

DRILL HOLES

BORDER REV: DATE: June 11, 2004

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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 contacts for Montgomery County and SHA are as follows:

- Ms. Cedric Ward, Assistant District Engineer - Traffic, Phone: (301) 513-7404
Mr. Richard L. Daff, Sr., Chief, Traffic Operations Division, Phone: (410) 787-7630
Mr. Vernon Stinnett, 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 Ricketts, Mont. County Traffic, 240-876-3681
Mr. Kamal Hamud, Mont. County TMC Center, 240-777-8761

EQUIPMENT LIST

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

Table with 3 columns: ITEM NO., DESCRIPTION, QUANTITY. Includes items like Sheet aluminum signs to consist of: (ground mount), Pedestrian education R10-3(1) sign (9"x15").

EQUIPMENT LIST (CONT.)

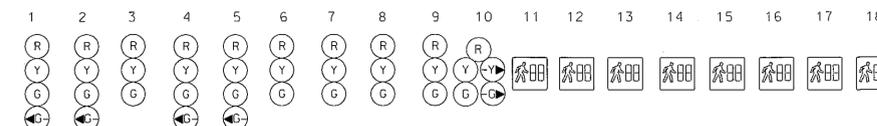
A. EQUIPMENT TO BE SUPPLIED BY S.H.A..

Table with 3 columns: ITEM NO., DESCRIPTION, QUANTITY. Includes items like Maintenance of traffic per assignment, Test Pit Excavation, 12" white heat applied permanent preformed thermoplastic pavement marking, 24" white heat applied permanent preformed thermoplastic pavement marking, Removal of existing permanent pavement line markings, Standard type A combination curb and gutter 12" gutter pan 8" depth, 5" concrete sidewalk, Detectable warning surface for curb ramps, 2 wire Central Control unit, Adjust existing handhole to grade, Audible/tactile pedestrian pushbutton station & signs, LED 16" countdown pedestrian signal head, LED signal head modules (any size), Remove and dispose of material & equipment per assignment, Schedule 80 rigid PVC conduit up to 4" - trenched, Install overhead or ground mounted sign (including hardware), No. 6 AWG stranded bare copper ground wire, Cut, clean, galvanize and cap traffic signal structure, Electrical cable - 2 conductor (No. 14 AWG), Electrical cable - 5 conductor (No. 14 AWG), Furnish & Install Breakaway Pedestal Pole (any size) - Painted brown.

C. EQUIPMENT TO BE REMOVED

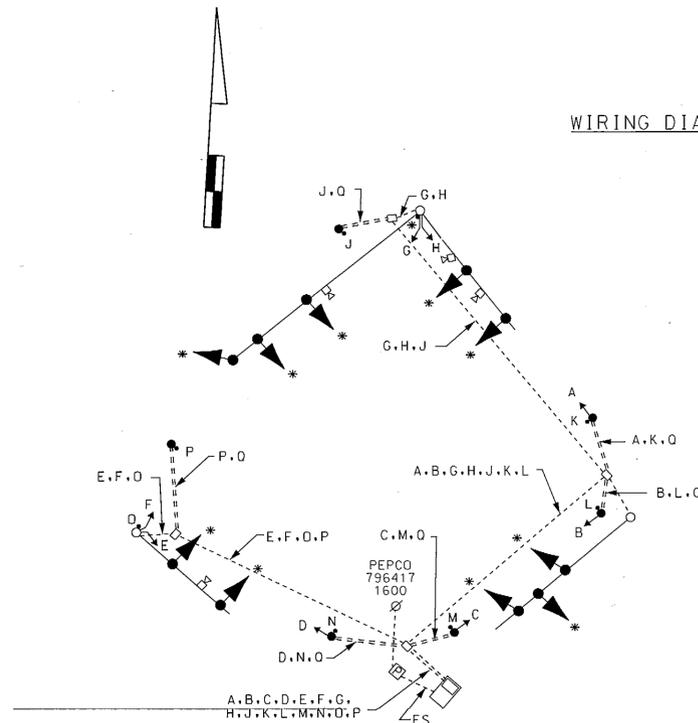
All removed signal materials are to become property of the contractor.

PHASE CHART



Phase chart table with columns for phases 1-18 and rows for various signal states like PHASE 1, PED CLEAR /COUNTDOWN, 1 CHANGE, PHASE 2, 2 CHANGE, PHASE 4 & 8, 4 & 8 CHANGE, PHASE 4 & 8 ALT, PED CLEAR / COUNTDOWN, 4 & 8 ALT CHANGE, FLASHING OPERATION.

WIRING DIAGRAM



WIRING KEY: 5-CONDUCTOR ELECTRICAL CABLE (NO. 14 A.W.G.), 2-CONDUCTOR ELECTRICAL CABLE (NO. 14 A.W.G.), Q - STRANDED BARE COPPER GROUND WIRE (NO. 6 A.W.G.), * - USE EXISTING WIRING, ES - EXISTING UNDERGROUND SERVICE TO BE MAINTAINED BY PEPCO

TOD NO: XX445-32, SHA NO: MO206A5A/B5A, MD 410 @ Maple Avenue

STREET TRAFFIC STUDIES, LTD. logo and address: 400 Crain Hwy., NW, Glen Burnie, MD 21061, Ph (410) 590-8500, Fax (410) 590-6637

SHA 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 12/10/10, CONTRACT NO. XX4455185, DESIGNED BY R.R.Z., COUNTY MONTGOMERY, DRAWN BY R.C., LOGMILE I5041005.29, CHECKED BY, TMS NO. K517, F.A.P. NO., TOD NO., TS NO. 1327C, DRAWING NO. 3 OF 3, SHEET NO. OF