

**PROJECT DESCRIPTION**

**GENERAL**

THIS PORTION OF THE PROJECT INVOLVES THE INSTALLATION OF APS (ACCESSIBLE PEDESTRIAN SIGNALS/CPS (COUNTDOWN PEDESTRIAN SIGNALS)) AT THE INTERSECTIONS OF US 1 BUSINESS (BALTIMORE PIKE) AND MD 924 (BOND STREET/KENMORE AVENUE), MD 924 (BOND STREET) AND OFFICE STREET, MD 924 (BOND STREET) AND CHURCHVILLE ROAD AND MD 924 (BOND STREET) AND PENNSYLVANIA AVENUE IN HARFORD COUNTY, MARYLAND.

U.S. 1 BUSINESS IS ASSUMED TO RUN IN A NORTH-SOUTH DIRECTION.

MD 924 BUSINESS IS ASSUMED TO RUN IN A NORTH-SOUTH DIRECTION.

**INTERSECTION OPERATION**

THE EXISTING INTERSECTION OPERATION WILL REMAIN THE SAME AT EACH INTERSECTION.

**TYPICAL MESSAGES FOR ACCESSIBLE PED SIGNALS**

MD 924 (BOND STREET) AND PENNSYLVANIA AVENUE

1. MD 924 (BOND STREET) AND PENNSYLVANIA AVENUE - NORTH LEG

STREETS AT 90 DEGREES

WAIT: "WAIT TO CROSS BOND AT PENNSYLVANIA, WAIT" \*

WALK: RAPID TICK

2. MD 924 (BOND STREET) AND PENNSYLVANIA AVENUE - SOUTH LEG

INTERSECTION WITH ANGLED CROSSING

WAIT: "WAIT TO CROSS BOND AT PENNSYLVANIA, CROSSWALK ANGLES LEFT, WAIT." \*\*

WALK: RAPID TICK

3. PENNSYLVANIA AVENUE AND MD 924 (BOND STREET) - EAST LEG

STREETS AT 90 DEGREES

WAIT: "WAIT TO CROSS PENNSYLVANIA AT BOND, WAIT" \*

WALK: RAPID TICK

4. PENNSYLVANIA AVENUE AND MD 924 (BOND STREET) - WEST LEG

INTERSECTION WITH ANGLED CROSSING

WAIT: "WAIT TO CROSS PENNSYLVANIA AT BOND, CROSSWALK ANGLES RIGHT, WAIT." \*\*

WALK: RAPID TICK

MD 924 (BOND STREET) AND OFFICE STREET

1. MD 924 (BOND STREET) AND OFFICE STREET - NORTH LEG

STREETS AT 90 DEGREES

WAIT: "WAIT TO CROSS BOND AT OFFICE, WAIT" \*

WALK: RAPID TICK

2. OFFICE STREET AND MD 924 (BOND STREET) - EAST LEG

STREETS AT 90 DEGREES

WAIT: "WAIT TO CROSS OFFICE AT BOND, WAIT" \*

WALK: RAPID TICK

MD 924 (BOND STREET) AND MD 22/MD 922E (CHURCHVILLE ROAD)

1. MD 22/MD 922E (CHURCHVILLE ROAD) AND MD 924 (BOND STREET) - EAST LEG

INTERSECTION WITH ANGLED CROSSING

WAIT: "WAIT TO CROSS CROSS CHURCHVILLE AT BOND, CROSSWALK ANGLES LEFT, WAIT." \*\*

WALK: RAPID TICK

2. MD 22/MD 922E (CHURCHVILLE ROAD) AND MD 924 (BOND STREET) - WEST LEG

STREETS AT 90 DEGREES

WAIT: "WAIT TO CROSS CHURCHVILLE AT BOND, WAIT." \*

WALK: RAPID TICK

3. MD 924 (BOND STREET) AND MD 22/MD 922E (CHURCHVILLE ROAD) - NORTH LEG

STREETS AT 90 DEGREES

WAIT: "WAIT TO CROSS BOND AT CHURCHVILLE, WAIT." \*

WALK: RAPID TICK

4. MD 924 (BOND STREET) AND MD 22/MD 922E (CHURCHVILLE ROAD) - SOUTH LEG

STREETS AT 90 DEGREES

WAIT: "WAIT TO CROSS BOND AT CHURCHVILLE, WAIT." \*

WALK: RAPID TICK

US 1 BUSINESS AND MD 924 (BOND STREET/KENMORE AVENUE)

1. US 1 BUSINESS (BALTIMORE PIKE) AND MD 924 (BOND STREET) - SOUTH LEG

INTERSECTION WITH ANGLED CROSSING

WAIT: "WAIT TO CROSS BALTIMORE AT BOND AND KENMORE, CROSSWALK ANGLES RIGHT, WAIT." \*\*

WALK: RAPID TICK

2. US 1 BUSINESS (BALTIMORE PIKE) AND MD 924 (BOND STREET/KENMORE AVENUE) - NORTH LEG

STREETS AT 90 DEGREES

WAIT: "WAIT TO CROSS BALTIMORE AT BOND AND KENMORE, WAIT" \*

WALK: RAPID TICK

3. MD 924 (BOND STREET/KENMORE AVENUE) AND US 1 BUSINESS (BALTIMORE PIKE) - WEST LEG

STREETS AT 90 DEGREES

WAIT: "WAIT TO CROSS BOND AT BALTIMORE, WAIT." \*

WALK: RAPID TICK

4. MD 924 (BOND STREET/KENMORE AVENUE) AND US 1 BUSINESS (BALTIMORE PIKE) - EAST LEG

STREETS AT 90 DEGREES

WAIT: "WAIT TO CROSS KENMORE AT BALTIMORE, WAIT" \*

WALK: RAPID TICK

\* MESSAGE USED IF DISTANCE FROM NEAREST PUSHBUTTON FOR PERPENDICULAR CROSSING IS < 10'

\*\* MESSAGE USED IF CROSSWALK DIVERGES FROM OR CONVERGES WITH PARALLEL TRAFFIC

NOTE: MESSAGES FOR INTERSECTION CONFIGURATIONS, VARYING FROM THE ABOVE ARE TO BE APPROVED BY THE DIRECTOR, OFFICE OF TRAFFIC AND SAFETY.

**CONTROLLER REQUIREMENTS**

MD 924 (BOND STREET) AND PENNSYLVANIA AVENUE

THE EXISTING POLE MOUNTED CABINET AND CONTROLLER WILL BE USED. THE CONTROLLER WILL BE RETROFITTED TO OPERATE APS EQUIPMENT.

MD 924 (BOND STREET) AND OFFICE STREET

THE EXISTING POLE MOUNTED CABINET AND CONTROLLER WILL BE USED. THE CONTROLLER WILL BE RETROFITTED TO OPERATE APS EQUIPMENT.

MD 924 (BOND STREET) AND CHURCHVILLE ROAD

THE EXISTING POLE MOUNTED CABINET AND CONTROLLER WILL BE USED. THE CONTROLLER WILL BE RETROFITTED TO OPERATE APS EQUIPMENT.

US 1 BUSINESS (BALTIMORE PIKE) MD 924 (BOND STREET/KENMORE AVENUE)

THE EXISTING POLE MOUNTED CABINET AND CONTROLLER WILL BE USED. THE CONTROLLER WILL BE RETROFITTED TO OPERATE APS EQUIPMENT.

**EQUIPMENT LIST "A"**

A. EQUIPMENT TO BE SUPPLIED BY THE SHA

| CATEGORY CODES | QUANTITY  | DESCRIPTION   |
|----------------|-----------|---|
| 973023         | 28 S.F.   | SHEET ALUMINUM SIGNS TO CONSIST OF (POLE MOUNT) :                             |
|                | - 12 EACH | R10-3(1) SIGN (9 IN. x 15 IN.) TO READ "PUSHBUTTON TO CROSS BOND STREET"      |
|                | - 4 EACH  | R10-3(1) SIGN (9 IN. x 15 IN.) TO READ "PUSHBUTTON TO CROSS PENNSYLVANIA AVE" |
|                | - 2 EACH  | R10-3(1) SIGN (9 IN. x 15 IN.) TO READ "PUSHBUTTON TO CROSS OFFICE STREET"    |
|                | - 4 EACH  | R10-3(1) SIGN (9 IN. x 15 IN.) TO READ "PUSHBUTTON TO CROSS CHURCHVILLE ROAD" |
|                | - 2 EACH  | R10-3(1) SIGN (9 IN. x 15 IN.) TO READ "PUSHBUTTON TO CROSS KENMORE AVENUE"   |
|                | - 4 EACH  | R10-3(1) SIGN (9 IN. x 15 IN.) TO READ "PUSHBUTTON TO CROSS BALTIMORE PIKE"   |

**EQUIPMENT LIST "C"**

C. EQUIPMENT TO BE REMOVED AND RETURNED TO SHA

ALL REMOVED SIGNAL MATERIALS SHALL BECOME PROPERTY OF THE CONTRACTOR

**MAINTENANCE OF TRAFFIC**

THE FOLLOWING TRAFFIC CONTROL STANDARDS SHALL BE REFERENCED FOR THE PROJECT. ADDITIONAL TRAFFIC CONTROL STANDARDS MAY BE USED AS DIRECTED BY THE ENGINEER.

STANDARD NO. MD-104.02-01 (SHOULDER WORK) STANDARD NO. MD-104.02-13 (INTERSECTION FLAGGING OPERATION)

**PROJECT CONTACTS**

THE CONTACT PERSONS FOR SHA ARE AS FOLLOWS:

MS. ERIN KUHN  
ASSISTANT DISTRICT ENGINEER - TRAFFIC  
PHONE: (410) 229-2381

MR. ANDRE FUTRELL  
ASSISTANT DISTRICT ENGINEER - MAINTENANCE  
PHONE: (410) 229-2361

MR. MIKE PASQUARIELLO  
DISTRICT UTILITY ENGINEER  
PHONE: (410) 229-2341

MR. ROBERT SYNDER  
ASSISTANT CHIEF, TRAFFIC OPERATIONS DIVISION  
PHONE: (410) 787-7631

MR. RICHARD L. DAFF, SR.  
CHIEF, TRAFFIC OPERATIONS DIVISION  
PHONE: (410) 787-7630

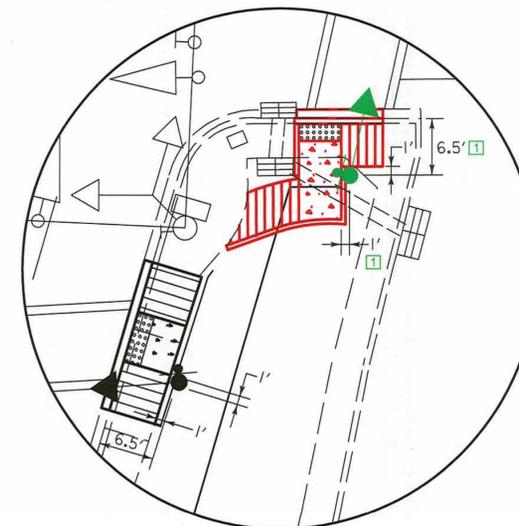
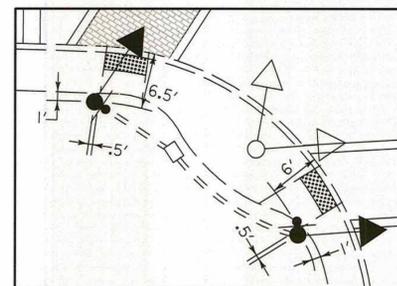
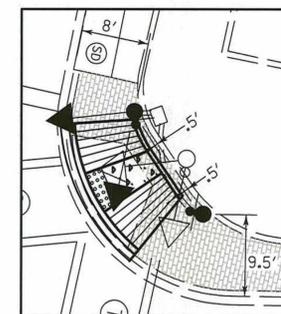
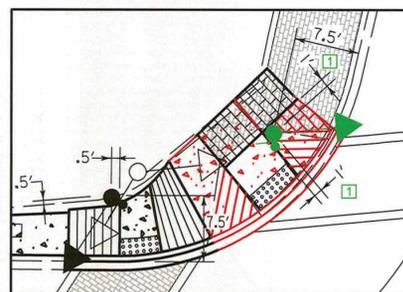
**EQUIPMENT LIST "B"**

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

| CATEGORY CODES | QUANTITY  | DESCRIPTION  |
|----------------|-----------|--|
| 203030         | 21 C.Y.   | TEST PIT EXCAVATION                                    |
| 655105         | 410 S.F.  | 5 IN. CONCRETE SIDEWALK                                |
| 801004         | 25 C.Y.   | CONCRETE FOR SIGNAL FOUNDATION                         |
| 801104         | 14 L.F.   | WOOD SIGN SUPPORTS 4 INCH X 4 INCH                     |
| 802501         | 700 L.F.  | NO. 6 AWG STRANDED BARE COPPER GROUND WIRE             |
| 805135         | 510 L.F.  | 3 INCH SCHEDULE 80 RIGID PVC CONDUIT-TRENCHED          |
| 811001         | 2 EACH    | FURNISH AND INSTALL ELECTRICAL HANDHOLE                |
| 813015         | 28 S.F.   | INSTALL OVERHEAD SIGN                                  |
| 813023         | 6 S.F.    | RELOCATE EXISTING GROUND MOUNTED SIGNS                 |
| 818004         | 25 EACH   | 10 FOOT BREAKAWAY PEDESTAL POLE                        |
| 860292         | 16 EACH   | CUT, CLEAN, GALVANIZE AND CAP TRAFFIC SIGNAL STRUCTURE |
| 861105         | 4500 L.F. | ELECTRICAL CABLE - 2 CONDUCTOR (NO. 14 AWG)            |
| 861107         | 3115 L.F. | ELECTRICAL CABLE - 5 CONDUCTOR (NO. 14 AWG)            |
| 800000         | 1 EACH    | REMOVE AND DISPOSE OF EXISTING MATERIAL AND EQUIPMENT  |
| 800000         | 25 EACH   | 16 INCH COUNTDOWN PEDESTRIAN SIGNAL HEAD               |
| 800000         | 28 EACH   | AUDIBLE/TACTILE PEDESTRIAN PUSHBUTTON STATION          |
| 800000         | 4 EACH    | 2-WIRE CENTRAL CONTROL UNIT                            |
| 800000         | 225 S.F.  | REMOVE AND RESET BRICK PAVERS                          |
| 800000         | 3 EACH    | 3" BLIND COUP WELDED & GALVANIZED                      |

**DIMENSION DIAGRAM - US 1 BUSINESS and MD 924**

SCALE: 1"=10'



GREENLINE REVISION NO. 1  
TEDD'S APPROVAL/DATE



WHITMAN, REQUARDT & ASSOCIATES, LLP  
801 South Caroline Street, Baltimore, Maryland 21231

STATE OF MARYLAND  
DEPARTMENT OF TRANSPORTATION  
STATE HIGHWAY ADMINISTRATION  
OFFICE OF TRAFFIC & SAFETY  
TRAFFIC ENGINEERING DESIGN DIVISION  
MD 924 Signals  
Bel Air, Maryland

**GENERAL INFORMATION SHEET**

|             |          |                 |             |              |           |
|-------------|----------|-----------------|-------------|--------------|-----------|
| SCALE       | NONE     | ADVERTISED DATE | 6/15/2011   | CONTRACT NO. | HA3885177 |
| DESIGNED BY | S. Bloss | COUNTY          | Harford     |              |           |
| DRAWN BY    | S. Bloss | LOGMILE         | 12800102.58 |              |           |
| CHECKED BY  | N. Leary | TIMS NO.        | K859        |              |           |
| F.A.P. NO.  |          | TOD NO.         |             |              |           |
| TS NO.      | 1472 O   | DRAWING         | TSP-7       | OF           | 7         |
|             |          | SHEET NO.       | 162C        | OF           | 162       |

BY: sbloss