

**PROJECT DESCRIPTION**

**GENERAL**

THIS PROJECT INVOLVES THE MODIFICATION OF A TRAFFIC CONTROL SIGNAL DUE TO THE WIDENING OF THE WESTBOUND LEFT TURN LANE AT THE INTERSECTION OF MD 140 (BALTIMORE BOULEVARD) AND SANDYMOUNT ROAD IN CARROLL COUNTY.

MD 140 IS ASSUMED TO RUN IN AN EAST-WEST DIRECTION.

**INTERSECTION OPERATION**

THE INTERSECTION WILL CONTINUE TO OPERATE IN A NEMA 6 PHASE, FULL TRAFFIC ACTUATED MODE. EXCLUSIVE LEFT-TURN PHASING IS PROVIDED FOR EASTBOUND AND WESTBOUND MD 140. VIDEO DETECTION IS PROPOSED FOR LEFT-TURN PHASING ALONG EASTBOUND AND WESTBOUND MD 140.

**CONTROLLER REQUIREMENTS**

A VIDEO DETECTION INTERFACE SHALL BE INSTALLED INTO THE EXISTING BASE MOUNTED CONTROLLER CABINET. SHA SIGNAL SHOP FORCES TO PERFORM INTERNAL CABINET WIRING.

**PROJECT CONTACTS**

**THE CONTACT PERSONS FOR DISTRICT #7 ARE AS FOLLOWS:**

Mr. David Coyne  
District Engineer  
Phone: 301-624-8101

Mr. John Concannon  
Assistant District Engineer - Traffic  
Phone: 301-624-8140

Ms. Andrea Abend  
Assistant District Engineer - Utilities  
Phone: 301-624-8115

Mr. John Huchrowski  
Assistant District Engineer - Construction  
Phone: 301-624-8200

The Power Company Representative:  
Baltimore Gas & Electric  
Phone: 410-291-5682

**THE CONTACT PERSONS FOR OFFICE OF TRAFFIC AND SAFETY::**

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

Mr. Robert Snyder  
Assistant Division Chief - Traffic Operations Division  
Phone: 410-787-7630

Mr. Edward Rodenhizer  
Team Leader - Signal Operations  
Phone: 410-787-7650

Mr. Eugene Bailey  
Team Leader - Sign Operations  
Phone: 410-787-7676

**EQUIPMENT LIST 'A'**

EQUIPMENT TO BE FURNISHED BY THE SHA.

ITEM NO	QUANTITY	DESCRIPTION
900000	1 EA	VIDEO DETECTION INTERFACE EQUIPMENT: I-4 CAMERAS
900000	77 SF	[UPDATED] SHEET ALUMINUM MAST ARM/POLE MOUNTED SIGN I EACH - SHIELD ASSEMBLY (30" x 51") "EAST, MD 144, RIGHT ARROW" I EACH - SHIELD ASSEMBLY (30" x 51") "WEST, MD 144, RIGHT ARROW" I EACH - SHIELD ASSEMBLY (48" x 75") "WEST, MD 144, LEFT ARROW" I EACH - SHIELD ASSEMBLY (48" x 75") "EAST, MD 144, LEFT ARROW" I EACH - RI-2 (36")

**EQUIPMENT LIST 'B'**

EQUIPMENT TO BE FURNISHED AND INSTALLED BY THE CONTRACTOR.

ITEM NO	QUANTITY	DESCRIPTION
120500	1 LS	MAINTENANCE OF TRAFFIC
114280	45 LF	REMOVAL OF EXISTING PAVEMENT LINE MARKINGS, ANY WIDTH
585625	120 LF	24 INCH WHITE PREFORMED THERMOPLASTIC PAVEMENT MARKING LINES
800000	2 EA	INSTALL 90 DEGREE 3 INCH CONDUIT BEND IN EXISTING FOUNDATION
800000	615 LF	DISCONNECT, PULLBACK AND REROUTE EXISTING CABLE
800000	1 LS	REMOVE AND DISPOSE OF EXISTING MATERIAL AND EQUIPMENT
801104	12 LF	WOOD SIGN SUPPORTS 4 INCH X 4 INCH
802501	180 LF	NO. 6 AWG STRANDED BARE COPPER GROUND WIRE
805115	130 LF	3 INCH SCHEDULE 80 RIGID PVC CONDUIT - BORED
805118	210 LF	4 INCH SCHEDULE 80 RIGID PVC CONDUIT - BORED
805135	925 LF	3 INCH SCHEDULE 90 RIGID PVC CONDUIT - TRENCHED
810605	4 EA	NONINVASIVE DETECTOR, 1000 FOOT LEAD IN CABLE
811001	8 EA	FURNISH AND INSTALL ELECTRICAL HANDHOLE
813014	5 SF	INSTALL GROUND MOUNTED SIGN
813015	72 SF	INSTALL OVERHEAD SIGN
816001	3 EA	VIDEO DETECTION CAMERA
816005	3 EA	CONTROL CABLE, 250 FOOT, VIDEO DETECTION CAMERA TO CONTROLLER
837001	3 EA	GROUND ROD - 3/4 INCH DIAMETER x 10 FOOT LENGTH
860284	36 EA	12 INCH LED VEHICULAR TRAFFIC SIGNAL HEAD SECTION
861104	1515 LF	ELECTRICAL CABLE - 2 CONDUCTOR (ALUMINUM SHIELDED)
861105	225 LF	ELECTRICAL CABLE - 2 CONDUCTOR (NO. 12 AWG) TRAY CABLE
861107	80 LF	ELECTRICAL CABLE - 5 CONDUCTOR (NO. 14 AWG)
861108	1250 LF	ELECTRICAL CABLE - 7 CONDUCTOR (NO. 14 AWG)

**EQUIPMENT LIST 'C'**

EQUIPMENT TO BE REMOVED AND RETURNED TO SHA.

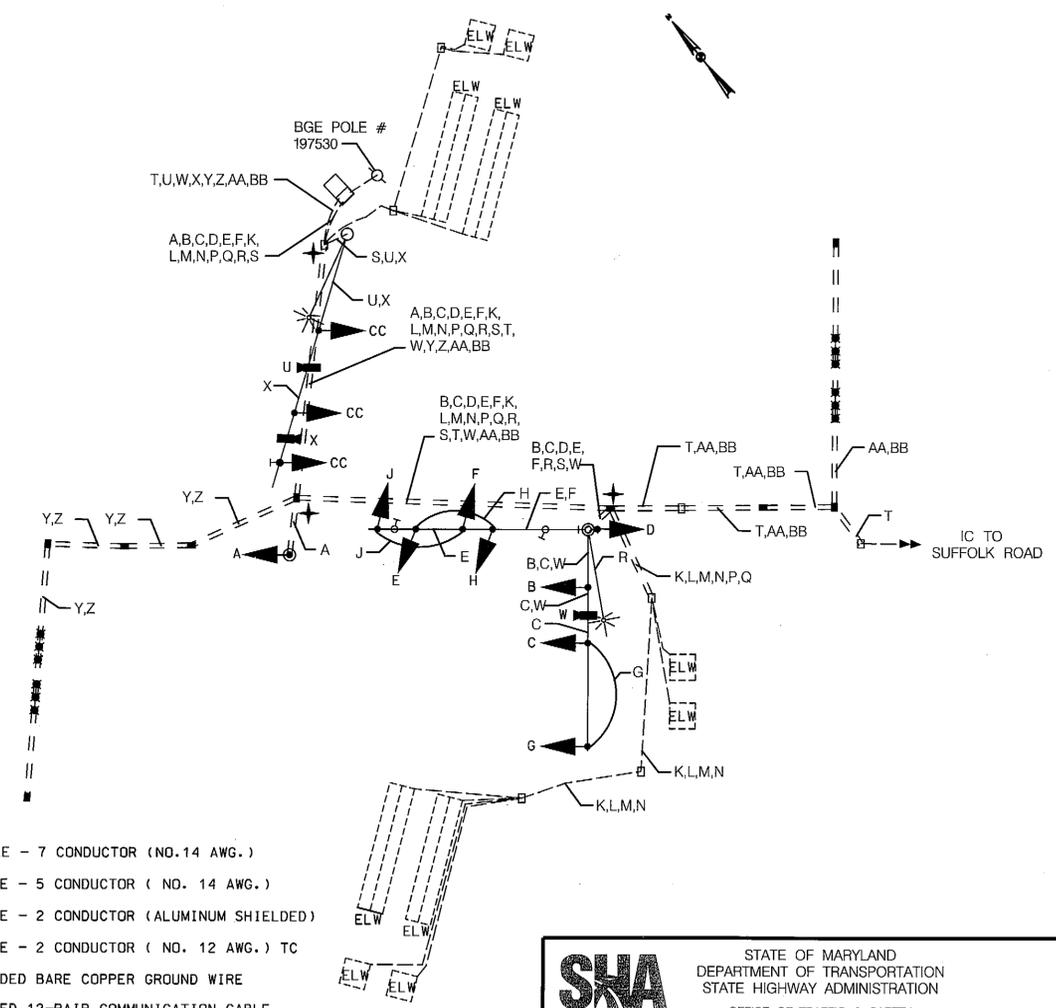
ITEM NO	QUANTITY	DESCRIPTION
NONE	NONE	NONE

ALL REMOVED MATERIALS ARE TO BECOME THE PROPERTY OF THE CONTRACTOR

**PHASE CHART**

	1	2	3	4	5	6	7	8	9	10	11	12
PHASE 1 + 5	G-	G-	R	R	G-	G-	R	R	R	R	R	R
1 + 5 CHANGE	G-	G-	G	G	G-	G-	R	R	R	R	R	R
PHASE 1 + 6	G-	G-	G	G	G-	G-	R	R	R	R	R	R
1 + 6 CHANGE	G-	G-	G	G	G-	G-	R	R	R	R	R	R
PHASE 2 + 5	G-	G-	R	R	G-	G-	G	G	R	R	R	R
2 + 5 CHANGE	G-	G-	R	R	G-	G-	G	G	R	R	R	R
PHASE 2 + 6	G-	G-	G	G	G-	G-	G	G	R	R	R	R
2 + 6 CHANGE	G-	G-	Y	Y	G-	G-	Y	Y	R	R	R	R
PHASE 4 & 8	G-	G-	R	R	G-	G-	R	R	G	G	G	G
4 & 8 CHANGE	G-	G-	R	R	G-	G-	R	R	Y	Y	Y	Y
FLASHING OPERATION	FL/R	FL/R	FL/Y	FL/Y	FL/R	FL/Y	FL/Y	FL/Y	FL/R	FL/R	FL/R	FL/R

**WIRING DIAGRAM**



- A, B, C, D, E, F - ELECTRICAL CABLE - 7 CONDUCTOR (NO. 14 AWG.)
- G, H, J - ELECTRICAL CABLE - 5 CONDUCTOR (NO. 14 AWG.)
- K, L, M, N, P, Q - ELECTRICAL CABLE - 2 CONDUCTOR (ALUMINUM SHIELDED)
- R - ELECTRICAL CABLE - 2 CONDUCTOR (NO. 12 AWG.) TC
- S - NO. 6 AWG STRANDED BARE COPPER GROUND WIRE
- T - EXISTING REROUTED 12-PAIR COMMUNICATION CABLE
- U, W, X - VIDEO DETECTION LEAD-IN CABLE
- Y, Z, AA, BB - MICROLOOP PROBE LEAD-IN CABLE
- CC - EXISTING CABLE TO BE UTILIZED
- ELW - EXISTING LOOP WIRE
- NML - NON-INVASIVE MICROLOOP PROBE
- + - PROPOSED GROUND ROD

**SHA** STATE OF MARYLAND  
DEPARTMENT OF TRANSPORTATION  
STATE HIGHWAY ADMINISTRATION  
OFFICE OF TRAFFIC & SAFETY  
TRAFFIC ENGINEERING DESIGN DIVISION  
MD 140 (BALTIMORE BOULEVARD) AT SANDYMOUNT ROAD

**RJM**  
RJM ENGINEERING, INC.  
CONSULTING ENGINEERS  
COLUMBIA, MARYLAND

**GENERAL INFORMATION**

SCALE: N.T.S. DATE: 12/2007 CONTRACT NO.: CL3445187

DESIGNED BY: P. WESTCOTT COUNTY: CARROLL  
DRAWN BY: P. WESTCOTT LOGMILE: 06014004.00  
CHECKED BY: M. ABEDI/E. RAUSER TIMS NO.: 1347  
FAP NO.: TOD NO.:

BY: \$USER\$