PROJECT DESCRIPTION

GENERAL

THIS PROJECT INVOLVES THE RECONSTRUCTION OF A TRAFFIC SIGNAL AT THE INTERSECTION OF MD 586 (VEIRS MILL ROAD) AND MD 193 (UNIVERSITY BLVD.) 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 FOR THE INTERSECTION SHALL OPERATE WITH EXCLUSIVE LEFT TURN PHASING. AUDIBLE PEDESTRIAN SIGNALS SHALL BE INSTALLED AROUND THE INTERSECTION. NEW 8 INCH CURB AND GUTTER WITH 4 INCH SIDEWALK SHALL ALSO BE INSTALLED WITH ADA RAMPS AND DETECTABLE WARNING SURFACE MATERIAL.

SPECIAL NOTES

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

PROJECT CONTACTS:

MR. LEE STARKLOFF, ASSISTANT DISTRICT ENGINEER - TRAFFIC
PHONE: (301) 513-7318
MR. DENNIS MCMAHON, ASSISTANT DISTRICT ENGINEER - CONSTRUCTION
PHONE: (301) 513-7336
MR. WAYNE MOWDY, ASSISTANT DISTRICT ENGINEER - MAINTENANCE
PHONE: (301) 513-7304
MR. AUGIE REBISH, UTILITY ENGINEER
PHONE: (301) 513-7350
MR. RICHARD L. DAFF, SR. CHIEF TRAFFIC OPERATIONS DIVISION
PHONE: (410) 787-7630
MR. WILHELM DERMINASSIAN, TRAFFIC ENGINEER - MCDPW&T
PHONE: (240) 777-2190

EQUIPMENT LIST

A. EQUIPMENT TO BE SUPPLIED BY THE ADMINISTRATION.

ITEM NO.	DESCRIPTION	UNITS	QUANTITY
9042	ECONOLITE ASC II 2100 CONTROLLER, SSM 12 E CONFLICT MONITOR, LAU PANEL AND RELAY PACKAGE WIRED TO MONTGOMERY COUNTY SPECIFICATIONS	EA	1
9044	BASE MOUNTED (SIZE-6) CABINET (MSHA SPECIFICATIONS)	EA	1
9086	VIDEO DETECTION INTERFACE EQUIPMENT: 1-4 CAMERAS	EA	1
9547	EXTRUDED ALUMINUM SIGNS CONSISTING OF:	SF	~~182~~ 186 [1]
	R10-4(1) (12"X9") POLE MOUNT	EA	8
	R3-5(L) (30"x36") MAST ARM MOUNT	EA	5
	D-3(1) (VAR.x16") MAST ARM MOUNT	EA	8
	M 95-1 (78"X 24") MAST ARM MOUNT	EA	2 [1]
	I95-4 (MOD)(36"X24")	EA	1
	M7-4 (9"X12") WOOD POLE MOUNTED	EA	2
	W11A-2 (36"X36") WOOD POLE MOUNTED	EA	2
	R10-11b(24"X24") MAST ARM MOUNT	EA	1 [1]

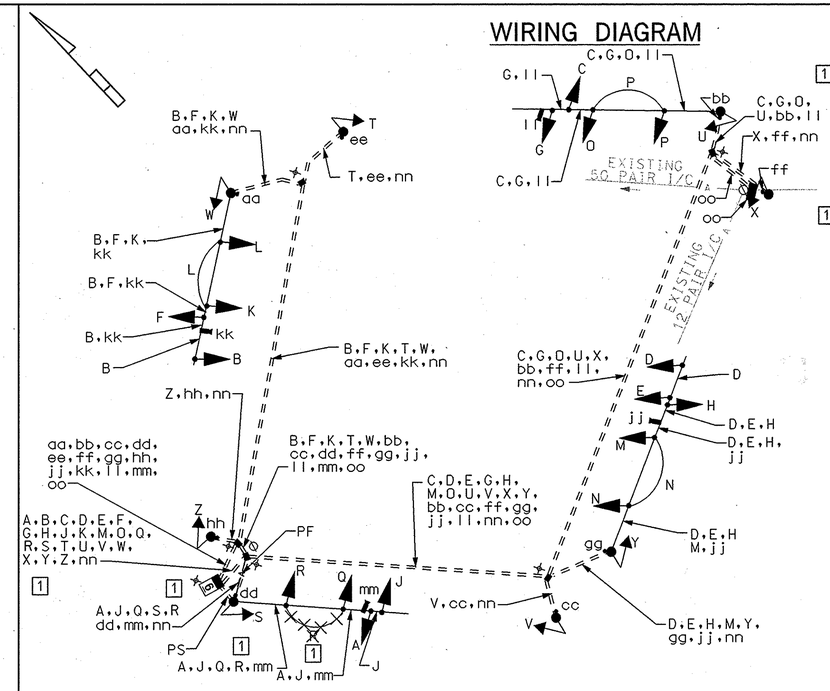
B. EQUIPMENT TO BE FURNISHED AND/OR INSTALLED BY THE CONTRACTOR.

ITEM NO.	DESCRIPTION	UNITS	QUANTITY
1001	MAINTENANCE OF TRAFFIC	EA	3
2001	CLASS 2 EXCAVATION	CY	15
2002	TEST PIT EXCAVATION	CY	5
5003	REMOVAL OF EXISTING PERMANENT PAVEMENT LINE MARKINGS-ANY WIDTH	LF	5872
5005	12 INCH HEAT APPL. WHITE PERMANENT PREFORMED THERMO. PAVEMENT MARKING	LF	1015
5006	24 INCH HEAT APPL. WHITE PERMANENT PREFORMED THERMO. PAVEMENT MARKING	LF	235
6001	DEPRESS CURB & GUTTER	LF	395
6002	STANDARD TYPE A COMBINATION CURB & GUTTER 12 IN. GUTTER PAN 8 IN. DEPTH	LF	150
6004	4 INCH CONCRETE SIDEWALK	SF	1960
8001	CONCRETE FOR SIGNAL FOUNDATIONS	CY	21
8009	16 INCH PEDESTRIAN SIGNAL HEAD SECTION - POLE MOUNT - LED COUNTDOWN	EA	16
8009	CONTROL CABLE, 300 FOOT VIDEO DETECTION CAMERA TO CONTROLLER	EA	3
8011	CONTROL CABLE, 500 FOOT VIDEO DETECTION CAMERA TO CONTROLLER	EA	1
8014	STEEL POLE WITH 50 FOOT SPECIAL "T" MAST ARMS	EA	2
8015	STEEL POLE WITH A SINGLE 60 FOOT SPECIAL "T" MAST ARM	EA	2
8018	FURNISH AND INSTALL 10 FOOT PEDESTAL POLE	EA	4
8019	REMOVE AND DISPOSE OF EXISTING EQUIPMENT	LS	1
8030	WOOD SIGN SUPPORTS 4 INCH X 6 INCH	LF	40
8031	NO. 6 AWG STRANDED BARE COPPER GROUND WIRE	LF	525
8035	FURNISH AND INSTALL WEATHER HEAD, 3 INCH	EA	1
8039	2 INCH SCHED. 80 PVC CONDUIT-TRENCHED	LF	5
8040	3 INCH SCHED. 80 PVC CONDUIT-TRENCHED	LF	160
8041	4 INCH SCHED. 80 PVC CONDUIT-TRENCHED	LF	95
8044	4 INCH SCHED. 80 PVC CONDUIT-SLOTTED	LF	435
8047	ELECTRICAL UTILITY SERVICE EQUIPMENT 120/240 VOLTS, 60 AMPS	EA	1
8048	CABLE 1-CONDUCTOR, NO. 4 AWG-THHN/THWN	LF	135
8054	FURNISH AND INSTALL ELECTRICAL HANDHOLE	EA	6
8056	INSTALL GROUND MOUNTED SIGN	SF	14
8057	INSTALL OVERHEAD SIGN	SF	~~160~~ 172 [1]
8058	VIDEO DETECTION CAMERA	EA	4
8070	12 PAIR INTERCONNECT CABLE, JELLYFILLED (UNDERGROUND)	LF	135
8075	GROUND ROD - 3/4 INCH DIA. X 10 FOOT LENGTH	EA	6
8077	12 INCH VEHICULAR TRAFFIC SIGNAL HEAD SECTION	EA	~~51~~ 53 [1]
8083	ELECTRICAL CABLE - 2 CONDUCTOR (NO. 14 AWG)	LF	1215
8085	ELECTRICAL CABLE - 5 CONDUCTOR (NO. 14 AWG)	LF	~~2225~~ 2205 [1]
8086	ELECTRICAL CABLE - 7 CONDUCTOR (NO. 14 AWG)	LF	~~1720~~ 1790 [1]
8096	INSTALL CONTROLLER AND CABINET - BASE MOUNT	EA	1
8103	2 WIRE NAVIGATOR PUSHBUTTON STATION	EA	8
8104	2 WIRE NAVIGATOR CENTRAL CONTROL UNIT	EA	1
8027	DETECTABLE WARNING SURFACE (SURFACE APPLIED)	SF	50
NEG.	REMOVE AND RELOCATE EXISTING SPLICE BOX	EA	1

C. SHA FORCES SHALL REMOVE THE CONTROLLER AND ALL AUXILLIARY EQUIPMENT FROM THE CONTROLLER CABINET. CONTACT ED RODENHIZER AT (410) 787-7650 AT LEAST 72 HOURS PRIOR TO REMOVAL OF EXISTING CONTROLLER TO ARRANGE FOR PICKUP. THE CABINET AND ALL OTHER MATERIALS TO BE REMOVED BY THE CONTRACTOR SHALL BECOME THE PROPERTY OF THE CONTRACTOR.

ITEM NO.	DESCRIPTION	UNITS	QUANTITY
	CONTROLLER	EA	1

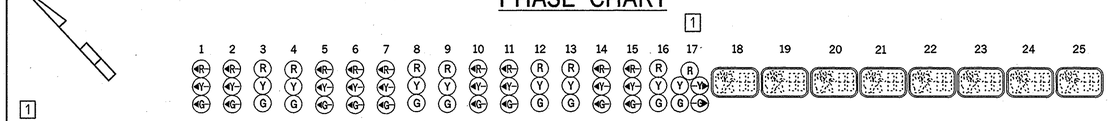
WIRING DIAGRAM



KEY

A,C,F,H,K,M,O,Q,R [1]	7 CONDUCTOR ELECTRICAL CABLE (NO. 14 AWG)
B,D,E,G,J,L,N,P,~~R~~,S,T,U,V,W,X,Y,Z [1]	5 CONDUCTOR ELECTRICAL CABLE (NO. 14 AWG)
aa, bb, cc, dd, ee, ff, gg, hh	2 CONDUCTOR ELECTRICAL CABLE (NO. 14 AWG)
jj, kk, ll, mm	VIDEO DETECTION CABLE
nn	1 CONDUCTOR (NO. 6 AWG) STRANDED COPPER GROUND WIRE
oo	12 PAIR INTERCONNECT CABLE
PS	POWER SERVICE 3 WIRE 1 CONDUCTOR (NO. 4 AWG)
PF	PROPOSED OVERHEAD FEED BY OTHERS
+	GROUND ROD

PHASE CHART [1]



	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25
PHASE 1 AND 5	←R–	←R–	R	R	←G–	←G–	←G–	G	G	←R–	←R–	R	R	←R–	←R–	R	R/G→	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/G→	WK	DW	DW	WK	DW	DW	DW	DW
1 AND 5 CHANGE	←R–	←R–	R	R	←Y–	←Y–	←Y–	G	G	←R–	←R–	R	R	←R–	←R–	R	R/Y→	WK	DW	DW	WK	DW	DW	DW	DW
PHASE 2 AND 5	←R–	←R–	G	G	←R–	←R–	←R–	G	G	←R–	←R–	R	R	←R–	←R–	R	R	WK	WK	WK	WK	DW	DW	DW	DW
PED CLEARANCE	←R–	←R–	G	G	←R–	←R–	←R–	G	G	←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–	Y	Y	←R–	←R–	←R–	Y	Y	←R–	←R–	R	R	←R–	←R–	R	R	DW	DW	DW	DW	DW	DW	DW	DW
PHASE 2 AND 6	←G–	←G–	G	G	←R–	←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	R	DW	WK	WK	DW	DW	DW	DW	DW
2 AND 6 CHANGE	←Y–	←Y–	G	G	←R–	←R–	←R–	R	R	←R–	←R–	R	R	←R–	←R–	R	R	DW	WK	WK	DW	DW	DW	DW	DW
PHASE 3 AND 7	←R–	←R–	R	R	←R–	←R–	←R–	R	R	←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	←G–	←G–	G	G	←R–	←R–	R	R	DW	DW	DW	DW	DW	WK	WK	DW
3 AND 8 CHANGE	←R–	←R–	R	R	←R–	←R–	←R–	R	R	←Y–	←Y–	G	G	←R–	←R–	R	R	DW	DW	DW	DW	DW	WK	WK	DW
PHASE 4 AND 7	←R–	←R–	R	R	←R–	←R–	←R–	R	R	←R–	←R–	R	R	←G–	←G–	G	G	DW	DW	DW	DW	WK	DW	DW	WK
4 AND 7 CHANGE	←R–	←R–	R	R	←R–	←R–	←R–	R	R	←R–	←R–	R	R	←Y–	←Y–	G	G	DW	DW	DW	DW	WK	DW	DW	WK
PHASE 4 AND 8	←R–	←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–	←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–	←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–	←R–	G	G	←R–	←R–	G	G	DW	DW	DW	DW	FL/DW	FL/DW	FL/DW	FL/DW
4 AND 8 ALT CHANGE	←R–	←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/R	FL/R	FL/R	FL/Y	FL/Y	FL/R	FL/R	FL/R	FL/R	FL/R	FL/R	FL/R	FL/R	DARK	DARK	DARK	DARK	DARK	DARK	DARK	DARK

[1] REDLINE REVISION NO. 1

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MARYLAND DOT - STATE HIGHWAY ADMINISTRATION
Office of Traffic & Safety
TRAFFIC ENGINEERING DESIGN DIVISION
GENERAL INFORMATION PLAN

MD 586 (VEIRS MILL ROAD) & MD 193 (UNIVERSITY BLVD.)

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CHECKED BY: S. RENZI	S.H.A. NO.	AT6045185			
SCALE: 1" = 20'	COUNTY:	MONTGOMERY	T.I.M.S. NO. F966	2 OF 2	
DATE: FEBRUARY 2005	LOG MILE:	1501930124			

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