PROJECT DESCRIPTION

I. GENERAL

This project involves the modification of an existing mast arm traffic control signal at the intersection of MD 410 (Philadelphia Ave) and Maple Avenue in Montgomery County. All pedestrian signals shall now be Countdown pedestrian signals with audible pushbuttons. Additionally, LED modules shall be installed into all signal heads. MD 410 (Philadelphia Ave) 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. The MD 410 (Philadelphia Ave) approaches running shall continue to operate in a split phase. The pedestrian phases across both legs of MD 410 (Philadelphia Ave) shall now be Countdown pedestrian phases with audible pushbutton actuation. The pedestrian phases across Maple Avenue shall now shall be Countdown pedestrian phases with audible pushbuttons on recall. The Maple Avenue approaches shall also continue to run concurrently.

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

3. Montgomery County Signal Shop shall install APS control unit into controller cabinet. The APS push buttons should be delivered to Mike Kinney at the Montgomery County Technical Center for programming at least two weeks prior to the beginning of work.

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 Montgomery County forces. Contact Kamal Hamud at (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.

The contracts for Montgomery County and SHA are as follows:

Ms. Cedric Ward Assistant District Engineer - Traffic Phone: (301) 513-7406	Mr. Richard L. Duff, Sr. Chief, Traffic Operations Division Phone: (410) 787-7830
Mr. Vernon Stinson Assistant District Engineer - Maintenance Phone: (301) 513-7304	Mr. Mike Kinney Signal Shop (Mont Co.) 240-777-8760
Mr. Victor Grafton Assistant District Engineer - Utility Phone: (301) 513 7350	Mr. Sonny Bailey Manager, Sign Shop Operations 410-787-7670
Mr. Bob Biskeetis Mont. County Traffic 240-876-3601	Mr. Kamal Hamud Mont. County TMC Center 240-777-8761

EQUIPMENT LIST

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

ITEM NO.	DESCRIPTION	QUANTITY
9570	Sheet aluminum signs to consist of: (ground mount)	8 SF
	Pedestrian education R10-3(1) sign (9"x15"). (Note: Sign to read "PUSHBUTTON TO CROSS PHILADELPHIA AVENUE".)	4 EA
	Pedestrian education R10-3(1) sign (9"x15"). (Note: Sign to read "PUSHBUTTON TO CROSS MAPLE AVENUE".)	4 EA

EQUIPMENT LIST (CONT.)

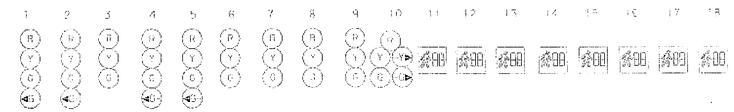
B. EQUIPMENT TO BE SUPPLIED BY S.H.A..

ITEM NO.	DESCRIPTION	QUANTITY
~~8003~~ 1001	Maintenance of traffic per assignment.	2 EA
2002	Test Pit Excavation	6 C.Y.
~~5004~~ 5005	12" white heat applied permanent preformed thermoplastic pavement marking.	650 ~~490~~ L.F.
~~5005~~ 5006	24" white heat applied permanent preformed thermoplastic pavement marking.	70 ~~25~~ L.F.
~~5007~~ 5001	Removal of existing permanent pavement line markings	680 ~~450~~ L.F.
6001	Standard type A combination curb and gutter 12" gutter pan 8" depth.	240 ~~265~~ L.F.
6002	5" concrete sidewalk.	950 ~~1025~~ S.F.
~~6005~~ 8019	Detectable warning surface for curb ramps	78 ~~98~~ S.F.
~~8001~~ 8002	2 wire Central Control unit	1 EA
~~8004~~ 8006	Adjust existing handhole to grade.	2 EA
8007	Audible/tactile pedestrian pushbutton station & signs.	8 EA
~~8013~~ 8010	LED 16" countdown pedestrian signal head.	8 EA
~~8014~~ 8011	LED signal head modules (any size).	36 EA
~~8021~~ 8013	Remove and dispose of material & equipment per assignment.	1 EA
~~8031~~ 8018	Schedule 80 rigid PVC conduit up to 4" - trenched.	80 L.F.
~~8032~~ 8034	Install overhead or ground mounted sign (including hardware).	8 S.F.
~~8036~~ 8033	No. 6 AWG stranded bare copper ground wire.	95 L.F.
~~8052~~ 8032	Cut, clean, galvanize and cap traffic signal structure.	3 EA
~~8054~~ 8023	Electrical cable - 2 conductor (No. 14 AWG).	570 L.F.
~~8056~~ 8025	Electrical cable - 5 conductor (No. 14 AWG).	740 L.F.
Neg.	Furnish & Install Breakaway Pedestal Pole (any size) - Painted brown	6 EA

C. EQUIPMENT TO BE REMOVED

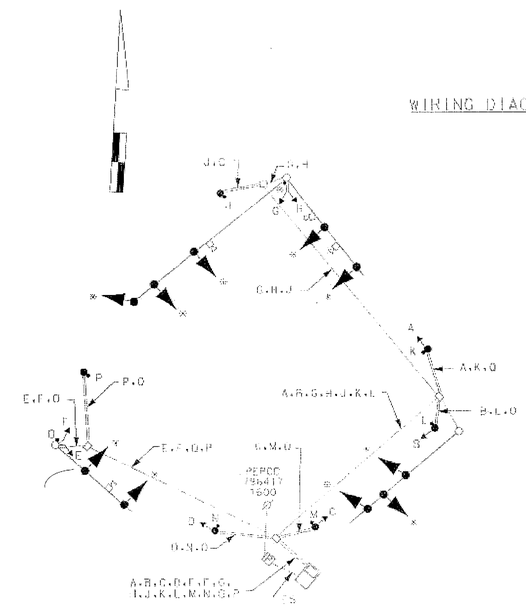
All removed signal materials are to become property of the contractor.

PHASE CHART



	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18
PHASE 1	G ◄G	G ◄G	-	R	R	R	R	R	R	R/◄G►	DW	DW	DW	DW	DW	DW	DW	DW
PED CLEAR /COUNTDOWN	G ◄G	G ◄G	-	R	R	R	R	R	R	R/◄G►	DW	FL/DW	FL/DW	DW	DW	DW	DW	DW
1 CHANGE	Y	Y	Y	R	R	R	R	R	R	R/◄Y►	DW	DW	DW	DW	DW	DW	DW	DW
PHASE 2	R	R	R	G ◄G	G ◄G	G	R	R	R	R	DW	DW	DW	DW	DW	DW	DW	DW
PED CLEAR /COUNTDOWN	R	R	R	G ◄G	G ◄G	G	R	R	R	R	FL/DW	DW	DW	FL/DW	DW	DW	DW	DW
2 CHANGE	R	R	R	Y	Y	Y	R	R	R	R	DW	DW	DW	DW	DW	DW	DW	DW
PHASE 4 & 8	R	R	R	R	R	R	G	G	G	G	DW	DW	DW	DW	DW	DW	DW	DW
4 & 8 CHANGE	R	R	R	R	R	R	Y	Y	Y	Y	DW	DW	DW	DW	DW	DW	DW	DW
PHASE 4 & 8 ALT	R	R	R	R	R	R	G	G	G	G	DW	DW	DW	DW	DW	DW	DW	DW
PED CLEAR / COUNTDOWN	R	R	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	R	R	Y	Y	Y	Y	DW	DW	DW	DW	DW	DW	DW	DW
FLASHING OPERATION	FL/R	FL/R	FL/R	FL/Y	FL/Y	FL/Y	FL/R	FL/R	FL/R	FL/R	BARS	BARS	BARS	BARS	BARS	BARS	BARS	FL/DW

WIRING DIAGRAM



TOD NO: XX427-22
SHA NO: MO228B58
MD 410 @ Maple Avenue

WIRE SPY

10 TO 18 AWG	5-CONDUCTOR CONTROL CABLE (NO. 14 A.W.G.)
10 TO 18 AWG	2-CONDUCTOR CONTROL CABLE (NO. 14 A.W.G.)
G	STRANDED BARE COPPER GROUND WIRE (NO. 6 A.W.G.)
*	USE EXISTING WIRING
FS	EXISTING HANDHOLE SERVICE TO BE MAINTAINED BY PEPCO

STATE OF MARYLAND
DEPARTMENT OF TRANSPORTATION
STATE HIGHWAY ADMINISTRATION

MD 410 (PHILADELPHIA AVENUE) AT MAPLE AVENUE

TAKOMA PARK, MARYLAND

GENERAL INFORMATION SHEET

SCALE NONE DATE 09/09/11 CONTRACT NO. XX4275185

DES. SPEC'D BY R.R.D. COUNTY MONTGOMERY
DRAWN BY R.C. FOLDER 150-005.29
CHECKED BY FILE NO. L143
E.A.P. NO. TSO NO.

TS NO. 13270 | DRAWING NO. 3 OF 3 | SHEET NO. OF

Greenline Revision
Dated June 14, 2011

SHA MDOT SHA O.O.T.S.
S.H.A. Approval Date
S.H.A. # 70 T.I.M.S. # 6517

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