: 25' PEDESTAL	13	
												10	632	90020	10	EACH	REMOVAL OF MISCELLANEOUS TRAFFIC SIGNAL ITEM: VARIOUS SIGNAL COMPONENTS		
						1		1		1		5	632	90100	5	EACH	REMOVAL OF TRAFFIC SIGNAL INSTALLATION		
						1		1			1	9	632	90104	9	EACH	REUSE OF TRAFFIC CONTROL ITEM: VARIOUS SIGNAL COMPONENTS		
												5	632	90400	5	EACH	SIGNALIZATION, MISC.: SPANWIRE ADJUSTMENT	2	
		2,800									445	3,595	632	90500	3,595	FT	SIGNALIZATION, MISC.: UNLASH AND RELASH MESSENGER WIRE	2	
						1		1		1	1	6	633	65521	6	EACH	CABINET, TYPE 332, AS PER PLAN	13	
						1		1		1	1	6	633	67101	6	EACH	CABINET FOUNDATION, AS PER PLAN	13	
						1		1		1	1	6	633	67201	6	EACH	CONTROLLER WORK PAD, AS PER PLAN	13	
						1		1		1	1	1	633	71000	1	EACH	FLASHER CONTROLLER		
						1		1		1	1	6	633	75001	6	EACH	UNINTERRUPTIBLE POWER SUPPLY (UPS), 1000 WATT, AS PER PLAN	13	
		6				1		1		1		9	809	60000	9	EACH	CCTV IP-CAMERA SYSTEM, DOME-TYPE		
		450										450	809	64550	450	FT	ETHERNET CABLE, OUTDOOR-RATED		
		14				3		3		3	2	29	809	69001	29	EACH	ADVANCE RADAR DETECTION, AS PER PLAN	14	
		12				3		3		3	4	33	809	69101	33	EACH	STOP LINE RADAR DETECTION, AS PER PLAN	14	
						1		1		1		5	809	69123	5	EACH	ATC CONTROLLER, AS PER PLAN	14	
						1		1				2	815	30001	2	EACH	SPREAD SPECTRUM RADIO, AS PER PLAN	14	
100												100	614	11110	100	hour	LAW ENFORCEMENT OFFICER WITH PATROL CAR FOR ASSISTANCE		
	33	24									1	58	614	18000	58	EACH	MAINTAINING TRAFFIC, MISC.: MAINTAINING TRAFFIC PER SIGNAL MODIFICATION/ UPGRADE LOCATION	4	
												5	614	18000	5	EACH	MAINTAINING TRAFFIC, MISC.: MAINTAINING TRAFFIC PER SIGNAL INSTALLATION	4	
													LS	623	10001	LS		CONSTRUCTION LAYOUT STAKES AND SURVEYING, AS PER PLAN	2
													LS	624	10000	LS		MOBILIZATION	

GENERAL SUMMARY

DESIGN AGENCY

 DESIGNER
 TCS
 REVIEWER
 MAG
 PROJECT ID
 105514
 SHEET TOTAL
 8 40


D08-TSG-FY23/FY24

MODEL: Sheet_SurvFI_PAPER SIZE: 34x22 (in.) DATE: 3/21/2023 TIME: 9:41:32 AM USER: iscantlon
p:\vhohdod-pw.bentley.com\ohhodo-pw-02\Documents\01 Active Projects\District 08_D08105514\00-Engineering\Roadway\Sheets\105514_GS002.dgn

COUNTY	MILE MARKER	LOCATION		632	632	632	632	632	632	632	632	632	632	632	632	809	809	809	809	614	
				INTERCONNECT CABLE, MISC.: RADAR CABLE FT	VEHICULAR SIGNAL HEAD, (LED), 3-SECTION, 12" LENS, 1-WAY, ALUMINUM, BLACK, WITHOUT BACKPLATE EACH	VEHICULAR SIGNAL HEAD, (LED), 5-SECTION, 12" LENS, 1-WAY, ALUMINUM, BLACK, WITHOUT BACKPLATE EACH	SIGNAL CABLE, 7 CONDUCTOR, NO. 14 AWG FT	SIGNALIZATION, MISC.: UNLASH AND RELASH MESSENGER WIRE FT	RELAMP EXISTING SIGNAL SECTION WITH LED LAMP UNIT, CIRCULAR RED, AS PER PLAN EACH	RELAMP EXISTING SIGNAL SECTION WITH LED LAMP UNIT, CIRCULAR YELLOW, AS PER PLAN EACH	RELAMP EXISTING SIGNAL SECTION WITH LED LAMP UNIT, CIRCULAR GREEN, AS PER PLAN EACH	RELAMP EXISTING SIGNAL SECTION WITH LED LAMP UNIT, RED ARROW, AS PER PLAN EACH	RELAMP EXISTING SIGNAL SECTION WITH LED LAMP UNIT, YELLOW ARROW, AS PER PLAN EACH	RELAMP EXISTING SIGNAL SECTION WITH LED LAMP UNIT, GREEN ARROW, AS PER PLAN EACH	RELAMP EXISTING SIGNAL SECTION WITH LED LAMP UNIT, WALKING PERSON SYMBOL/UPRAISED HAND, AS PER PLAN EACH	ETHERNET CABLE, OUTDOOR RATED FT	CCTV IP-CAMERA SYSTEM DOME TYPE, AS PER PLAN EACH	STOP LINE RADAR DETECTION, AS PER PLAN EACH	ADVANCE RADAR DETECTION, AS PER PLAN EACH	MAINTAINING TRAFFIC MISC.: MAINTAINING TRAFFIC PER SIGNAL MODIFICATION/UPGRADE LOCATION EACH	
BUTLER	73	SR 177	4.30						290									4	2		
BUTLER	747	UNION CENTRE BLVD	2.50							10	10	10	2	5	7					1	
BUTLER	747	TYLERSVILLE	4.10	1000			3250		500	10	10	10	2	5	7					1	
BUTLER	747	HAMILTON-MASON RD	4.90						230	8	8	8		2	2					1	
BUTLER	747	MILLIKIN	7.03							8	8	8		1	1					1	
BUTLER	75	NB & LIBERTY WAY	5.91							4	4	4	6	7	7					1	
BUTLER	75	SB & LIBERTY WAY	5.91							5	4	4	4	7	7					1	
CLERMONT	28	MCCLELLAND	2.10													50	1				
CLINTON	73	MITCHELL RD							275											2	
GREENE	444	GATE 15A/SR 844 ENTRANCE RAMP	2.50							8	8	8	1	1	1					1	
GREENE	444	SR 844 EXIT RAMP	2.60							8	8	8								1	
GREENE	675	NB & SR 235	15.40							6	6	6								1	
GREENE	675	SB & SR 235	15.40							6	6	6								1	
GREENE	675	NB & SR 444	17.54							7	7	7		1	1					1	
GREENE	675	SB & SR 444	17.67							7	7	7		1	1					1	
HAMILTON	22	HOSBROOK RD	11.67							8	8	8			4	4	6			1	
HAMILTON	27	BANNING	10.45													50	1				
HAMILTON	27	DRY RIDGE RD	14.36							10	10	10	3	3	3	4				1	
HAMILTON	27	DRY RIDGE CONNECTOR	14.36							10	10	10		2	2	6				1	
HAMILTON	50	NEWTOWN RD	32.50													50	1				
HAMILTON	71	NB & PFEIFFER RD	15.76							9	7	7		2	3	2				1	
HAMILTON	71	SB & PFEIFFER RD	15.77							8	8	8		1	1	2				1	
HAMILTON	71	NB & MASON MONTGOMERY RD	17.17		7	2														1	
HAMILTON	74	WB & NEW HAVEN	1.60	400			1345	430													
HAMILTON	74	EB & NEW HAVEN	1.60	400			1345	425													
HAMILTON	125	FIVE MILE	5.20							20	20	10	6	8	12	20				1	
HAMILTON	125	FIVE MILE SOUTH CROSSOVER	5.20							4	4		2	2	6					1	
HAMILTON	125	FIVE MILE NORTH CROSSOVER	5.20							4	4		2	2	6					1	
HAMILTON	126	LOVELAND MADEIRA	22.49													150	1				
HAMILTON	275	NB & FIVE MILE	37.28							6	6	6								1	
WARREN	22	WILLOW POND	4.96													100	1				
WARREN	48	DWIRE	8.06													50	1				
WARREN	73	RED LION FIVE POINTS	7.21						300									4	4		
WARREN	73	BUNNELL HILL	8.07						200	8	8	8						2	2	1	
WARREN	73	TOWNSHIP LINE	11.19						150									2	2		
		SUBTOTAL		0	1800	7	2	5940	2800	174	171	153	28	54	71	50	450	6	12	14	23
TOTAL CARRIED TO THE GENERAL SUMMARY				0	1800	7	2	5940	2800	174	171	153	28	54	71	50	450	6	12	14	23

MAINTENANCE SUBSUMMARY

DESIGN AGENCY



DESIGNER
TCS

REVIEWER
MAG

PROJECT ID
105514

SHEET TOTAL
10 | 40

LEGEND

	PROP.	EX.
TRAFFIC SIGNAL, 3 UNIT HEAD, 12"		
TRAFFIC SIGNAL, 5 UNIT HEAD, 12"		
SIGNAL SUPPORT POLE		
COMBINATION SIGNAL SUPPORT POLE		
PEDESTAL SUPPORT POLE		
CONTROLLER CABINET AND WORK PAD		
TRAFFIC PULL BOX		
LIGHTING PULL BOX		
STOP LINE RADAR DETECTOR		
ADVANCE/DILEMMA ZONE RADAR DETECTION UNIT		
DETECTION ZONE		
PTZ CAMERA		

SIGNS



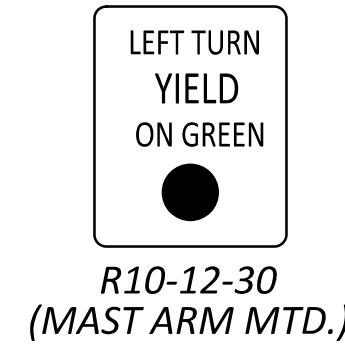
120" x 84" (POLE MTD.)

S1



120" x 84" (POLE MTD.)

S2



R10-12-30 (MAST ARM MTD.)

SN3

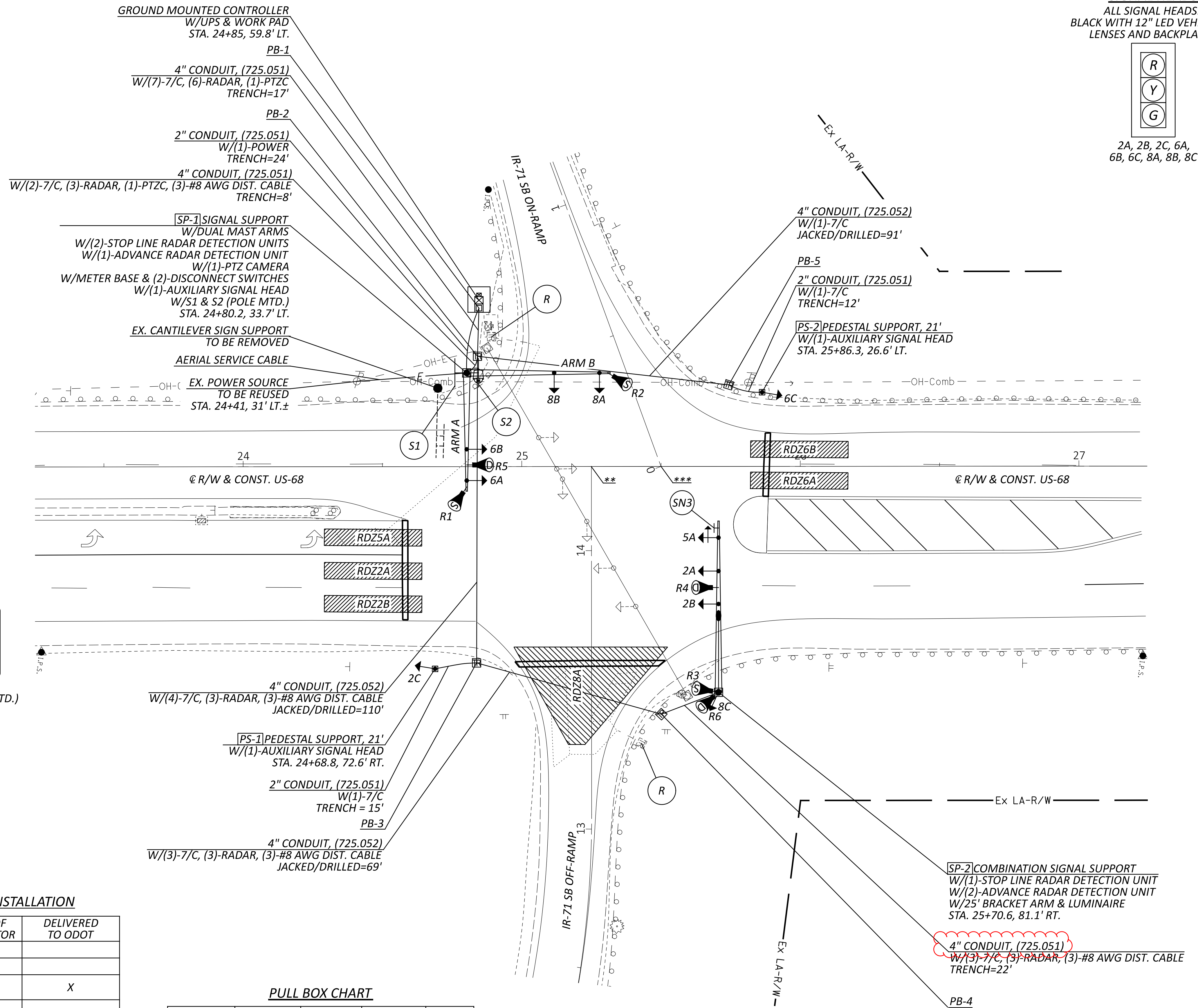
ITEM 632, REMOVAL OF TRAFFIC SIGNAL INSTALLATION

QTY.	REMOVED ITEM DESCRIPTION	DISPOSED OF BY CONTRACTOR	DELIVERED TO ODOT
2	STRAIN POLES	X	
LUMP	SIGNAL CABLE	X	
1	TRAFFIC SIGNAL CONTROLLER & CABINET		X
1	CABINET FOUNDATION	X	
6	VEHICULAR SIGNAL HEADS	X	
2	STRAIN POLE FOUNDATIONS	X	
1	RADAR DETECTION UNIT		X
LUMP	MESSENGER WIRE & ACCESSORIES	X	
1	UPS W/CABINET		X

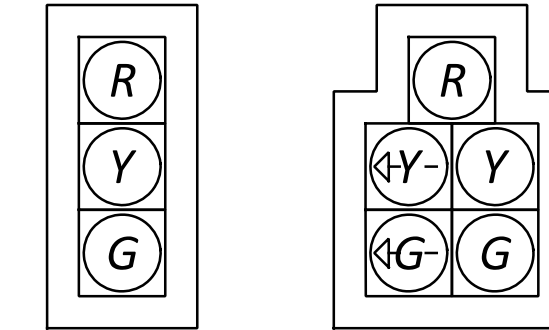
PULL BOX CHART

PULL BOX NUMBER	FUNCTION	STA.	OFFSET	SIZE
PB-1	TRAFFIC	24+84.7	56.9' LT.	24"
PB-2	TRAFFIC	24+84.1	39.6' LT.	24"
PB-3	TRAFFIC	24+83.8	70.5' RT.	24"
PB-4	TRAFFIC	25+50.1	89.0' RT.	24"
PB-5	TRAFFIC	25+74.4	29.3' LT.	24"

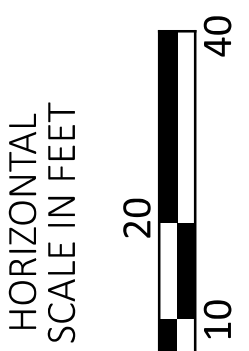
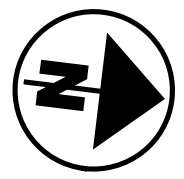
NOTE: ALL PULL BOXES SHALL BE PORTLAND CONCRETE (725.08)



SIGNAL HEADS
 ALL SIGNAL HEADS:
 BLACK WITH 12" LED VEHICULAR
 LENSES AND BACKPLATES



2A, 2B, 2C, 6A, 6B, 6C, 8A, 8B, 8C
 5A



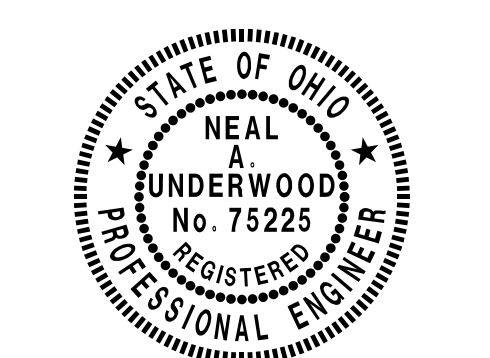
TRAFFIC SIGNAL PLAN
I-71 SB RAMPS & US 68

DESIGN AGENCY



DESIGNER	NRB
REVIEWER	NAU 08-19-22
PROJECT ID	105514
SHEET	35
TOTAL	40

ENGINEER'S SEAL:



SIGNED: Neal A. Underwood
 DATE: 12/1/2022

NOTES:

** STA. 25+25.0 @ R/W & CONST. US-68 = STA. 14+30.2 @ IR-71 SB OFF-RAMP

*** STA. 50+00.0 @ R/W & CONST. US-68 = STA. 00+00.0 @ IR-71 SB ON-RAMP

1. ALL STATIONING AND OFFSETS FROM @ R/W & CONST. US-68 UNLESS OTHERWISE NOTED.