

**PROJECT DESCRIPTION**

**I. GENERAL**

THIS PROJECT INVOLVES A TRAFFIC SIGNAL MODIFICATION IN CONJUNCTION WITH GEOMETRIC IMPROVEMENTS ON THE WEST SIDE OF THE INTERSECTION OF SOUTHBOUND US ROUTE 1 (WASHINGTON BOULEVARD) AND BOWIE ROAD. THE MODIFICATION INVOLVES THE ADDITION OF A NEW TRAFFIC SIGNAL POLE, UPGRADE OF TWO PEDESTRIAN SIGNAL HEADS AND ASSOCIATED SIGNS, HANDBOXES, AND ETC. TO ACCOMMODATE THE PROPOSED GEOMETRICS. MD ROUTE 1 IS ASSUMED TO RUN IN A NORTH-SOUTH DIRECTION.

**II. INTERSECTION OPERATION**

THIS INTERSECTION WILL OPERATE IN A NEMA TWO-PHASE, SEMI-TRAFFIC-ACTUATED MODE. SOUTHBOUND US ROUTE 1 MOVEMENTS WILL OPERATE SEPARATELY FROM THE WESTBOUND AND EASTBOUND MOVEMENTS, WHICH WILL OPERATE CONCURRENTLY. PRE-EMPTION EQUIPMENT IS PROVIDED ON THE EASTBOUND AND SOUTHBOUND MOVEMENTS. A PEDESTRIAN PHASE IS PROVIDED ACROSS THE NORTH LEG OF THE INTERSECTION.

**III. CONTROLLER REQUIREMENTS**

THE POLE-MOUNTED CONTROLLER ASSEMBLY IS EXISTING AND TO BE REUSED.

**IV. SPECIAL NOTES**

1. MAINTENANCE OF TRAFFIC WILL BE HANDLED BY THE CONTRACTOR UTILIZING THE FOLLOWING STANDARD PLATES FOR TRAFFIC CONTROL: 104.00 - 104.00-30, 104.31-01 (FLAGGING OPERATION), 104.33-01 (SHOULDER WORK), 104.35 (LANE SHIFT), 104.32-01 (INTERSECTION FLAGGING OPERATION).
2. THE CONTRACTOR SHALL BE RESPONSIBLE FOR PULLING ALL CABLE TO THE CABINET AND SHALL PROPERLY LABEL EACH CABLE. ALL INTERNAL WIRING SHALL BE DONE BY SHA SIGNAL FORCES. CONTACT ED RODENHIZER AT LEAST 72 HOURS PRIOR TO INSTALLATION.
3. ALL UNDERGROUND AND OVERHEAD UTILITIES SHOWN ON THESE PLANS ARE SCHEMATIC ONLY AND MAY NOT BE COMPLETE. THE CONTRACTOR SHALL BE RESPONSIBLE FOR IDENTIFYING MISS UTILITY PRIOR TO CONSTRUCTION SO THAT ALL UTILITIES MAY BE LOCATED IN THE FIELD. IF THE CONTRACTOR PERCEIVES A CONFLICT BETWEEN THE UTILITIES AND THE TRAFFIC SIGNAL WILL OCCUR, THEN THE CONTRACTOR SHALL NOTIFY THE PROJECT ENGINEER IMMEDIATELY SO THAT CONFLICT MAY BE RESOLVED.

**Pushbutton Operation**

WAIT MESSAGE : NORTH LEG: WAIT TO CROSS WASHINGTON @ BOWIE  
WALK MESSAGE : SHALL BE RAPID TICK

**PROJECT CONTACTS**

THE CONTACT PERSONS FOR THIS PROJECT ARE AS FOLLOWS:

MR. BRIAN YOUNG  
ASSISTANT DISTRICT ENGINEER - TRAFFIC  
PHONE: (301) 513-7358

MS. AUGUSTINE REBISH  
DISTRICT UTILITIES ENGINEER  
PHONE: (301) 513-7350

MR. WAYNE MOWDY  
ASSISTANT DISTRICT ENGINEER - MAINTENANCE  
PHONE: (301) 513-7358

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

THE POWER COMPANY REPRESENTATIVE IS:  
BC&E  
7313 PARKWAY DRIVE  
HANOVER, MD 21076  
PHONE: (410) 850-4620

MR. ED RODENHIZER  
SIGNAL OPERATIONS SUPERVISOR  
PHONE: (410) 787-7650

**EQUIPMENT LIST "A"**

A. EQUIPMENT TO BE FURNISHED AND/OR INSTALLED BY SHA  
NONE

**EQUIPMENT LIST "B"**

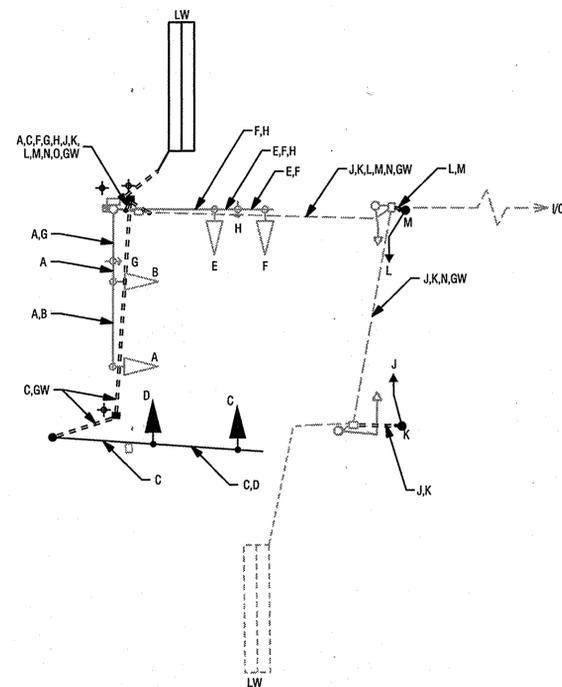
B. EQUIPMENT TO BE FURNISHED AND/OR INSTALLED BY THE CONTRACTOR

QUANTITY	UNITS	SPECIFICATION SECTION	DESCRIPTION	QUANTITY	UNITS	SPECIFICATION SECTION	DESCRIPTION
1	LS	104	MAINTENANCE OF TRAFFIC.	35	SF	813	FURNISH AND INSTALL SHEET ALUMINUM SIGNS CONSISTING OF: 1 EA D-3(I) MOD. VAR. x 16" "BOWIE RD" 1 EA D-3(I) MOD. VAR. x 16" "WASHINGTON BLVD" 1 EA R3-IL) 30' x 30' NO LEFT TURN 1 EA R6-IL) 36' x 12" "ONE WAY" LEFT ARROW 2 EA R6-IR) 36' x 12" "ONE WAY" RIGHT ARROW 2 EA R10-3(I) MOD. 9' x 15" "PUSH BUTTON TO CROSS WASHINGTON BLVD" 2 EA R10-3(I) MOD. 9' x 15" "PUSH BUTTON TO CROSS WASHINGTON BLVD" IN BRAILLE TYPE 2
1	LS	108	MOBILIZATION.	2	EA	814	FURNISH AND INSTALL 16 IN. ONE-WAY, ONE SECTION (LED SYMBOLIC MAN/HAND AND COUNTDOWN BLACK-FACED ALUMINUM SIGNAL HEAD, PEDESTAL POLE MOUNTED).
3	CY	108	TEST PIT EXCAVATION.	6	EA	814	FURNISH AND INSTALL 12 IN. VEHICULAR SIGNAL HEAD SECTION.
25	LF	801	FURNISH AND INSTALL 4X4 WOOD SIGN SUPPORTS	2	EA	817	FURNISH AND INSTALL PEDESTRIAN APS PUSH BUTTON WITH R10-3(I) MOD. SIGN.
3	EA	804	FURNISH AND INSTALL GROUND ROD - 3/4 IN. DIAMETER x 10 FT.	1	EA	817	FURNISH AND INSTALL 15' SPECIAL 'T' STEEL POLE WITH 50" MAST ARM.
325	LF	804	FURNISH AND INSTALL No. 6 STRANDED BARE COPPER GROUND WIRE	2	EA	818	FURNISH AND INSTALL 10' BREAKAWAY PEDESTAL POLE.
60	LF	805	3 IN. SCHEDULE 80 RIGID PVC CONDUIT (TRENCHED).				
60	LF	805	3 IN. SCHEDULE 80 RIGID PVC CONDUIT (BORED).				
270	LF	805	ELECTRICAL CABLE - 2 CONDUCTOR (No. 14 AWG)				
110	LF	810	ELECTRICAL CABLE - 4 CONDUCTOR (No. 20 AWG).				
570	LF	810	ELECTRICAL CABLE - 5 CONDUCTOR (No. 14 AWG).				
245	LF	810	ELECTRICAL CABLE - 7 CONDUCTOR (No. 14 AWG).				
35	LF	549	FURNISH AND INSTALL 5 IN. DOUBLE YELLOW THERMOPLASTIC PAVEMENT MARKING.				
100	LF	549	FURNISH AND INSTALL 12 IN. WHITE THERMOPLASTIC PAVEMENT MARKING. (CROSSWALK)				
100	LF	549	FURNISH AND INSTALL 24 IN. WHITE THERMOPLASTIC PAVEMENT MARKING. (STOPBAR)				
2	EA	811	FURNISH AND INSTALL ELECTRICAL HANDBOX.				
120	LF	815	FURNISH AND INSTALL SAW CUT FOR LOOP DETECTOR.				
10	LF	805	FURNISH AND INSTALL 1 IN. LIQUID-TIGHT, FLEXIBLE NON-METALLIC CONDUIT DETECTOR SLEEVE.				
420	LF	814	FURNISH AND INSTALL LOOP DETECTOR WIRE (No. 14 AWG) ENCASED IN FLEXIBLE TUBING.				

**EQUIPMENT LIST "C"**

C. EQUIPMENT TO BE REMOVED AND RETURNED TO SHA  
ALL MATERIAL REMOVED IN ACCORDANCE WITH THESE PLANS SHALL BECOME THE PROPERTY OF THE CONTRACTOR.

**WIRING DIAGRAM**



**WIRING LEGEND**

- N.O 2 CONDUCTOR ELECTRICAL CABLE (ALUMINUM SHEILED) (LOOP DETECTOR)  
\* NOTE: RESPLICE EXISTING LOOP DETECTOR (N).
- K.M 2 CONDUCTOR ELECTRICAL CABLE (No. 14 AWG) (PUSH BUTTON)
- G.H 4 CONDUCTOR ELECTRICAL STRANDED CABLE (No. 20 AWG) (PRE-EMPTION)
- J.L 5 CONDUCTOR ELECTRICAL CABLE (No. 14 AWG) (PED HEADS)
- B,D,E 5 CONDUCTOR ELECTRICAL CABLE (No. 14 AWG) (SIGNAL HEADS)
- A,C,F 7 CONDUCTOR ELECTRICAL CABLE (No. 14 AWG) (SIGNAL HEADS)
- LW LOOP DETECTOR WIRE (No. 14 AWG) IN FLEXIBLE TUBING
- GW STRANDED BARE COPPER GROUND WIRE (No. 6 AWG)
- ⊕ GROUND ROD (IN HANDHOLE)
- ∩ INTERCONNECT

**PHASE CHART**

	1	2	3	4	5	6	7	8	
	(G)	(Y)	(R)	(G)	(Y)	(R)	(G)	(Y)	(R)
PHASE 2	G	G	R	R	R	R	DW	DW	∩
PHASE 2 CHANGE	Y	Y	R	R	R	R	DW	DW	∩
PHASE 4 + 8	R	R	G	G	G	G	DW	DW	∩
PHASE 4 + 8 CHANGE	R	R	Y	Y	Y	Y	DW	DW	∩
ALT PHASE 4 + 8	R	R	G	G	G	G	W	W	∩
PED CLEAR	R	R	G	G	G	G	FL/DW	FL/DW	∩
ALT PHASE 4 + 8 CHANGE	R	R	Y	Y	Y	Y	DW	DW	∩
PRE-EMPTION PHASE 2	G	G	R	R	R	R	DW	DW	∩
PRE-EMPTION PHASE	Y	Y	R	R	R	R	DW	DW	∩
PRE-EMPTION PHASE 8	R	R	R	R	G	G	DW	DW	∩
PRE-EMPTION CHANGE	R	R	R	R	Y	Y	DW	DW	∩
FLASHING OPERATION	FL/Y	FL/Y	FL/R	FL/R	FL/R	FL/R	DARK	DARK	∩

**SHA** STATE OF MARYLAND  
DEPARTMENT OF TRANSPORTATION  
STATE HIGHWAY ADMINISTRATION  
OFFICE OF TRAFFIC & SAFETY  
TRAFFIC ENGINEERING DESIGN DIVISION  
SOUTHBOUND US ROUTE 1 (WASHINGTON BOULEVARD)  
@ BOWIE ROAD  
LAUREL, MARYLAND

**TRAFFIC SIGNAL MODIFICATION PLAN**

SCALE 1" = 20' DATE 06-03-08 CONTRACT NO. \_\_\_\_\_

DESIGNED BY CT/NDG COUNTY PRINCE GEORGES  
DRAWN BY APV LOGMILE 116000113.50  
CHECKED BY CT TIMS# 1890  
F.A.P. NO. TOD NO. \_\_\_\_\_

DRAWING NO. 1632G-G1 SHEET NO. 2 OF 2

WELLS + ASSOCIATES, INC.  
TRANSPORTATION, TRAFFIC AND PARKING CONSULTANTS  
1420 Spring Hill Road  
McLean, VA 22102  
Phone: (703) 977-6620 Fax: (703) 917-0739  
5 West Street  
Lynchburg, VA 24179  
Phone: (703) 443-1442 Fax: (703) 443-1225

PLOTTED: \$DATE\$  
FILE: L:\Projects\3501 - 4000\3730 - US 1 SB & Bowie Rd\Design\US 1 SB & Bowie Rd TSD.dgn

DRILL HOLES

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BY: APV