PROJECT DESCRIPTION

GENERAL

THIS PROJECT INVOLVES THE RECONSTRUCTION OF THE TRAFFIC CONTROL SIGNAL AT MD 140 AND FRANKLIN BLVD./CHERRY HILL RD. IN BALTIMORE COUNTY. MD 140 WILL BE WIDENED ALONG THE EAST AND WEST SIDES TO PROVIDE A DOUBLE LEFT-TURN LANE IN THE NORTHBOUND DIRECTION. MD 140 IS ASSUMED TO RUN IN A NORTH - SOUTH DIRECTION.

INTERSECTION OPERATION

THE INTERSECTION WILL OPERATE IN A NEMA SIX-PHASE, FULL-TRAFFIC-ACTUATED MODE WITH EXCLUSIVE LEFT-TURN PHASING FOR NORTH- AND SOUTHBOUND TRAFFIC, AN OVERLAP FOR EASTBOUND RIGHT-TURNING TRAFFIC AND SIDE STREET SPLIT PHASING.

CONTROLLER REQUIREMENTS

THE EXISTING CONTROLLER, LOOP DETECTOR AMPLIFIERS, AND ASSOCIATED HARNESSES WILL REMAIN. VIDEO DETECTION WILL BE USED FOR PRESENCE DETECTION ON EACH APPROACH AND FOR ADVANCE DETECTION ON FRANKLIN BOULEVARD. NON-INVASIVE PROBES WILL BE USED FOR ADVANCE DETECTION ON MD 140.

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 #4 ARE AS FOLLOWS:

Mr. Dave Malkowski
District Engineer
Phone: 410-321-2800

Mr. Randall Scott
Assistant District Engineer - Traffic
Phone: 410-321-2800

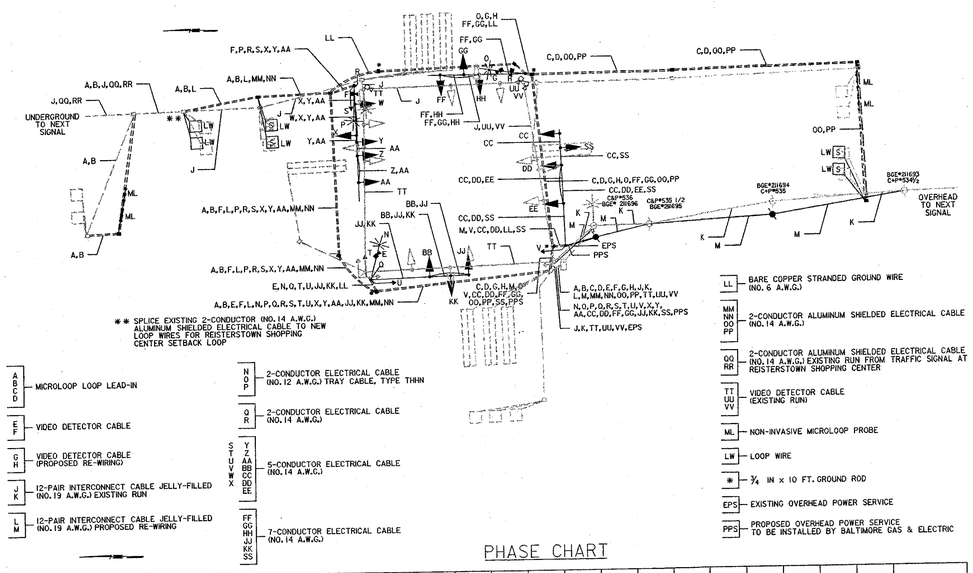
Mr. Joseph McMahon
District Utility Engineer
Phone: 410-321-2800

Mr. Dave Ramsey
Assistant District Engineer - Maintenance
Phone: 410-321-2800

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

The Power Company Representative is:
Baltimore Gas & Electric Company
Mr. Bernie Thurman
7317 Parkway Drive South
Hanover, Maryland 21076
Phone: 410-855-9030

WIRING LEGEND



PHASE CHART

	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19
PHASE 1 + 5	~~G~~	~~G~~	~~G~~	R	R	~~G~~	~~G~~	R	R	R	R	R/~~G~~	R	R	R	DW	DW	DW	DW
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/~~G~~	R	R	R	DW	DW	DW	DW
PHASE 1 + 6 CHANGE	~~Y~~	~~Y~~	~~Y~~	G	G	~~R~~	~~R~~	R	R	R	R	R/~~Y~~	R	R	R	DW	DW	DW	DW
PHASE 2 + 5	~~R~~	~~R~~	~~R~~	R	R	~~G~~	~~G~~	G	G	R	R	R	R	R	R	DW	DW	DW	DW
PHASE 2 + 5 CHANGE	~~R~~	~~R~~	~~R~~	R	R	~~Y~~	~~Y~~	G	G	R	R	R	R	R	R	DW	DW	DW	DW
PHASE 2 + 6	~~R~~	~~R~~	~~R~~	G	G	~~R~~	~~R~~	G	G	R	R	R	R	R	R	W	W	DW	DW
PED CLEARANCE	~~R~~	~~R~~	~~R~~	G	G	~~R~~	~~R~~	G	G	R	R	R	R	R	R	FDW	FDW	DW	DW
PHASE 2 + 6 CHANGE	~~R~~	~~R~~	~~R~~	Y	Y	~~R~~	~~R~~	Y	Y	R	R	R	R	R	R	DW	DW	DW	DW
PHASE 3	~~R~~	~~R~~	~~R~~	R	R	~~R~~	~~R~~	R	R	R	R	R	G/~~G~~	G/~~G~~	G	DW	DW	DW	DW
PHASE 3 CHANGE	~~R~~	~~R~~	~~R~~	R	R	~~R~~	~~R~~	R	R	R	R	R	Y	Y	Y	DW	DW	DW	DW
PHASE 3 ALT	~~R~~	~~R~~	~~R~~	R	R	~~R~~	~~R~~	R	R	R	R	R	G/~~G~~	G/~~G~~	G	DW	DW	W	W
PED CLEARANCE	~~R~~	~~R~~	~~R~~	R	R	~~R~~	~~R~~	R	R	R	R	R	G/~~G~~	G/~~G~~	G	DW	DW	FDW	FDW
PHASE 3 ALT CHANGE	~~R~~	~~R~~	~~R~~	R	R	~~R~~	~~R~~	R	R	R	R	R	Y	Y	Y	DW	DW	DW	DW
PHASE 4	~~R~~	~~R~~	~~R~~	R	R	~~R~~	~~R~~	R	R	G/~~G~~	G/~~G~~	G/~~G~~	R	R	R	DW	DW	DW	DW
PHASE 4 CHANGE	~~R~~	~~R~~	~~R~~	R	R	~~R~~	~~R~~	R	R	Y	Y	Y/~~Y~~	R	R	R	DW	DW	DW	DW
FLASHING OPERATION	FL/RA	FL/RA	FL/RA	FL/Y	FL/Y	FL/RA	FL/RA	FL/Y	FL/Y	FL/R	FL/R	FL/R	FL/R	FL/R	FL/R	DARK	DARK	DARK	DARK

EQUIPMENT LIST 'A'

EQUIPMENT TO BE FURNISHED BY THE SHA.

QUANTITY	CATEGORY CODE	DESCRIPTION
114 SF	900000	SHEET ALUMINUM SIGNS:
		4 EACH - D3-2 SIGN (16 IN. X VAR) MAST ARM MOUNT
		1 EACH - R10-12 (MOD) SIGN (30 IN. X 36 IN.) MAST ARM MOUNT
		1 EACH - R3-6L SIGN (30 IN. X 36 IN.) MAST ARM MOUNT
		4 EACH - R3-5L SIGN (30 IN. X 36 IN.) MAST ARM MOUNT
		2 EACH - R3-5R SIGN (30 IN. x 36 IN.) MAST ARM MOUNT

EQUIPMENT LIST 'B'

EQUIPMENT TO BE FURNISHED AND INSTALLED BY THE CONTRACTOR.

QUANTITY	CATEGORY CODE	DESCRIPTION
700 LF	585620	FURNISH AND INSTALL 12 IN. WHITE HEAT APPLIED THERMOPLASTIC PERMANENT PREFORMED PAVEMENT MARKING (FOR CROSSWALKS)
180 LF	585624	FURNISH AND INSTALL 24 IN. WHITE HEAT APPLIED THERMOPLASTIC PERMANENT PREFORMED PAVEMENT MARKING (FOR STOP LINE)
19 CY	801004	FURNISH AND INSTALL CONCRETE FOR SIGNAL POLE FOUNDATION
4 EA	837001	FURNISH AND INSTALL GROUND ROD - 3/4 IN. DIAMETER X 10 FT. LENGTH
100 LF	802501	FURNISH AND INSTALL NO. 6 A.W.G. STRANDED BARE COPPER GROUND WIRE
550 LF	870160	FURNISH AND INSTALL 2 IN. DIAMETER RIGID PVC ELECTRICAL CONDUIT (SCHEDULE 80) - TRENCHED
60 LF	870163	FURNISH AND INSTALL 3 IN. DIAMETER RIGID PVC ELECTRICAL CONDUIT (SCHEDULE 80) - TRENCHED
140 LF	805150	FURNISH AND INSTALL 3 IN. DIAMETER RIGID PVC ELECTRICAL CONDUIT (SCHEDULE 80) - SLOTTED
75 LF	870166	FURNISH AND INSTALL 4 IN. DIAMETER RIGID PVC ELECTRICAL CONDUIT (SCHEDULE 80) - TRENCHED
340 LF	805155	FURNISH AND INSTALL 4 IN. DIAMETER RIGID PVC ELECTRICAL CONDUIT (SCHEDULE 80) - SLOTTED
60 LF	805160	FURNISH AND INSTALL 1 IN. LIQUID-TIGHT NON-METALLIC CONDUIT FOR DETECTOR SLEEVE
30 LF	805010	FURNISH AND INSTALL 1 IN. ELECTRICAL CONDUIT - GALVANIZED RISER FOR PHONE DROP
3 EA	831010	FURNISH AND INSTALL 250 WATT HPS LAMP AND LUMINAIRE WITH PHOTOCELL
3 EA	866104	FURNISH AND INSTALL 20-FOOT LIGHTING ARM FOR TRAFFIC SIGNAL STRUCTURE
2,000 LF	861104	FURNISH AND INSTALL ELECTRICAL CABLE - 2 CONDUCTOR ALUMINUM SHIELDED (NO.14 A.W.G.)
780 LF	861116	FURNISH AND INSTALL ELECTRICAL CABLE - 2 CONDUCTOR (NO.12 A.W.G)
2,575 LF	861107	FURNISH AND INSTALL ELECTRICAL CABLE - 5 CONDUCTOR (NO.14 A.W.G.)
1,260 LF	861108	FURNISH AND INSTALL ELECTRICAL CABLE - 7 CONDUCTOR (NO.14 A.W.G.)
100 LF	861117	FURNISH AND INSTALL ELECTRICAL CABLE - 3 WIRE (NO. 4 A.W.G.)
850 LF	862101	FURNISH AND INSTALL LOOP WIRE ENCASED IN FLEXIBLE TUBING (NO.14 A.W.G.)

EQUIPMENT LIST 'B' (CONTINUED)

EQUIPMENT TO BE FURNISHED AND INSTALLED BY THE CONTRACTOR.

QUANTITY	CATEGORY CODE	DESCRIPTION
675 LF	862102	FURNISH AND INSTALL SAW CUT FOR SIGNAL (LOOP DETECTOR)
4 LF	810011	FURNISH AND INSTALL LOOPWIRE SPLICED TO EXISTING 2-CONDUCTOR (ALUMINUM SHIELDED)
1 EA	807205	FURNISH AND INSTALL CONTROL AND DISTRIBUTION OF EQUIPMENT
12 EA	811001	FURNISH AND INSTALL ELECTRICAL HANDHOLE
24 LF	801104	FURNISH AND INSTALL 4 IN. X 4 IN. WOOD SIGN SUPPORTS
79 SF	813006	RELOCATE SIGNS FROM EXISTING OVERHEAD STRUCTURE
1 120 SF	801706	REMOVE SIGNS FROM EXISTING OVERHEAD STRUCTURE
181 SF	813015	INSTALL OVERHEAD SIGNS
1 45 EA	860272	FURNISH AND INSTALL 12 IN. VEHICULAR TRAFFIC SIGNAL HEAD
6 EA	860270	FURNISH AND INSTALL 8 IN. VEHICULAR TRAFFIC SIGNAL HEAD SECTION
8 EA	860278	FURNISH AND INSTALL 12 IN. PEDESTRIAN TRAFFIC SIGNAL HEAD SECTION
2 EA	865001	FURNISH AND INSTALL PUSH BUTTONS AND SIGNS
1 EA	818041	FURNISH AND INSTALL 27' STEEL POLE WITH A SINGLE 60 FT. MAST ARM
3 EA	818036	FURNISH AND INSTALL 27' STEEL POLE WITH A SINGLE 50 FT. MAST ARM
1,500 LF	800000	REWIRE 12-PAIR COMMUNICATION CABLE, JELLY FILLED (NO.19 A.W.G. - SELF SUPPORTING)
1 EA	800000	FURNISH AND INSTALL CONTROL CABLE, 250 FT., VIDEO DETECTION CAMERA TO CONTROLLER
1 EA	800000	FURNISH AND INSTALL CONTROL CABLE, 500 FT., VIDEO DETECTION CAMERA TO CONTROLLER
1 EA	800000	FURNISH AND INSTALL VIDEO DETECTOR CAMERA
3 EA	800000	RELOCATE VIDEO DETECTOR CAMERA FROM EXISTING POLE TO PROPOSED LIGHTING ARM
1 LS	800000	REMOVE AND DISPOSE OF EXISTING SIGNAL EQUIPMENT AND MATERIAL
4 EA	800000	FURNISH AND INSTALL NON-INVASIVE DETECTOR, 1,000 FOOT LEAD-IN CABLE
140 LF	800000	FURNISH AND INSTALL NON-INVASIVE DETECTOR, CARRIER PIPE
1 EA	860292	CUT, CLEAN, GALVANIZE AND CAP TRAFFIC SIGNAL STRUCTURE
420 LF	861105	FURNISH AND INSTALL ELECTRICAL CABLE - 2 CONDUCTOR (NO.14 A.W.G.)

SP-2

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

REVISIONS	APPROVALS
1 ADDENDUM NO. 1 3/7/02	TEAM LEADER, TRAFFIC ENGINEERING DESIGN DIVISION
	ASST. CHIEF TRAFFIC ENGINEERING DESIGN DIVISION
	CHIEF, TRAFFIC ENGINEERING DESIGN DIVISION
	DIRECTOR, TRAFFIC & SAFETY

ORIGINAL ON FILE

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

DRAWN BY: W.R. SMITH	F.A.P. NO. SEE TITLE SHEET	TS NO. 2159 D	SHEET NO.
CHECKED BY: S.E. WEBER	S.H.A. NO. BW 996M82		
SCALE: NONE	COUNTY: BALTIMORE	T.I.M.S. NO. E-557	10 OF 12
DATE: JANUARY, 1986	LOG MILE:		