

PROJECT DESCRIPTION

I. GENERAL

This project involves the modification of an existing Traffic Control Signal with street lighting and interconnect at the intersection of US 29 (Columbia Pike) and Prelude Drive in Montgomery County. Countdown pedestrian signal heads with audible pushbuttons shall be installed at this location. US 29 (Columbia Pike) is assumed to run an east-west direction.

II. INTERSECTION OPERATION

- The intersection shall continue to operate in a NEMA five-phase, semi-actuated mode, with the US 29 (Columbia Pike) approaches running concurrently. The Exclusive/Permissive left turn phase for the eastbound approach of US 29 (Columbia Pike) A new Countdown pedestrian phase with audible pushbuttons across Prelude Drive shall be placed on recall. A new Countdown pedestrian phase with audible pushbuttons across the east leg of US 29 (Columbia Pike) shall be placed on actuation. The existing farside sampling stations on all legs of this intersection shall remain in operation. The Prelude Drive approach shall continue to run in its own phase.
- 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.
- 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

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

EQUIPMENT LIST

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

ITEM NO.	DESCRIPTION	QUANTITY
9571	Sheet aluminum signs to consist of: (mast arm or pole mount)	3 SF
	Pedestrian education R10-4(1) mod sign. (Note: Sign to read "PUSHBUTTON TO CROSS COLUMBIA PIKE")	2 EA
	Pedestrian education R10-4(1) mod sign. (Note: Sign to read "PUSHBUTTON TO CROSS PRELUDE DRIVE")	2 EA

B. EQUIPMENT TO BE FURNISHED AND INSTALLED BY THE CONTRACTOR

ITEM NO.	DESCRIPTION	QUANTITY
1001	Maintenance of traffic per assignment.	1 EA
2002	Test Pit Excavation	4 C.Y.
5003	12" heat applied white permanent preformed thermoplastic pavement marking.	290 L.F.
5004	24" heat applied white permanent preformed thermoplastic pavement marking.	65 L.F.
5005	Removal of existing permanent pavement line markings	370 L.F.

EQUIPMENT LIST (CONT.)

B. EQUIPMENT TO BE FURNISHED AND INSTALLED BY THE CONTRACTOR

ITEM NO.	DESCRIPTION	QUANTITY
6001	Standard type A combination curb and gutter 12" gutter pan 8" depth.	70 L.F.
6002	4" concrete sidewalk.	350 S.F.
8003	2 wire Central Control unit	1 EA
8010	Audible/tactile pedestrian pushbutton station & signs.	4 EA
8011	Breakaway Pedestal pole (10')	4 EA
8014	LED 16" countdown pedestrian signal head.	4 EA
8017	Remove and dispose of existing material and equipment per assignment.	1 EA
8022	Disconnect, pull back and reroute cable.	950 L.F.
8026	Schedule 80 rigid PVC conduit up to 4" - trenched.	130 L.F.
8027	Detectable warning surfaces	36 S.F.
8030	Concrete for signal foundation.	2.8 CY
8033	No. 6 AWG stranded bare copper ground wire.	95 L.F.
8044	Furnish and install electrical handhole.	1 EA
8046	Install overhead sign.	3 S.F.
8052	Ground rod 3/4" diameter x 10' length.	1 EA
8058	Electrical cable - 2 conductor (No. 14 AWG).	635 L.F.
8060	Electrical cable - 5 conductor (No. 14 AWG).	665 L.F.

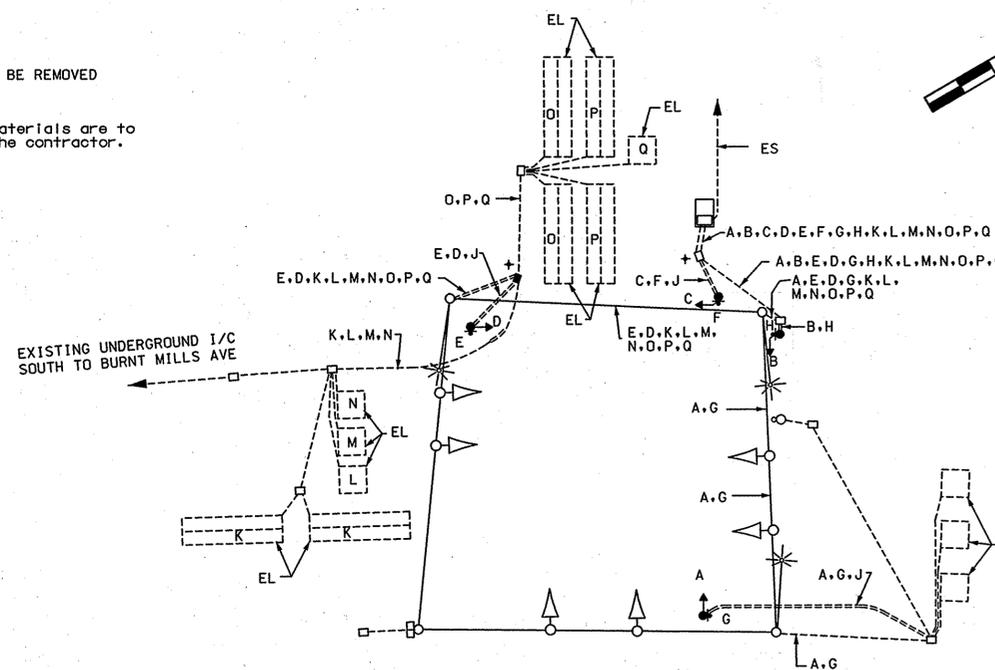
C. EQUIPMENT TO BE REMOVED

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

PHASE CHART

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

WIRING DIAGRAM



**WIRING KEY**

- A, B, C, D, E, F, G, H, I, J, K, L, M, N, O, P, Q
- 5-CONDUCTOR ELECTRICAL CABLE (NO. 14 A.W.G.)
- 2-CONDUCTOR ELECTRICAL CABLE (NO. 14 A.W.G.)
- J - STRANDED BARE COPPER GROUND WIRE (NO. 6 A.W.G.)
- K, L, M, N, O, P, Q - EXISTING 2-CONDUCTOR ELECTRICAL CABLE (ALUMINUM SHIELDED) REROUTED THRU PROPOSED & EXISTING SIGNAL EQUIPMENT
- EL - LOOP WIRE (NO. 14 A.W.G.) EXISTING
- ES - EXISTING UNDERGROUND SERVICE TO BE MAINTAINED BY PEPCO
- + - GROUND ROD

**SHA** STATE OF MARYLAND  
DEPARTMENT OF TRANSPORTATION  
STATE HIGHWAY ADMINISTRATION

**US 29 (COLUMBIA PIKE) AND PRELUDE DRIVE**  
WHITE OAK, MARYLAND

**GENERAL INFORMATION SHEET**

SCALE NONE DATE 12/15/06 CONTRACT NO. AT9255185

DESIGNED BY J ALLEN COUNTY MONTGOMERY  
DRAWN BY R. C. LOGMILE 15002904.35  
CHECKED BY \_\_\_\_\_ TMS NO. H824  
F.A.P. NO. \_\_\_\_\_ TOD NO. \_\_\_\_\_

TS NO. 2544B DRAWING NO. 2 OF 2 SHEET NO. OF

TOD NO: AT925-02  
SHA No.: MO281A52/B52  
US 29 @ Prelude Drive

**ST**  
STREET TRAFFIC STUDIES, LTD.  
400 Crain Hwy. N.W.  
Crosby, MD 21031  
Ph (410) 590-5500  
Fax (410) 590-6637

5115b61.dgn T-16  
PLOTTED: \$DATE\$  
FILE: \$FILE\$

DRILL HOLES

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BORDER REV. DATE: June 1, 2004