PROJECT DESCRIPTION

GENERAL

THIS PROJECT INVOLVES THE RECONSTRUCTION OF A TRAFFIC SIGNAL AT THE INTERSECTION OF MD 185 (CONNECTICUT AVE) AT MD 410 (EAST WEST HIGHWAY) IN MONTGOMERY COUNTY.

INTERSECTION OPERATION

A SYSTEM CONTROLLER HOUSED IN A BASE MOUNTED CABINET SHALL BE INSTALLED AT THIS LOCATION.
THE INTERSECTION WILL OPERATE IN A FULLY ACTUATED MODE USING 8 NEMA PHASES. THE LEFT TURN PHASES ALONG NORTHBOUND MD 185 AND EASTBOUND AND WESTBOUND MD 410 SHALL OPERATE WITH EXCLUSIVE LEFT TURNS PHASING; THE LEFT TURN PHASE ALONG SOUTHBOUND MD 185 SHALL OPERATE WITH EXCLUSIVE/PERMISSIVE LEFT TURN PHASING.

SPECIAL NOTES

1. THE FOLLOWING CONTACT PERSONS FOR THIS PROJECT ARE AS FOLLOWS:

MR. LEE STARKLOFF, ASSISTANT DISTRICT ENGINEER-TRAFFIC
PHONE: (301) 513-7300
MR. DENNIS McMAHON, ASSISTANT DISTRICT ENGINEER-CONSTRUCTION
PHONE: (301) 513-7336
MR. RALEIGH MEDLEY, ASSISTANT DISTRICT ENGINEER-MAINTENANCE
PHONE: (301) 513-7300
MR. AUGIE REBISH, ASSISTANT DISTRICT ENGINEER-UTILITY
PHONE: (310) 513-7300
MR. RICHARD L. DAFF, Sr., CHIEF TRAFFIC OPERATIONS DIVISION
PHONE: (410) 787-7630
MR. BOBBY GONZALES, TRAFFIC ENGINEER MCDPWT
PHONE: (240) 777-8761
MR. MIKE KINNEY, MCDPWT (FOR SURVEILLANCE CAMERA)
PHONE: (240) 777-8760

EQUIPMENT LIST

A. EQUIPMENT TO BE SUPPLIED BY THE ADMINISTRATOR.

CATEGORY CODE NO.	DESCRIPTION	UNITS	QUANTITY
900000	BASE MOUTED(SIZE-6) CABINET(MSHA SPECIFICATIONS) WITH ECONOLITE ASC 2 2100 CONTROLER. SSM 12 E CONFLICT MONITOR. POWER SUPPLY FOR RACK MOUNTED DETECTION. LAU PANEL AND RELAY PACKAGE WIRED TO MONTOGOMERY COUTY SPECIFICATIONS	EA	1
973023	FLAT SHEET ALUMINUM SIGNS. (BLUE OR GREEN)	SF	260
	D-3(1) (16" X VAR.)	EA	4
	R10-12 (36"X42")	EA	1
	R3-5 (30"x36")	EA	4
	SHIELD ASSEMBLY (30" x 51")	EA	4
	SHIELD ASSEMBLY (48" x 75")	EA	4
	R10-4(1) MOD (12" x 9")	EA	4

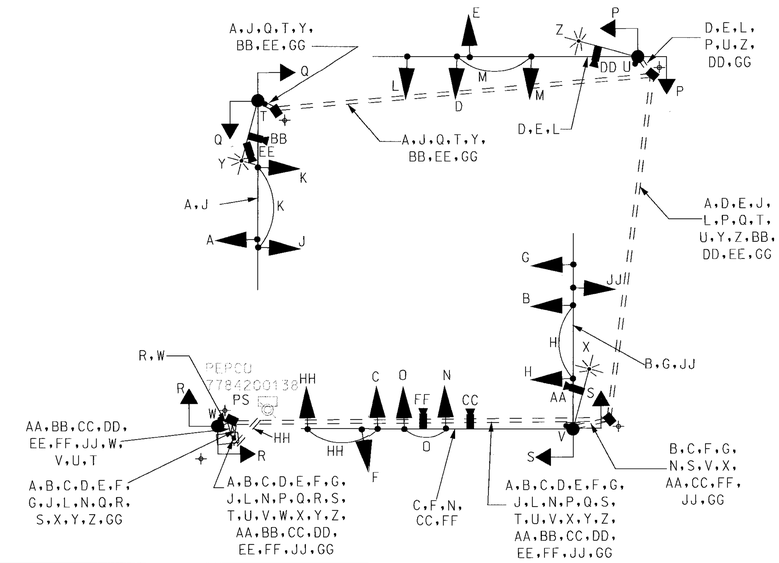
B. EQUIPMENT TO BE FURNISHED AND/OR INSTALLED BY THE CONTRACTOR.

CATEGORY	DESCRIPTION	UNITS	QUANTITY
203030	TEST PIT EXCAVATION	CY	5
585620	12 INCH HEAT APPLIED WHITE PERMANENT PERFORMED THERMOPLASTIC PAVEMENT MARKING	LF	800
585624	24 INCH HEAT APPLIED WHITE PERMANENT PERFORMED THERMOPLASTIC PAVEMENT MARKING	LF	200
800000	REMOVE AND DISPOSE OF EXISTING EQUIPMENT	LS	1
801004	CONCRETE FOUNDATION FOR TRAFFIC SIGNAL STRUCTURE	CY	14.65
801106	WOOD SIGN SUPPORTS 4 INCH X 6 INCH	LF	40
805135	3" SCHEDULE 80 RIGID PVC CONDUIT - TRENCHED	LF	230
805140	4" SCHEDULE 80 RIGID PVC CONDUIT - TRENCHED	LF	40
807400	ELECTRICAL UTILITY SERVICE EQUIPMENT	EA	1
805155	4" SCHEDULE 80 RIGID PVC CONDUIT - SLOTTED	LF	400
810010	ELECTRICAL CABLE 1-CONDUCTOR NO 4 AWG-THHN/THWN	LF	100
811001	FRUNISH AND INSTALL ELECTRICAL HANDHOLE	EA	4
813014	INSTALL GROUND MOUNTED SIGN	SF	47
813015	INSTALL OVERHEAD SIGN	SF	213
816001	VIDEO TRAFFIC DETECTOR CAMERA	EA	6
816005	CONTROL CABLE, 250 FOOT, VIDEO DETECTION CAMERA TO CONTROLLER	EA	3
816010	CONTROL CABLE, 500 FOOT, VIDEO DETECTION CAMERA TO CONTROLLER	EA	3
818004	10 FOOT BREAKAWAY PEDESTAL POLE	EA	1
818036	STEEL POLE WITH SINGLE 50 FT. MAST ARM	EA	1
818051	STEEL POLE WITH TWIN 50' AND 70' MAST ARMS	EA	1
818052	STEEL POLE WITH SINGLE 70' MAST ARM	EA	1
822002	12-PAIR COMMUNICATION CABLE. JELLYFILLED(UNDERGROUND)	LF	100
802501	STRANDED BARE COPPER GROUND WIRE. NO. 6 AWG	LF	400
831010	250 WATT HPS LUMINAIRE W/PHOTOCELL	EA	3
837001	GROUND ROD -3/4" DIAMETER X 10' LENGTH	EA	5
860272	12 INCH SIGNAL HEAD SECTIONS	EA	52
860278	12 PEDESTRIAN SIGNAL HEAD SECTION POLE MOUNT	EA	12
860282	12 PEDESTRIAN SIGNAL HEAD SECTION PEDESTAL POLE MOUNT	EA	4
861105	ELECTRICAL CABLE -2 CONDUCTOR NO. 14 AWG	LF	650
861107	ELECTRICAL CABLE- 5 CONDUCTOR NO. 14 AWG	LF	1600
861108	ELECTRICAL CABLE- 7 CONDUCTOR NO. 14 AWG	LF	2000
861116	ELECTRICAL CABLE -2 CONDUCTOR NO. 12 AWG	LF	750
866103	15 FT. LIGHTING BRACKET ARM FOR SIGNAL STRUCTURE	EA	4
865001	PUSHBUTTON AND SIGN	EA	4
871202	INSTALL CONTROLLER AND CABINET	EA	1

C. MATERIALS TO BE REMOVED BY THE CONTRACTOR.

SHA FORCES SHALL REMOVE THE CONTROLLER AND ALL AUXILIARY EQUIPMENT FROM THE CONTROLLER CABINET. THE CABINET AND ALL OTHER MATERIALS TO BE REMOVED BY THE CONTRACTOR SHALL BECOME THE PROPERTY OF THE CONTRACTOR.

WIRING DIAGRAM



KEY

A B C D E F JJ J	7 CONDUCTOR ELECTRICAL CABLE (NO. 14 AWG)
G H K L M N O HH Q R S	5 CONDUCTOR ELECTRICAL CABLE (NO. 14 AWG)
T U V W	2 CONDUCTOR ELECTRICAL CABLE (NO. 14 AWG)
X Y Z	2 CONDUCTOR ELECTRICAL CABLE (NO. 12 AWG) TRAY CABLE
BB DD EE	VIDEO DETECTION CABLE (500 FT CABLE LENGTH)
AA CC FF	VIDEO DETECTION CABLE (250 FT CABLE LENGTH)
GG	1 CONDUCTOR (NO. 6 AWG) STRANDED COPPER GROUND WIRE
HH	12 PAIR I/C JELLYFILLED(UNDERGROUND)
PS	POWER SERVICE UNDERGROUND PROVIDE A MIN OF 35 FT OF SLACK
⏚	GROUND ROD

PHASE CHART

	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24
PHASE 1 AND 5	←G	←G	R	R	←G/R	←G/R	R	←R	←R	←R	R	R	←R	←R	R	R	DW	DW	DW	DW	DW	DW	DW	DW
1 AND 5 CHANGE TO 1 AND 6,2 AND 5,OR 2 AND 6																								
PHASE 1 AND 6	←G	←G	G	G	R	R	R	←R	←R	←R	R	R	←R	←R	R	R	DW	WK	WK	DW	DW	DW	DW	DW
PED CLEARANCE	←G	←G	G	G	R	R	R	←R	←R	←R	R	R	←R	←R	R	R	FL/DW	FL/DW	FL/DW	FL/DW	DW	DW	DW	DW
1 AND 6 CHANGE	←Y	←Y	Y	Y	R	R	R	←R	←R	←R	R	R	←R	←R	R	R	DW	DW	DW	DW	DW	DW	DW	DW
PHASE 2 AND 5	←R	←R	R	R	←G/G	←G/G	G	←R	←R	←R	R	R	←R	←R	R	R	WK	DW	DW	WK	DW	DW	DW	DW
PED CLEARANCE	←R	←R	R	R	←G/G	←G/G	G	←R	←R	←R	R	R	←R	←R	R	R	FL/DW	FL/DW	FL/DW	FL/DW	DW	DW	DW	DW
2 AND 5 CHANGE	←R	←R	R	R	←Y/G	←Y/G	G	←R	←R	←R	R	R	←R	←R	R	R	DW	DW	DW	DW	DW	DW	DW	DW
PHASE 2 AND 6	←R	←R	G	G	G	G	G	←R	←R	←R	R	R	←R	←R	R	R	WK	WK	WK	WK	DW	DW	DW	DW
PED CLEARANCE	←R	←R	G	G	G	G	G	←R	←R	←R	R	R	←R	←R	R	R	FL/DW	FL/DW	FL/DW	FL/DW	DW	DW	DW	DW
2 AND 6 CHANGE	←R	←R	Y	Y	Y	Y	Y	←R	←R	←R	R	R	←R	←R	R	R	DW	DW	DW	DW	DW	DW	DW	DW
PHASE 3 AND 7	←R	←R	R	R	R	R	R	←G	←G	←G	R	R	←G	←G	R	R	DW	DW	DW	DW	DW	DW	DW	DW
3 AND 7 CHANGE TO 3 AND 8, 4 AND 7, OR 4 AND 8																								
PHASE 3 AND 8	←R	←R	R	R	R	R	R	←R	←R	←R	R	R	←G	←G	G	G	DW	DW	DW	DW	DW	DW	WK	WK
3 AND 8 CHANGE	←R	←R	R	R	R	R	R	←R	←R	←R	R	R	←Y	←Y	Y	Y	DW	DW	DW	DW	DW	DW	DW	DW
PHASE 4 AND 7	←R	←R	R	R	R	R	R	←G	←G	←G	G	G	←R	←R	R	R	DW	DW	DW	DW	WK	DW	DW	WK
4 AND 7 CHANGE	←R	←R	R	R	R	R	R	←Y	←Y	←Y	Y	Y	←R	←R	R	R	DW	DW	DW	DW	DW	DW	DW	DW
PHASE 4 AND 8	←R	←R	R	R	R	R	R	←R	←R	←R	G	G	←R	←R	G	G	DW	DW	DW	DW	DW	DW	DW	DW
4 AND 8 CHANGE	←R	←R	R	R	R	R	R	←R	←R	←R	Y	Y	←R	←R	Y	Y	DW	DW	DW	DW	DW	DW	DW	DW
PHASE 4 AND 8 ALT	←R	←R	R	R	R	R	R	←R	←R	←R	G	G	←R	←R	G	G	DW	DW	DW	DW	WK	WK	WK	WK
PED CLEARANCE	←R	←R	R	R	R	R	R	←R	←R	←R	G	G	←R	←R	G	G	DW	DW	DW	DW	FL/DW	FL/DW	FL/DW	FL/DW
PHASE 4 AND 8 CHANGE	←R	←R	R	R	R	R	R	←R	←R	←R	Y	Y	←R	←R	Y	Y	DW	DW	DW	DW	DW	DW	DW	DW
FLASHING OPERATION	FL /R	FL /R	FL /Y	FL /Y	FL /Y	FL /Y	FL /Y	FL /R	FL /R	FL /R	FL /R	FL /R	FL /R	FL /R	FL /R	FL /R	DARK	DARK	DARK	DARK	DARK	DARK	DARK	DARK

TSP-2

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MARYLAND DOT - STATE HIGHWAY ADMINISTRATION
Office of Traffic & Safety
TRAFFIC ENGINEERING DESIGN DIVISION
TRAFFIC SIGNAL PLAN
MD 185 (Connecticut Avenue) at MD 410 (East West Highway)

DRAWN BY: SJ DU	F.A.P. NO. SEE TITLE SHEET	TS NO. 4640A	SHEET NO.
CHECKED BY: Keith Riniker	S.H.A. NO. M087951 71		
SCALE: NTS	COUNTY: MONTGOMERY	T.I.M.S. NO. E816	____ OF ____
DATE: DECEMBER, 2002	LOG MILE: 15018561.38		

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