EQUIPMENT LIST

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

SPEC. NUMBER	DESCRIPTION	QUANTITY
814	16". one-way. LED (DW. W) symbolic pedestrian signal head with adjustable bracket for pole mounting and cutaway visors. (Countdown Display)	8 EA
205	Eight-phase. full-traffic actuated. solid state digital controller with all necessary equipment housed NEMA size "6 "- mounted cabinet with MMU	1 EA
205	Rack-mounted 4 channel loop detector amplifiers	6 EA
801	Furnish and install concrete for signal foundation.	24 CF
813	Pedestrian education R10-3E(1) mod sign. (Note: Sign to read "PUSH BUTTON TO CROSS EAST-WEST HIGHWAY"	4 EA
813	Pedestrian education R10-3E(1) mod sign. (Note: Sign to read "PUSH BUTTON TO CROSS NEWELL STREET"	2 EA
813	Pedestrian education R10-3E(1) mod sign. (Note: Sign to read "PUSH BUTTON TO CROSS BLAIR MILL ROAD"	2 EA
556	12" white heat applied permanent preformed thermoplastic pavement marking	500 LF
556	24" white heat applied permanent preformed thermoplastic pavement marking	75 LF
805	Furnish and install 2" schedule 80 rigid polyvinyl chloride - trenched	50 LF
805	Furnish and install 3" schedule 80 rigid polyvinyl chloride conduit - trenched	200LF
805	Furnish and install 4" schedule 80 rigid polyvinyl chloride conduit - trenched	330 LF
811	Furnish and install 4" schedule 80 rigid polyvinyl chloride conduit - bored.	340 LF
810	Furnish and install electrical handhole.	6 EA
810	Furnish and install 2-conductor electrical cable (No. 14 A.W.G.).	1310 LF
810	Furnish and install 5-conductor electrical cable (No. 14 A.W.G.).	1310 LF
810	Furnish and install 7-conductor electrical cable (No. 14 A.W.G.).	1600 LF
810	Furnish and install ground rod - 3/4 " x 10'.	9 EA
810	Furnish and install No. 6 AWG stranded bare copper ground wire.	700 LF
810	Furnish and install tray cable - 2 conductor (No. 12 AWG)	625 LF
810	Electrical cable 1-conductor No. 4 AWG THHN/THWN.	20 LF
819	Electrical cable 1-conductor No. 250 KCMIL	1,000 LF
819	Sawcut for signal (loop detector).	700 LF
806	Furnish and install 1 in. liquid tight flexible non-metallic conduit for detector sleeve.	50 LF
808	Audible/tactile pedestrian pushbutton station & signs with 2 wire	8 EA
819	APS central control unit.	1 EA
819	Furnish and install 10' breakaway pedestal pole with transformer base.	8 EA
819	Metered service pedestal embedded.	1 EA
	Remove existing pedestal pole and foundation 12" below grade	6 EA
	Remove existing pedestrian pushbutton from existing traffis signal pole	2 EA
	Remove existing pedestrian signals from existing traffic signal pole.	2 EA
	Remove existing controller cabinet.	1 EA
	Remove existing power meter pedestal.	1 EA

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

Mr. Jeff Wentz
Assistant District Engineer - Traffic
Phone: (301) 513-7318

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. Keith Lord
Signal Shop (Mont Co.)
301-674-8965

Mr. Sonny Bailey
Sign Shop
410-787-7670

Mr. Kamal Hamud
240-777-8761

The power company representative is:
Mr. Steve Custer
PEPCO Customer Design
201 W Guide Dr.,
Rockville. MD 20850
Phone: 301 548-4333

PROJECT DESCRIPTION

I. GENERAL

This project involves the installation ofcountdown pedestrian signal heads with audible pushbuttons and interconnect at the intersection of MD 410 (East-West Highway) and Blair Mill Rd. / Newell Street in Montgomery County. MD 410 (East-West Highway) is assumed to run in an east-west direction.

II. INTERSECTION OPERATION

1. The intersection is to operate in a NEMA six-phase. semi-actuated mode. with the MD 410 (East-West Highway) approaches running concurrently. Exclusive/Permissive left turn phases shall be provided for the westbound approach of MD 410 (East-West Highway). A Countdown pedestrian phase with audible pushbutton actuation shall be provided across all intersection approaches. Pedestrian phases 2 & 6 shall operate on recall while pedestrian phases 3 & 4 shall be push button activated.

2. A full-traffic-actuated. eight-phase controller equipped with a 2-wire Central Control Unit & 2 rack-mounted loop detector amplifiers and all necessary equipment housed in a NEMA size "6" base-mounted cabinet shall be installed at this intersection.

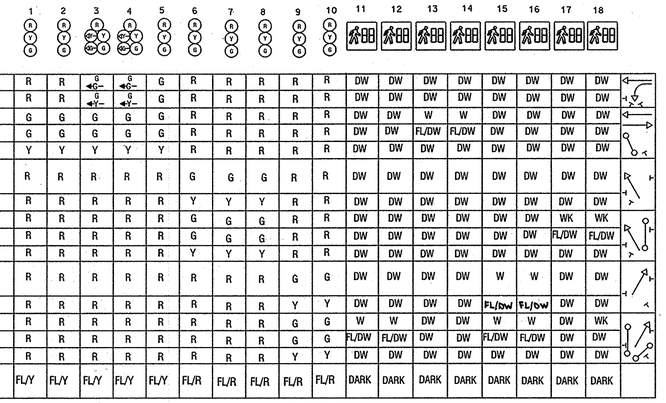
   Montgomery County signal shop shall install APS control unit into controller cabinet. The Contractor shall deliver the Control Unit and audible pushbuttons to the Montgomery County Signal Shop for testing and programming.

III. SPECIAL NOTES

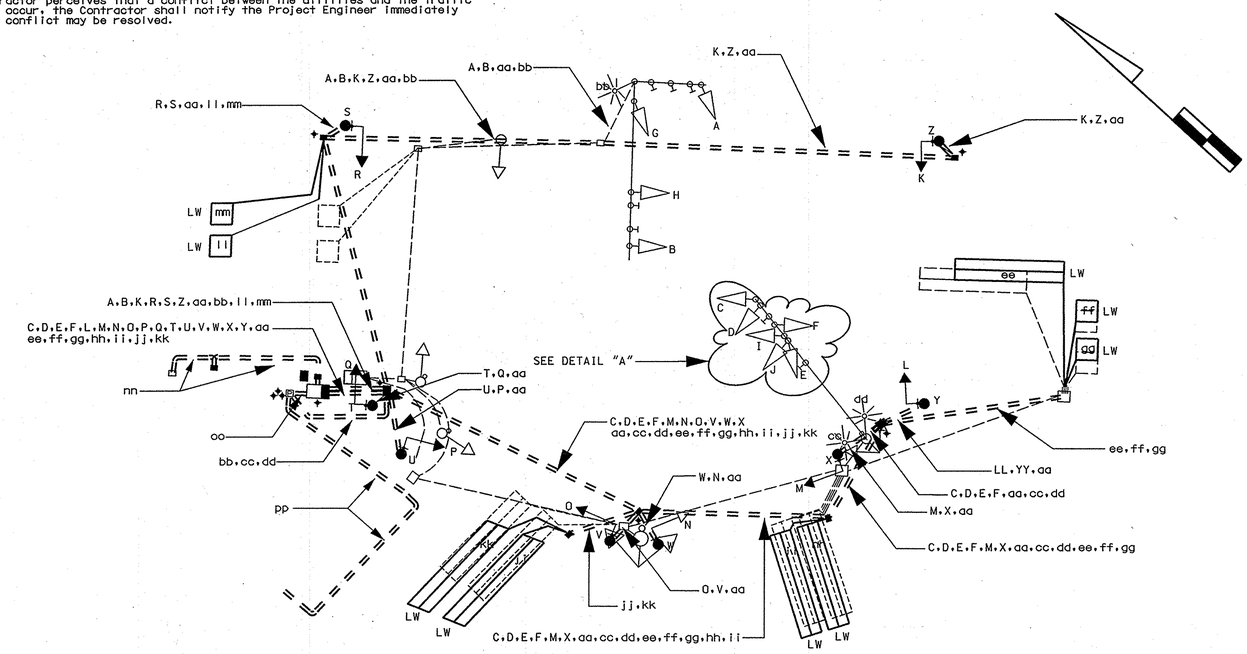
1. The Contractor shall be responsible for terminating all signal cables. excluding interconnect. to the appropriate terminals and shall properly label each cable.

2. Disconnecting and splicing of interconnect cable shall be performed by Montgomery County Forces. The contractor shall run the interconnect cable into the base of each cabinet and properly tag the cable. 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.



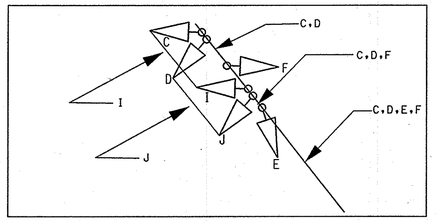
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18
PHASE 2 & 5	R	R	G	G	G	R	R	R	R	R	DW	DW	DW	DW	DW	DW	DW	DW
5 CHANGE	R	R	G	G	G	R	R	R	R	R	DW	DW	DW	DW	DW	DW	DW	DW
PHASE 2 & 6	G	G	G	G	G	R	R	R	R	R	DW	DW	W	W	DW	DW	DW	DW
PED CLEAR	G	G	G	G	G	R	R	R	R	R	DW	DW	FL/DW	FL/DW	DW	DW	DW	DW
2 & 6 CHANGE	Y	Y	Y	Y	Y	R	R	R	R	R	DW	DW	DW	DW	DW	DW	DW	DW
PHASE 3	R	R	R	R	R	G	G	G	R	R	DW	DW	DW	DW	DW	DW	DW	DW
3 CHANGE	R	R	R	R	R	Y	Y	Y	R	R	DW	DW	DW	DW	DW	DW	DW	DW
PHASE ALT. 3	R	R	R	R	R	G	G	G	R	R	DW	DW	DW	DW	DW	DW	WK	WK
PED CLEAR	R	R	R	R	R	G	G	G	R	R	DW	DW	DW	DW	DW	DW	FL/DW	FL/DW
ALT. 3 CHANGE	R	R	R	R	R	Y	Y	Y	R	R	DW	DW	DW	DW	DW	DW	DW	DW
PHASE 4	R	R	R	R	R	R	R	R	G	G	DW	DW	DW	DW	W	W	DW	DW
4 CHANGE	R	R	R	R	R	R	R	R	Y	Y	DW	DW	DW	DW	FL/DW	FL/DW	DW	DW
PHASE ALT. 4	R	R	R	R	R	R	R	R	G	G	W	W	DW	DW	W	W	DW	WK
PED CLEAR	R	R	R	R	R	R	R	R	G	G	FL/DW	FL/DW	DW	DW	FL/DW	FL/DW	DW	DW
ALT. 4 CHANGE	R	R	R	R	R	R	R	R	Y	Y	DW	DW	DW	DW	DW	DW	DW	DW
FLASHING OPERATION	FL/Y	FL/Y	FL/Y	FL/Y	FL/Y	FL/R	FL/R	FL/R	FL/R	FL/R	DARK	DARK	DARK	DARK	DARK	DARK	DARK	DARK



WIRING KEY

- A, B, C, D, E, F, G, H, I, J, K, L, M, N, O, P, Q, R — 7-CONDUCTOR ELECTRICAL CABLE (NO. 14 A.W.G)
- S, T, U, V, W, X, Y, Z — 5-CONDUCTOR ELECTRICAL CABLE (NO. 14 A.W.G)
- aa, bb — 2-CONDUCTOR ELECTRICAL CABLE (NO. 14 A.W.G)
- aa - STRANDED BARE COPPER GROUND WIRE (NO. 6 A.W.G.)
- bb, cc, dd — 2-CONDUCTOR TRAY CABLE (NO. 12 A.W.G)
- ee, ff, gg, hh, ii, jj, kk, ll, mm — PROPOSED 2-CONDUCTOR (ALUMINUM SHIELDED) (NO. 14 A.W.G.)
- nn - 12-PAIR VOICE GRADE INTERCONNECT CABLE (JELLY FILLED)
- oo - 2-1 CONDUCTOR ELECTRICAL CABLE (NO. 4 A.W.G.)
- pp - 3-1 CONDUCTOR ELECTRICAL CABLE (NO. 250 KCMIL)
- ✦ - GROUND ROD

DETAIL A



GEOMETRIC LEGEND
PROPOSED
EXISTING

LEGEND OF UNDERGROUND AND OVERHEAD UTILITIES
AERIAL CABLE
ELECTRIC
TELEPHONE
GAS
SEWER
WATER
CABLE TV

GOROVE/SLADE ASSOCIATES, INC.
1140 CONNECTICUT AVE.NW.SUITE 700
WASHINGTON, DC 20036
PHONE:(202) 296-8625
FAX:(202) 785-1276

STATE OF MARYLAND
DEPARTMENT OF TRANSPORTATION
STATE HIGHWAY ADMINISTRATION

MD 410 (EAST-WEST HIGHWAY) AND NEWELL STREET / BLAIR MILL ROAD

TRAFFIC SIGNAL PLAN

SCALE 1"= 20' DATE 08-02-07 CONTRACT NO. BW996M82

DESIGNED BY CUS
DRAWN BY CUS
CHECKED BY
F.A.P. NO.
COUNTY MONTGOMERY
LOGMILE 15041004.02
TIMS NO. 1153
TOD NO.

TS NO. 3538C | DRAWING NO. 2 OF 3 | SHEET NO. 2 OF 3