

SHEET NUM.											PART.	ITEM	ITEM	GRAND	UNIT	DESCRIPTION	SEE SHEET NO.
5	10	11	37								01/SAF/OT	EXT	TOTAL				
LS											LS	201	11000	LS		<b>ROADWAY</b>	
	132										132	202	23000	132	SY	CLEARING AND GRUBBING	
	2,354										2,354	202	30000	2,354	SF	PAVEMENT REMOVED	
	490										490	202	32000	490	FT	WALK REMOVED	
200	1,212										1,412	608	10000	1,412	SF	CURB REMOVED	
	1,419										1,419	608	52000	1,419	SF	4" CONCRETE WALK	
	10										10	608	53020	10	SF	CURB RAMP	
																DETECTABLE WARNING	
																<b>EROSION CONTROL</b>	
20											20	653	10000	20	CY	TOPSOIL FURNISHED AND PLACED	
500											500	659	00500	500	SY	SEEDING AND MULCHING, CLASS 1	
25											25	659	14000	25	SY	REPAIR SEEDING AND MULCHING	
0.03											0.03	659	20000	0.03	TON	COMMERCIAL FERTILIZER	
0.09											0.09	659	31000	0.09	ACRE	LIME	
3											3	659	35000	3	MGAL	WATER	
																<b>DRAINAGE</b>	
	4										4	611	98634	4	EACH	CATCH BASIN RECONSTRUCTED TO GRADE	
																<b>PAVEMENT</b>	
	587										587	252	01500	587	FT	FULL DEPTH PAVEMENT SAWING	
	18										18	304	20000	18	CY	AGGREGATE BASE	
	60										60	452	12010	60	SY	8" NON-REINFORCED CONCRETE PAVEMENT, CLASS QC 1P	
100	306										406	609	26000	406	FT	CURB, TYPE 6	
																<b>TRAFFIC CONTROL</b>	
		13									13	630	03100	13	FT	GROUND MOUNTED SUPPORT, NO. 3 POST	
		1									1	630	08600	1	EACH	SIGN POST REFLECTOR	
			3								3	630	79000	3	EACH	SIGN HANGER ASSEMBLY, SPAN WIRE	
		4	7.5								11.5	630	80100	11.5	SF	SIGN, FLAT SHEET	
			6								6	630	80500	6	EACH	SIGN, DOUBLE FACED, STREET NAME	
				9							9	630	87100	9	EACH	REMOVAL OF OVERHEAD MOUNTED SIGN AND REERECTION	
				2							2	630	87520	2	EACH	REMOVAL OF POLE MOUNTED SIGN AND REERECTION	
		24									24	644	00500	24	FT	STOP LINE	
		1,260									1,260	644	00600	1,260	FT	CROSSWALK LINE	
		1,019									1,019	644	30000	1,019	FT	REMOVAL OF PAVEMENT MARKING	
																<b>TRAFFIC SIGNALS</b>	
			3								3	625	17960	3	EACH	BRACKET ARM, 8'	
			2								2	625	18400	2	EACH	BRACKET ARM, 20'	
			1,548								1,548	625	23000	1,548	FT	NO. 4 AWG 600 VOLT DISTRIBUTION CABLE	
			387								387	625	23400	387	FT	NO. 10 AWG POLE AND BRACKET CABLE	
			20								20	625	25400	20	FT	CONDUIT, 2", 725.04	
			214								214	625	25500	214	FT	CONDUIT, 3", 725.04	
				46							46	625	25600	46	FT	CONDUIT, 4", 725.04	
				3							3	625	26250	3	EACH	LUMINAIRE, CONVENTIONAL (LED), TYPE II, 120V	
				257							257	625	29000	257	FT	TRENCH	
				3							3	625	30700	3	EACH	PULL BOX, 725.08, 18"	
				1							1	625	30706	1	EACH	PULL BOX, 725.08, 24"	
				22							22	625	32000	22	EACH	GROUND ROD	
					22						22	632	04000	22	EACH	VEHICULAR SIGNAL HEAD, MISC.: ADD BACKPLATE	36
					28						28	632	05007	28	EACH	VEHICULAR SIGNAL HEAD, (LED), 3-SECTION, 12" LENS, 1-WAY, POLYCARBONATE, AS PER PLAN	34
					8						8	632	05087	8	EACH	VEHICULAR SIGNAL HEAD, (LED), 5-SECTION, 12" LENS, 1-WAY, POLYCARBONATE, AS PER PLAN	34
					8						8	632	20731	8	EACH	PEDESTRIAN SIGNAL HEAD (LED), TYPE D2, COUNTDOWN, AS PER PLAN	33
					36						36	632	25000	36	EACH	COVERING OF VEHICULAR SIGNAL HEAD	
						8					8	632	25010	8	EACH	COVERING OF PEDESTRIAN SIGNAL HEAD	
						6					6	632	26000	6	EACH	PEDESTRIAN PUSHBUTTON	
						267					267	632	30200	267	FT	MESSENGER WIRE, 7 STRAND, 3/8" DIAMETER WITH ACCESSORIES	
						267					267	632	30600	267	FT	TETHER WIRE, WITH ACCESSORIES	

GENERAL SUMMARY

DESIGN AGENCY  
**2LMN**

DESIGNER  
 JJR

REVIEWER  
 ALL 11/19/21

PROJECT ID  
 112327

SHEET TOTAL  
 8 85

SHEET NUM.											PART.	ITEM	ITEM	GRAND	UNIT	DESCRIPTION	SEE SHEET NO.
6	37										01/SAF/OT	EXT	TOTAL				
<b>TRAFFIC SIGNALS</b>																	
	3,317										3,317	632	40500	3,317	FT	SIGNAL CABLE, 5 CONDUCTOR, NO. 14 AWG	
	3,738										3,738	632	40700	3,738	FT	SIGNAL CABLE, 7 CONDUCTOR, NO. 14 AWG	
	15										15	632	64010	15	EACH	SIGNAL SUPPORT FOUNDATION	
	5										5	632	64020	5	EACH	PEDESTAL FOUNDATION	
	2,613										2,613	632	65200	2,613	FT	LOOP DETECTOR LEAD-IN CABLE	
	104										104	632	68300	104	FT	POWER CABLE, 3 CONDUCTOR, NO. 6 AWG	
	505										505	632	69800	505	FT	SERVICE CABLE, 3 CONDUCTOR, NO. 6 AWG	
	2										2	632	70001	2	EACH	POWER SERVICE, AS PER PLAN	33
	2										2	632	70400	2	EACH	CONDUIT RISER, 2" DIAMETER	
	4										4	632	72100	4	EACH	SIGNAL SUPPORT, TYPE TC-81.22, DESIGN 2	
	1										1	632	72110	1	EACH	SIGNAL SUPPORT, TYPE TC-81.22, DESIGN 4	
	1										1	632	72130	1	EACH	SIGNAL SUPPORT, TYPE TC-81.22, DESIGN 12	
	1										1	632	79100	1	EACH	COMBINATION SIGNAL SUPPORT, TYPE TC-81.22, DESIGN 2	
	1										1	632	79110	1	EACH	COMBINATION SIGNAL SUPPORT, TYPE TC-81.22, DESIGN 4	
	1										1	632	79130	1	EACH	COMBINATION SIGNAL SUPPORT, TYPE TC-81.22, DESIGN 12	
	2										2	632	86120	2	EACH	STRAIN POLE, TYPE TC-81.11, DESIGN 8	
	2										2	632	86130	2	EACH	STRAIN POLE, TYPE TC-81.11, DESIGN 10	
	2										2	632	87130	2	EACH	COMBINATION STRAIN POLE, TYPE TC-81.11, DESIGN 10	
	5										5	632	89900	5	EACH	PEDESTAL, 8', TRANSFORMER BASE	
	1										1	632	90020	1	EACH	REMOVAL OF MISCELLANEOUS TRAFFIC SIGNAL ITEM PEDESTAL & FOUNDATION	36
	9										9	632	90020	9	EACH	REMOVAL OF MISCELLANEOUS TRAFFIC SIGNAL ITEM SIGNAL/STRAIN POLE & FOUNDATION	36
	9										9	632	90020	9	EACH	REMOVAL OF MISCELLANEOUS TRAFFIC SIGNAL ITEM EXISTING CABLE TO BE DISPOSED	
	2										2	632	90100	2	EACH	REMOVAL OF TRAFFIC SIGNAL INSTALLATION	
	12										12	632	90202	12	EACH	REUSE OF PEDESTRIAN SIGNAL HEAD	
	8										8	632	90210	8	EACH	REUSE OF PEDESTRIAN PUSHBUTTON	
	1										1	632	90400	1	EACH	SIGNALIZATION, MISC.: POLICE CAMERA RELOCATION	33
	8										8	632	90400	8	EACH	SIGNALIZATION, MISC.: CONTROLLER REMOVED	36
	2										2	633	65511	2	EACH	CABINET, TYPE TS-2, AS PER PLAN	33
	2										2	633	67100	2	EACH	CABINET FOUNDATION	
	2										2	633	67200	2	EACH	CONTROLLER WORK PAD	
	2										2	804	98000	2	FT	FIBER OPTIC CABLE, MISC.: FIBER OPTIC CABLE RELOCATION	33
	8										8	804	98100	8	EACH	FIBER OPTIC CABLE, MISC.: FIBER OPTIC CABLE CONNECTIONS	33
	6										6	809	69001	6	EACH	ADVANCE RADAR DETECTION, AS PER PLAN	36
	9										9	809	69101	9	EACH	STOP LINE RADAR DETECTION, AS PER PLAN	36
	10										10	809	69123	10	EACH	ATC V6.24 CONTROLLER, AS PER PLAN	33
	1										1	809	69200	1	EACH	EMERGENCY VEHICLE PREEMPTION	
	3										3	809	69210	3	EACH	PREEMPT RECEIVING UNIT	
	9										9	809	69211	9	EACH	PREEMPT RECEIVING UNIT, AS PER PLAN	35
	460										460	809	69220	460	FT	PREEMPT DETECTOR CABLE	
	1										1	809	69230	1	EACH	PREEMPT PHASE SELECTOR	
	8										8	816	30001	8	EACH	VIDEO DETECTION SYSTEM, AS PER PLAN	36
<b>MAINTENANCE OF TRAFFIC</b>																	
200											200	614	11110	200	HOUR	LAW ENFORCEMENT OFFICER WITH PATROL CAR FOR ASSISTANCE	
<b>INCIDENTALS</b>																	
											LS	614	11000	LS		MAINTAINING TRAFFIC	
											LS	623	10000	LS		CONSTRUCTION LAYOUT STAKES AND SURVEYING	
											LS	624	10000	LS		MOBILIZATION	

GENERAL SUMMARY

DESIGN AGENCY  
  
 DESIGNER  
 JJR  
 REVIEWER  
 ALL 11/19/21  
 PROJECT ID  
 112327  
 SHEET TOTAL  
 9 85

**809 PREEMPTION**

THIS ITEM OF WORK SHALL CONSIST OF FURNISHING AND INSTALLING PREEMPTION EQUIPMENT IN THE LOCATIONS AND LOCAL CONTROLLERS AS SHOWN IN THE PLANS. THE PREEMPTION SHALL CONFORM TO ODOT SUPPLEMENTAL SPECIFICATION 809 AND SHALL UTILIZE COMMUNICATIONS TO IDENTIFY THE PRESENCE OF AN EMERGENCY PRIORITY VEHICLE. IT SHALL CAUSE THE TRAFFIC SIGNAL CONTROLLER TO SELECT A PRE-PROGRAMMED PREEMPTION PLAN THAT WILL DISPLAY AND HOLD THE DESIRED SIGNAL PHASE FOR THE DIRECTION OF THE EMERGENCY VEHICLE.

THE COMMUNICATIONS MEDIUM SHALL EMPLOY EITHER SOUND, LIGHT OR RADIO DETECTION TECHNIQUES TO DETERMINE AND LOG THE PRESENCE OF THE EMERGENCY VEHICLE. THE SYSTEM SHALL DETECT THE PRESENCE OF THE VEHICLE THROUGH AN EMITTING DEVICE LOCATED ON THE EMERGENCY VEHICLE. THE SYSTEM SHALL ACTIVATE THE PREEMPTION SEQUENCE BY APPLYING A SIGNAL TO ONE OF THE CONTROLLER'S PREEMPT DISCRETE INPUTS. THE SYSTEM SHALL BE COMPLETELY COMPATIBLE WITH THE CONTROLLER.

THE EQUIPMENT SHALL BE SHELF OR RACK MOUNTED AND EASILY REMOVABLE AND REPLACEABLE WITHIN THE CABINET. SUPPLY EQUIPMENT COMPLETELY WIRED IN THE CONTROLLER CABINET AND TESTED. THE SYSTEM SHALL BE CAPABLE OF PREEMPTING AND RECEIVING PRIORITY FOR EACH APPROACH TO THE INTERSECTION. IT SHALL BE POSSIBLE TO DETECT THE EMERGENCY VEHICLE AT LEAST 2000 FEET FROM THE INTERSECTION IN AN 80dB-A NOISE ENVIRONMENT.

ALL PREEMPTION PLANS SHOULD BE PROGRAMMED TO PREVENT THE YELLOW TRAP, UNLESS AS DIRECTED BY THE DISTRICT TRAFFIC ENGINEER. YELLOW TRAP PREVENT WILL FORCE THE TRANSITION THROUGH YELLOW CHANGE AND RED CLEARANCE FOR RESOLUTION OF YELLOW TRAP IF ANY PHASE OPPOSING THE PREEMPTION CLEARANCE PHASE(S) IS ACTIVE AND DISPLAYING A GREEN OR FLASHING YELLOW ARROW INDICATION WHEN THE PREEMPTION PLAN IS ACTIVATED AND THE PREEMPTION CLEARANCE PHASE(S) ARE GREEN.

SUPPLY EACH INTERSECTION SHOWN IN THE PLANS WITH THE FOLLOWING COMPONENTS, EACH BID SEPARATELY:

1. PREEMPT RECEIVING UNIT.
2. PREEMPT DETECTOR CABLE.
3. PREEMPT PHASE SELECTOR ASSEMBLY AND INTERFACE WIRING PANEL.

IF A LIGHT-ACTIVATED SYSTEM IS SPECIFIED, THE CONTRACTOR SHALL INVENTORY THE CITY'S EXISTING EMITTERS TO DETERMINE COMPATIBILITY WITH THE PROPOSED SYSTEM. IF EXISTING EMITTERS ARE FOUND TO BE NOT COMPATIBLE, THEN THE CITY SHALL BE SUPPLIED (AT COSTS INCIDENTAL TO THE SYSTEM) WITH THE EMITTERS, TRANSMITTERS, SWITCHES, WIRING AND ALL REQUIRED VEHICLE EQUIPMENT FOR THE FOLLOWING EMERGENCY VEHICLES. THE CITY SHALL BE RESPONSIBLE FOR INSTALLING VEHICLE EQUIPMENT.

IF A RADIO-ACTIVATED SYSTEM IS SPECIFIED, THE CONTRACTOR SHALL SUPPLY THE ABOVE EMERGENCY VEHICLES WITH EMITTERS AT COST INCIDENTAL TO THE SYSTEM.

IF A SOUND-ACTIVATED SYSTEM IS SPECIFIED, THE CONTRACTOR SHALL INVENTORY THE ABOVE EMERGENCY VEHICLES TO DETERMINE COMPATIBILITY OF THE SIRENS WITH THE SYSTEM. EACH VEHICLE THAT IS DETERMINED TO BE NOT COMPATIBLE SHALL BE SUPPLIED WITH NEW SIRENS AT COST INCIDENTAL TO THE SYSTEM.

**809 PREEMPTION (CONT'D)**

IF A LIGHT, RADIO, OR SOUND ACTIVATED SYSTEM IS NOT SPECIFIED, THEN THE CONTRACTOR SHALL SUPPLY A RADIO ACTIVATED SYSTEM.

THE CITY SHALL BE SUPPLIED WITH SOFTWARE REQUIRED TO CALIBRATE, LOG, AND OPERATE THE SYSTEM. TWO (2) OPERATING AND INSTRUCTION MANUALS SHALL BE SUPPLIED WITH THE SOFTWARE.

THE CONTRACTOR SHALL THOROUGHLY TEST THE INSTALLED SYSTEM. AS A MINIMUM, THE CONTRACTOR SHALL VERIFY THAT ALL CONNECTIONS ARE PROPERLY MADE TO THE CONTROLLER CABINETS. THE CONTRACTOR SHALL CHECK THAT THE RANGE SETTING IS PROPER FOR EACH INTERSECTION. THE CONTRACTOR SHALL DETERMINE THAT ALL PHASE SELECTORS ARE SELECTING THE PROPER PHASE AND TIMING ACCURATELY. THE CONTRACTOR SHALL VERIFY THAT ALL VEHICLE EMITTERS ARE BEING PROPERLY DETECTED.

IF THE PROPOSED PREEMPT SYSTEM IS NOT COMPATIBLE WITH THE EXISTING SYSTEM, THE CONTRACTOR SHALL PROVIDE TRAINING FOR UP TO FIFTEEN (15) PERSONS IN THE OPERATION OF THE SYSTEM. IT SHALL BE PROVIDED WITHIN 48 HOURS OF THE INSTALLATION OF THE SYSTEM. IT SHALL CONSIST OF HANDS-ON INSTRUCTION FOR A MINIMUM OF SIXTEEN (16) HOURS. THE CONTRACTOR SHALL PROVIDE TRAINING FOR UP TO FOUR (4) PERSONS IN THE INSTALLATION AND MAINTENANCE OF THE SYSTEM. IT SHALL CONSIST OF A MINIMUM OF EIGHT (8) HOURS OF INSTRUCTION. TRAINING SHALL BE SUPPLIED WITHIN SEVEN (7) DAYS OF THE INSTALLATION OF THE SYSTEM. ALL TRAINING SHALL BE HELD IN A CITY SUPPLIED LOCATION. TRAINING SHALL BE CONDUCTED BY SOMEONE WHO HAS PERFORMED THIS WITHIN THE LAST YEAR AND DOES IT ON A REGULAR BASIS. THE COST OF TRAINING, INCLUDING COURSE MATERIAL, TRAVEL SUBSISTENCE AND RELATED COSTS, SHALL BE ENTIRELY BORNE BY THE CONTRACTOR AND SHALL BE INCIDENTAL TO THE PREEMPTION EQUIPMENT.

PAYMENT FOR ITEM 809 PREEMPTION SHALL BE MADE AT THE CONTRACT UNIT PRICE FOR EACH PREEMPTION IN PLACE AND FULLY OPERATIONAL AS SHOWN IN THE PLANS, EXCEPT FOR THOSE ITEMS BID SEPARATELY.

**809 PREEMPTION RECEIVING UNIT**

RECEIVING UNITS SHALL CONSIST OF A LIGHTWEIGHT, WEATHER-PROOF AND DIRECTIONAL ASSEMBLY. EACH RECEIVING UNIT SHALL BE 360 DEGREE ADJUSTABLE. THE RECEIVING UNIT SHALL BE CAPABLE OF SENDING THE PROPER ELECTRICAL SIGNAL TO THE TRAFFIC SIGNAL CONTROLLER VIA THE PREEMPTION DETECTOR CABLE. RECEIVING UNITS SHALL BE SUPPLIED WITH MAST ARM MOUNTING HARDWARE AS SHOWN IN THE PLANS.

FURNISH PREEMPTION RECEIVING UNITS WITH 60-MONTH WARRANTIES OR FOR THE MANUFACTURER'S STANDARD WARRANTY WHICHEVER IS GREATER. ENSURE THAT THE WARRANTY PERIOD BEGINS ON THE DATE OF SHIPMENT TO THE PROJECT. ENSURE THAT EACH UNIT HAS A PERMANENT LABEL OR STAMP INDICATING THE DATE OF SHIPMENT.

PAYMENT FOR ITEM 809 PREEMPTION RECEIVING UNIT SHALL BE AT THE CONTRACT UNIT FOR EACH RECEIVING UNIT IN PLACE, COMPLETELY INSTALLED AT THE LOCATION SHOWN IN THE PLANS, WIRED, TESTED AND ACCEPTED.

**809 PREEMPTION DETECTOR CABLE**

THIS ITEM SHALL CONSIST OF FURNISHING AND INSTALLING PREEMPTION DETECTOR HOME RUN CABLE IN THE LOCATIONS SHOWN IN THE PLANS. IT SHALL CONNECT THE PREEMPT RECEIVING UNITS TO THE PHASE SELECTORS IN THE LOCAL CONTROLLER CABINET.

PREEMPTION DETECTOR CABLE SHALL CONFORM TO ODOT SPECIFICATION 632. ONLY ONE EXTERNAL SPLICE SHALL BE PERMITTED BETWEEN PREEMPTION RECEIVER UNIT AND CONTROLLER CABINET. THIS SPLICE SHALL MEET THE REQUIREMENTS OF C&MS 632.23 USING A WATERPROOF EPOXY SPLICE KIT. THE CABLE SHALL BE APPROVED FOR BOTH OVERHEAD AND UNDERGROUND USE. THE JACKET SHALL WITHSTAND EXPOSURE TO SUNLIGHT AND ATMOSPHERIC TEMPERATURES AND STRESSES REASONABLY EXPECTED IN NORMAL INSTALLATIONS.

PAYMENT FOR ITEM 809 PREEMPTION DETECTOR CABLE SHALL BE MADE AT THE CONTRACT UNIT PRICE PER FOOT FOR THE CABLE FURNISHED, IN PLACE, ALL CONNECTIONS MADE AND WIRING COMPLETED, TESTED AND ACCEPTED.

**809 PREEMPT PHASE SELECTOR**

THIS ITEM SHALL CONSIST OF FURNISHING AND INSTALLING PREEMPT PHASE SELECTORS INCLUDING WIRING INTERFACE PANELS IN THE LOCAL CONTROLLER CABINET AND ALL OTHER ACCESSORIES THAT ARE NECESSARY TO MAKE THE PREEMPT PHASE SELECTORS COMPLETELY FUNCTIONAL AND OPERATIONAL AS SHOWN IN THE PLANS. THIS ITEM SHALL INCLUDE THE EXTRA CABINET SPACE NECESSARY TO BE LOCATED IN THE LOCAL CONTROLLER CABINETS WHERE INDICATED IN THE PLANS.

THE PHASE SELECTORS SHALL CONSIST OF A MODULE OR MODULES THAT WILL PROVIDE THE NECESSARY INPUTS TO THE CONTROLLER. PHASE SELECTORS SHALL BE SUPPLIED WITH SUFFICIENT QUANTITIES OF CHANNELS TO PROVIDE PREEMPTION FOR ALL APPROACHES TO THE INTERSECTION SEPARATELY. POWER SHALL BE OBTAINED FROM THE PHASE SELECTOR OR PHASE SELECTOR POWER SUPPLY AND NOT FROM THE LOCAL CONTROLLER TIMER.

THE PHASE SELECTORS SHALL HAVE FRONT PANEL INDICATORS FOR ACTIVE PREEMPT CHANNEL STATUS. IT SHALL HAVE TEST SWITCHES TO ACTIVATE ALL PREEMPT CHANNELS.

FURNISH PREEMPT PHASE SELECTORS WITH 60-MONTH WARRANTIES OR FOR THE MANUFACTURER'S STANDARD WARRANTY WHICHEVER IS GREATER. ENSURE THAT THE WARRANTY PERIOD BEGINS ON THE DATE OF SHIPMENT TO THE PROJECT. ENSURE THAT EACH UNIT HAS A PERMANENT LABEL OR STAMP INDICATING THE DATE OF SHIPMENT.

PAYMENT FOR ITEM 809 PREEMPT PHASE SELECTOR SHALL BE MADE AT THE CONTRACT UNIT PRICE FOR EACH PHASE SELECTOR IN PLACE, COMPLETELY INSTALLED IN THE LOCAL CONTROLLER SHOWN IN THE PLANS, WIRED, TESTED AND ACCEPTED.

**809 PREEMPT RECEIVING UNIT, AS PER PLAN**


THE CONTRACTOR SHALL REMOVE AND REERECT THE EXISTING PREEMPTION RECEIVING UNIT TO THE NEW LOCATION SPECIFIED IN THE PLANS. THE CONTRACTOR SHALL ALSO RELOCATE ALL ASSOCIATED EQUIPMENT FOR FULL FUNCTIONALITY AFTER RELOCATION. IF THE EXISTING PREEMPTION DETECTOR CABLE IS IN WORKING CONDITION AND LONG ENOUGH TO BE REUSED IT MAY. IF NOT, THE CONTRACTOR SHALL SUPPLY AND INSTALL NEW PREEMPTION DETECTOR CABLE.

PAYMENT WILL BE AT THE CONTRACT UNIT PRICE PER EACH, RELOCATED, ALL CONNECTIONS MADE AND WIRING COMPLETED, TESTED AND ACCEPTED AND SHALL INCLUDE THE PREEMPTION DETECTOR CABLE WHEN NECESSARY.



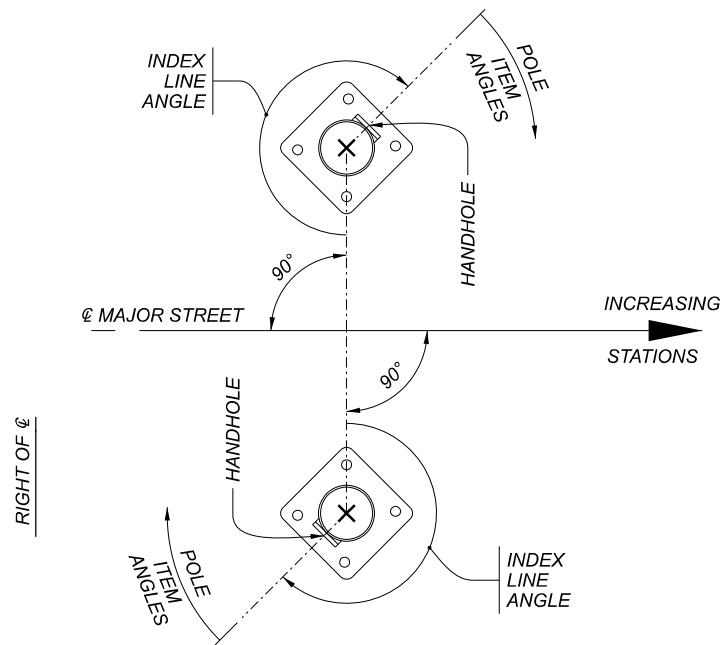
ITEM	EXTENSION	MCCARTY/ ANDERSON	SR 32 EB RAMPS	SR 32 WB RAMPS	TRACTOR SUPPLY	HURON/ CARR	KROGER	SOUTH ST	HARDING AVE	BRIDGE ST	ATHENS ST	CHILLICOTHE/ Morton	TOTAL	UNIT	DESCRIPTION	SEE SHEET
625	17960				1	1			1				3	EACH	BRACKET ARM, 8'	
625	18400							1				1	2	EACH	BRACKET ARM, 20'	
625	23000				615	666			267				1548	FT	NO. 4 AWG 600 VOLT DISTRIBUTION CABLE	
625	23400				129	129			129				387	FT	NO. 10 AWG POLE AND BRACKET CABLE	
625	25400							12				8	20	FT	CONDUIT, 2", 725.04	
625	25500				41	34	9	92	22	6	4	6	214	FT	CONDUIT, 3", 725.04	
625	25600							46					46	FT	CONDUIT, 4", 725.04	
625	26250				1	1			1				3	EACH	LUMINAIRE, CONVENTIONAL(LED), TYPE II, 120 V	
625	29000				41	34	9	127	22	6	4	14	257	FT	TRENCH	
625	30700							2				1	3	EACH	PULL BOX, 725.08, 18"	
625	30706							1					1	EACH	PULL BOX, 725.08, 24"	
625	32000				3	3	1	8	2	1	1	3	22	EACH	GROUND ROD	
630	80100							7.5					7.5	SF	SIGN, FLAT SHEET	
630	80500							3				3	6	EACH	SIGN, DOUBLE FACED, STREET NAME	
630	87100				1	3	1		2	1	1		9	EACH	REMOVAL OF OVERHEAD MOUNTED SIGN AND REERECTION	
630	87520				2								2	EACH	REMOVAL OF POLE MOUNTED SIGN AND REERECTION	
630	79000							3					3	EACH	SIGN HANGER ASSEMBLY, SPAN WIRE	
632	04000				4	4	2		4	6	2		22	EACH	VEHICULAR SIGNAL HEAD, MISC.: ADD BACKPLATE	36
632	05007				3	3	3	6	3	2	3	5	28	EACH	VEHICULAR SIGNAL HEAD, (LED), 3-SECTION, 12" LENS, 1-WAY, POLYCARBONATE, AS PER PLAN	34
632	05087				1	1	1	1	1		2	1	8	EACH	VEHICULAR SIGNAL HEAD, (LED), 5-SECTION, 12" LENS, 1-WAY, POLYCARBONATE, AS PER PLAN	34
632	20731							6				2	8	EACH	PEDESTRIAN SIGNAL HEAD (LED), TYPE D2, COUNTDOWN, AS PER PLAN	33
632	25000				4	4	4	7	4	2	5	6	36	EACH	COVERING OF VEHICULAR SIGNAL HEAD	
632	25010							6				2	8	EACH	COVERING OF PEDESTRIAN SIGNAL HEAD	
632	26000							4				2	6	EACH	PEDESTRIAN PUSHBUTTON	
632	30200							211				56	267	FT	MESSENGER WIRE, 7 STRAND, 3/8" DIAMETER WITH ACCESSORIES	
632	30600							211				56	267	FT	TETHER WIRE, WITH ACCESSORIES	
632	40500				101	741	98	1048	522	314	322	171	3317	FT	SIGNAL CABLE, 5 CONDUCTOR, NO. 14 AWG	
632	40700				537	739	325	780	370	210	473	304	3738	FT	SIGNAL CABLE, 7 CONDUCTOR, NO. 14 AWG	
632	64010				2	2	1	4	2	1	1	2	15	EACH	SIGNAL SUPPORT FOUNDATION	
632	64020				1	1		3					5	EACH	PEDESTAL FOUNDATION	
632	65200				95	500	92	1039	249	151	316	171	2613	FT	LOOP DETECTOR LEAD-IN CABLE	
632	68300							55				49	104	FT	POWER CABLE, 3 CONDUCTOR, NO. 6 AWG	
632	69800							360				145	505	FT	SERVICE CABLE, 3 CONDUCTOR, NO. 6 AWG	
632	70001							1				1	2	EACH	POWER SERVICE, AS PER PLAN	33
632	70400							1				1	2	EACH	CONDUIT RISER, 2" DIAMETER	
632	72100				1	1			1	1			4	EACH	SIGNAL SUPPORT, TYPE TC-81.22, DESIGN 2	
632	72110										1		1	EACH	SIGNAL SUPPORT, TYPE TC-81.22, DESIGN 4	
632	72130						1						1	EACH	SIGNAL SUPPORT, TYPE TC-81.22, DESIGN 12	
632	79100								1				1	EACH	COMBINATION SIGNAL SUPPORT, TYPE TC-81.22, DESIGN 2	
632	79110					1							1	EACH	COMBINATION SIGNAL SUPPORT, TYPE TC-81.22, DESIGN 4	
632	79130				1								1	EACH	COMBINATION SIGNAL SUPPORT, TYPE TC-81.22, DESIGN 12	
632	86120							2					2	EACH	STRAIN POLE, TYPE TC-81.11, DESIGN 8	
632	86130							1				1	2	EACH	STRAIN POLE, TYPE TC-81.11, DESIGN 10	
632	87130							1				1	2	EACH	COMBINATION STRAIN POLE, TYPE TC-81.11, DESIGN 10	
632	89900				1	1		3					5	EACH	PEDESTAL, 8', TRANSFORMER BASE	
632	90100							1				1	2	EACH	REMOVAL OF TRAFFIC SIGNAL INSTALLATION	
632	90020					1							1	EACH	REMOVAL OF MISCELLANEOUS TRAFFIC SIGNAL ITEM; PEDESTAL & FOUNDATION	36
632	90020				2	2	1		2	1	1		9	EACH	REMOVAL OF MISCELLANEOUS TRAFFIC SIGNAL ITEM; SIGNAL/STRAIN POLE & FOUNDATION	36
632	90021	1	1	1	1	1	1		1	1	1		9	EACH	REMOVAL OF MISCELLANEOUS TRAFFIC SIGNAL ITEM; EXISTING CABLE TO BE DISPOSED	
632	90202				1	3	1		4	2	1		12	EACH	REUSE OF PEDESTRIAN SIGNAL HEAD	
632	90210				1	2	1		2	1	1		8	EACH	REUSE OF PEDESTRIAN PUSHBUTTON	
632	90400							1					1	EACH	SIGNALIZATION, MISC.:POLICE CAMERA RELOCATION	33
632	90400		1	1	1	1	1		1	1	1		8	EACH	SIGNALIZATION, MISC.:CONTROLLER REMOVED	36
633	65511							1				1	2	EACH	CABINET, TYPE TS-2, AS PER PLAN	33
633	67100							1				1	2	EACH	CABINET FOUNDATION	
633	67200							1				1	2	EACH	CONTROLLER WORK PAD	
804	98000							1				1	2	EACH	FIBER OPTIC CABLE, MISC.:FIBER OPTIC CABLE RELOCATION	33
804	98000		1	1	1	1	1		1	1	1		8	EACH	FIBER OPTIC CABLE, MISC.:FIBER OPTIC CABLE CONNECTIONS	33
809	69001	2	2	2									6	EACH	ADVANCE RADAR DETECTION, AS PER PLAN	36
809	69101	5	2	2									9	EACH	STOP-BAR RADAR DETECTION, AS PER PLAN	36
809	69122		1	1	1	1	1	1	1	1	1	1	10	EACH	ATC CONTROLLER, AS PER PLAN	33
809	69200							1					1	EACH	EMERGENCY VEHICLE PREEMPTION	
809	69210							3					3	EACH	PREEMPT RECEIVING UNIT	
809	69211				2	2	1		2	1	1		9	EACH	PREEMPT RECEIVING UNIT, AS PER PLAN	35
809	69220							460					460	FT	PREEMPT DETECTOR CABLE	
809	69230							1					1	EACH	PREEMPT PHASE SELECTOR	
816	30001				1	1	1	1	1	1	1	1	8	EACH	VIDEO DETECTION SYSTEM, AS PER PLAN	36

TRAFFIC SIGNAL SUBSUMMARY

DESIGN AGENCY  
  
 DESIGNER  
 JZM  
 REVIEWER  
 EMW 11-22-21  
 PROJECT ID  
 112327  
 SHEET TOTAL  
 37 85

PLAN DETAILS FOR STRAIN POLES

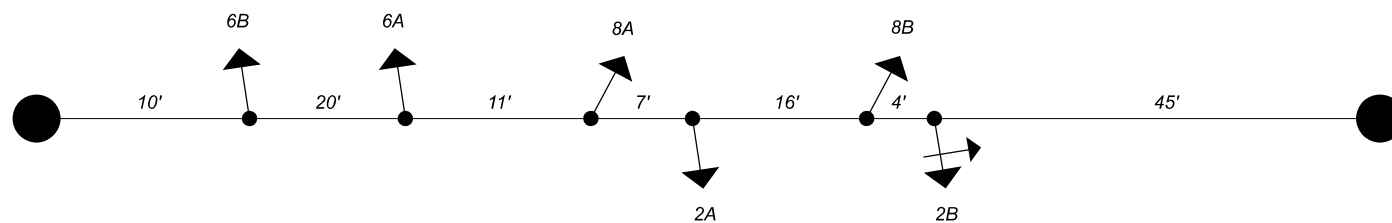
REFERENCE SHEET NO.	STATION & OFFSET	POLE NO.	POLE DESIGN NO.	POLE HEIGHT (FT.)	FOUNDTATION ELEV.	SPAN WIRE ATTACHED AT HEIGHT	INDEX LINE ANGLE (DEG.)	ANGLES (DEG.) FROM INDEX LINE					
								CABLE ENTRANCE 12" FROM TOP	DILEMMA ZONE RADAR DETECTION UNIT	STOP BAR RADAR DETECTION UNIT	PEDESTRIAL SIGNAL HEAD	PEDESTRIAN PUSHBUTTON	BRACKET ARM
79	STA. 90+25.8, 17.5' LT	SP-1	10	28'	647.6	26'	180°	180°	-	-	96°	96°	-
79	STA. 90+19.4, 39.1' RT	SP-2	10	36'	647.4	26'	216°	150°	-	-	239°	239°	150°



- NOTES:
- ALL ANGLES ARE MEASURED CLOCKWISE.
  - THE INDEX LINE GOES THROUGH THE CENTER OF THE HANDHOLE.

POLE DIAGRAM

PLAN VIEW FOR SPANWIRE (BOX) DETAIL



- NOTES:
- 17' MIN TO 19' MAX CLEARANCE PER TC-85.22
  - TETHERED PER TC-85.21
  - TOP OF SIGNAL SUPPORT AND PEDESTAL FOUNDATIONS SHALL BE LEVEL WITH THE SIDEWALK ELEVATION WHERE ADA LANDINGS ARE ADJACENT; ELSEWHERE, FOUNDATIONS SHALL BE 2" ( 1") ABOVE GRADE PER TC-21.21