

**PROJECT DESCRIPTION**

**I. GENERAL**

THIS PROJECT INVOLVES THE CONVERSION OF THE EXISTING INTERSECTION CONTROL BEACON (ICB) WITH STREET LIGHTING TO A FULL COLOR TRAFFIC CONTROL SIGNAL WITH INTERCONNECT, AND AUDIBLE/TACTILE AND COUNTDOWN PEDESTRIAN SIGNALS AT THE INTERSECTION OF MD 97 (GEORGIA AVE) AND EMORY CHURCH RD IN MONTGOMERY COUNTY. MD 97 IS ASSUMED TO RUN IN A NORTH-SOUTH DIRECTION.

**II. INTERSECTION OPERATION**

1. THE INTERSECTION SHALL OPERATE IN A NEMA SIX (6) PHASE, SEMI-ACTUATED MODE. THE NORTHBOUND AND SOUTHBOUND MD 97 APPROACHES SHALL OPERATE CONCURRENTLY, WITH LEADING EXCLUSIVE-PERMISSIVE LEFT TURN PHASES PROVIDED FOR BOTH APPROACHES OF MD 97. EMORY CHURCH AND SERVICE ROAD APPROACHES SHALL OPERATE AS A SPLIT PHASE.
2. A PROPOSED NEMA FULL-TRAFFIC-ACTUATED, EIGHT (8) PHASE CONTROLLER WITH VIDEO DETECTION INTERFACE, 2 WIRE CENTRAL CONTROL UNIT AND ALL NECESSARY EQUIPMENT IN AN EXISTING NEMA SIZE "6" BASE MOUNTED CABINET SHALL BE INSTALLED AT THIS LOCATION. VIDEO DETECTION INTERFACE SHALL BE INSTALLED INTO THE CABINET BY MONTGOMERY COUNTY FORCES.

**CONTACTS**

<b>DISTRICT (DISTRICT 3 - MONTGOMERY)</b>	<b>OFFICE OF TRAFFIC AND SAFETY</b>
MR. BRIAN YOUNG DISTRICT ENGINEER 301-513-7311	VACANT CHIEF, TRAFFIC OPERATIONS 410-787-7630
MS. FELECIA MURPHY ASSISTANT DISTRICT ENGINEER - TRAFFIC 301-513-7498	MR. ROBERT SNYDER ASSISTANT DIVISION CHIEF, TRAFFIC OPERATIONS 410-787-7630
MR. VICTOR GRAFTON DISTRICT UTILITY ENGINEER 301-513-7350	MR. EDWARD RODENHIZER CHIEF, SIGNAL OPERATIONS SECTION 410-787-7650
MR. KEVIN NOWAK & MR. DUANE BERNARD ASSISTANT DISTRICT ENGINEER - CONSTRUCTION 301-513-7336	MR. EUGENE BAILEY CHIEF, SIGN OPERATIONS SECTION 410-787-7670
MR. VERNON STINNETT ASSISTANT DISTRICT ENGINEER - MAINTENANCE 301-513-7304	MR. MICHAEL STOCKER SUPPLY OFFICER IV (SIGNAL SHOP WAREHOUSE) 410-787-7696
<b>MONTGOMERY COUNTY DOT</b>	
MR. KAMAL HAMUD TRAFFIC ENGINEER 240-777-8761	
MR. ROBERT RICKETTS SIGNAL SHOP 301-279-1291	

**III. SPECIAL NOTES**

APS WILL FUNCTION AS FOLLOWS:  
TO CROSS MD 97 (GEORGIA AVE) NORTHBOUND LANES

1. WHEN A PEDESTRIAN LOCATES AND PRESSES THE PUSHBUTTON FOR AN EXTENDED TIME, THE PUSHBUTTON UNIT WILL ANNOUNCE THE FOLLOWING MESSAGE: "WAIT TO CROSS GEORGIA AT EMORY CHURCH. CROSSWALK ANGLES RIGHT. ~~Wait~~ "Second button in median" wait
2. WHEN THE WALK PHASE BEGINS, THE PUSHBUTTON UNIT WILL PROVIDE A RAPID TICK WHICH WILL LAST FOR THE DURATION OF THE WALK PHASE.

TO CROSS MD 97 (GEORGIA AVE) SOUTHBOUND LANES

1. WHEN A PEDESTRIAN LOCATES AND PRESSES THE PUSHBUTTON FOR AN EXTENDED TIME, THE PUSHBUTTON UNIT WILL ANNOUNCE THE FOLLOWING MESSAGE: "WAIT TO CROSS GEORGIA AT EMORY CHURCH. CROSSWALK ANGLES LEFT. WAIT."
2. WHEN THE WALK PHASE BEGINS, THE PUSHBUTTON UNIT WILL PROVIDE A RAPID TICK WHICH WILL LAST FOR THE DURATION OF THE WALK PHASE.

**EQUIPMENT LIST**

**A. EQUIPMENT TO BE FURNISHED BY STATE HIGHWAY ADMINISTRATION**

ITEM NO.	QUANTITY	DESCRIPTION
9116	1 EA	CONTROLLER ASC III WITH TELEMETRY
9124	1 EA	VIDEO DETECTION INTERFACE EQUIPMENT: 1-8 CAMERAS
9570	6.25 SF	SHEET ALUMINUM GROUND MOUNTED SIGN R3-7(R) (30"x30")
9571	11.25 SF	SHEET ALUMINUM MAST ARM / POLE MOUNTED SIGN R3-5(R) (30"x36")
	1 EA	R10-3(1) - Georgia Ave (9"x15")
	4 EA	

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

ITEM NO.	QUANTITY	DESCRIPTION
1001	1 EA	MAINTENANCE OF TRAFFIC
2002	2 CY	TEST PIT EXCAVATION
5003	75 LF	REMOVAL OF EXISTING PERMANENT PAVEMENT LINE MARKINGS
5005	110 LF	24 INCH WHITE PREFORMED THERMOPLASTIC PAVEMENT MARKING LINES
6001	45 LF	STANDARD TYPE A COMBINATION CURB AND GUTTER 12 INCH GUTTER PAN 8 INCH DEPTH
6002	1105 SF	5 INCH CONCRETE SIDEWALK
6003	120 SF	DETECTABLE WARNING SURFACE FOR CURB RAMPS
8001	34 EA	12 INCH LED SIGNAL HEAD SECTION
8002	1 EA	2-WIRE CENTRAL CONTROL UNIT
8008	4 EA	AUDIBLE/TACTILE PEDESTRIAN PUSHBUTTON STATION AND SIGNS
8009	4 EA	BREAKAWAY PEDESTAL POLE (ANY SIZE)
8016	4 EA	LED 16 INCH COUNTDOWN PEDESTRIAN SIGNAL HEAD
8024	1 EA	REMOVE & DISPOSE OF EQUIPMENT (PER ASSIGNMENT)
8028	5 EA	VIDEO DETECTION CAMERA AND CABLE ANY LENGTH
8036	90 LF	UP TO 4 INCH SCHEDULE 80 RIGID PVC CONDUIT-BORED
8037	145 LF	UP TO 4 INCH SCHEDULE 80 RIGID PVC CONDUIT-SLOTTED
8038	65 LF	UP TO 4 INCH SCHEDULE 80 RIGID PVC CONDUIT-TRENCHED
8039	15 LF	WOOD SIGN SUPPORTS UP TO 4' X 6'

**EQUIPMENT LIST (CONT'D)**

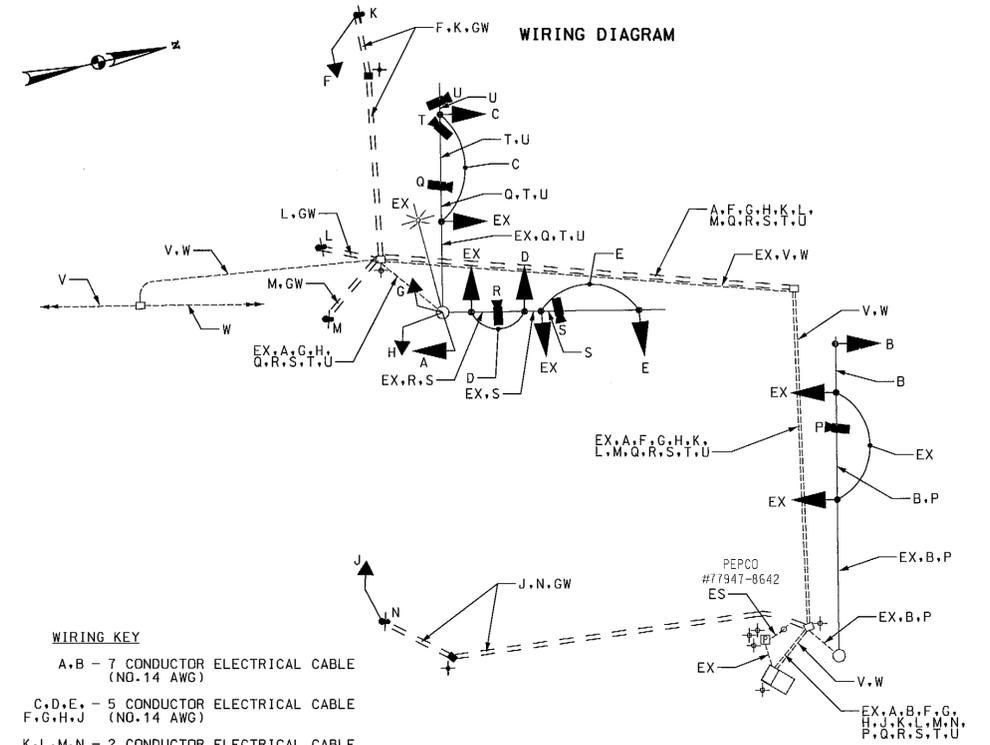
**B. EQUIPMENT TO BE FURNISHED AND/OR INSTALLED BY CONTRACTOR (CONT'D)**

ITEM NO.	QUANTITY	DESCRIPTION
8040	17.5 SF	INSTALL OVERHEAD OR GROUND MOUNTED SIGN (INCLUDING ALL HARDWARE)
8042	250 LF	NO. 6 AWG STRANDED BARE COPPER GROUND WIRE
8046	2 EA	FURNISH AND INSTALL ELECTRICAL HANDHOLE
8051	2 EA	CUT, CLEAN, GALVANIZE AND CAP TRAFFIC SIGNAL STRUCTURE
8053	810 LF	ELECTRICAL CABLE - 2 CONDUCTOR (NO. 14 AWG)
8055	900 LF	ELECTRICAL CABLE - 5 CONDUCTOR (NO. 14 AWG)
8056	360 LF	ELECTRICAL CABLE - 7 CONDUCTOR (NO. 14 AWG)

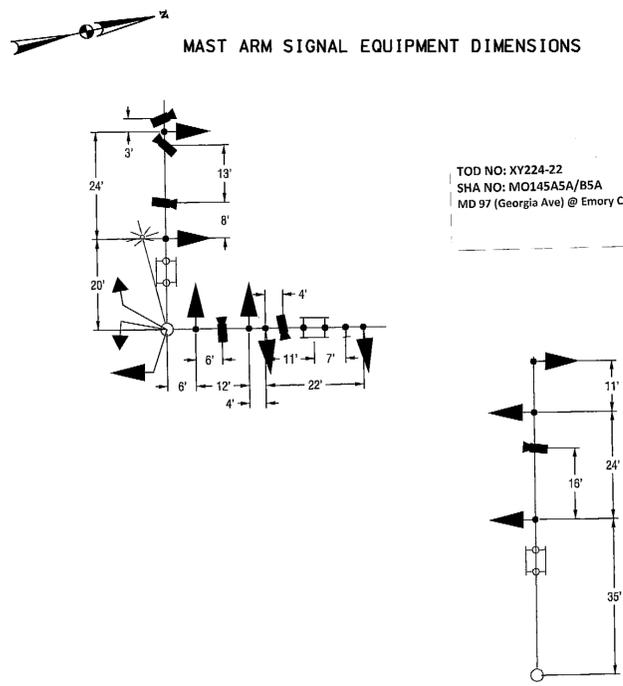
C. MATERIALS TO BE REMOVED BY THE CONTRACTOR SHALL BECOME THE PROPERTY OF THE SIGNAL CONTRACTOR UPON COMPLETION OF THE NEW SIGNAL.

**PHASE CHART**

PHASE	1	2	3	4	5	6	7	8	9	10	11	12	13	14
PHASE 1 AND 5	G/R	G/R	R	G/R	G/R	R	R	R	R	R	DW	DW	DW	DW
1 AND 5 MAY CHANGE TO 1 AND 6, 2 AND 5, OR 2 AND 6														
PHASE 1 AND 6	G/G	G/G	G	R	R	R	R	R	R	R	DW	DW	DW	DW
1 CHANGE	Y/G	Y/G	G	R	R	R	R	R	R	R	DW	DW	DW	DW
PHASE 2 AND 5	R	R	R	G/G	G/G	G	R	R	R	R	DW	DW	DW	DW
5 CHANGE	R	R	R	Y/G	Y/G	G	R	R	R	R	DW	DW	DW	DW
PHASE 2 AND 6	G	G	G	G	G	G	R	R	R	R	DW	DW	DW	DW
2 AND 6 CHANGE	Y	Y	Y	Y	Y	Y	R	R	R	R	DW	DW	DW	DW
PHASE 3	R	R	R	R	R	R	R	R	G/G	G/G	DW	DW	DW	DW
3 CHANGE	R	R	R	R	R	R	R	R	Y	Y	DW	DW	DW	DW
PHASE 4	R	R	R	R	R	R	G/G	G/G	R	R	DW	DW	DW	DW
4 CHANGE	R	R	R	R	R	R	Y	Y	R	R	DW	DW	DW	DW
PHASE 4 ALT.	R	R	R	R	R	R	G/G	G/G	R	R	WK	WK	WK	WK
PED CLEAR /COUNTDOWN	R	R	R	R	R	R	G/G	G/G	R	R	FLOW	FLOW	FLOW	FLOW
4 ALT. CHANGE	R	R	R	R	R	R	Y	Y	R	R	DW	DW	DW	DW
FLASHING OPERATION	FLY	FLY	FLY	FLY	FLY	FLY	FLR	FLR	FLR	FLR	DARK	DARK	DARK	DARK



**MAST ARM SIGNAL EQUIPMENT DIMENSIONS**



**WIRING KEY**

- A,B - 7 CONDUCTOR ELECTRICAL CABLE (NO. 14 AWG)
- C,D,E - 5 CONDUCTOR ELECTRICAL CABLE (NO. 14 AWG)
- F,G,H,J - 5 CONDUCTOR ELECTRICAL CABLE (NO. 14 AWG)
- K,L,M,N - 2 CONDUCTOR ELECTRICAL CABLE (NO. 14 AWG)
- P,Q,R,S,T,U - VIDEO DETECTION CABLE (3 CONDUCTOR NO. 8 AWG)
- V - EXISTING INTERCONNECT TO EMORY LA (50-PAIR COMMUNICATION CABLE)
- W - EXISTING INTERCONNECT TO OLD BALTIMORE RD (50-PAIR COMMUNICATION CABLE)
- GW - 1 CONDUCTOR STRANDED BARE COPPER GROUND WIRE (NO. 6 AWG)
- EX - EXISTING CABLES
- ES - EXISTING POWER SERVICE
- + - PROPOSED GROUND ROD
- + - EXISTING GROUND ROD

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

**MD 97 AT EMORY CHURCH RD  
ICB FULL SIGNAL CONVERSION**  
OLNEY, MD

**GENERAL INFORMATION SHEET**

SCALE N.T.S. DATE SEPTEMBER 27, 2012 CONTRACT NO. XY2245185

DESIGNED BY MF COUNTY MONTGOMERY  
DRAWN BY JEK/MF LOGMILE 15009710.30  
CHECKED BY KMP TMS NO. L490  
F.A.P. NO.  TOD NO.

TS NO. 4464A-GI DRAWING **SG-01** OF 02 SHEET NO. 01 OF 02

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