LIST OF MAJOR EQUIPMENT

EQUIPMENT ITEMS 678.15 - TRAFFIC CONTROL SIGNAL SYSTEM, INTERSECTION(US ROUTE 2 & TALCOTT 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
STOP BAR DETECTOR ASSEMBLY (FLAT BLACK)	4	ECONOLITE AUTOSCOPE ENCORE	
ADVANCED DETECTOR ASSEMBLY	2	WAVETRONIX SMARTSENSOR ADVANCE	
DETECTION PROCESSOR (CARDS)	1	ECONOLITE AUTOSCOPE TIP	
DETECTION PROCESSOR (CARDS)	1	ECONOLITE AUTOSCOPE TAP	
DETECTION PROCESSOR (CARDS)	1	WAVETRONIX CLICK 650	
DETECTION CABINET RACK	2		
DETECTOR BRACKET FOR MAST ARM OR POLE	6	FLAT BLACK	
ACCESSIBLE PEDESTRIAN PUSH BUTTON ASSEMBLIES POLE MOUNTED WITH LOCATOR TONE, R10-3e SIGN	6		TO BE PROVIDED AND INSTALLED BY CONTRACTOR
ACCESSIBLE PEDESTRIAN SIGNAL HEADS COUNTDOWN STYLE	6		
PEDESTRIAN PEDESTAL POLE ON EXISTING FOUNDATION	2	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)	7	FLAT BLACK	
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	
NEW 12-INCH LED SIGNAL HEADS (ONE-WAY 5-SECTION, VISORS, DISCONNECT HANGERS, 5 INCH LOUVERED BACKPLATES WITH 2 INCH RETRO-REFLECTIVE BORDER AND MOUNTING HARDWARE)	1	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	WHELAN CONFIRMATION STROBE	
NEW LED BLANK OUT SIGN	3		
HARDENED NETWORK SWITCH	1	CISCO IE 2000	TO BE PROVIDED AND INSTALLED BY OTHERS
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 RESONSIBLE FOR ENSURING THAT THERE IS ADEQUATE ROOM FOR THESE ITEMS INSIDE THE CABINET.

PREEMPTION DETECTION 2 GTT 711 RECEIVER

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	45.5		22.5	5	45.5		22.5
MAX 2 - GREEN (AM)	5	50.5		21.5	5	50.5		21.5
MAX 3 - GREEN (PM)	5	54.5		21.5	5	54.5		21.5
YELLOW CLEARANCE	4.0	4.0		4.0	4.0	4.0		4.0
ALL RED CLEARANCE	2.0	2.0		2.5	2.0	2.0		2.5
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		7		7		7		7
PEDESTRIAN CLEAR		17		20		17		20
RECALL MODE		SOFT				SOFT		
COORDINATED		X				X		

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

PREEMPTION TIMINGS

	PREEMPTOR			
	1	2	3	4
DIRECTION	EB	WB		
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		

SCHEDULE PLAN

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

COORDINATION PLAN

				SPLIT PHASES / SPLIT TIMES							
PATTERN	COS	CYCLE	OFFSET	1	2	3	4	5	6	7	8
1	111	92	30	11	52	0	29	11	52	0	29
2	211	96	10	11	57	0	28	11	57	0	28
3	311	100	66	11	61	0	28	11	61	0	28

ACTION PLAN

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

DAY PLAN

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

ELECTRICAL WIRING	LENGTH	DESCRIPTION
EXISTING MAP-1 WIRING		
CABINET TO SIGNAL HEAD	80'	PHASE 1
CABINET TO SIGNAL HEAD	80'	PHASE 6
CABINET TO SIGNAL HEAD	80'	PHASE 6
CABINET TO DETECTION	80'	STOP BAR
CABINET TO DETECTION	80'	ADVANCE
CABINET TO LED SIGN	80'	NO RIGHT TURN ON RED
CABINET TO PREEMPTION	80'	DETECTOR
CABINET TO STROBE LIGHT	80'	PREEMPTION
EXISTING MAP-2 WIRING		
CABINET TO SIGNAL HEAD	155'	PHASE 8
CABINET TO SIGNAL HEAD	155'	PHASE 8
CABINET TO DETECTION	155'	STOP BAR
CABINET TO LED SIGN	155'	NO RIGHT TURN ON RED
EXISTING MAP-3 WIRING		
CABINET TO SIGNAL HEAD	275'	PHASE 2
CABINET TO SIGNAL HEAD	275'	PHASE 2
CABINET TO SIGNAL HEAD	275'	PHASE 5
CABINET TO DETECTION	275'	STOP BAR
CABINET TO DETECTION	275'	ADVANCE
CABINET TO LED SIGN	275'	NO RIGHT TURN ON RED
CABINET TO PREEMPTION	275'	DETECTOR
CABINET TO STROBE LIGHT	275'	PREEMPTION
CABINET TO PEDESTRIAN HEAD	225'	CROSSING US 2
CABINET TO PEDESTRIAN BUTTON	225'	CROSSING US 2
CABINET TO PEDESTRIAN HEAD	225'	CROSSING DRIVEWAY
CABINET TO PEDESTRIAN BUTTON	225'	CROSSING DRIVEWAY
EXISTING MAP-4 WIRING		
CABINET TO SIGNAL HEAD	155'	PHASE 4
CABINET TO SIGNAL HEAD	155'	PHASE 4
CABINET TO DETECTION	155'	STOP BAR
CABINET TO LED SIGN	155'	NO RIGHT TURN ON RED
CABINET TO PEDESTRIAN HEAD	115'	CROSSING DRIVEWAY
CABINET TO PEDESTRIAN BUTTON	115'	CROSSING DRIVEWAY
PP-14 WIRING		
CABINET TO PEDESTRIAN HEAD	30'	CROSSING TALCOTT ROAD
CABINET TO PEDESTRIAN BUTTON	30'	CROSSING TALCOTT ROAD
PP-15 WIRING		
CABINET TO PEDESTRIAN HEAD	125'	CROSSING TALCOTT ROAD
CABINET TO PEDESTRIAN BUTTON	125'	CROSSING TALCOTT ROAD
CABINET TO PEDESTRIAN HEAD	125'	CROSSING US 2
CABINET TO PEDESTRIAN BUTTON	125'	CROSSING US 2
SUBTOTAL	5770'	
ROUNDING	30'	
TOTALS	5800'	

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 (US ROUTE 2 & TALCOTT ROAD).

MS 581: US ROUTE 2 & TALCOTT ROAD

PROJECT NAME: WILLISTON-ESSEX
PROJECT NUMBER: STPG SGNL(46)

FILE NAME: t15t017sig.dgn
PROJECT LEADER: M. LACROIX
DESIGNED BY: K. RECORD
TRAFFIC SIGNAL LAYOUT SHEET 7B

PLOT DATE: 3/21/2017
DRAWN BY: K. RECORD
CHECKED BY: M. LACROIX
SHEET 32 OF 66