DRILL HOLES

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BORDER REV: DATE: June 1, 2004

## PROJECT DESCRIPTION

I. GENERAL

This project involves the modification of an existing Traffic Control Signal with interconnect at the intersection of MD 41 (Perring Pkwy) and McClean Boulevard/Hillsway Avenue in Baltimore County. The existing pedestrian signal heads shall be replaced with Countdown pedestrian signals. MD 41 (Perring Pkwy) is assumed to run a north-south direction.

II. INTERSECTION OPERATION

1. The intersection is to operate in a NEMA eight-phase, fully-actuated mode, with the MD 41 (Perring Pkwy) approaches running concurrently. The exclusive left turn phases for the northbound and southbound approaches of MD 41 (Perring Pkwy) will continue to operate as normal. Countdown pedestrian phases with audible pushbutton actuation shall be provided for all four legs of this intersection. The Countdown pedestrian phase with audible pushbuttons across McClean Blvd./Hillsway Avenue shall be on recall. The McClean Blvd./Hillsway Avenue approach shall continue to operate in an exclusive/permissive operation.

2. The existing eight-phase controller, shall be used to house the 2-wire Central Control Unit and all necessary equipment in a NEMA size "6" base-mounted cabinet at this intersection.

3. SHA signal shop shall install APS control unit into controller cabinet. The Contractor shall deliver the Control Central Unit and audible pushbuttons to the SHA 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. All controller cabinet wiring will be performed by the SHA Signal Shop. Contact Mr. Ed Rodenhizer at (410) 787-7652 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:

To Cross MD 41 (PERRING PKWY)

a When pedestrian locates and presses pushbutton for an extended time, the pushbutton unit will announce "Wait to cross Perring at McClean"

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

a When pedestrian locates and presses pushbutton for an extended time, the pushbutton unit will announce "Wait to cross Perring at Hillsway"

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

To Cross McClean Boulevard

a When pedestrian locates and presses pushbutton for an extended time, the pushbutton unit will announce "Wait to cross McClean at Perring"

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

To Cross Hillsway Avenue

a When pedestrian locates and presses pushbutton for an extended time, the pushbutton unit will announce "Wait to cross Hillsway at Perring"

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

The contact persons for District #4 are as follows:

Ms. Erin Kuhn
Assistant District Engineer - Traffic
Phone: (410) 321-2781

Mr. Steve Marciszewski
Assistant District Engineer - Maintenance
Phone: (410) 321-2761

Mr. Mike Pasquaiello
Assistant District Engineer - Utility
Phone: (410) 321-2841

Mr. Richard L. Daff, Sr.
Chief, Traffic Operations Division
Phone: (410) 787-7630

Mr. Ed Rodenhizer
Chief, Traffic Signal Operations Division
410-787-7652

Mr. Sonny Bailey
Chief, Sign Shop
410-787-7676

## EQUIPMENT LIST

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

| ITEM NO. | DESCRIPTION | QUANTITY |
|---|---|---|
| 9571 | Sheet aluminum signs to consist of: (pole mount) | 8 SF |
| | R10-3(1) (9"x15") sign. (Note: To read "PUSH BUTTON TO CROSS HILLSWAY AVENUE). | 2 EA |
| | R10-3(1) (9"x15") sign. (Note: To read "PUSH BUTTON TO CROSS McCLEAN BOULEVARD). | 2 EA |
| | R10-3(1) (9"x15") sign. (Note: To read "PUSH BUTTON TO CROSS PERRING PKWY). | 4 EA |

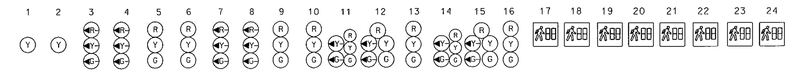
B. EQUIPMENT TO BE FURNISHED AND INSTALLED BY THE CONTRACTOR

| ITEM NO. | DESCRIPTION | QUANTITY |
|---|---|---|
| 1001 | Maintenance of traffic per assignment. | 2 EA |
| 2002 | Test Pit Excavation | 8 C.Y. |
| 6002 | 5" Concrete Sidewalk | 12 S.F. |
| 8003 | 2 wire Central Control unit | 1 EA |
| 8008 | Adjust and re-ring existing span wire (each span). | 3 EA |
| 8010 | Audible/tactile pedestrian pushbutton station & signs. | 8 EA |
| 8011 | Breakaway pedestal pole (5' & 10') | 5 EA |
| 8014 | LED 16" countdown pedestrian signal heads. | 8 EA |
| 8017 | Remove and dispose of existing material & equipment per assignment. | 1 EA |
| 8028 | Schedule 80 rigid PVC conduit up to 4" - trenched. | 175 L.F. |
| 8034 | No. 6 AWG stranded bare copper ground wire. | 125 L.F. |
| 8045 | Furnish and install electrical handhole | 1 EA |
| 8046 | Install ground mounted sign. | 8 SF |
| 8056 | Electrical cable - 2 conductor (No. 14 AWG). | 900 L.F. |
| 8058 | Electrical cable - 5 conductor (No. 14 AWG). | 1100 L.F. |

C. EQUIPMENT TO BE REMOVED

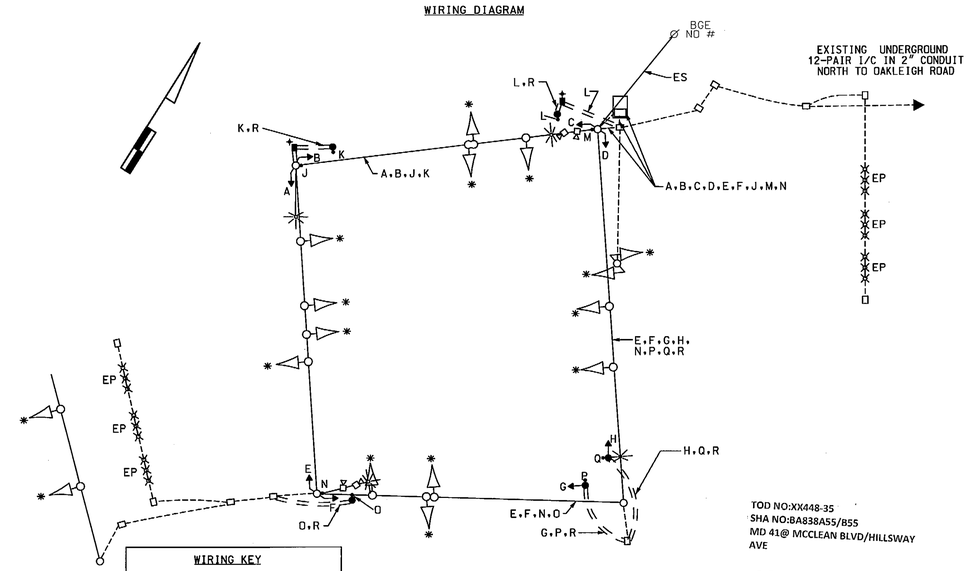
All removed signal materials are to become property of the contractor.

## PHASE CHART



| | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 | 12 | 13 | 14 | 15 | 16 | 17 | 18 | 19 | 20 | 21 | 22 | 23 | 24 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| PHASE 1 & 5 | Y | Y | ◄G- | ◄G- | R | R | ◄G- | ◄G- | R | R | R | R | R | R | R | R | DW | DW | DW | DW | DW | DW | DW | DW |
| CHANGES TO PHASES 1 & 6, 2 & 5 OR 2 & 6 | | | | | | | | | | | | | | | | | | | | | | | | |
| PHASE 1 & 6 | Y | Y | ◄G- | ◄G- | G | G | ◄R- | ◄R- | R | R | R | R | R | R | R | R | DW | DW | DW | DW | DW | DW | DW | DW |
| 1 & 6 CHANGE | Y | Y | ◄Y- | ◄Y- | G | G | ◄R- | ◄R- | R | R | R | R | R | R | R | R | DW | DW | DW | DW | DW | DW | DW | DW |
| PHASE 2 & 5 | Y | Y | ◄R- | ◄R- | R | R | ◄G- | ◄G- | G | G | R | R | R | R | R | R | DW | DW | DW | DW | DW | DW | DW | DW |
| 2 & 5 CHANGE | Y | Y | ◄R- | ◄R- | R | R | ◄Y- | ◄Y- | G | G | R | R | R | R | R | R | DW | DW | DW | DW | DW | DW | DW | DW |
| PHASE 2 & 6 | Y | Y | ◄R- | ◄R- | G | G | ◄R- | ◄R- | G | G | R | R | R | R | R | R | WK | WK | WK | WK | DW | DW | DW | DW |
| PED CLEAR / COUNTDOWN | Y | Y | ◄R- | ◄R- | G | G | ◄R- | ◄R- | G | G | R | R | R | R | R | R | FL/DW | FL/DW | FL/DW | FL/DW | DW | DW | DW | DW |
| 2 & 6 CHANGE | Y | Y | ◄R- | ◄R- | Y | Y | ◄R- | ◄R- | Y | Y | R | R | R | R | R | R | DW | DW | DW | DW | DW | DW | DW | DW |
| PHASE 3 & 7 | Y | Y | ◄R- | ◄R- | R | R | ◄R- | ◄R- | R | R | ◄G-/R | ◄G-/R | R | ◄G-/R | ◄G-/R | R | DW | DW | DW | DW | DW | DW | DW | DW |
| CHANGES TO PHASES 3 & 8, 4 & 7 OR 4 & 8 | | | | | | | | | | | | | | | | | | | | | | | | |
| PHASE 3 & 8 | Y | Y | ◄R- | ◄R- | R | R | ◄R- | ◄R- | R | R | ◄G-/G | ◄G-/G | G | R | R | R | DW | DW | DW | DW | DW | DW | DW | DW |
| 3 & 8 CHANGE | Y | Y | ◄R- | ◄R- | R | R | ◄R- | ◄R- | R | R | ◄Y-/G | ◄Y-/G | Y | R | R | R | DW | DW | DW | DW | DW | DW | DW | DW |
| PHASE 4 & 7 | Y | Y | ◄R- | ◄R- | R | R | ◄R- | ◄R- | R | R | R | R | R | ◄G-/G | ◄G-/G | G | DW | DW | DW | DW | DW | DW | DW | DW |
| 4 & 7 CHANGE | Y | Y | ◄R- | ◄R- | R | R | ◄R- | ◄R- | R | R | R | R | R | ◄Y-/G | ◄Y-/G | G | DW | DW | DW | DW | DW | DW | DW | DW |
| PHASE 4 & 8 | Y | Y | ◄R- | ◄R- | R | R | ◄R- | ◄R- | R | R | G | G | G | G | G | G | DW | DW | DW | DW | DW | DW | DW | DW |
| 4 & 8 CHANGE | Y | Y | ◄R- | ◄R- | R | R | ◄R- | ◄R- | R | R | Y | Y | Y | Y | Y | Y | DW | DW | DW | DW | DW | DW | DW | DW |
| PHASE 4 & 8 ALT | Y | Y | ◄R- | ◄R- | R | R | ◄R- | ◄R- | R | R | G | G | G | G | G | G | DW | DW | DW | DW | WK | WK | WK | WK |
| PED CLEAR / COUNTDOWN | Y | Y | ◄R- | ◄R- | R | R | ◄R- | ◄R- | R | R | Y | Y | Y | Y | Y | Y | DW | DW | DW | DW | FL/DW | FL/DW | FL/DW | FL/DW |
| 4 & 8 ALT CHANGE | Y | Y | ◄R- | ◄R- | R | R | ◄R- | ◄R- | R | R | Y | Y | Y | Y | Y | Y | DW | DW | DW | DW | DW | DW | DW | DW |
| FLASHING OPERATION | FL/Y | FL/Y | FL/◄R- | FL/◄R- | FL/Y | FL/Y | FL/◄R- | FL/◄R- | FL/Y | FL/Y | FL/R | FL/R | FL/R | FL/R | FL/R | FL/R | DARK | DARK | DARK | DARK | DARK | DARK | DARK | DARK |

## WIRING DIAGRAM




TOD NO:XX448-35
SHA NO:BA838A55/B55
MD 41@ MCCLEAN BLVD/HILLSWAY AVE

### WIRING KEY

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

J,K,M,N,O,P,Q,R — 2-CONDUCTOR ELECTRICAL CABLE (NO. 14 A.W.G )

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

✱ - USE EXISTING WIRING

EP - EXISTING PROBE

ES - POWER SERVICE

+ - GROUND ROD

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

5732gl.dgn T-242

PLOTTED: @DATETIME@
FILE: @FILE@

STATE OF MARYLAND
DEPARTMENT OF TRANSPORTATION
STATE HIGHWAY ADMINISTRATION

# MD 41 (PERRING PKWY) AND McCLEAN BLVD / HILLSWAY

PARKVILLE, MARYLAND

## GENERAL INFORMATION SHEET

SCALE NONE DATE 6-2-09 CONTRACT NO. XX4485185

DESIGNED BY JAMES ALLEN Jr. COUNTY BALTIMORE
DRAWN BY JAMES ALLEN Jr. LOGMILE 03004100.14
CHECKED BY TIMS NO. J529
F.A.P. NO. TOD NO.

TS NO. 849F | DRAWING NO. 2 OF 2 | SHEET NO. OF

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