DRILL HOLES

BORDER REV. DATE: June 1, 2004

PROJECT DESCRIPTION

I. GENERAL

This project involves the modification of an existing Traffic Control Signal at the intersection of MD 648E (Baltimore Annapolis Blvd) and Furnace Branch Road in Anne Arundel County. LED Countdown Pedestrian signals with audible pushbuttons shall be added to the north and east legs at this intersection. All signal heads shall be upgraded to "LED" signal heads at this intersection. MD 648E is assumed to run an north-south direction.

II. INTERSECTION OPERATION

1. The intersection is to operate in a NEMA four-phase, full-actuated mode, with the MD 648E (Baltimore Annapolis Blvd) approaches continuing to run concurrently. The existing exclusive/permissive left turn phase shall remain in operation for the southbound approach of MD 648E (Baltimore Annapolis Blvd). A pedestrian phase with pushbutton actuation shall be added across the north leg of MD 648E (Baltimore Annapolis Blvd). A pedestrian phase with pushbutton actuation shall be added across Furnace Branch Rd.

2. The existing full-traffic-actuated, eight-phase controller with all necessary equipment housed in a NEMA size "6" base-mounted cabinet shall be utilized at this intersection.

III. SPECIAL NOTES

1. The Contractor shall be responsible for terminating all signal cables, to the appropriate terminals and shall properly label each cable.

2. All controller cabinet wiring will be performed by the S.H.A. Signal Shop Contact Mr. Ed Rodenhizer at (410) 787-7650 seventy-two hours in advance of intended work.

3. All underground and overhead utilities shown on these plans are schematic only and may not be complete. The Contractor shall be responsible for notifying Miss Utility prior to construction so that all utilities may be located in the field. If the Contractor perceives that a conflict between the utilities and the traffic signal will occur, the Contractor shall notify the Project Engineer immediately so that the conflict may be resolved.

The contact persons for District #5 are as follows:

Ms. Kim Tran
Assistant District Engineer - Traffic
Phone: (410) 841-1003

Mr. Charles George
Assistant District Engineer - Maintenance
Phone: (410) 841-1002

Mr. John Mays
Assistant District Engineer - Utility
Phone: (410) 841-1005

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

Mr. Ed Rodenhizer
Signal Shop
410-787-7652

Mr. Sonny Bailey
Sign Shop
410-787-7670

EQUIPMENT LIST

A. EQUIPMENT TO BE SUPPLIED BY S.H.A..

ITEM NO.	DESCRIPTION	QUANTITY
9000	FLAT SHEET ALUMINUM SIGNS	3 SF
	R10-4(1)MOD (12" X 9") (NOTE: SIGN TO READ "PUSH BUTTON TO CROSS "BALTIMORE ANNAPOLIS BLVD"	2 EA
	R10-4(1)MOD (12"X9") (NOTE: SIGN TO READ "PUSH BUTTON TO CROSS FURNACE BRANCH ROAD"	2 EA

EQUIPMENT LIST (CONT.)

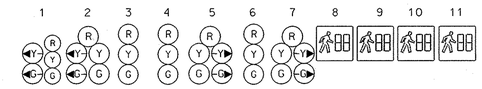
B. EQUIPMENT TO BE FURNISHED AND/OR INSTALLED BY THE CONTRACTOR

ITEM NO.	DESCRIPTION	QUANTITY
1001	Maintenance of traffic per assignment.	1 EA
2002	Test Pit Excavation	4 C.Y.
8002	12" red or green LED signal head section	15 EA
8003	12" yellow LED signal head section	11 EA
8006	2 wire Central Control unit	1 EA
8011	8" LED (R,Y,G) signal head section	3 EA
8014	Audible/tactile pedestrian pushbutton station & signs.	4 EA
8015	Breakaway pedestal pole (10')	4 EA
8022	Down guy with anchors.	1 EA
8024	LED 16" countdown pedestrian signal head.	4 EA
8028	Remove and dispose of existing equipment per assignment.	1 EA
8031	2" schedule 80 rigid polyvinyl chloride conduit - trenched.	200 L.F.
8037	Detectable warning surfaces	8 S.F.
8040	Concrete for signal foundation	4 C.Y.
8043	No. 6 AWG stranded bare copper ground wire.	140 L.F.
8048	4" schedule 80 rigid polyvinyl chloride conduit - bored.	70 L.F.
8062	Furnish and install electrical handhole.	2 EA
8063	Install ground mounted sign.	3 S.F.
8070	Ground rod 3/4" dia. x 10' length.	2 EA
8076	Electrical cable - 2 conductor (No. 14 AWG).	750 L.F.
8078	Electrical cable - 5 conductor (No. 14 AWG).	760 L.F.
8079	Electrical cable - 7 conductor (No. 14 AWG).	185 L.F.

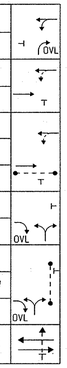
C. EQUIPMENT TO BE REMOVED

All other removed signal materials are to become property of the contractor.

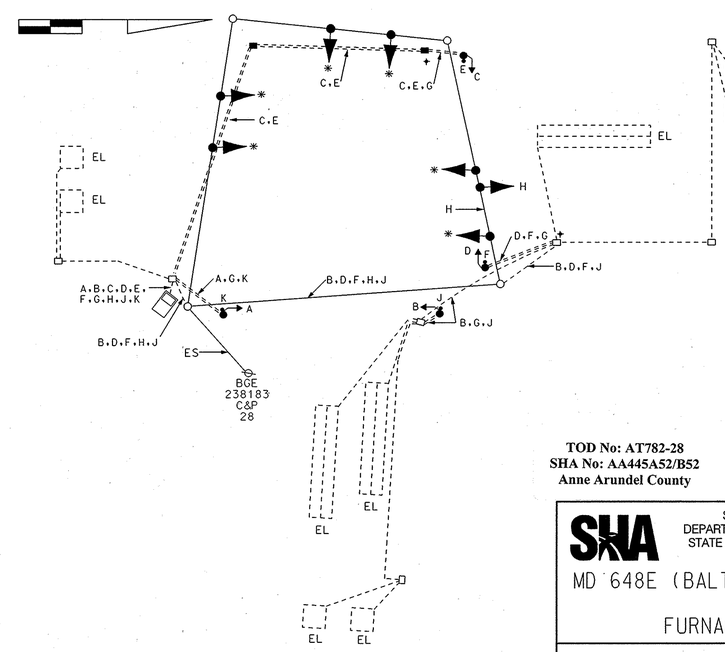
PHASE CHART



	1	2	3	4	5	6	7	8	9	10	11
PHASE 2 & 5	◄G-/G	◄G-/G	R	R	R	R	G/-G►	DW	DW	DW	DW
2 & 5 CHANGE	◄Y-/G	◄Y-/G	R	R	R	R	Y/-G►	DW	DW	DW	DW
PHASE 2 & 6	G	G	G	G	G	R	R	DW	DW	DW	DW
2 & 6 CHANGE	Y	Y	Y	Y	Y	R	R	DW	DW	DW	DW
PHASE 2 & 6 ALT	G	G	G	G	G	R	R	WK	WK	DW	DW
PED CLEAR / COUNTDOWN	G	G	G	G	G	R	R	FL/DW	FL/DW	DW	DW
2 & 6 CHANGE ALT	Y	Y	Y	Y	Y	R	R	DW	DW	DW	DW
PHASE 4	R	R	R	R	R -G►	G	G	DW	DW	DW	DW
4 CHANGE	R	R	R	R	R -Y►	Y	Y	DW	DW	DW	DW
PHASE 4 ALT	R	R	R	R	R -G►	G	G	DW	DW	WK	WK
PED CLEAR / COUNTDOWN	R	R	R	R	R -G►	G	G	DW	DW	FL/DW	FL/DW
4 ALT CHANGE	R	R	R	R	R -Y►	Y	Y	DW	DW	DW	DW
FLASHING OPERATION	FL/Y	FL/Y	FL/Y	FL/Y	FL/Y	FL/R	FL/R	DARK	DARK	DARK	DARK



WIRING DIAGRAM



WIRING KEY

A, B, C, D — 5-CONDUCTOR ELECTRICAL CABLE (NO. 14 A.W.G)

E, F, J, K — 2-CONDUCTOR ELECTRICAL CABLE (NO. 14 A.W.G)

G - STRANDED BARE COPPER GROUND WIRE (NO. 6 A.W.G.)

H - 7-CONDUCTOR ELECTRICAL CABLE (NO. 14 A.W.G)

✱ - USE EXISTING WIRING

EL - LOOP WIRE (NO. 14 A.W.G.) EXISTING

ES - EXISTING OVERHEAD SERVICE TO BE MAINTAINED BY BG&E

✦ - GROUND ROD

TOD No: AT782-28
SHA No: AA445A52/B52
Anne Arundel County

STATE OF MARYLAND
DEPARTMENT OF TRANSPORTATION
STATE HIGHWAY ADMINISTRATION

MD 648E (BALTIMORE ANNAPOLIS BLVD) AND FURNACE BRANCH ROAD

STREET TRAFFIC STUDIES, LTD.
400 Crain Hwy.,NW.
Glen Burnie,MD 21061
Ph (410) 590-5500
Fax (410) 590-6637

4929GI.DGN D6-55

PLOTTED: $DATETIME$
FILE: $FILE$

SCALE NONE	DATE 1/5/06	CONTRACT NO. AT7825185	
DESIGNED BY JA		COUNTY ANNE ARUNDEL	
DRAWN BY JA		LOGMILE 02E64806.07	
CHECKED BY		TIMS NO. H246	
F.A.P. NO.		TOD NO.	
TS NO. 1467C	DRAWING NO. 2 OF 2	SHEET NO. OF	