DRILL HOLES

BORDER REV. DATE: June 1, 2004

PROJECT DESCRIPTION

I. GENERAL

This project involves the modification of an existing Traffic Control Signal with street lighting and interconnect at the intersection of MD 410 (East-West Hwy) and Waverly Street in Montgomery County. Countdown pedestrian signals with audible pushbuttons shall be installed at this location. MD 410 (East-West Hwy) is assumed to run an east-west direction.

II. INTERSECTION OPERATION

1. The intersection shall continue to operate in a NEMA four-phase, semi-actuated mode, with the MD 410 (East-West Hwy) approaches running concurrently. The pedestrian phases across both legs of MD 410 (East-West Hwy) shall now be Countdown pedestrian phases with audible pushbutton actuation. The pedestrian phases across Waverly Street shall now be Countdown pedestrian phases with audible pushbuttons on recall. Farside sampling stations for westbound MD 410 left turns at MD 355 shall continue to be provided at this intersection. The Waverly Street approaches shall also continue to run concurrently.

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.

3. Montgomery County signal shop shall instal APS control unit into controller cabinet. The Contractor shall deliver the Control Unit and audible pushbuttons to the Montgomery County Signal Shop for testing and programming.

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 Montgomery County. Signal Shop Contact Mr. Kamal hamudat (240) 777-8761 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.

4. APS will function as follows:

FOR MD 410 (EAST WEST HIGHWAY)

a When pedestrian locates and presses pushbutton for an extended time, the pushbutton unit will be " Wait to cross East West Highway."

b. When WALK phase begins, the message will be a rapid tick which will last for the duration of the WALK phase.

FOR WAVERLY STREET

a When pedestrian locates and presses pushbutton for an extended time, the pushbutton unit will be " Wait to cross Waverly Street".

b. When WALK phase begins, the message will be a rapid tick which will last for the duration of the WALK phase.

The contact persons for District #3 (Montgomery County) are as follows:

Mr. Jeff Wentz
Assistant District Engineer - Traffic
Phone: (301) 513-7358

Mr. Wayne Mowdy
Assistant District Engineer - Maintenance
Phone: (301) 513-7304

Mr. Augie Rebish
District Engineer - Utility
Phone: (301) 513-7350

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
410-787-7676

EQUIPMENT LIST

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

CAT NO.	DESCRIPTION	QUANTITY
973023	SHEET ALUMINIUM SIGNS	8 SF
	Pedestrian education R10-3(1) mod sign. (Note: Sign to read "PUSHBUTTON TO CROSS EAST WEST HIGHWAY").	4 EA
	Pedestrian education R10-3(1) mod sign. (Note: Sign to read "PUSHBUTTON TO CROSS WAVERLY STREET")	4 EA

EQUIPMENT LIST (CONT.)

B. EQUIPMENT TO BE FURNISHED AND INSTALLED BY THE CONTRACTOR

CAT NO.	DESCRIPTION	QUANTITY
203030	TEST PIT EXCAVATION	6 CY
800000A	16" COUNTDOWN PEDESTRIAN SIGNAL HEAD	8 EA
800000A	2 WIRE CONTROL UNIT	1 EA
800000A	AUDIBLE TACTILE PEDESTRIAN PUSHBUTTON STATION AND SIGNS	8 EA
1 800000A	~~3 WIRE,~~ 1 CONDUCTOR (No. 250 KCMIL) ELECTRICAL CABLE	~~200~~ 350 LF
801004	CONCRETE FOR SIGNAL FOUNDATION	4.2 CY
802501	NO. 6 AWG STRANDED BARE COPPER GROUND WIRE	150 LF
805135	3 INCH SCHEDULE 80 RIGID PVC CONDUIT-TRENCHED	100 LF
807202	METERED SERVICE PEDESTAL	1 SF
813015	INSTALL OVERHEAD SIGN	8 EA
1 818004	10 FOOT BREAKAWAY PEDESTAL POLE (PAINTED FED # 595a-20040)	6 EA
860284	12 INCH LED VEHICULAR TRAFFIC SIGNAL HEAD SECTION	24 EA
860294	PAINT INSTALLED TRAFFIC SIGNAL STRUCTURE (BROWN)	6 LF
861105	ELECTRICAL CABLE - 2 CONDUCTOR (NO. 14 AWG)	960 LF
861107	ELECTRICAL CABLE - 5 CONDUCTOR (NO. 14 AWG)	1000 EA
1 861108	ELECTRICAL CABLE - 7 CONDUCTOR (NO. 14 AWG)	155 LF
861116	ELECTRICAL CABLE - 2 CONDUCTOR (NO. 12 AWG) TC	180 LF
1 ~~973001~~ 800000	REMOVE AND SALVAGE EXISTING EQUIPMENT	1 ~~LS~~ EA

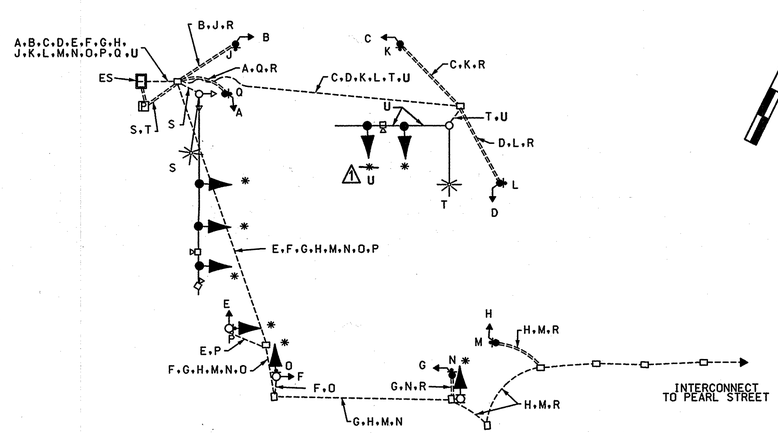
C. EQUIPMENT TO BE REMOVED

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

PHASE CHART

	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
	R Y G	R Y G	R Y G	R Y G	R Y G	R Y G	R Y G	R Y G								
PHASE 2	G	G	G	G	R	R	R	R	WK	WK	WK	WK	DW	DW	DW	DW
PED CLEAR / COUNTDOWN	G	G	G	G	R	R	R	R	FL/DW	FL/DW	FL/DW	FL/DW	DW	DW	DW	DW
2 CHANGE	Y	Y	Y	Y	R	R	R	R	DW	DW	DW	DW	DW	DW	DW	DW
PHASE 3 & 8	R	R	R	R	G	G	R	R	DW	DW	DW	DW	DW	DW	DW	DW
3 & 8 CHANGE	R	R	R	R	G	G	R	R	DW	DW	DW	DW	DW	DW	DW	DW
PHASE 4 & 8	R	R	R	R	G	G	G	G	DW	DW	DW	DW	DW	DW	DW	DW
4 & 8 CHANGE	R	R	R	R	Y	Y	Y	Y	DW	DW	DW	DW	DW	DW	DW	DW
PHASE 3 & 8 ALT	R	R	R	R	G	G	R	R	DW	DW	DW	DW	DW	WK	WK	DW
3 & 8 ALT CHANGE	R	R	R	R	G	G	R	R	DW	DW	DW	DW	DW	WK	WK	DW
PHASE 4 & 8 ALT	R	R	R	R	G	G	G	G	DW	DW	DW	DW	WK	WK	WK	WK
PED CLEAR / COUNTDOWN	R	R	R	R	G	G	G	G	DW	DW	DW	DW	FL/DW	FL/DW	FL/DW	FL/DW
4 & 8 ALT CHANGE	R	R	R	R	Y	Y	Y	Y	DW	DW	DW	DW	DW	DW	DW	DW
FLASHING OPERATION	FL/Y	FL/Y	FL/Y	FL/Y	FL/R	FL/R	FL/R	FL/R	DARK	DARK	DARK	DARK	DARK	DARK	DARK	DARK

WIRING DIAGRAM



WIRING KEY

A B C D E F G H } 5-CONDUCTOR ELECTRICAL CABLE (NO. 14 A.W.G)

K L M N O P Q } 2-CONDUCTOR ELECTRICAL CABLE (NO. 14 A.W.G)

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

S T } 2-CONDUCTOR TRAY CABLE (NO. 12 A.W.G)

U - 5-CONDUCTOR ELECTRICAL CABLE (NO. 14 A.W.G)

✱ - USE EXISTING CABLE

ES - EXISTING SERVICE TO BE MAINTAINED BY PEPCO

1 ADDENDUM 1: DATE: 10-16-07

STATE OF MARYLAND
DEPARTMENT OF TRANSPORTATION
STATE HIGHWAY ADMINISTRATION

MD 410 (EAST-WEST HWY) AND WAVERLY STREET

GENERAL INFORMATION SHEET

SCALE NONE DATE 6/18/07 CONTRACT NO. MO2825185

DESIGNED BY JWA COUNTY MONTGOMERY
DRAWN BY RC LOGMILE 15W41000.08
CHECKED BY TIMS NO. H162
F.A.P. NO. AC-STPG-000A(241)E TOD NO.

TS NO. | DRAWING NO. 2 OF 2 | SHEET NO. 18 OF 42

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

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