PROJECT DESCRIPTION

GENERAL

THIS PROJECT INVOLVES THE INSTALLATION OF A TRAFFIC CONTROL SIGNAL AT MD 99 AND WETHERBURN ROAD/MAPLEWOOD DRIVE. THE TRAFFIC SIGNAL WILL FUNCTION AS FULLY TRAFFIC ACTUATED AND OPERATE ON A PART-TIME BASIS. A QUEUE DETECTOR INSTALLED ON WETHERBURN ROAD WILL CALL THE TRAFFIC SIGNAL FROM FLASH TO FULL COLOR.

INTERSECTION OPERATION

THE INTERSECTION WILL OPERATE IN A NEMA SIX-PHASE, FULL-TRAFFIC-ACTUATED MODE WITH EXCLUSIVE LEFT-TURN PHASING FOR EAST- AND WESTBOUND TRAFFIC. CONCURRENT PHASING WILL BE PROVIDED FOR THE SIDE STREET. PEDESTRIAN PUSH BUTTONS ARE PROVIDED TO CROSS THE EAST LEG OF MD 99.

CONTROLLER REQUIREMENTS

INSTALL A NEW EIGHT-PHASE FULLY ACTUATED TRAFFIC SIGNAL CONTROLLER, LOOP DETECTOR AMPLIFIERS, PHONE DROP, AND ASSOCIATED HARNESSES IN A NEMA SIZE '6' BASE MOUNTED CABINET. LOOP DETECTORS ARE PROPOSED FOR PRESENCE DETECTION ON ALL APPROACHES. NON-INVASIVE MICROLOOP PROBES ARE PROPOSED FOR SETBACK DETECTION ALONG MD 99.

GENERAL

UPON COMPLETION OF THIS PROJECT, THE CONTRACTOR SHALL NOTIFY MR. ROBERT SNYDER OF SHA AT (410) 787-7635 TO ARRANGE FOR THE PHONE DROP LINE INSTALLATION. THE CONTRACTOR IS TO PROVIDE MR. SNYDER WITH THE NEAREST STREET ADDRESS, ZIP CODE AND PHONE NUMBER.

THE CONTACT PERSONS FOR DISTRICT #7 ARE AS FOLLOWS:

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

Mr. James Buckalew
District Utility Engineer
Phone: 301-624-8115

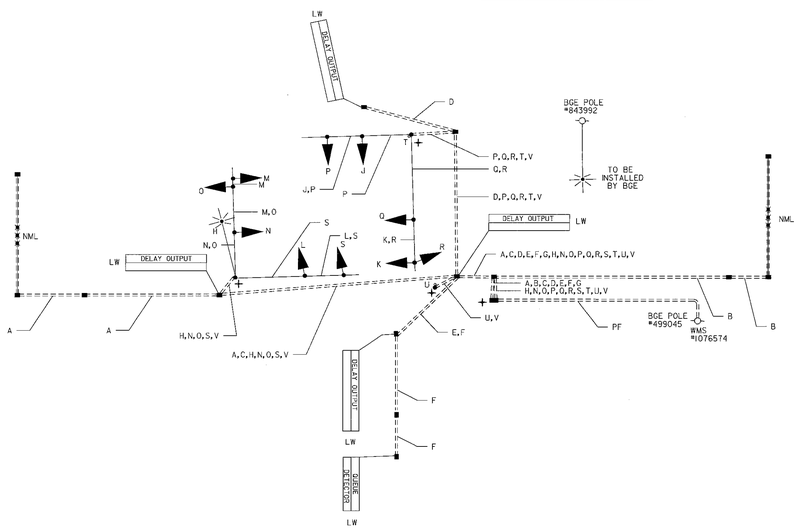
Mr. Dave Coyne
Assistant District Engineer - Maintenance
Phone: 301-624-8105

Mr. Edward Rodenhizer
Chief, SHA Traffic Signal Shop
Phone: 410-787-7650

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

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

WIRING LEGEND



A B	MICROLOOP PROBE LEAD-IN
C D E F G	2-CONDUCTOR ALUMINUM SHIELDED ELECTRICAL CABLE (NO.14 A.W.G.)
H	2-CONDUCTOR ELECTRICAL CABLE (NO.12 A.W.G.)
J K L M	5-CONDUCTOR ELECTRICAL CABLE (NO.14 A.W.G.)
N O P Q R S	7-CONDUCTOR ELECTRICAL CABLE (NO.14 A.W.G.)
T U	2-CONDUCTOR ELECTRICAL CABLE (NO.14 A.W.G.)
V	BARE COPPER STRANDED GROUND WIRE (NO. 6 A.W.G.)
NML	NON-INVASIVE MICROLOOP PROBE
LW	LOOP WIRE
+	¾ IN. x 10 FT. GROUND ROD
PF	PROPOSED UNDERGROUND POWER SERVICE TO BE INSTALLED BY BALTIMORE GAS & ELECTRIC

PHASE CHART

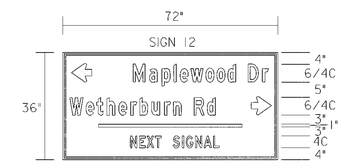
	1	2	3	4	5	6	7	8	9	10
PHASE 1 + 5	G/R	G/R	R	G/R	G/R	R	R	R	R	R
PHASE 1 + 5 CHANGE	THE CONTROLLER MAY SKIP TO PHASE 1 + 6, 2 + 5 OR 2 + 6									
PHASE 1 + 6	G/G	G/G	G	R	R	R	R	R	R	R
PHASE 1 + 6 CHANGE	Y/G	Y/G	G	R	R	R	R	R	R	R
PHASE 2 + 5	R	R	R	G/G	G/G	G	R	R	R	R
PHASE 2 + 5 CHANGE	R	R	R	Y/G	Y/G	G	R	R	R	R
PHASE 2 + 6	G	G	G	G	G	G	R	R	R	R
PED CLEARANCE	G	G	G	G	G	G	R	R	R	R
PHASE 2 + 6 CHANGE	Y	Y	Y	Y	Y	Y	R	R	R	R
PHASE 4 + 8	R	R	R	R	R	R	G	G	G	G
PHASE 4 + 8 CHANGE	R	R	R	R	R	R	Y	Y	Y	Y
PHASE 4 + 8 ALT	R	R	R	R	R	R	G	G	G	G
PED CLEARANCE	R	R	R	R	R	R	G	G	G	G
PHASE 4 + 8 ALT CHANGE	R	R	R	R	R	R	Y	Y	Y	Y
FLASHING OPERATION	FL/Y	FL/Y	FL/Y	FL/Y	FL/Y	FL/Y	FL/R	FL/R	FL/R	FL/R

EQUIPMENT LIST 'A'

EQUIPMENT TO BE FURNISHED BY THE SHA.

CAT CODE	QUANTITY	DESCRIPTION
9000	1 EA	[UPDATED] 40/50 MAST ARM TWIN X 21'-0" POLE
9013	1 EA	[UPDATED] 20 FOOT LIGHTING ARM, CLAMP ON
9016	4 EA	[UPDATED] FOUR-CHANNEL DETECTOR AMPLIFIER
9020	1 EA	[UPDATED] 40/40 MAST ARM TWIN X 27'-0" POLE
9044	1 EA	[UPDATED] CONTROLLER CABINET, SIZE 6
9570	62 SF	[UPDATED] SHEET ALUMINUM GROUND MOUNTED SIGN:
		2 EACH - D-3(3) (MOD) (72 IN. X 36 IN.)
		2 EACH - D95-25 SIGN (24 IN. X 24 IN.), W3-3 (36 IN. X 36 IN.)
9571	70 SF	[UPDATED] SHEET ALUMINUM MAST ARM/POLE MOUNTED SIGN:
		2 EACH - R10-12 SIGN (30 IN. X 36 IN.)
		2 EACH - M95-1 SIGN (72 IN. X 24 IN.)
		2 EACH - D-3(2) SIGN (72 IN. X 16 IN.)
		2 EACH - D-3(2) SIGN (66 IN. X 16 IN.)

SIGN DETAIL



EQUIPMENT LIST 'B'

EQUIPMENT TO BE FURNISHED AND INSTALLED BY THE CONTRACTOR.

ITEM NO.	QUANTITY	DESCRIPTION
1001	3 EA	MAINTENANCE OF TRAFFIC
2002	3 CY	TEST PIT EXCAVATION
5001	200 LF	REMOVAL OF EXISTING PERMANENT PAVEMENT LINE MARKINGS - ANY WIDTH
5004	400 LF	5 INCH HEAT-APPLIED YELLOW PERMANENT PREFORMED THERMOPLASTIC PAVEMENT MARKINGS
5005	400 LF	12 INCH HEAT APPLIED WHITE PERMANENT PREFORMED PAVEMENT MARKINGS
5006	75 LF	24 INCH HEAT APPLIED WHITE PERMANENT PREFORMED PAVEMENT MARKINGS
6004	36 SF	4 INCH CONCRETE SIDEWALK
8001	8 CY	CONCRETE FOUNDATION
8008	2 EA	INSTALL STEEL POLE & SINGLE OR TWIN
8013	1 EA	PED POLE (ANY SIZE)
8014	1 EA	REMOVE AND DISPOSE MATERIALS AND EQUIPMENT PER ASSIGNMENT
8021	66 LF	WOOD SIGN SUPPORTS 4 INCH x 6 INCH
8022	225 LF	NO. 6 AWG STRANDED BARE COPPER GROUND WIRE
8028	260 LF	3 INCH SCHEDULE 80 PVC CONDUIT - BORED
8029	160 LF	4 INCH SCHEDULE 80 PVC CONDUIT - BORED
8031	765 LF	3 INCH SCHEDULE 80 PVC CONDUIT - TRENCHED
8032	100 LF	4 INCH SCHEDULE 80 PVC CONDUIT - TRENCHED
8036	25 LF	1 INCH LIQUID-TIGHT FLEXIBLE NON-METALLIC CONDUIT FOR DETECTOR SLEEVE
8038	1 EA	ELECTRICAL UTILITY SERVICE EQUIPMENT 120/240 VOLTS 60 AMPS
8043	1 EA	NONINVASIVE DETECTOR, 500 FOOT LEAD IN CABLE
8044	1 EA	NONINVASIVE DETECTOR, 1000 FOOT LEAD IN CABLE
8045	14 EA	FURNISH AND INSTALL ELECTRICAL HANDHOLE
8047	62 SF	INSTALL GROUND MOUNTED SIGN
8048	70 SF	INSTALL OVERHEAD SIGN
8064	1 EA	250 WATT HIGH PRESSURE SODIUM LAMP AND LUMINAIRE
8069	4 EA	GROUND ROD-3/4 INCH DIAMETER x 10 FOOT LENGTH
8070	6 EA	8 INCH VEHICULAR TRAFFIC SIGNAL HEAD SECTION
8071	32 EA	12 INCH VEHICULAR TRAFFIC SIGNAL HEAD SECTION
8076	600 LF	ELECTRICAL CABLE - 2 CONDUCTOR (ALUMINUM SHIELDED)
8077	180 LF	ELECTRICAL CABLE - 2 CONDUCTOR (NO.14 AWG)
8079	100 LF	ELECTRICAL CABLE - 5 CONDUCTOR (NO.14 AWG)
8080	1,100 LF	ELECTRICAL CABLE - 7 CONDUCTOR (NO.14 AWG)
8081	150 LF	ELECTRICAL CABLE - 2 CONDUCTOR (NO.12 AWG) TC
8082	2,300 LF	LOOP WIRE ENCASED IN FLEXIBLE TUBING (NO.14 AWG)
8083	575 LF	SAW CUT FOR SIGNAL (LOOP DETECTOR)
8084	2 EA	PUSH BUTTON AND SIGN
8090	1 EA	INSTALL CONTROLLER AND CABINET - BASE MOUNT
NEGOT	1 LS	CLEARING AND GRUBBING
NEGOT	1 EA	INSTALL 20 FOOT LIGHTING ARM, CLAMP ON

STV Incorporated
engineers /architects /planners /scientists /construction managers
7125 Ambassador Road Baltimore, MD 21244-2722 (410) 944-9112

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

MD 99 AND WETHERBURN RD./MAPLEWOOD DR.
GENERAL INFORMATION

SHA #: HO095A59/B59/M59 TOD #: AT058-25

DRAWN BY: MRK	F.A.P. NO. SEE TITLE SHEET	TS NO. TS-4283	SHEET NO.
CHECKED BY: MTS	S.H.A. NO. AT3585185		
SCALE: NONE	COUNTY: HOWARD	T.I.M.S. NO. F 727	2 OF 2
DATE: OCTOBER 2003	LOG MILE: I3009905.02		

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02/20/07 PM 11/17/2003