## PROJECT DESCRIPTION

GENERAL

THIS PROJECT INVOLVES THE INSTALLATION OF APS AND COUNTDOWN PEDESTRIAN SIGNALS ACROSS THE NORTH, SOUTH, AND WEST LEGS AT THE INTERSECTION OF MD 108 (CLARKSVILLE PIKE) AND COLUMBIA ROAD IN HOWARD COUNTY. ALL EXISTING TRAFFIC SIGNAL HEADS WILL BE REPLACED WITH NEW BLACK-FACED LED SIGNAL HEADS. ALSO, EXISTING SIDEWALK RAMPS WILL BE REPLACED WITH NEW ADA ACCESSIBLE SIDEWALK RAMPS. MD 108 IS ASSUMED TO RUN IN AN EAST-WEST DIRECTION.

INTERSECTION OPERATION

THE INTERSECTION WILL CONTINUE TO OPERATE IN A NEMA SIX-PHASE, FULL-TRAFFIC-ACTUATED MODE WITH MAINLINE EXCLUSIVE LEFT TURN PHASING AND SIDE-STREET SPLIT PHASING. THE CONCURRENT MAINLINE AND ALTERNATE SIDE STREET PEDESTRIAN PHASES WILL REMAIN.

CONTROLLER REQUIREMENTS

THE EXISTING BASE MOUNTED CONTROLLER SHALL REMAIN. THE SHA SIGNAL SHOP WILL INSTALL A 2-WIRE CENTRAL CONTROL UNIT WITHIN THE CABINET.

THE CONTACT PERSONS FOR DISTRICT #7 ARE AS FOLLOWS:

Mr. John Concannon
Assistant District Engineer - Traffic
Phone: 301-624-8140

MS. Andrea Abend
Assistant District Engineer - Utility
Phone: 301-624-8115

Mr. Ray Johnson
Assistant District Engineer - Maintenance
Phone: 301-624-8105

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

Mr. Edward Rodenhizer
Chief, SHA Signal Shop
Phone: 410-787-7650

The Power Company is:
Baltimore Gas and Electric
7317 Parkway Drive South
Hanover, MD 21076
Phone: 410-859-9062

## EQUIPMENT LIST 'A'

EQUIPMENT TO BE FURNISHED BY THE SHA.

| ITEM NO | QUANTITY | DESCRIPTION |
|---|---|---|
| 9571 | 177 SF | [UPDATED] SHEET ALUMINUM MAST ARM/ POLE MOUNTED SIGN |
| | | 2 EA - R10-4(I)MOD, (9 IN. X 15 IN.) POLE MOUNT, "PUSH BUTTON TO CROSS CLARKSVILLE PIKE" |
| | | 4 EA - R10-4(I)MOD, ( 9 IN. X 15 IN.) POLE MOUNT, "PUSH BUTTON TO CROSS COLUMBIA ROAD" |
| | | 1 EA - ASSOCIATED SHIELD ASSEMBLY "EAST, MD 108, LEFT ARROW" (48 IN. X 75 IN.) |
| | | 1 EA - ASSOCIATED SHIELD ASSEMBLY "WEST, MD 108, LEFT ARROW" (48 IN. X 75 IN.) |
| | | 1 EA - ASSOCIATED SHIELD ASSEMBLY "EAST, MD 108, RIGHT ARROW" (30 IN. X 51 IN.) |
| | | 1 EA - ASSOCIATED SHIELD ASSEMBLY "WEST, MD 108, RIGHT ARROW" (30 IN. X 51 IN.) |
| | | 1 EA - W3-3(2), SIGNAL AHEAD, PREPARE TO STOP WHEN FLASHING, FY, (120 IN. x 60 IN.) |
| | | 1 EA - R1-2, YIELD, (36 IN. x 36 IN.) |
| | | 2 EA - W11-2, ADVANCED PEDESTRIAN SYMBOL, FY, (36 IN. x 36 IN.) |
| | | 1 EA - W11-2, ADVANCED PEDESTRIAN SYMBOL, FY, (48 IN. x 48 IN.) |
| | | 2 EA - M6-2 (MOD), DIRECTIONAL ARROW - DIAGONAL, FY, (15 IN. x 21 IN.) |
| | | 1 EA - W16-2, ON RAMP SUPPLEMENTAL FY, (36 IN. x 24 IN.) |

## EQUIPMENT LIST 'B'

EQUIPMENT TO BE FURNISHED AND INSTALLED BY THE CONTRACTOR.

| ITEM NO | QUANTITY | DESCRIPTION |
|---|---|---|
| 1001 | 1 EA | MAINTENANCE OF TRAFFIC |
| 2002 | 6 CY | TEST PIT EXCAVATION |
| 5002 | 1285 LF | REMOVAL OF EXISTING PERMANENT PAVEMENT LINE MARKINGS - ANY WIDTH |
| 5004 | 650 LF | 12 INCH HEAT APPLIED WHITE PERMANENT PREFORMED THERMOPLASTIC PAVEMENT MARKINGS |
| 6000 | 140 LF | REMOVAL AND DISPOSAL OF EXISTING TRAFFIC BARRIER |
| 6001 | 310 LF | STANDARD TYPE A COMBINATION CURB AND GUTTER 12 INCH GUTTER PAN 8 INCH DEPTH |
| 6002 | 1000 SF | 4 INCH CONCRETE SIDEWALK |
| 6005 | 1 EA | TYPE 1 TRAFFIC BARRIER END TREATMENT, ANY OPTION (SEE NOTE 13) |
| 8000 | 6 CY | CONCRETE FOR SIGNAL POLE FOUNDATION |
| 8001 | 45 EA | 12 INCH LED SIGNAL HEAD SECTION |
| 8002 | 1 EA | 2 WIRE CENTRAL CONTROL UNIT |
| 8004 | 6 EA | 8 INCH LED SIGNAL HEAD SECTION |
| 8008 | 6 EA | AUDIBLE/TACTILE PEDESTRIAN PUSHBUTTON |
| 8009 | 6 EA | BREAKAWAY PEDESTAL POLE (ANY SIZE) |
| 8014 | 6 EA | LED 16 INCH COUNTDOWN PEDESTRIAN SIGNAL HEADS |
| 8022 | 1 EA | REMOVE AND DISPOSE OF MATERIAL AND EQUIPMENT PER ASSIGNMENT |
| 8035 | 135 LF | SCHEDULE 80 RIGID PVC CONDUIT UP TO 4 INCHES - TRENCHED |
| 8037 | 64 LF | WOOD SIGN SUPPORTS UP TO 4 X 6 |
| 8038 | 70 SF | DETECTABLE WARNING SURFACES |
| 8039 | 177 SF | INSTALL OVERHEAD OR GROUND MOUNTED SIGN |
| 8041 | 200 LF | NO. 6 AWG STRANDED BARE COPPER GROUND WIRE |
| 8054 | 1510 LF | ELECTRICAL CABLE - 2 CONDUCTOR (NO. 14 AWG) |
| 8056 | 1600 LF | ELECTRICAL CABLE - 5 CONDUCTOR (NO. 14 AWG) |
| 8057 | 780 LF | ELECTRICAL CABLE - 7 CONDUCTOR (NO. 14 AWG) |

## 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 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| PHASE 1 & 5 | ~~G~~ | ~~G~~ | R | R | FL/Y | FL/Y | ~~G~~ | ~~G~~ | ~~G~~ | R | R | R | R | R | R | R | R | DW | DW | DW | DW | DW | DW |
| PHASE 1 & 5 CHANGE | THE CONTROLLER MAY SKIP TO PHASE: 1 & 6, 2 & 5, OR 2 & 6 | | | | | | | | | | | | | | | | | | | | | | |
| PHASE 1 & 6 | ~~G~~ | ~~G~~ | G | G | FL/Y | FL/Y | ~~R~~ | ~~R~~ | ~~R~~ | R | R | R | R | R | R | R | R | DW | DW | DW | DW | DW | DW |
| PHASE 1 CHANGE | ~~Y~~ | ~~Y~~ | G | G | FL/Y | FL/Y | ~~R~~ | ~~R~~ | ~~R~~ | R | R | R | R | R | R | R | R | DW | DW | DW | DW | DW | DW |
| PHASE 2 & 5 | ~~R~~ | ~~R~~ | R | R | DARK | DARK | ~~G~~ | ~~G~~ | ~~G~~ | G | G | R | R | R | R | R | R | DW | DW | DW | DW | DW | DW |
| PHASE 5 CHANGE | ~~R~~ | ~~R~~ | R | R | DARK | DARK | ~~Y~~ | ~~Y~~ | ~~Y~~ | G | G | R | R | R | R | R | R | DW | DW | DW | DW | DW | DW |
| PHASE 2 & 6 | ~~R~~ | ~~R~~ | G | G | DARK | DARK | ~~R~~ | ~~R~~ | ~~R~~ | G | G | R | R | R | R | R | R | W | W | W | W | DW | DW |
| PHASE 2 & 6 PED. CLEARANCE | ~~R~~ | ~~R~~ | G | G | DARK | DARK | ~~R~~ | ~~R~~ | ~~R~~ | G | G | R | R | R | R | R | R | FL/DW | FL/DW | FL/DW | FL/DW | DW | DW |
| PHASE 2 & 6 CHANGE | ~~R~~ | ~~R~~ | Y | Y | FL/Y | FL/Y | ~~R~~ | ~~R~~ | ~~R~~ | Y | Y | R | R | R | R | R | R | DW | DW | DW | DW | DW | DW |
| PHASE 3 | ~~R~~ | ~~R~~ | R | R | FL/Y | FL/Y | ~~R~~ | ~~R~~ | ~~R~~ | R | R | R | R | R | ~~G~~ / G | ~~G~~ / G | G | DW | DW | DW | DW | DW | DW |
| PHASE 3 CHANGE | ~~R~~ | ~~R~~ | R | R | FL/Y | FL/Y | ~~R~~ | ~~R~~ | ~~R~~ | R | R | R | R | R | Y | Y | Y | DW | DW | DW | DW | DW | DW |
| PHASE 3 ALT. | ~~R~~ | ~~R~~ | R | R | FL/Y | FL/Y | ~~R~~ | ~~R~~ | ~~R~~ | R | R | R | R | R | ~~G~~ / G | ~~G~~ / G | G | DW | DW | DW | DW | W | W |
| PHASE 3 ALT. PED CLEARANCE | ~~R~~ | ~~R~~ | R | R | FL/Y | FL/Y | ~~R~~ | ~~R~~ | ~~R~~ | R | R | R | R | R | ~~G~~ / G | ~~G~~ / G | G | DW | DW | DW | DW | FL/DW | FL/DW |
| PHASE 3 ALT. CHANGE | ~~R~~ | ~~R~~ | R | R | FL/Y | FL/Y | ~~R~~ | ~~R~~ | ~~R~~ | R | R | R | R | R | Y | Y | Y | DW | DW | DW | DW | DW | DW |
| PHASE 4 | ~~R~~ | ~~R~~ | R | R | FL/Y | FL/Y | ~~R~~ | ~~R~~ | ~~R~~ | R | R | ~~G~~ / G | ~~G~~ / G | G | R | R | R | DW | DW | DW | DW | DW | DW |
| PHASE 4 CHANGE | ~~R~~ | ~~R~~ | R | R | FL/Y | FL/Y | ~~R~~ | ~~R~~ | ~~R~~ | R | R | Y | Y | Y | R | R | R | DW | DW | DW | DW | DW | DW |
| FLASHING OPERATION | FL/RA | FL/RA | FL/Y | FL/Y | DARK | DARK | FL/RA | FL/RA | FL/RA | FL/Y | FL/Y | FL/R | FL/R | FL/R | FL/R | FL/R | FL/R | DARK | DARK | DARK | DARK | DARK | DARK |

## EQUIPMENT LIST 'C'

EQUIPMENT TO BE REMOVED AND RETURNED TO SHA.

| ITEM NO | QUANTITY | DESCRIPTION |
|---|---|---|

NONE - ALL REMOVED EQUIPMENT SHALL BECOME THE PROPERTY OF THE CONTRACTOR

**TOD No.: AT783-21**
**SHA No.: HO377A58/B58**
MD 108 (Clarksville Pike) @ Columbia Rd

STATE OF MARYLAND
DEPARTMENT OF TRANSPORTATION
STATE HIGHWAY ADMINISTRATION
OFFICE OF TRAFFIC & SAFETY
TRAFFIC ENGINEERING DESIGN DIVISION

MD 108 (CLARKSVILLE PIKE)
AND COLUMBIA ROAD

**GENERAL INFORMATION - 01**

SCALE NONE DATE 9/2006 CONTRACT NO. AT7835185

DESIGNED BY MCG COUNTY HOWARD
DRAWN BY MCG LOGMILE 13010809.80
CHECKED BY BAB T.I.M.S. NO. H8711
F.A.P. NO. TOD NO.

DRAWING NO. TS-2045F 61 OF SHEET NO. 2 OF 3

STV Incorporated
engineers / architects / planners / construction managers
7125 Ambassador Road Baltimore, MD 21244-2722 (410) 944-9112

BY: SHARPSB

PLOTTED: FRIDAY, SEPTEMBER 29, 2006 AT 03:11 PM
FILE: I:\PROJECTS\031251\3\031251\3.0023\DRAWINGS\TRA\PSG-P001_MD108.DGN