

ITEM 614, PORTABLE CHANGEABLE MESSAGE SIGNS, AS PER PLAN

THE CONTRACTOR SHALL FURNISH, INSTALL, MAINTAIN AND REMOVE, WHEN NO LONGER NEEDED, A CHANGEABLE MESSAGE SIGN. THE SIGN SHALL BE OF A TYPE SHOWN ON A LIST OF APPROVED PCMS UNITS AVAILABLE ON THE OFFICE OF MATERIALS MANAGEMENT WEB PAGE. THE LIST CONTAINS CLASS A AND B UNITS WITH MINIMUM LEGIBILITY DISTANCES OF 800 FEET AND 650 FEET, RESPECTIVELY.

EACH SIGN SHALL BE TRAILER-MOUNTED AND EQUIPPED WITH A FUNCTIONAL DIMMING MECHANISM, TO DIM THE SIGN DURING DARKNESS, AND A TAMPER AND VANDAL PROOF ENCLOSURE. EACH SIGN SHALL BE PROVIDED WITH APPROPRIATE TRAINING AND OPERATION INSTRUCTIONS TO ENABLE ON-SITE PERSONNEL TO OPERATE AND TROUBLESHOOT THE UNIT. THE SIGN SHALL ALSO BE CAPABLE OF BEING POWERED BY AN ELECTRICAL SERVICE DROP FROM A LOCAL UTILITY COMPANY. THE PCMS SHALL BE DELINEATED IN ACCORDANCE WITH C&MS 614.03.

THE PROBABLE PCMS LOCATIONS AND WORK LIMITS FOR THOSE LOCATIONS ARE TO BE USED FOR THE SHORT-TERM CLOSURES OF I-77 IN ACCORDANCE WITH SCD MT-99.60 AS WELL AS FOR THE CLOSURE OF RAMP D4 AS SHOWN ON THE DETOUR PLAN ON SHEET 21. PLACEMENT, OPERATION, MAINTENANCE AND ALL ACTIVATION OF THE SIGNS BY THE CONTRACTOR SHALL BE AS DIRECTED BY THE ENGINEER. THE PCMS SHALL BE LOCATED IN A HIGHLY VISIBLE POSITION YET PROTECTED FROM TRAFFIC. THE CONTRACTOR SHALL, AT THE DIRECTION OF THE ENGINEER, RELOCATE THE PCMS TO IMPROVE VISIBILITY OR ACCOMMODATE CHANGED CONDITIONS. WHEN NOT IN USE, THE PCMS SHALL BE TURNED OFF. ADDITIONALLY, WHEN NOT IN USE FOR EXTENDED PERIODS OF TIME, THE PCMS SHALL BE TURNED AWAY FROM ALL TRAFFIC.

THE ENGINEER SHALL BE PROVIDED ACCESS TO EACH SIGN UNIT AND SHALL BE PROVIDED WITH APPROPRIATE TRAINING AND OPERATION INSTRUCTIONS TO ENABLE ODOT PERSONNEL TO OPERATE AND TROUBLESHOOT THE UNIT, AND TO REVISE SIGN MESSAGES, IF NECESSARY.

ALL MESSAGES TO BE DISPLAYED ON THE SIGN WILL BE PROVIDED BY THE ENGINEER. A LIST OF ALL REQUIRED PRE-PROGRAMMED MESSAGES WILL BE GIVEN TO THE CONTRACTOR AT THE PROJECT PRE-CONSTRUCTION CONFERENCE. THE SIGN SHALL HAVE THE CAPABILITY TO STORE UP TO 99 MESSAGES. MESSAGE MEMORY OR PRE-PROGRAMMED DISPLAYS SHALL NOT BE LOST AS A RESULT OF POWER FAILURES TO THE ON-BOARD COMPUTER. THE SIGN LEGEND SHALL BE CAPABLE OF BEING CHANGED IN THE FIELD. THREE-LINE PRESENTATION FORMATS WITH UP TO SIX MESSAGE PHRASES SHALL BE SUPPORTED. PCMS FORMAT SHALL PERMIT THE COMPLETE MESSAGE FOR EACH PHASE TO BE READ AT LEAST TWICE.

THE PCMS SHALL CONTAIN AN ACCURATE CLOCK AND PROGRAMMING LOGIC WHICH WILL ALLOW THE SIGN TO BE ACTIVATED, DEACTIVATED OR MESSAGES CHANGED AUTOMATICALLY AT DIFFERENT TIMES OF THE DAY FOR DIFFERENT DAYS OF THE WEEK.

THE PCMS SHALL CONTAIN A CELLULAR TELEPHONE DATA LINK WHICH WILL (IN ACTIVE CELLULAR PHONE AREAS) ALLOW REMOTE SIGN ACTIVATION, MESSAGE CHANGES, MESSAGE ADDITIONS AND REVISIONS TO TIME OF DAY PROGRAMS. THE SYSTEM SHALL ALSO PERMIT VERIFICATION OF CURRENT AND PROGRAMMED MESSAGES. ONE REMOTE DATA INPUT DEVICE (LAPTOP COMPUTER PLUS MODEM OR EQUIVALENT) SHALL BE FURNISHED FOR USE BY THE DISTRICT TRAFFIC ENGINEER, OR EQUIVALENT, AND SHALL BE INSURED AGAINST THEFT. THE PCMS UNIT SHALL BE MAINTAINED IN GOOD WORKING ORDER BY THE CONTRACTOR IN ACCORDANCE WITH THE PROVISIONS OF C&MS 614.07. THE CONTRACTOR SHALL, PRIOR TO ACTIVATING THE UNIT, MAKE ARRANGEMENTS, WITH AN AUTHORIZED SERVICE AGENT FOR THE PCMS, TO ASSURE PROMPT SERVICE IN THE EVENT OF FAILURE. ANY FAILURE SHALL NOT RESULT IN THE SIGN BEING OUT OF SERVICE FOR MORE THAN 12 HOURS, INCLUDING WEEKENDS. FAILURE TO COMPLY MAY RESULT IN AN ORDER TO STOP WORK AND OPEN ALL TRAFFIC LANES AND/OR IN THE DEPARTMENT TAKING APPROPRIATE ACTION TO SAFELY CONTROL TRAFFIC. THE ENTIRE COST TO CONTROL TRAFFIC, ACCRUED BY THE DEPARTMENT DUE TO THE CONTRACTOR'S NONCOMPLIANCE, WILL BE DEDUCTED FROM MONEYS DUE, OR TO BECOME DUE THE CONTRACTOR ON HIS CONTRACT.

ITEM 614, PORTABLE CHANGEABLE MESSAGE SIGNS, AS PER PLAN (CONTINUED)

THE CONTRACTOR SHALL BE RESPONSIBLE FOR 24-HOUR-PER-DAY OPERATION AND MAINTENANCE OF THESE SIGNS ON THE PROJECT FOR THE DURATION OF THE PHASES WHEN THE PLAN REQUIRES THEIR USE.

PAYMENT FOR THE ABOVE DESCRIBED ITEM SHALL BE AT THE CONTRACT UNIT PRICE. PAYMENT SHALL INCLUDE ALL LABOR, EQUIPMENT, FUELS, LUBRICATING OILS, SOFTWARE, HARDWARE AND INCIDENTALS TO PERFORM THE ABOVE DESCRIBED WORK.

614, PORTABLE CHANGEABLE MESSAGE SIGN, AS PER PLAN 15 SNMT

ITEM 614, WORK ZONE IMPACT ATTENUATOR FOR 24" WIDE HAZARDS (UNIDIRECTIONAL OR BIDIRECTIONAL)

THIS ITEM SHALL CONSIST OF FURNISHING AND INSTALLING A NON-GATING IMPACT ATTENUATOR. FURNISH AN IMPACT ATTENUATOR FROM THE OFFICE OF ROADWAY ENGINEERING'S APPROVED LIST FOR WORK ZONE IMPACT ATTENUATORS, FROM THE ROADWAY STANDARDS APPROVED PRODUCTS WEB PAGE.

INSTALLATION SHALL BE AT THE LOCATIONS SPECIFIED IN THE PLANS IN ACCORDANCE WITH THE MANUFACTURER'S SPECIFICATIONS.

THE CONTRACTOR SHALL REPAIR OR REPLACE A DAMAGED UNIT WITHIN 24 HOURS OF A DAMAGING IMPACT.

WHEN BIDIRECTIONAL DESIGNS ARE SPECIFIED, THE CONTRACTOR SHALL SUPPLY APPROPRIATE TRANSITIONS.

WHEN GATING IMPACT ATTENUATORS ARE DESIRED, THE CONTRACTOR SHALL SUBMIT DOCUMENTATION TO THE ENGINEER FOR ACCEPTANCE.

THE COST FOR THE ADDITIONAL BARRIER REQUIRED FOR A GATING IMPACT ATTENUATOR SHALL BE INCLUDED IN THE COST OF THE GATING IMPACT ATTENUATOR.

PAYMENT FOR THE ABOVE WORK SHALL BE MADE AT THE UNIT PRICE BID AND SHALL INCLUDE ALL LABOR, TOOLS, EQUIPMENT, AND MATERIALS NECESSARY TO CONSTRUCT AND MAINTAIN A COMPLETE AND FUNCTIONAL IMPACT ATTENUATOR SYSTEM, INCLUDING ALL RELATED BACKUPS, TRANSITIONS, LEVELING PADS, HARDWARE AND GRADING, NOT SEPARATELY SPECIFIED, AS REQUIRED BY THE MANUFACTURER.

EARTHWORK FOR MAINTAINING TRAFFIC

THE FOLLOWING QUANTITIES HAVE BEEN INCLUDED IN THE PLAN FOR INFORMATION ONLY.

EXCAVATION FOR MAINTAINING TRAFFIC	415 CY
EMBANKMENT FOR MAINTAINING TRAFFIC	415 CY

WHEN UNDERCUTS ARE NECESSARY FOR MAINLINE PAVEMENT OR EMBANKMENT CONSTRUCTION, EVALUATE THE NEED FOR TEMPORARY ROAD UNDERCUTS IF WITHIN A CLOSE PROXIMITY TO THE MAINLINE UNDERCUTS. A GEOTECHNICAL EVALUATION SHOULD BE CONSIDERED TO DETERMINE IF THE EXISTING SOIL CONDITIONS ARE ADEQUATE TO SUPPORT THE TEMPORARY ROAD. ADDITIONAL SOIL BORINGS ALONG THE TEMPORARY ROAD ARE NOT NORMALLY REQUIRED.

ALL COSTS RESULTING FROM THE ABOVE EARTHWORK FOR MAINTAINING TRAFFIC SHALL BE CONSIDERED TO BE INCLUDED IN THE LUMP SUM PRICE BID FOR ITEM 615, ROADS FOR MAINTAINING TRAFFIC.

DRAINAGE FOR MAINTAINING TRAFFIC

THE FOLLOWING QUANTITY HAS BEEN INCLUDED IN THE PLAN FOR DRIVE PIPES FOR INFORMATION ONLY AND SHALL BE PAID FOR UNDER ITEM 615 - ROADS FOR MAINTAINING TRAFFIC.

12" CONDUIT, TYPE D	600 FT
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MAINTENANCE OF TRAFFIC SIGNAL/FLASHER INSTALLATION

THE CONTRACTOR SHALL BE RESPONSIBLE FOR MAINTAINING TRAFFIC SIGNAL/FLASHER INSTALLATIONS WITHIN THE PROJECT UNDER THE FOLLOWING CONDITION:

- EXISTING SIGNAL/FLASHER INSTALLATIONS WHICH THE PLANS REQUIRE THE CONTRACTOR TO ADJUST, MODIFY, ADD ONTO OR REMOVE, OR WHICH THE CONTRACTOR ACTUALLY ADJUSTS, MODIFIES OR OTHERWISE DISTURBS. THE CONTRACTOR SHALL BE RESPONSIBLE FOR THE ENTIRE INSTALLATION (AT AN INTERSECTION) FROM THE TIME HIS OPERATIONS FIRST DISTURB THE INSTALLATION UNTIL THE INSTALLATION HAS BEEN SUBSEQUENTLY REMOVED OR MODIFIED AND THE WORK IS ACCEPTED.
- NEW OR REUSED SIGNAL/FLASHER INSTALLATIONS OR DEVICES, INSTALLED BY THE CONTRACTOR. THE CONTRACTOR SHALL BE RESPONSIBLE FOR MAINTENANCE OF THESE FROM THE TIME OF INSTALLATION UNTIL THE WORK IS ACCEPTED.

THE CONTRACTOR SHALL CORRECT AS QUICKLY AS POSSIBLE ALL OUTAGES OR MALFUNCTIONS. HE SHALL PROVIDE THE MAINTAINING AGENCY AND THE ENGINEER SUCH ADDRESSES AND PHONE NUMBERS WHERE HIS MAINTENANCE FORCES CAN BE CONTACTED. THE CONTRACTOR SHALL PROVIDE ONE OR MORE PERSONS TO RECEIVE ALL CALLS AND DISPATCH THE NECESSARY MAINTENANCE FORCES TO CORRECT OUTAGES. SUCH A PERSON OR PERSONS MAY BE USED TO PERFORM OTHER DUTIES AS LONG AS PROMPT ATTENTION IS GIVEN TO THESE CALLS AND A PERSON IS READILY AVAILABLE CONTINUOUSLY 24 HOURS A DAY, 7 DAYS A WEEK. ALL LAMP OUTAGES, CABLE OUTAGES, ELECTRICAL FAILURES, EQUIPMENT MALFUNCTIONS AND MISALIGNED SIGNAL HEADS SHALL BE CORRECTED TO THE SATISFACTION OF THE ENGINEER WITH THE SIGNAL BACK TO SERVICE WITHIN FOUR HOURS AFTER THE CONTRACTOR HAS BEEN NOTIFIED OF THE OUTAGE.

IN THE EVENT NEW SIGNALS ARE DAMAGED PRIOR TO ACCEPTANCE, ALL DAMAGED EQUIPMENT EXCEPT POLES AND CONTROL EQUIPMENT SHALL BE REPLACED BY THE CONTRACTOR TO THE SATISFACTION OF THE ENGINEER WITH THE SIGNAL BACK IN SERVICE WITHIN 8 HOURS AFTER THE CONTRACTOR'S NOTIFICATION OF THE OUTAGE. THE CONTRACTOR SHALL ARRANGE FOR FULL TRAFFIC CONTROL UNTIL THE SIGNAL IS BACK IN OPERATION. IF POLES AND/OR CONTROL EQUIPMENT ARE DAMAGED AND MUST BE REPLACED, THE CONTRACTOR SHALL MAKE TEMPORARY REPAIRS AS NECESSARY TO BRING THE SIGNAL BACK INTO FULL OPERATION WITHIN THE ALLOWED 8-HOUR PERIOD, AND SHALL MAKE PERMANENT REPAIRS OR REPLACEMENT AS SOON THEREAFTER AS POSSIBLE.

NONE OF THE ABOVE SHALL BE CONSTRUED AS COLLECTIVE OR CONSECUTIVE OUTAGE TIME PERIODS AT ANY ONE LOCATION. THAT IS, WHERE MORE THAN ONE OUTAGE OCCURS AT ANY ONE LOCATION THEN THE ALLOTTED TIME LIMIT SHALL BE FOR THE WORST SINGLE OUTAGE.

WHERE OUTAGES ARE THE DIRECT RESULT OF A VEHICLE CRASH THE RESPONSE OF THE CONTRACTOR SHALL BE AS OUTLINED ABOVE. THE CONTRACTOR SHALL BE RESPONSIBLE FOR COLLECTION OF ANY COMPENSATION FOR THIS WORK FROM THOSE PARTIES RESPONSIBLE FOR THE DAMAGE.

WHERE THE CONTRACTOR HAS FAILED TO, OR CANNOT RESPOND TO, AN OUTAGE OR SIGNAL EQUIPMENT MALFUNCTION, AT THESE LOCATIONS WITHIN HIS RESPONSIBILITY, WITHIN PERIODS AS SPECIFIED ABOVE, THE ENGINEER MAY INVOKE THE PROVISIONS OF SECTION 105.15 AND ANY SUBSEQUENT BILLINGS TO THE STATE OR THE CITY OF BROADVIEW HEIGHTS FOR POLICE SERVICES AND MAINTENANCE SERVICES BY CITY FORCES SHALL BE DEDUCTED FROM MONEYS DUE OR TO BECOME DUE THE CONTRACTOR IN ACCORDANCE WITH PROVISIONS OF SECTION 105.15.

THE CONTRACTOR SHALL PROVIDE THE MAINTENANCE SERVICE ENTIRELY WITH HIS FORCES OR HE MAY CHOOSE TO ENTER INTO A COOPERATIVE UNDERSTANDING WITH THE LOCAL MAINTAINING AGENCY TO PROVIDE THE MAINTENANCE. THE CONTRACTOR SHALL INFORM THE ENGINEER, IN WRITING, OF THE MAINTENANCE METHOD SELECTED.

MAINTENANCE OF TRAFFIC SIGNAL/FLASHER INSTALLATION (CONTINUED)

THE CONTRACTOR SHALL BE RESPONSIBLE FOR ANY DAMAGE TO ANY TRAFFIC SIGNAL COMPONENTS REQUIRED TO BE HANDLED DURING THE RELOCATION OF POLES AND REVISIONS TO THE SIGNAL SYSTEM. WHEN A TRAFFIC SIGNAL MUST BE TAKEN OUT OF SERVICE BY THE CONTRACTOR, DUE TO CONSTRUCTION PROCEDURES, THIS OUTAGE SHALL NOT EXCEED 4 HOURS AND SHALL NOT INCLUDE THE HOURS OF 7:00AM TO 7:00PM. ANY SIGNALIZED INTERSECTION, WHERE THE SIGNAL IS OUT OF SERVICE DUE TO CONSTRUCTION PROCEDURES, OR DUE TO AN OUTAGE OR MALFUNCTION OF EQUIPMENT AS DESCRIBED ABOVE, SHALL BE PROTECTED BY OFF-DUTY CITY OF BROADVIEW HEIGHTS POLICE, HIRED BY THE CONTRACTOR.

ANY VEHICULAR TRAFFIC SIGNAL HEAD, EITHER NEW OR EXISTING WHICH WILL BE OUT OF OPERATION SHALL BE COVERED IN THE MANNER DESCRIBED IN 632.25.

THE CONTRACTOR SHALL MAINTAIN COMPLETE RECORDS OF MALFUNCTIONS INCLUDING:

- TIME OF NOTIFICATION OF MALFUNCTION;
- TIME OF WORK CREWS ARRIVAL TO CORRECT THE MALFUNCTION;
- ACTIONS TAKEN TO CORRECT THE MALFUNCTION, INCLUDING A LIST OF PARTS REPAIRED OR REPLACED;
- A DIAGNOSIS OF REASON FOR THE MALFUNCTION AND PROBABILITY OF REOCCURRENCE;
- TIME OF COMPLETION OF THE REPAIR AND SYSTEM RESTORED TO FULL SERVICE.

A COPY OF THESE RECORDS SHALL BE PROVIDED TO THE ENGINEER WITHIN THREE (3) WORKING DAYS FOLLOWING COMPLETION OF EACH REPAIR.

ALL COSTS RESULTING FROM THE ABOVE REQUIREMENTS SHALL BE CONSIDERED TO BE INCLUDED IN THE LUMP SUM PRICE BID FOR ITEM 614, MAINTAINING TRAFFIC.

ITEM 614, MAINTAINING TRAFFIC MISC.: TEMPORARY CLOSURE IR-77

CONTRACTOR TO COORDINATE WITH AT&T RELOCATION CONTRACTOR TO PROVIDE MAINTENANCE OF TRAFFIC FOR THE PLACEMENT OF WIRES OVER NORTHBOUND AND SOUTHBOUND IR-77. MAINTENANCE OF TRAFFIC SHALL FOLLOW ALL REQUIREMENTS OF FREEWAY/EXPRESSWAY CLOSURE IN WORKZONES SCD MT-99.50 OR SHORT-TERM CLOSURE OF A MULTI-LANE DIVIDED HIGHWAY SCD MT-99.60. CONTRACTOR SHALL PROVIDE NOTICE OF CLOSURE AS DESCRIBED IN THESE PLANS. CONTRACTOR SHALL INCLUDE THE COST OF A LAW ENFORCEMENT OFFICER (LEO) WITH THIS ITEM. CONTRACTOR SHALL BID THIS ITEM FOR ALL LABOR, MATERIALS AND EQUIPMENT NECESSARY TO TEMPORARILY CLOSE ONE DIRECTION OF IR-77 EITHER NORTHBOUND OR SOUTHBOUND AT A TIME.

614, MAINTAINING TRAFFIC, MISC.: TEMPORARY CLOSURE IR-77	4 EACH
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ITEM 614, MAINTAINING TRAFFIC MISC.: SHOULDER CLOSURE IR-77

CONTRACTOR TO COORDINATE WITH AT&T RELOCATION CONTRACTOR TO PROVIDE MAINTENANCE OF TRAFFIC FOR THE PLACEMENT OF TEMPORARY UTILITY POLES WITHIN THE SHOULDERS AND MEDIAN OF IR-77. MAINTENANCE OF TRAFFIC SHALL FOLLOW ALL REQUIREMENTS OF CLOSING RIGHT OR LEFT LANE OF A MULTI-LANE DIVIDED HIGHWAY WITH DRUMS SCD MT-95.30. CONTRACTOR SHALL BID THIS ITEM FOR ALL LABOR, MATERIALS AND EQUIPMENT NECESSARY TO TEMPORARILY CLOSE THE SHOULDERS OF IR-77.

614, MAINTAINING TRAFFIC, MISC.: SHOULDER CLOSURE IR-77	6 EACH
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SHEET NUM.												PART.		ITEM	ITEM EXT	GRAND TOTAL	UNIT	DESCRIPTION	SEE SHEET NO.
OFFICE CALCS	12	13	14	63	66	67	68	107	119	122	127	01/SAF/04	02/SAF/13						
						160						160		611	00510	160	FT	DRAINAGE (CONT.) 6" CONDUIT, TYPE F FOR UNDERDRAIN OUTLETS	
	100											100		611	00900	100	FT	6" CONDUIT, TYPE B	
	100				509							609		611	04400	609	FT	12" CONDUIT, TYPE B	
					90							90		611	04400	90	FT	12" CONDUIT, TYPE B, 706.02	
					10							10		611	04600	10	FT	12" CONDUIT, TYPE C, 706.02	
	150				204							354		611	05900	354	FT	15" CONDUIT, TYPE B	
					60							60		611	05900	60	FT	15" CONDUIT, TYPE B, 706.02	
					30							30		611	05900	30	FT	15" CONDUIT, TYPE B, 706.08	
					85							85		611	06700	85	FT	15" CONDUIT, TYPE F, 707.05 TYPE C OR 707.21	
					1							1		611	98150	1	EACH	CATCH BASIN, NO. 3	
					13							13		611	98180	13	EACH	CATCH BASIN, NO. 3A	
					1							1		611	98371	1	EACH	CATCH BASIN, NO. 6, AS PER PLAN	12
					3							3		611	98630	3	EACH	CATCH BASIN ADJUSTED TO GRADE	
					10							10		611	99574	10	EACH	MANHOLE, NO. 3	
	3											3		611	99651	3	EACH	MANHOLE FRAME AND COVER, AS PER PLAN	12
	3,000											3,000		SPECIAL	61199820	3,000	LB	MISCELLANEOUS METAL	12
		LS										LS		611	99920	LS		DRAINAGE STRUCTURE, MISC.: CATCH BASIN LINING	13
																		PAVEMENT	
			66									66		251	01000	66	SY	PARTIAL DEPTH PAVEMENT REPAIR (441)	14
			225									225		253	01001	225	SY	PAVEMENT REPAIR, AS PER PLAN	14
1,607												1,607		254	01000	1,607	SY	PAVEMENT PLANING, ASPHALT CONCRETE, 1.25"	
1,321												1,321		254	01000	1,321	SY	PAVEMENT PLANING, ASPHALT CONCRETE, 1.5"	
1,222	86											1,308		301	56000	1,308	CY	ASPHALT CONCRETE BASE, PG64-22, (449)	
								14				14		301	56100	14	CY	ASPHALT CONCRETE BASE, PG64-22, (449), (DRIVEWAYS), 3.5"	
1,497								78				1,575		304	20000	1,575	CY	AGGREGATE BASE	
1,454								7				1,461		407	20000	1,461	GAL	NON-TRACKING TACK COAT	
471												471		441	10101	471	CY	ASPHALT CONCRETE SURFACE COURSE, TYPE 1, (446), AS PER PLAN, PG70-22M, 1.25" OR 1.5"	13
497												497		441	10200	497	CY	ASPHALT CONCRETE INTERMEDIATE COURSE, TYPE 2, (446), 1.75"	
								5				5		441	70500	5	CY	ASPHALT CONCRETE SURFACE COURSE, TYPE 1, (449), (DRIVEWAYS), PG64-22, 1.25"	
								3				3		441	70700	3	CY	ASPHALT CONCRETE INTERMEDIATE COURSE, TYPE 2, (449), (DRIVEWAYS), PG64-22, 1.75"	
								485				485		452	10050	485	SY	6" NON-REINFORCED CONCRETE PAVEMENT, CLASS QC MS OR QC1 WITH ACCELERATOR	
								167				167		452	12050	167	SY	8" NON-REINFORCED CONCRETE PAVEMENT, CLASS QC MS OR QC1 WITH ACCELERATOR	
					2,896							2,896		609	12000	2,896	FT	COMBINATION CURB AND GUTTER, TYPE 2	
					36							36		609	24510	36	FT	CURB, TYPE 4-C	
					963							1,077		609	26000	1,077	FT	CURB, TYPE 6	
128								114				128		SPECIAL	69012060	128	SY	PAVEMENT OVERLAY FABRIC COMPOSITE	14
											10	10		SPECIAL	69098300	10	SY	FULL DEPTH SHOULDER PAVEMENT REPLACEMENT	127
																		WATER WORK	
								28				28		638	00600	28	FT	6" WATER MAIN DUCTILE IRON PIPE ANSI CLASS 52, PUSH-ON JOINTS AND FITTINGS	
								45				45		638	01200	45	FT	8" WATER MAIN DUCTILE IRON PIPE ANSI CLASS 52, PUSH-ON JOINTS AND FITTINGS	
								178				328		638	02400	328	FT	12" WATER MAIN DUCTILE IRON PIPE ANSI CLASS 52, PUSH-ON JOINTS AND FITTINGS	
												268		638	04900	268	FT	1" COPPER SERVICE BRANCH	
								251				251		638	06200	251	FT	POLYETHYLENE ENCASEMENT	
												2		638	07800	2	EACH	6" GATE VALVE AND VALVE BOX	
												2		638	07900	2	EACH	8" GATE VALVE AND VALVE BOX	
												6		638	08100	6	EACH	12" GATE VALVE AND VALVE BOX	
								2				2		638	10200	2	EACH	6" FIRE HYDRANT	
												2		638	10700	2	EACH	FIRE HYDRANT REMOVED AND DISPOSED OF	
												3		638	10800	3	EACH	VALVE BOX ADJUSTED TO GRADE	
												3		638	10900	3	EACH	SERVICE BOX ADJUSTED TO GRADE	
												2		SPECIAL	63821002	2	EACH	INSTALL 1" METER SETTING, COMPLETE, CLEVELAND	121
												3		638	98000	3	EACH	WATER WORK, MISC.: 1" SERVICE VALVE & VALVE BOX, COMPLETE	122
								15				15		638	98000	15	EACH	WATER WORK, MISC.: POT-HOLING EXISTING WATER MAIN	119
									LS			LS		638	98100	LS		WATER WORK, MISC.: MAINTENANCE OF WATER SERVICE	119
								400				400		638	98600	400	FT	WATER WORK, MISC.: FROSTPROOFING FOR 8" WATER MAIN	119
												150		SPECIAL	69099400	150	LB	ADDITIONAL DUCTILE IRON FITTINGS	122

GENERAL SUMMARY

CUY-77-4.79

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SHEET NUM.										PART.		ITEM	ITEM	GRAND	UNIT	DESCRIPTION	SEE SHEET NO.	CALCULATED	KAH	CHECKED	RAK
OFFICE CALCS	132	157								01/SAF/04	02/SAF/13		EXT	TOTAL							
TRAFFIC CONTROL (CONT.)																					
	209									209		644	00500	209	FT	STOP LINE					
	296									296		644	00620	296	FT	CROSSWALK LINE, 12"					
	247									247		644	00700	247	FT	TRANSVERSE/DIAGONAL LINE					
	105									105		644	00900	105	SF	ISLAND MARKING					
	48									48		644	01300	48	EACH	LANE ARROW					
	3									3		644	01360	3	EACH	WRONG WAY ARROW					
	530									530		644	01500	530	FT	DOTTED LINE, 4"					
	0.07									0.07		646	10200	0.07	MILE	CENTER LINE					
	286									286		646	10310	286	FT	CHANNELIZING LINE, 12"					
	4									4		646	20300	4	EACH	LANE ARROW					
TRAFFIC SIGNALS																					
		27								27		625	25402	27	FT	CONDUIT, 2", 725.05					
		262								262		625	25502	262	FT	CONDUIT, 3", 725.05					
		164								164		625	25602	164	FT	CONDUIT, 4", 725.05					
		408								408		625	25603	408	FT	CONDUIT, 4", 725.05, AS PER PLAN				154	
		249								249		625	25900	249	FT	CONDUIT, JACKED OR DRILLED, 4"					
		248								248		625	29000	248	FT	TRENCH					
		13								13		625	30706	13	EACH	PULL BOX, 725.08, 24"					
		5								5		625	31510	5	EACH	PULL BOX REMOVED					
		8								8		625	32000	8	EACH	GROUND ROD					
		12								12		632	05006	12	EACH	VEHICULAR SIGNAL HEAD, (LED), 3-SECTION, 12" LENS, 1-WAY, POLYCARBONATE (BLACK)					
		3								3		632	05086	3	EACH	VEHICULAR SIGNAL HEAD, (LED), 5-SECTION, 12" LENS, 1-WAY, POLYCARBONATE (BLACK)					
		4								4		632	20731	4	EACH	PEDESTRIAN SIGNAL HEAD (LED), TYPE D2, COUNTDOWN, AS PER PLAN				154	
		15								15		632	25000	15	EACH	COVERING OF VEHICULAR SIGNAL HEAD					
		4								4		632	25010	4	EACH	COVERING OF PEDESTRIAN SIGNAL HEAD					
		4								4		632	26000	4	EACH	PEDESTRIAN PUSHBUTTON					
		765								765		632	40200	765	FT	SIGNAL CABLE, 2 CONDUCTOR, NO. 14 AWG					
		785								785		632	40500	785	FT	SIGNAL CABLE, 5 CONDUCTOR, NO. 14 AWG					
		767								767		632	40700	767	FT	SIGNAL CABLE, 7 CONDUCTOR, NO. 14 AWG					
		560								560		632	40900	560	FT	SIGNAL CABLE, 9 CONDUCTOR, NO. 14 AWG					
		4								4		632	64010	4	EACH	SIGNAL SUPPORT FOUNDATION					
		2								2		632	64020	2	EACH	PEDESTAL FOUNDATION					
		6								6		632	64950	6	EACH	TEST HOLE PERFORMED					
		121								121		632	68200	121	FT	POWER CABLE, 2 CONDUCTOR, NO. 6 AWG					
		398								398		632	68300	398	FT	POWER CABLE, 3 CONDUCTOR, NO. 6 AWG					
		2								2		632	70000	2	EACH	POWER SERVICE					
		1								1		632	71368	1	EACH	SIGNAL SUPPORT, TYPE TC-12.31 DESIGN 10 POLE, WITH MAST ARMS TC-81.22 DESIGN 13 AND DESIGN 12				152	
		1								1		632	71388	1	EACH	SIGNAL SUPPORT, TYPE TC-12.31 DESIGN 10 POLE, WITH MAST ARMS TC-81.22 DESIGN 14 AND DESIGN 12				152	
		1								1		632	72110	1	EACH	SIGNAL SUPPORT, TYPE TC-81.22, DESIGN 4				152	
		1								1		632	72130	1	EACH	SIGNAL SUPPORT, TYPE TC-81.22, DESIGN 12				152	
		2								2		632	89610	2	EACH	PEDESTAL, 9'					
		2								2		632	90101	2	EACH	REMOVAL OF TRAFFIC SIGNAL INSTALLATION, AS PER PLAN				154	
		2								2		633	65523	2	EACH	CABINET, TYPE 332L, AS PER PLAN				154	
		2								2		633	67100	2	EACH	CABINET FOUNDATION					
		2								2		633	67200	2	EACH	CONTROLLER WORK PAD					
		2								2		633	75001	2	EACH	UNINTERRUPTIBLE POWER SUPPLY (UPS), 1000 WATT, AS PER PLAN				152	
		1								1		809	60040	1	EACH	CCTV IP-CAMERA SYSTEM, QUAD MULTI-VIEW FIXED WITH PTZ					
		256								256		809	64550	256	FT	ETHERNET CABLE, OUTDOOR-RATED					
		5								5		809	69101	5	EACH	STOP LINE RADAR DETECTION, AS PER PLAN				154	
		2								2		809	69123	2	EACH	ATC CONTROLLER, AS PER PLAN				154	
		2								2		809	69201	2	EACH	EMERGENCY VEHICLE PREEMPTION, AS PER PLAN				155	
		6								6		809	69211	6	EACH	PREEMPT RECEIVING UNIT, AS PER PLAN				155	
		1,238								1,238		809	69221	1,238	FT	PREEMPT DETECTOR CABLE, AS PER PLAN				155	
		2								2		809	69231	2	EACH	PREEMPT PHASE SELECTOR, AS PER PLAN				155	
		6								6		809	69241	6	EACH	PREEMPT CONFIRMATION LIGHT, AS PER PLAN				155	

GENERAL SUMMARY

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SHEET NUM.											PART.		ITEM	ITEM EXT	GRAND TOTAL	UNIT	DESCRIPTION	SEE SHEET NO.
OFFICE CALCS	13	15	16	17	18	21	22				01/SAF/04	02/SAF/13						
																STRUCTURE OVER 20 FOOT SPAN STRUCTURE CUY-077-0479 GENERAL SUMMARY	171	
																MAINTENANCE OF TRAFFIC		
																301 ASPHALT CONCRETE BASE, PG64-22, (449)		
																304 AGGREGATE BASE		
																407 NON-TRACKING TACK COAT		
																410 TRAFFIC COMPACTED SURFACE, TYPE A OR B		
																441 ASPHALT CONCRETE SURFACE COURSE, TYPE 1, (446), PG64-22		
																614 LAW ENFORCEMENT OFFICER WITH PATROL CAR FOR ASSISTANCE		
																614 SPECIAL 61411300 WORK ZONE TRAFFIC SIGNAL	18	
																614 11630 INCREASED BARRIER DELINEATION		
																614 12380 WORK ZONE IMPACT ATTENUATOR, 24" WIDE HAZARDS, (UNIDIRECTIONAL)		
																614 LS 12420 DETOUR SIGNING		
																614 12500 REPLACEMENT SIGN		
																614 13000 ASPHALT CONCRETE FOR MAINTAINING TRAFFIC		
																614 13310 BARRIER REFLECTOR, TYPE 1, ONE-WAY		
																614 13350 OBJECT MARKER, ONE WAY		
																614 18000 MAINTAINING TRAFFIC, MISC.: SHOULDER CLOSURE IR-77	16	
																614 18000 MAINTAINING TRAFFIC, MISC.: TEMPORARY CLOSURE IR-77	16	
																614 18601 PORTABLE CHANGEABLE MESSAGE SIGN, AS PER PLAN	16	
																614 20010 WORK ZONE LANE LINE, CLASS I, 6"		
																614 21000 WORK ZONE CENTER LINE, CLASS I		
																614 22010 WORK ZONE EDGE LINE, CLASS I, 6"		
																614 23000 WORK ZONE CHANNELIZING LINE, CLASS I, 8"		
																614 23010 WORK ZONE CHANNELIZING LINE, CLASS I, 12"		
																614 24000 WORK ZONE DOTTED LINE, CLASS I		
																614 26000 WORK ZONE STOP LINE, CLASS I		
																614 27010 WORK ZONE CROSSWALK LINE, CLASS I, 12"		
																614 30000 WORK ZONE ARROW, CLASS I		
																615 LS 10000 ROADS FOR MAINTAINING TRAFFIC		
																615 1,196 PAVEMENT FOR MAINTAINING TRAFFIC, CLASS B		
																616 70 WATER		
																617 30 COMPACTED AGGREGATE		
																617 1 WATER		
																622 1,100 PORTABLE BARRIER, UNANCHORED		
																642 1 CENTER LINE, TYPE 1		
																615 LS 10000		
																614 11000 MAINTAINING TRAFFIC		
																619 18 MNTH FIELD OFFICE, TYPE B, AS PER PLAN	13	
																623 LS 10001 CONSTRUCTION LAYOUT STAKES AND SURVEYING, AS PER PLAN	12	
																624 LS 10000 MOBILIZATION		
																INCIDENTALS		
																CPM PROGRESS SCHEDULE (SEE PROPOSAL NOTE)		

CALCULATED	KAH	CHECKED	RAK
GENERAL SUMMARY			
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