PROJECT DESCRIPTION

I. GENERAL

THIS PROJECT INVOLVES THE MODIFICATION OF THE EXISTING TRAFFIC CONTROL SIGNAL AT THE INTERSECTION OF MD 384 (COLESVILLE ROAD) AND SECOND AVENUE / WAYNE AVENUE IN MONTGOMERY COUNTY. GEOMETRIC IMPROVEMENTS AT THIS INTERSECTION REQUIRE THE INSTALLATION OF NEW PEDESTAL POLES AND CONDUIT. COUNTDOWN PEDESTRIAN SIGNALS AND APS STATIONS SHALL BE INSTALLED ON ALL CORNERS. EXISTING INTERCONNECT AND FIBER FOR A MONTGOMERY COUNTY CAMERA SHALL BE REROUTED AND/OR REPLACED. MD 384 (COLESVILLE ROAD) IS ASSUMED TO RUN IN THE EAST-WEST DIRECTION.

II. INTERSECTION OPERATION

1. THE INTERSECTION SHALL OPERATE IN A NEMA FIVE-PHASE, FULL TRAFFIC ACTUATED MODE. THE MD 384 APPROACHES SHALL OPERATE CONCURRENTLY AND THE SECOND AVENUE / WAYNE AVENUE WILL OPERATE IN A SPLIT PHASE OPERATION. THE LEFT TURN PHASE FOR EASTBOUND MD 384 SHALL BE REMOVED AND AN EXCLUSIVE LEFT TURN PHASE SHALL BE PROVIDED FOR WESTBOUND MD 384 FOR BUSES ONLY. A RIGHT TURN OVERLAP FOR EASTBOUND MD 384 TO SOUTHBOUND WAYNE AVENUE SHALL BE PROVIDED DURING THE NORTHBOUND WAYNE AVENUE MOVEMENT. COUNTDOWN PEDESTRIAN PHASES WITH AUDIBLE PUSHBUTTON ACTUATION SHALL OPERATE ACROSS MD 384 AND ALSO ACROSS SECOND AVENUE AND WAYNE AVENUE.

2. USE EXISTING FULL TRAFFIC ACTUATED, EIGHT PHASE CONTROLLER WITH L.A.U. AND L.A.U. PANEL HOUSED IN A NEMA SIZE "6" BASE-MOUNTED CABINET. INSTALL APS CENTRAL CONTROL UNIT.

III. SPECIAL NOTES

1. THE CONTRACTOR SHALL BE RESPONSIBLE FOR TERMINATING ALL SIGNAL CABLES, EXCLUDING INTERCONNECT, TO THE APPROPRIATE TERMINALS AND SHALL PROPERLY LABEL EACH CABLE.

2. DISCONNECTING AND SPLICING OF INTERCONNECT CABLE SHALL BE PERFORMED BY MONTGOMERY COUNTY FORCES. THE CONTRACTOR SHALL RUN THE INTERCONNECT CABLE INTO THE BASE OF EACH CABINET AND PROPERLY TAG THE CABLE. ALL CONTROLLER CABINET WIRING WILL BE PERFORMED BY MONTGOMERY COUNTY FORCES. CONTACT KAMAL HAMUD AT (240) 777-8761 SEVENTY-TWO HOURS IN ADVANCE OF INTENDED WORK.

3. ALL UNDERGROUND AND OVERHEAD UTILITIES SHOWN ON THESE PLANS ARE SCHEMATIC ONLY AND MAY NOT BE COMPLETE. THE CONTRACTOR SHALL BE RESPONSIBLE FOR NOTIFYING MISS UTILITY PRIOR TO CONSTRUCTION SO THAT ALL UTILITIES MAY BE LOCATED IN THE FIELD. IF THE CONTRACTOR PERCEIVES THAT A CONFLICT BETWEEN THE UTILITIES AND THE TRAFFIC SIGNAL WILL OCCUR, THE CONTRACTOR SHALL NOTIFY THE PROJECT ENGINEER IMMEDIATELY SO THAT THE CONFLICT MAY BE RESOLVED.

EQUIPMENT LIST

A. EQUIPMENT TO BE SUPPLIED BY MONTGOMERY COUNTY DEPARTMENT OF TRANSPORTATION AND INSTALLED BY THE CONTRACTOR

ITEM NO.	DESCRIPTION	QUANTITY
	NONE	

B. EQUIPMENT TO BE FURNISHED AND INSTALLED BY THE CONTRACTOR

ITEM NO.	DESCRIPTION	QUANTITY
203030	TEST PIT EXCAVATION	2 CY
585448	12" WHITE HEAT APPLIED PERMANENT PREFORMED THERMOPLASTIC PAVEMENT MARKING (CROSSWALK)	720 LF
585452	24" WHITE HEAT APPLIED PERMANENT PREFORMED THERMOPLASTIC PAVEMENT MARKING (STOP LINE)	160 LF
600000	REMOVE & RESET BRICK PAVERS	120 SF
655104	REPLACE 4 INCH CONCRETE SIDEWALK	365 SF
800000	16 INCH PEDESTRIAN COUNTDOWN SIGNAL HEAD - PEDESTAL MOUNTED	2 EA
800000	16 INCH PEDESTRIAN COUNTDOWN SIGNAL HEAD - POLE MOUNTED	6 EA
800000	3 INCH SCHEDULE 80 90° PVC CONDUIT BEND	3 FA
800000	4 INCH SCHEDULE 80 RIGID PVC CONDUIT - 2ND CONDUIT	580 LF
800000	F&I APS PUSHBUTTON AND ASSY.	8 EA
800000	FURNISH & DELIVER 2-WIRE APS CENTRAL CONTROL UNIT	1 EA
800000	REMOVE AND DISPOSE OF EXISTING MATERIALS AND EQUIPMENT	1 LS
801004	CONCRETE FOR SIGNAL FOUNDATION	4 CY
801605	PEDESTRIAN EDUCATION R10-4(1) MOD SIGN. (NOTE: SIGN TO READ "PUSH BUTTON TO CROSS COLESVILLE ROAD")	4 EA
801605	PEDESTRIAN EDUCATION R10-4(1) MOD SIGN. (NOTE: SIGN TO READ "PUSH BUTTON TO CROSS SECOND AVENUE")	2 EA
801605	PEDESTRIAN EDUCATION R10-4(1) MOD SIGN. (NOTE: SIGN TO READ "PUSH BUTTON TO CROSS WAYNE AVENUE")	2 EA
801605	R3-2 "NO LEFT TURNS" SIGN (30" x 30") MAST ARM MOUNTED.	2 EA
801605	R3-5(L) "LEFT TURN ONLY" SIGN (30" x 36") MAST ARM MOUNTED.	2 EA
801607	INSTALL SHEET ALUMINUM SIGN	12 EA
802501	NO. 6 AWG STRANDED BARE COPPER GROUND WIRE	665 LF
805135	3 INCH SCHEDULE 80 RIGID PVC CONDUIT - TRENCHED	160 LF
805140	4 INCH SCHEDULE 80 RIGID PVC CONDUIT - TRENCHED	80 LF

EQUIPMENT LIST (CONT'D)

B. EQUIPMENT TO BE FURNISHED AND INSTALLED BY THE CONTRACTOR

ITEM NO.	DESCRIPTION	QUANTITY
805155	4 INCH SCHEDULE 80 RIGID PVC CONDUIT - SLOTTED	505 LF
811001	F&I ELECTRICAL HANDHOLE	6 EA
811002	REMOVAL OF HANDHOLE	7 EA
816001	VIDEO DETECTION CAMERA	1 EA
816005	CONTROL CABLE, 250 FOOT, VIDEO DETECTION CAMERA TO CONTROLLER	4 EA
816010	CONTROL CABLE, 500 FOOT, VIDEO DETECTION CAMERA TO CONTROLLER	1 EA
818004	5 FOOT BREAKAWAY PEDESTAL POLE	4 EA
837001	GROUND ROD -3/4 INCH DIAMETER X 10 FOOT LENGTH	4 EA
860284	FURNISH AND INSTALL 12 INCH VEHICULAR LED TRAFFIC SIGNAL HEAD (R, Y, G)	6 EA
860284	FURNISH AND INSTALL 12 INCH VEHICULAR LED TRAFFIC SIGNAL HEAD (R, Y, G, GA) (LEFT)	4 EA
860284	FURNISH AND INSTALL 12 INCH VEHICULAR LED TRAFFIC SIGNAL HEAD (R, Y, G, YA, GA) (RIGHT)	1 EA
860284	FURNISH AND INSTALL 12 INCH VEHICULAR LED TRAFFIC SIGNAL HEAD (RA, YA, GA) (LEFT)	2 EA
861105	ELECTRICAL CABLE - 2 CONDUCTOR (NO. 14 AWG)	1410 LF
861107	ELECTRICAL CABLE - 5 CONDUCTOR (NO. 14 AWG)	1485 LF
861108	ELECTRICAL CABLE - 7 CONDUCTOR (NO. 14 AWG)	2545 LF
861116	ELECTRICAL CABLE - 2 CONDUCTOR TRAY (NO. 12 AWG)	445 LF
873001	REMOVAL AND SALVAGE OF ANY SIGNAL HEAD	20 EA
873001	REMOVAL AND SALVAGE OF SIGNS LESS THAN 50SF	37 EA

PHASE CHART

	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21
	R Y G	R Y G	R Y G	R Y G	R Y G	R Y G	R Y G	R Y G G	R Y G G	R Y G	R Y G G	R Y G G	R Y G								
PHASE 2 & 5	R	R	R	◀G–	◀G–	G	G	R	R	R	R	R	R	WK	DW	DW	WK	DW	DW	DW	DW
5 CHANGE	R	R	R	◀Y–	◀Y–	G	G	R	R	R	R	R	R	WK	DW	DW	WK	DW	DW	DW	DW
PHASE 2 & 6	G	G	G	◀R–	◀R–	G	G	R	R	R	R	R	R	WK	WK	WK	WK	DW	DW	DW	DW
PED CLEAR COUNTDOWN	G	G	G	◀R–	◀R–	G	G	R	R	R	R	R	R	FL/DW	FL/DW	FL/DW	FL/DW	DW	DW	DW	DW
2 & 6 CHANGE	Y	Y	Y	◀R–	◀R–	Y	Y	R	R	R	R	R	R	DW	DW	DW	DW	DW	DW	DW	DW
PHASE 3	R	R	R	◀R–	◀R–	R	R	R	R	R	◀G–/G	◀G–/G	G	DW	DW	DW	DW	DW	DW	DW	DW
3 CHANGE	R	R	R	◀R–	◀R–	R	R	R	R	R	Y	Y	Y	DW	DW	DW	DW	DW	DW	DW	DW
PHASE 3 ALT	R	R	R	◀R–	◀R–	R	R	R	R	R	◀G–/G	◀G–/G	G	DW	DW	DW	DW	WK	DW	DW	WK
PED CLEAR COUNTDOWN	R	R	R	◀R–	◀R–	R	R	R	R	R	◀G–/G	◀G–/G	G	DW	DW	DW	DW	FL/DW	DW	DW	FL/DW
3 ALT CHANGE	R	R	R	◀R–	◀R–	R	R	R	R	R	Y	Y	Y	DW	DW	DW	DW	DW	DW	DW	DW
PHASE 4	R	R	R/–G▶	◀R–	◀R–	R	R	◀G–/G	◀G–/G	G	R	R	R	DW	DW	DW	DW	DW	DW	DW	DW
4 CHANGE	R	R	R/–Y▶	◀R–	◀R–	R	R	Y	Y	Y	R	R	R	DW	DW	DW	DW	DW	DW	DW	DW
PHASE 4 ALT	R	R	R/–G▶	◀R–	◀R–	R	R	◀G–/G	◀G–/G	G	R	R	R	DW	DW	DW	DW	DW	WK	WK	DW
PED CLEAR COUNTDOWN	R	R	R/–G▶	◀R–	◀R–	R	R	◀G–/G	◀G–/G	G	R	R	R	DW	DW	DW	DW	DW	FL/DW	FL/DW	DW
4 ALT CHANGE	R	R	R/–Y▶	◀R–	◀R–	R	R	Y	Y	Y	R	R	R	DW	DW	DW	DW	DW	DW	DW	DW
FLASHING OPERATION	FL/Y	FL/Y	FL/Y	FL/◀R–	FL/◀R–	FL/Y	FL/Y	FL/R	FL/R	FL/R	FL/R	FL/R	FL/R	DARK	DARK	DARK	DARK	DARK	DARK	DARK	DARK

The following contact persons for District #3 are as follows:

Kamal Hamud
Engineer III (Montgomery County)
Phone #(240) 777-8761

Mr. Wayne Mowdy
Asst. District Engineer-Maintenance
Phone #(301) 513-7304

Mr. Richard L. Daff, Sr.
Chief, Traffic Operations Division
Phone #(410) 787-7630

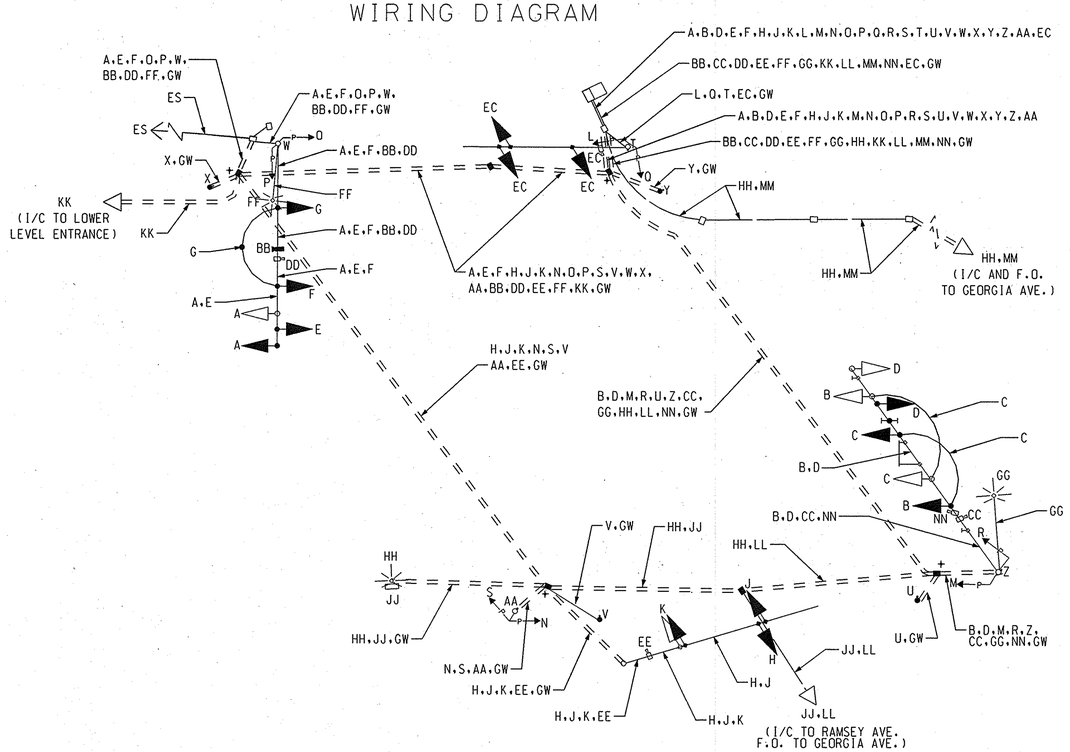
Mr. Steve Custer
PEPCO Customer Design
201 W. Guide Dr.
Rockville, MD 20850
Phone #(301) 548-4333

Mr. Jeff Wentz
Assistant District Engineer-Traffic
Phone #(301) 513-7358

Mr. Augustine Rebish
District Engineer-Utility
Phone #(301) 513-7350

Mr. Ed Rodenhizer
Signal Shop Supervisor
Phone #(410) 787-7652

WIRING DIAGRAM



WIRING KEY

A,B,C,D,E,F,H,K,J - 7-CONDUCTOR ELECTRICAL CABLE (NO.14 A.W.G.)
G,L,M,N,O,P,Q,R,S - 5-CONDUCTOR ELECTRICAL CABLE (NO.14 A.W.G.)
T,U,V,W,X,Y,Z,AA - 2-CONDUCTOR ELECTRICAL CABLE (NO.14 A.W.G.)
BB,CC,DD,NN - 250' VIDEO DETECTION CONTROL CABLE
EE - 500' VIDEO DETECTION CONTROL CABLE
FF,GG - 2-CONDUCTOR TRAY CABLE (NO.12 A.W.G.)
HH,JJ - REROUTED 6-PAIR FIBER OPTIC CABLE (SHA SOC CAMERA)
KK,LL,MM - INTERCONNECT CABLE (12-PAIR JELLY FILLED)
EC - EXISTING CABLE
ES - EXISTING UNDERGROUND SERVICE FROM PEPCO
GW - STRANDED BARE COPPER GROUND WIRE (NO.6 A.W.G.)
+ - GROUND ROD

SHA No.: BW847M83
MD 384 @ Lower Entrance-Silver Spring Transit Center

STATE OF MARYLAND
DEPARTMENT OF TRANSPORTATION
STATE HIGHWAY ADMINISTRATION
OFFICE OF TRAFFIC & SAFETY
TRAFFIC ENGINEERING DESIGN DIVISION

MD 384 (COLESVILLE ROAD) AND WAYNE AVE./SECOND AVE.

SILVER SPRING, MARYLAND

PARSONS BRINCKERHOFF QUADE & DOUGLAS
100 South Charles Street
Tower 1, 10th Floor
Baltimore, MD 21201-2727
Phone: 410-237-5050
Fax: 410-237-4609

GENERAL INFORMATION SHEET

SCALE NONE	DATE 08/25/2006	CONTRACT NO. BW996M82	
DESIGNED BY KMP		COUNTY MONTGOMERY	
DRAWN BY MKF		LOGMILE 15038400.39	
CHECKED BY KMP		T.I.M.S. NO. H589	
F.A.P. NO.		TOD NO.	
TS NO. 2092C-GI	DRAWING NO. 2 OF 2	SHEET NO. 6 OF 12	

PLOTTED: MONDAY, SEPTEMBER 11, 2006 AT 10:38 AM
FILE: G:\17967A\01\PLANS\COLESVILLE_WAYNE_G101.DGN

BY: PERMISOHN