

**PROJECT DESCRIPTION**

THIS PORTION OF THE PROJECT INVOLVES THE UPGRADING OF AN EXISTING TRAFFIC SIGNAL AT MD 924 (MAIN STREET) AND FULFORD AVE. / U.S. RTE. 1 BUSINESS IN HARFORD COUNTY. THE SIGNAL WILL BE UPGRADED IN ONE PHASE. BLACK FACED LED SIGNAL HEADS WILL REPLACE THE EXISTING SIGNAL HEADS. APS PUSH BUTTONS AND SIGNS WILL BE ADDED TO THE SIGNAL. MD 924 IS ASSUMED TO RUN IN AN EAST-WEST DIRECTION.  
INTERSECTION OPERATION

**I. NORMAL OPERATION**  
THE INTERSECTION WILL OPERATE IN A TWO PHASE, FULLY TRAFFIC ACTUATED MODE.

**CONTROLLER REQUIREMENTS:**

AN EXISTING FULLY - TRAFFIC - ACTUATED - EIGHT - PHASE TRAFFIC SIGNAL CONTROLLER IN A POLE - MOUNTED SYSTEM READY CABINET WILL REMAIN AT THIS INTERSECTION.

**SPECIAL NOTE:**

UPON COMPLETION OF THIS PROJECT, THE CONTRACTOR SHALL NOTIFY MR. ROBERT SNYDER OF SHA AT (410) 787-7631 TO ARRANGE FOR THE PHONE LINE INSTALLATION. THE CONTRACTOR IS TO PROVIDE MR. SNYDER WITH THE NEAREST STREET ADDRESS, ZIP CODE, AND PHONE NUMBER.

**EQUIPMENT LIST**

A. EQUIPMENT TO BE SUPPLIED BY SHA AND INSTALLED BY THE CONTRACTOR:

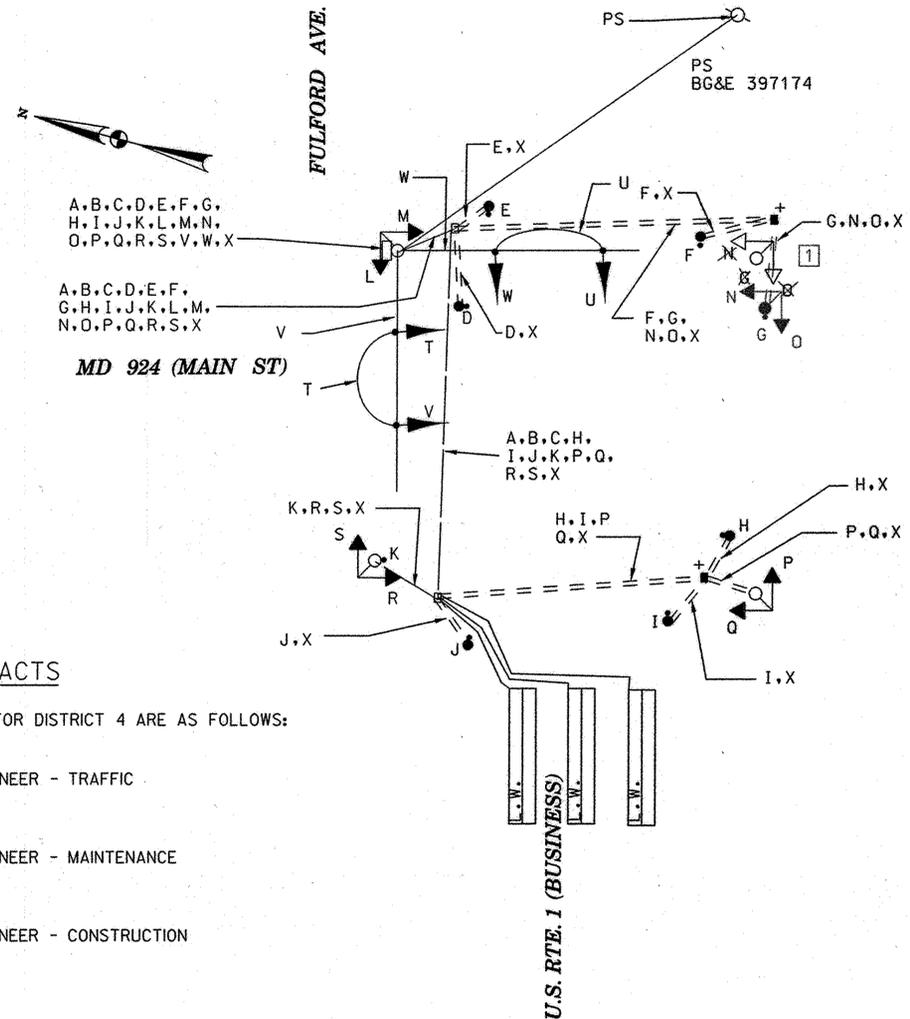
CATAGORY CODE NO.	SPEC. NO.	QUANTITY	DESCRIPTION
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B. EQUIPMENT TO BE FURNISHED AND INSTALLED BY THE CONTRACTOR:

CATEGORY CODE NO.	SPEC. NO.	QUANTITY	DESCRIPTION
120500	104	L.S.	MAINTENANCE OF TRAFFIC
203030	205	10 C.Y.	TEST PIT EXCAVATION
585621	SP-555	285 L.F.	FURNISH AND INSTALL 12 IN. WHITE HEAT APPLIED PERMANENT PREFORMED THERMOPLASTIC PAVEMENT MARKING (CROSSWALK)
585624	SP-555	70 L.F.	FURNISH AND INSTALL 24 IN. WHITE HEAT APPLIED PERMANENT PREFORMED THERMOPLASTIC PAVEMENT MARKING (STOP LINE)
801004	801	6.65 C.Y.	FURNISH AND INSTALL CONCRETE FOR SIGNAL FOUNDATION
802501	810	175 L.F.	FURNISH AND INSTALL NO. 6 AWG STRANDED BARE COPPER GROUND WIRE
861104	810	250 L.F.	FURNISH AND INSTALL ELECTRICAL CABLE - 2 CONDUCTOR (ALUMINUM SHIELDED)
861105	810	285 L.F.	FURNISH AND INSTALL ELECTRICAL CABLE - 2 CONDUCTOR (NO. 14 AWG).
861107	810	750 L.F.	FURNISH AND INSTALL ELECTRICAL CABLE - 5 CONDUCTOR (NO. 14 AWG).
861108	810	475 L.F.	FURNISH AND INSTALL ELECTRICAL CABLE - 7 CONDUCTOR (NO. 14 AWG).
811001	811	2 EA.	FURNISH AND INSTALL ELECTRICAL HANDHOLE.
805135	805	20 L.F.	FURNISH AND INSTALL 1 IN. ELECTRICAL CONDUIT GALVANIZED SLEEVE.
805135	805	25 L.F.	FURNISH AND INSTALL 3 IN. DIA. PVC ELECTRICAL CONDUIT SCHEDULE 80 - BORED.
805155	805	130 L.F.	FURNISH AND INSTALL 4 IN. DIA. PVC ELECTRICAL CONDUIT SCHEDULE 80 - SLOTTED.
862101	810	1400 L.F.	FURNISH AND INSTALL LOOP WIRE ENCASED IN FLEXIBLE TUBING (NO. 14 AWG).
862102	815	500 L.F.	SAW CUT FOR SIGNAL (LOOP DETECTOR).
800000		1 EA.	FURNISH AND INSTALL TWO WIRE CONTROL UNIT.
800000		8 EA.	FURNISH AND INSTALL AUDIBLE TACTILE PEDESTRIAN PUSH BUTTON STATION AND SIGN.
860272	814	28 EA.	FURNISH AND INSTALL 12 IN. L.E.D. VEHICULAR TRAFFIC SIGNAL HEAD SECTION BLACK FACED
800000		8 EA.	FURNISH AND INSTALL 16" LED COUNTDOWN PEDESTRIAN SIGNAL HEAD (PAINTED BLACK)
800000		L.S.	REMOVE AND DISPOSE OF EXISTING MATERIAL / EQUIPMENT
1	818004	810	6 EA. FURNISH AND INSTALL 10 FT BREAKAWAY STEEL PUSH BUTTON PED POLE (4 IN. SCHEDULE 40 PIPE).
1	818004	818	1 EA. FURNISH AND INSTALL 10 FT BREAKAWAY PEDESTAL POLE.

**WIRING DIAGRAM**

	1	2	3	4	5	6	7	8	9	10	11	12
PHASE 2	G	G	R	R	W	W	W	W	DW	DW	DW	DW
PED CLEAR	G	G	R	R	FL/DW*	FL/DW*	FL/DW*	FL/DW*	DW	DW	DW	DW
PHASE 2 CHANGE	Y	Y	R	R	DW							
PHASE 4	R	R	G	G	DW							
PHASE 4 CHANGE	R	R	Y	Y	DW							
PHASE 4 ALT	R	R	G	G	DW	DW	DW	DW	W	W	W	W
PED CLEAR	R	R	G	G	DW	DW	DW	DW	FL/DW*	FL/DW*	FL/DW*	FL/DW*
PHASE 4 ALT CHANGE	R	R	Y	Y	DW							
FLASHING OPERATION	FL/Y	FL/Y	FL/R	FL/R	DARK							



**WIRING KEY**

- A, B, C } 2-CONDUCTOR ELECTRICAL CABLE (ALUMINUM SHIELDED)
- D-K } 2-CONDUCTOR ELECTRICAL CABLE (NO. 14 A.W.G.)
- L-U } 5-CONDUCTOR ELECTRICAL CABLE (NO. 14 A.W.G.)
- V, W } 7-CONDUCTOR ELECTRICAL CABLE (NO. 14 A.W.G.)
- L, W } LOOP WIRE
- X } STRANDED BARE COPPER GROUND WIRE (NO. 6 A.W.G.)

**PROJECT CONTACTS**

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. DONALD SCHAEFER  
ASSISTANT DISTRICT ENGINEER - CONSTRUCTION  
PHONE: (410) 321-2821
- MR. MIKE PASQUARIELLO  
UTILITY ENGINEER  
PHONE: (410) 321-2841
- MR. EDWARD RODENHIZER  
MANAGER, SIGNAL OPERATIONS SECTION  
PHONE: (410) 787-7652
- MR. RICHARD DAFF  
CHIEF, TRAFFIC OPERATIONS DIVISION  
PHONE: (410) 787-7630

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

**MD 924 (MAIN ST.) STREETScape IMPROVEMENTS FROM MD 22 (FULFORD AVE.) TO GORDON ST. (DESIGN BUILD)**

**JMT**  
**JOHNSON, MIRMIRAN & THOMPSON**  
Engineering A Brighter Future®  
72 Loveton Circle Baltimore, Maryland 21152-0949

APPROVALS	REVISIONS
TEAM LEADER	1 GREENLINE 1 2-15-08 HA1865184 RECONSTRUCT SIGNAL DUE TO GEOM CHANGES
ASST. DIV. CHIEF	2 HA1865184 RECONSTRUCT SIGNAL DUE TO GEOM CHANGES
DIVISION CHIEF	3 REPLACE INTERCONNECT CABLE
OFFICE DIRECTOR	

MD 924 (MAIN ST. @ US 1/FULFORD AVE.)  
SCALE NO SCALE DATE JUNE 1890 CONTRACT NO. AW-497-491-005  
DESIGNED BY COUNTY HARFORD  
DRAWN BY H. KILAN LOGMILE 12092405.54  
CHECKED BY T.I.M.S. NO. G-985  
F.A.P. NO. TOD NO. TS-1473N  
DRAWING NO. TS - 02 OF 14 SHEET NO. 3 OF 15