

LIST OF MAJOR EQUIPMENT

EQUIPMENT ITEMS 678.15 - TRAFFIC CONTROL SIGNAL SYSTEM, INTERSECTION(VT ROUTE 2A & ZEPHYR ROAD)	QUANTITY	REMARKS	PROCUREMENT
NEMA P44 BASE-MOUNTED CONTROLLER CABINET WITH 15-INCH EXTENDED BASE ON AN EXISTING CONCRETE FOUNDATION INCLUDING TRAFFIC SIGNAL CONTROLLER (NEMA TS2), BIU, SMART MALFUNCTIONING MONITORING UNIT (MMU), CONTROLLER IDENTIFICATION PLAQUE, AND GPS CLOCK	1	FLAT BLACK WITH ANCILLARY EQUIPMENT, FACING AWAY FROM TRAFFIC. CONTROLLER SHALL BE ECONOLITE COBALT. MMU SHALL BE ECONOLITE MMU2-16LE SMARTMONITOR. BIU SHALL BE ECONOLITE BIU-64.	TO BE PROVIDED BY AGENCY, INSTALLED BY CONTRACTOR
ADVANCE DETECTOR ASSEMBLY	2	WAVETRONIX SMARTSENSOR ADVANCE	
ADVANCE DETECTION PROCESSOR (CARDS)	1	WAVETRONIX CLICK 650	
DETECTION CABINET RACK	1		
DETECTOR BRACKET FOR MAST ARM OR POLE	2	FLAT BLACK	
ACCESSIBLE PEDESTRIAN PUSH BUTTON ASSEMBLIES POLE MOUNTED WITH LOCATOR TONE, R10-3e SIGN,	8	FLAT BLACK	
ACCESSIBLE PEDESTRIAN SIGNAL HEADS COUNTDOWN STYLE	8	FLAT BLACK	
PEDESTRIAN PEDESTAL POLE ON EXISTING FOUNDATION	1	FLAT BLACK	
NEW 12-INCH LED SIGNAL HEADS (ONE-WAY 3-SECTION, VISORS, DISCONNECT HANGERS, 5 INCH LOUVERED BACKPLATES WITH 2 INCH RETRO-REFLECTIVE BORDER AND MOUNTING HARDWARE)	8	FLAT BLACK	TO BE PROVIDED AND INSTALLED BY CONTRACTOR
NEW 12-INCH LED SIGNAL HEADS (ONE-WAY 4-SECTION, VISORS, DISCONNECT HANGERS, 5 INCH LOUVERED BACKPLATES WITH 2 INCH RETRO-REFLECTIVE BORDER AND MOUNTING HARDWARE)	2	FLAT BLACK	
SIGNAL HEAD BRACKETS AND ANCILLARY EQUIPMENT	10	FLAT BLACK	
OPTICAL PREEMPTION DETECTORS	2	TOMAR DETOC SERIES, FLAT BLACK	
OPTICAL PREEMPTION SIGNAL PROCESS CARD & CAGE	2	TOMAR OSPOCx OPTICAL SIGNAL PROCESSOR	
PREEMPTION AC STROBE - RED	2		
NEW LED BLANK OUT SIGN	4	FLAT BLACK	
HARDENED NETWORK SWITCH	1	CISCO IE 2000	TO BE PROVIDED AND INSTALLED BY OTHERS
HARDENED NETWORK ROUTER	1	CISCO 819	
DIRECTIONAL WIRELESS INTERCONNECT ANTENNA	1		
WIRELESS INTERCONNECT PROCESSOR CARD	1		

NOTE: THE NETWORK SWITCH, WIRELESS ANTENNA, AND PROCESSOR CARD ARE FOR INFORMATION PURPOSES REGARDING THE INSTALLATION AND CONFIGURATION OF THE CABINET. THESE ITEMS WILL BE PURCHASED AND INSTALLED UNDER A SEPARATE CONTRACT. THE CONTRACTOR IS RESPONSIBLE FOR ENSURING THAT THERE IS ADEQUATE ROOM FOR THESE ITEMS INSIDE THE CABINET.

CONTROLLER TIMING CHART

PHASE	1	2	3	4	5	6	7	8
IN USE	X	X		X	X	X		X
TRAFFIC MOVEMENT	←	↑		→	↓	↑		←
MIN. GREEN	5	8		5	5	8		5
MAX 1 - GREEN (OFF)	5	48.5		20	5	48.5		20
MAX 2 - GREEN (AM)	5	50.5		22	5	50.5		22
MAX 3 - GREEN (PM)	5	53.5		23	5	53.5		23
YELLOW CLEARANCE	4.0	4.5		4.0	4.0	4.5		4.0
ALL RED CLEARANCE	2.0	2.0		2.0	2.0	2.0		2.0
VEHICLE EXTENSION	2.0	2.0		2.0	2.0	2.0		2.0
DELAY GREEN	0.0	5.0		5.0	0.0	5.0		5.0
WALK	0	7		7	0	7		7
PEDESTRIAN CLEAR	0	19		19	0	19		19
RECALL MODE		SOFT				SOFT		
COORDINATED		X				X		

ACTION PLAN

PLAN NO.	PATTERN	FLASH	REFERENCE
1	1	NO	MAX 1
2	2	NO	MAX 2
3	3	NO	MAX 3
4	254 - FREE	NO	FREE

COORDINATION PLAN

PATTERN	COS	CYCLE	OFFSET	SPLIT PHASES / SPLIT TIMES							
				1	2	3	4	5	6	7	8
1	111	92	2	11	55		26	11	55		26
2	211	96	88	11	57		28	11	57		28
3	311	100	80	11	60		29	11	60		29

SCHEDULE PLAN

SCHEDULE NO.	DAY PLAN	DAYS	DATES
1	1	MON, TUE, WED, THU, FRI	1-31
1	2	SAT, SUN	1-31

DAY PLAN

PLAN NO.	EVENT	ACTION PLAN	START TIME
1	1	2	6:00 AM
1	2	1	9:00 AM
1	3	3	3:00 PM
1	4	1	7:00 PM
1	5	254	10:00 PM
2	1	1	6:00 AM
2	2	3	9:00 AM
2	3	254	10:00 PM

PREEMPTION TIMINGS

	PREEMPTOR			
	1	2	3	4
DIRECTION	NB	SB		
HOLD PHASE	2 & 5	1 & 6		
DET LOCK	YES	YES		
DURATION TIME	18.5	18.5		
MIN GREEN	8	8		
HOLD GREEN	12	12		
HOLD YELLOW	4.5	4.5		
HOLD RED	2	2		

WEEKDAY PEAKS

	HOURS	
MAX 2 - AM PEAK	6:00 AM TO	9:00 AM
MAX 1 - OFF PEAK	9:00 AM TO	3:00 PM
	7:00 PM TO	10:00 PM
MAX 3 - PM PEAK	3:00 PM TO	7:00 PM
FREE	10:00 PM TO	6:00 AM

ELECTRICAL WIRING	LENGTH	DESCRIPTION
EXISTING MAP-1 WIRING		
CABINET TO SIGNAL HEAD	75'	PHASE 4
CABINET TO SIGNAL HEAD	75'	PHASE 4
CABINET TO LED SIGN	75'	NO RIGHT TURN ON RED
CABINET TO DETECTOR	75'	STOP BAR
EXISTING MAP-2 WIRING		
CABINET TO SIGNAL HEAD	175'	PHASE 2
CABINET TO SIGNAL HEAD	175'	PHASE 2
CABINET TO SIGNAL HEAD	175'	PHASE 5
CABINET TO LED SIGN	175'	NO RIGHT TURN ON RED
CABINET TO DETECTOR	175'	STOP BAR
CABINET TO DETECTOR	175'	ADVANCE
CABINET TO PREEMPTION	175'	DETECTOR
CABINET TO STROBE LIGHT	175'	PREEMPTION
CABINET TO PEDESTRIAN BUTTON	125'	VT 2A CROSSING
CABINET TO PEDESTRIAN HEAD	125'	VT 2A CROSSING
CABINET TO PEDESTRIAN BUTTON	125'	CONNOR WAY CROSSING
CABINET TO PEDESTRIAN HEAD	125'	CONNOR WAY CROSSING
EXISTING MAP-3 WIRING		
CABINET TO SIGNAL HEAD	305'	PHASE 8
CABINET TO SIGNAL HEAD	305'	PHASE 8
CABINET TO LED SIGN	305'	NO RIGHT TURN ON RED
CABINET TO DETECTOR	305'	STOP BAR
CABINET TO PEDESTRIAN BUTTON	255'	VT 2A CROSSING
CABINET TO PEDESTRIAN HEAD	255'	VT 2A CROSSING
CABINET TO PEDESTRIAN BUTTON	255'	PAUL ST CROSSING
CABINET TO PEDESTRIAN HEAD	255'	PAUL ST CROSSING
EXISTING MAP-4 WIRING		
CABINET TO SIGNAL HEAD	195'	PHASE 1
CABINET TO SIGNAL HEAD	195'	PHASE 6
CABINET TO SIGNAL HEAD	195'	PHASE 6
CABINET TO LED SIGN	195'	NO RIGHT TURN ON RED
CABINET TO DETECTOR	195'	STOP BAR
CABINET TO DETECTOR	195'	ADVANCE
CABINET TO PREEMPTION	195'	DETECTOR
CABINET TO STROBE LIGHT	195'	PREEMPTION
CABINET TO PEDESTRIAN BUTTON	145'	VT 2A CROSSING
CABINET TO PEDESTRIAN HEAD	145'	VT 2A CROSSING
CABINET TO PEDESTRIAN BUTTON	145'	PAUL ST CROSSING
CABINET TO PEDESTRIAN HEAD	145'	PAUL ST CROSSING
PP-7 WIRING		
CABINET TO PEDESTRIAN BUTTON	55'	VT 2A CROSSING
CABINET TO PEDESTRIAN HEAD	55'	VT 2A CROSSING
CABINET TO PEDESTRIAN BUTTON	55'	CONNOR WAY CROSSING
CABINET TO PEDESTRIAN HEAD	55'	CONNOR WAY CROSSING
SUBTOTAL	6800'	
ROUNDING	50'	
TOTALS	6850'	

ELECTRICAL WIRING IS SHOWN FOR ESTIMATING PURPOSES ONLY. PAYMENT FOR THIS ITEM WILL BE INCIDENTAL TO PAY ITEM 678.15 - TRAFFIC CONTROL SIGNAL SYSTEM, INTERSECTION (VT ROUTE 2A & ZEPHYR ROAD).

CONDUIT SCHEDULE - ADDITIONS		
	WIRED	ELECTRICAL
PED POSTS MADE AT ECI YARD (3 POSTS MADE)	11.25'	11.25'

MS 579: VT ROUTE 2A & ZEPHYR ROAD

PROJECT NAME:	WILLISTON-ESSEX
PROJECT NUMBER:	STPG SGNL(46)
FILE NAME: t15i017sig.dgn	PLOT DATE: 3/21/2017
PROJECT LEADER: M. LACROIX	DRAWN BY: K. RECORD
DESIGNED BY: K. RECORD	CHECKED BY: M. LACROIX
TRAFFIC SIGNAL LAYOUT SHEET 4B	SHEET 26 OF 66