

**PROJECT DESCRIPTION**

**GENERAL**

THIS PROJECT INVOLVES A FULL RECONSTRUCTION OF THE TRAFFIC SIGNAL AT THE INTERSECTION OF MD 704 (MARTIN LUTHER KING JR. HIGHWAY) AT GLENARDEN PARKWAY IN PRINCE GEORGE'S COUNTY. THE EXISTING VEHICULAR SIGNAL HEADS WILL BE UPGRADED TO LED. IN ADDITION, ACCESSIBLE PUSHBUTTONS AND COUNTDOWN PEDESTRIAN SIGNALS WILL BE INSTALLED ON THE EAST LEG. MD 704 IS ASSUMED TO RUN IN AN EAST-WEST DIRECTION.

**INTERSECTION OPERATION**

THE INTERSECTION WILL CONTINUE TO OPERATE IN A NEMA SIX PHASE, SEMI TRAFFIC ACTUATED MODE WITH CONCURRENT PHASING ON THE SIDE STREET. THE EXISTING EAST- AND WESTBOUND EXCLUSIVE /PERMISSIVE PHASING WILL REMAIN. THE EXISTING ALTERNATE SIDE STREET PEDESTRIAN PHASE WILL ALSO REMAIN.

**CONTROLLER REQUIREMENTS**

INSTALL A NEW BASE MOUNTED CABINET AND FOUNDATION. THE SHA SIGNAL SHOP WILL INSTALL THE CONTROLLER, ALL ASSOCIATED HARNESSSES, ONE (1) 2 WIRE CENTRAL CONTROL UNIT, ONE (1) FOUR CHANNEL DETECTOR AMPLIFIER WITHIN THE EXISTING CABINET AND ONE (1) VIDEO DETECTION INTERFACE EQUIPMENT WITHIN THE CABINET.

**PHONE DROP**

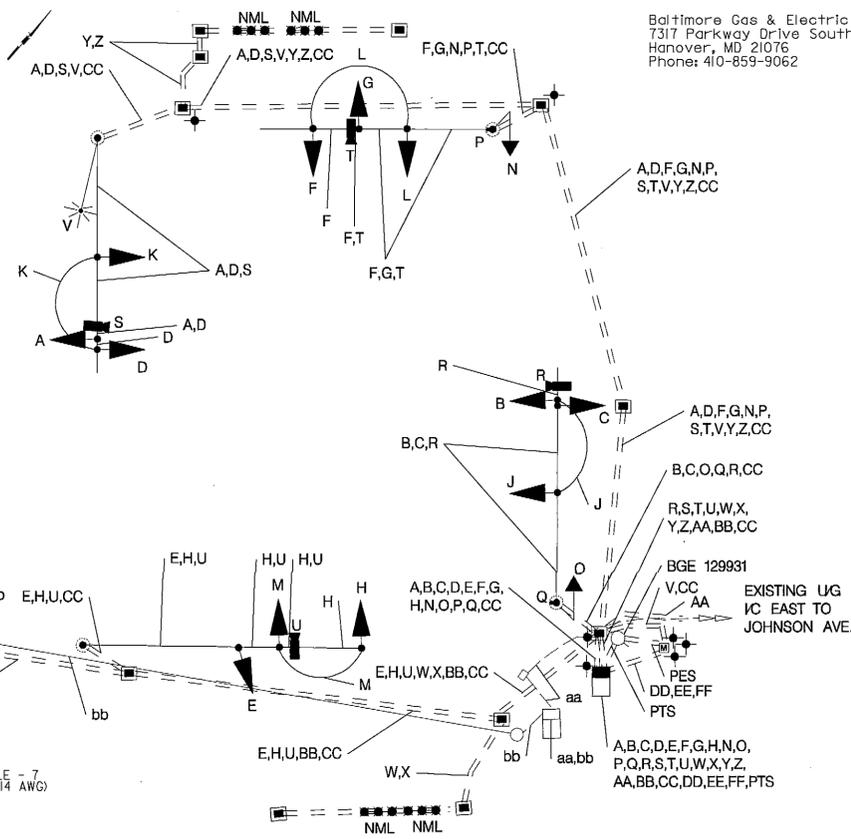
THE CONTRACTOR SHALL NOTIFY MR. ROBERT SNYDER OF THE SHA SIGNAL SHOP AT 410-787-7630 FOR THE PHONE DROP LINE INSTALLATION. THE CONTRACTOR IS TO PROVIDE MR. SNYDER WITH THE NEAREST STREET ADDRESS, ZIP CODE AND PHONE NUMBER.

**APS WILL FUNCTION AS FOLLOWS:**

TO CROSS MARTIN LUTHER KING JR. HIGHWAY

- A. WHEN A PEDESTRIAN LOCATES AND PASSES THE PUSHBUTTON FOR AN EXTENDED TIME, THE PUSHBUTTON MESSAGE WILL BE "WAIT TO CROSS MLK HIGHWAY AT GLENARDEN, CROSSWALK ANGLES LEFT."
- B. WHEN THE "WALK" PHASE BEGINS, THE MESSAGE WILL BE A RAPID TICK, WHICH WILL LAST FOR THE DURATION OF THE "WALK" PHASE.

**WIRING DIAGRAM**



- A B C D E F G H I J K L M N O P Q R U S T V W X Y Z
- BB - ELECTRICAL CABLE - 7 CONDUCTOR (NO. 14 AWG)
- BB - ELECTRICAL CABLE - 5 CONDUCTOR (NO. 14 AWG)
- BB - ELECTRICAL CABLE - 2 CONDUCTOR (NO. 14 AWG)
- BB - CONTROL CABLE - 250 FT. VIDEO DETECTION CAMERA TO CONTROLLER
- BB - CONTROL CABLE - 500 FT. VIDEO DETECTION CAMERA TO CONTROLLER
- BB - ELECTRICAL CABLE - 2 CONDUCTOR (NO. 12 AWG), TC
- BB - NON-INVASIVE MICROLOOP PROBE LEAD IN CABLE - 500 FOOT
- CC - PULL BACK EXISTING I/C CABLE EAST TO JOHNSON AVE.
- AA - REROUTE EXISTING I/C CABLE EAST TO JOHNSON AVE.
- bb - PULL BACK EXISTING I/C CABLE WEST TO HUBBARD RD.
- BB - REROUTE EXISTING I/C CABLE WEST TO HUBBARD RD.
- CC - NO. 6 STRANDED BARE COPPER GROUND WIRE
- DD - PROPOSED POWER SERVICE FEED, ELECTRICAL CABLE - 1 CONDUCTOR, NO. 4 AWG
- PES - PROPOSED UNDERGROUND ELECTRICAL SERVICE TO BE INSTALLED BY OTHERS
- PTS - PROPOSED UNDERGROUND TELEPHONE SERVICE TO BE INSTALLED BY OTHERS
- PROPOSED GROUND ROD - 3/4 IN. DIAMETER X 10 FOOT LENGTH
- PROPOSED METERED SERVICE PEDESTAL
- NML - NON INVASIVE MICROLOOP PROBE

**THE CONTACT PERSONS FOR DISTRICT #3 / OOTS ARE AS FOLLOWS:**

- District #3
- Mr. Brian Young  
Assistant District Engineer - Traffic  
Phone: 301-513-7358
- Mr. Augie Reblsh  
District Utility Engineer  
Phone: 301-513-7350
- Mr. Wayne Mowdy  
Assistant District Engineer - Maintenance  
Phone: 301-513-7304
- Mr. Kevin Nowak  
Assistant District Engineer - Construction  
Phone: 301-513-7336
- Office Of Traffic & Safety
- Mr. Richard L. Daff Sr.  
Chief, Traffic Operations Division  
Phone: 410-787-7630
- Mr. Robert Snyder  
Assistant Division Chief, Traffic Operations  
410-787-7630
- Mr. Edward Rodenhizer  
Team Leader, Signal Operations  
Phone: 410-787-7650
- Mr. Eugene Bailey  
Team Leader Sign Operations  
410-787-7670

The Power Company Representative is:  
Baltimore Gas & Electric  
7317 Parkway Drive South  
Hanover, MD 21076  
Phone: 410-859-9062

**EQUIPMENT LIST 'A'**

**EQUIPMENT TO BE FURNISHED BY THE SHA.**

ITEM NO.	QUANTITY	DESCRIPTION
9016	1 EA	[UPDATED] 4 CHANNEL DETECTOR AMPLIFIER
9044	1 EA	[UPDATED] CONTROLLER CABINET, SIZE 6
9086	1 EA	[UPDATED] VIDEO DETECTION INTERFACE EQUIPMENT: I-4 CAMERAS
9570	59 SF	[UPDATED] SHEET ALUMINUM GROUND MOUNTED SIGN 2 EA - SI-1 FYG (36 IN. x 36 IN.) 2 EA - M6-2 MOD FYG (21 IN. x 15 IN.) 1 EA - ASSOCIATED SHIELD ASSEMBLY "EAST, MD 704, RIGHT ARROW" (30 IN. x 51 IN.) 1 EA - ASSOCIATED SHIELD ASSEMBLY "EAST, MD 704, LEFT ARROW" (48 IN. x 75 IN.)
9571	81 SF	[UPDATED] SHEET ALUMINUM MAST ARM / POLE MOUNTED SIGNS: 2 EA - R10-3(I) (9 IN. x 15 IN.) "PUSH BUTTON TO CROSS MLK JR HWY" 1 EA - ASSOCIATED SHIELD ASSEMBLY "WEST, MD 704, RIGHT ARROW" (30 IN. x 51 IN.) 1 EA - ASSOCIATED SHIELD ASSEMBLY "WEST, MD 704, LEFT ARROW" (48 IN. x 75 IN.) 2 EA - D-3(I) (96 IN. x 16 IN.) "GLENARDEN PKWY" DUAL FACED 1 EA - R3-5(L) (30 IN. x 36 IN.) 1 EA - R3-5(R) (30 IN. x 36 IN.) 1 EA - R3-6(L) (30 IN. x 36 IN.)

**EQUIPMENT LIST 'C'**

**EQUIPMENT TO BE REMOVED AND RETURNED TO SHA.**

ITEM NO.	QUANTITY	DESCRIPTION
NONE		ALL REMOVED EQUIPMENT SHALL BECOME THE PROPERTY OF THE CONTRACTOR

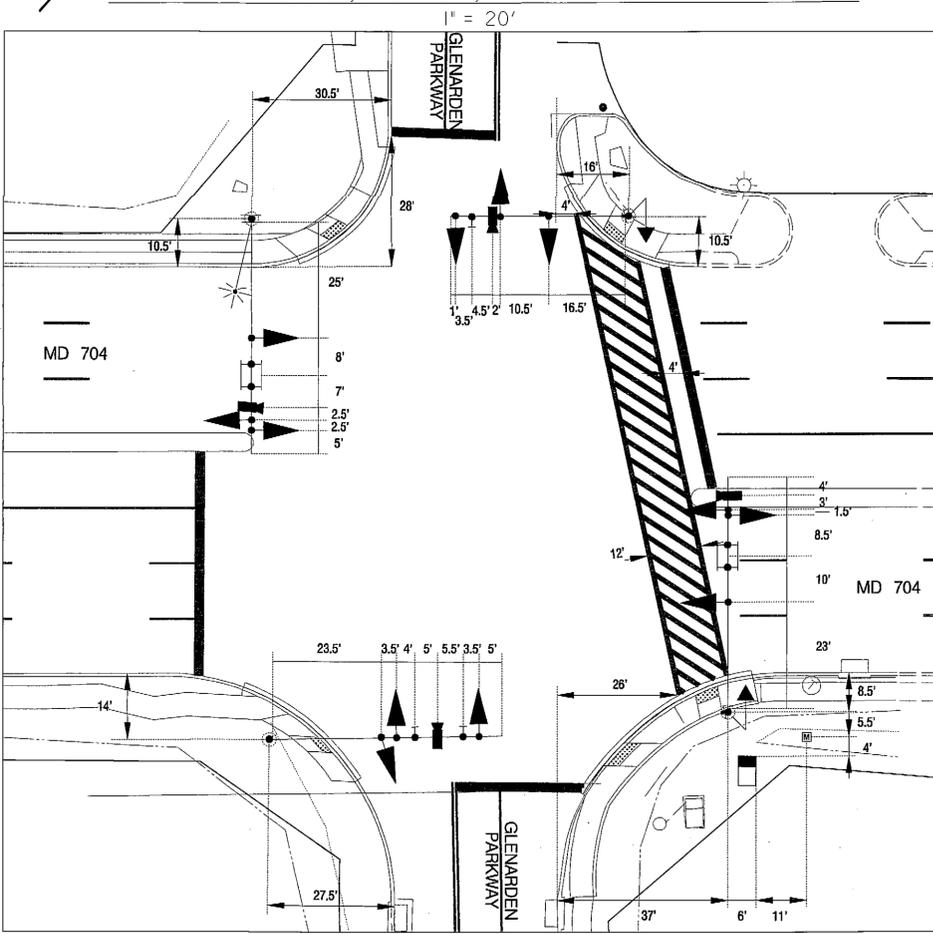
**EQUIPMENT LIST 'B'**

**EQUIPMENT TO BE FURNISHED AND INSTALLED BY THE CONTRACTOR.**

ITEM NO.	QUANTITY	DESCRIPTION
1003	3 EA	MAINTENANCE OF TRAFFIC
2002	4 CY	TEST PIT EXCAVATION
5001	2 EA	HEAT APPLIED WHITE PERMANENT PREFORMED THERMOPLASTIC PAVEMENT MARKING ARROWS
5002	4 EA	HEAT APPLIED WHITE PERMANENT PREFORMED THERMOPLASTIC PAVEMENT MARKING LETTERS
5004	700 LF	12 INCH HEAT APPLIED WHITE PERMANENT PREFORMED THERMOPLASTIC PAVEMENT MARKINGS
5005	175 LF	24 INCH HEAT APPLIED WHITE PERMANENT PREFORMED THERMOPLASTIC PAVEMENT MARKINGS
5006	500 LF	5 INCH HEAT APPLIED WHITE OR YELLOW PERMANENT PAVEMENT LINE MARKINGS
5007	800 LF	REMOVAL OF EXISTING PERMANENT PAVEMENT LINE MARKINGS - ANY WIDTH
6002	30 SF	5 INCH CONCRETE SIDEWALK
8001	1 EA	2 WIRE CENTRAL CONTROL UNIT
8003	6 EA	8 INCH LED SIGNAL HEAD SECTION
8006	1 EA	ANY SIZE LIGHTING ARM ON SIGNAL POLE WITH 250 WATT HPS LAMP AND LUMINAIRE
8007	2 EA	AUDIBLE/TACTILE PEDESTRIAN PUSHBUTTON
8013	2 EA	LED 16 INCH COUNTDOWN PEDESTRIAN SIGNAL HEAD SECTION - POLE MOUNT
8015	1 EA	MAST ARM POLE & 38 FT MAST ARM ANY 'T' DIMENSION
8018	3 EA	MAST ARM POLE & 50 FT MAST ARM ANY 'T' DIMENSION
8019	4 EA	MICROLOOP PROBE (ANY LENGTH) LEAD IN CABLE UP TO 1000 FT
8021	1 EA	REMOVE & DISPOSE OF MATERIAL & EQUIPMENT PER ASSIGNMENT
8025	4 EA	VIDEO DETECTION CAMERA & CABLE UP TO 500 FT
8031	200 LF	DISCONNECT, PULL-BACK AND REROUTE CABLES
8033	105 LF	SCHEDULE 80 RIGID PVC ELECTRICAL CONDUIT UP TO 4 INCHES - BORED
8034	300 LF	SCHEDULE 80 RIGID PVC ELECTRICAL CONDUIT UP TO 4 INCHES - SLOTTED
8035	450 LF	SCHEDULE 80 RIGID PVC ELECTRICAL CONDUIT UP TO 4 INCHES - TRENCHED
8036	58 LF	WOOD SIGN SUPPORTS UP TO 4 x 6
8038	140 SF	INSTALL OVERHEAD OR GROUND MOUNTED SIGN
8040	500 LF	NO. 6 AWG STRANDED BARE COPPER GROUND WIRE
8042	1 EA	METERED SERVICE PEDESTAL EMBEDDED
8044	100 LF	ELECTRICAL CABLE 1-CONDUCTOR NO. 4 AWG-THN/THWN
8046	11 EA	FURNISH AND INSTALL ELECTRICAL HANDHOLE
8050	38 EA	12 INCH LED VEHICULAR TRAFFIC SIGNAL HEAD SECTION
8054	250 LF	ELECTRICAL CABLE - 2 CONDUCTOR (NO. 14 AWG)
8056	350 LF	ELECTRICAL CABLE - 5 CONDUCTOR (NO. 14 AWG)
8057	1850 LF	ELECTRICAL CABLE - 7 CONDUCTOR (NO. 14 AWG)
8058	300 LF	ELECTRICAL CABLE - 2 CONDUCTOR (NO. 12 AWG), TC
8065	1 EA	INSTALL CONTROLLER AND CABINET - BASE MOUNT

TOD NO: XX444-19  
SHA NO: PG718A55/B55  
MD 704 @ GLENARDEN PKWY

**PROPOSED SIGNAL POLE, EQUIPMENT, APS AND PAVEMENT MARKING DETAIL**



**PHASE CHART**

	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	R	R	DW	DW
PHASE 1 AND 5 CHANGE TO 1 AND 6, 2 AND 5, OR 2 AND 6														
PHASE 1 AND 6	G-R	G-R	G	R	R	R	R	R	R	R	R	R	DW	DW
PHASE 1 CHANGE	Y	Y	G	R	R	R	R	R	R	R	R	R	DW	DW
PHASE 2 AND 5	R	R	R	G-R	G-R	G	R	R	R	R	R	R	DW	DW
PHASE 5 CHANGE	R	R	R	Y	Y	G	R	R	R	R	R	R	DW	DW
PHASE 2 AND 6	G	G	G	G	G	G	R	R	R	R	R	R	DW	DW
PHASE 2 AND 6 CHANGE	Y	Y	Y	Y	Y	Y	R	R	R	R	R	R	DW	DW
PHASE 4 AND 8	R	R	R	R	R	R	G	G	G	G	G	G	DW	DW
PHASE 4 AND 8 CHANGE	R	R	R	R	R	R	Y	Y	Y	Y	Y	Y	DW	DW
PHASE 4 AND 8 ALT.	R	R	R	R	R	R	G	G	G	G	G	G	W/K	W/K
PED CLEARANCE	R	R	R	R	R	R	G	G	G	G	G	G	FL/DW	FL/DW
PHASE 4 AND 8 ALT. CHANGE	R	R	R	R	R	R	Y	Y	Y	Y	Y	Y	DW	DW
FLASHING OPERATION	FL/Y	FL/Y	FL/Y	FL/Y	FL/Y	FL/Y	FL/R	FL/R	FL/R	FL/R	FL/R	FL/R	DARK	DARK

**SHA** STATE OF MARYLAND  
DEPARTMENT OF TRANSPORTATION  
STATE HIGHWAY ADMINISTRATION  
OFFICE OF TRAFFIC & SAFETY  
TRAFFIC ENGINEERING DESIGN DIVISION  
MD 704 (MARTIN LUTHER KING JR. HIGHWAY)  
AT GLENARDEN PARKWAY

**GENERAL INFORMATION**

SCALE: NONE ADVERTISED DATE: 12/20/08 CONTRACT NO.: XX4445185

DESIGNED BY: VGN COUNTY: PRINCE GEORGE'S  
DRAWN BY: VGN LOGMILE: 160070403.61  
CHECKED BY: BAB CSW TMS NO.: 1525  
F.A.P. NO.: TOD NO.:

TS NO. 548D-GI DRAWING SG-02 OF 02 SHEET NO. 2 OF 2

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