

PROJECT DESCRIPTION

THIS PROJECT INVOLVES THE INSTALLATION OF LED COUNTDOWN PEDESTRIAN SIGNAL HEADS, APS PUSHBUTTONS, AND SIGNS AT THE INTERSECTION OF US 1 (WASHINGTON BLVD) AND LOUDON AVENUE IN HOWARD COUNTY. US 1 IS ASSUMED TO RUN IN A NORTH-SOUTH DIRECTION.

INTERSECTION OPERATION

THIS INTERSECTION CURRENTLY OPERATES IN A NEMA SIX-PHASE FULL-TRAFFIC-ACTUATED MODE WITH EXCLUSIVE-PERMISSIVE LEFT TURNS ON NORTHBOUND AND SOUTHBOUND US 1 AND AN ALTERNATE PEDESTRIAN PHASE FOR THE NORTH LEG OF THE INTERSECTION.

CONTROLLER REQUIREMENTS

THE EXISTING FULL-TRAFFIC-ACTUATED EIGHT PHASE TRAFFIC SIGNAL CONTROLLER HOUSED IN A BASE MOUNTED CABINET WILL BE USED. AN APS CENTRAL CONTROL UNIT WILL BE FURNISHED BY THE CONTRACTOR AND INSTALLED BY THE SHA.

SPECIAL NOTE

APS WILL FUNCTION AS FOLLOWS:

FOR US 1 (BALTIMORE-WASHINGTON BOULEVARD):

A. WHEN PEDESTRIAN LOCATES AND PRESSES PUSHBUTTON FOR AN EXTENDED TIME, THE PUSHBUTTON UNIT MESSAGE WILL BE "WAIT TO CROSS BALTIMORE-WASHINGTON BOULEVARD AT LOUDON AVENUE."

B. WHEN WALK PHASE BEGINS, THE MESSAGE WILL BE A RAPID TICK WHICH WILL LAST FOR THE DURATION OF THE WALK PHASE.

CONTACT PERSONS FOR DISTRICT #7 ARE AS FOLLOWS:

MR. JOHN CONCANNON ASSISTANT DISTRICT ENGINEER-TRAFFIC PHONE: (301)624-8140
 MS. ANDREA ABEND UTILITY ENGINEER PHONE: (301)624-8115

MR. RAYMOND JOHNSON ASSISTANT DISTRICT ENGINEER-MAINTENANCE PHONE: (301)624-8105

CONTACT PERSONS FOR OOTS ARE AS FOLLOWS:

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

MR. ED RODENHIZER CHIEF, SIGNAL OPERATIONS (410)787-7650
 MR. EUGENE BAILEY CHIEF, SIGN OPERATIONS (410)787-7676

EQUIPMENT LIST "A"

A. EQUIPMENT TO BE SUPPLIED BY THE SHA.

NONE

EQUIPMENT LIST "B"

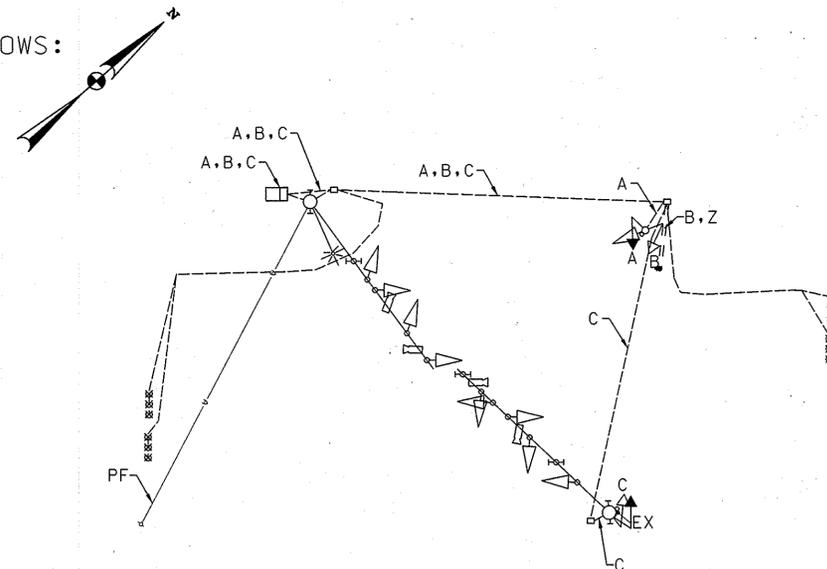
B. EQUIPMENT TO BE FURNISHED AND/OR INSTALLED BY THE CONTRACTOR.

ITEM NO.	DESCRIPTION	UNIT	QUANTITY
2003	TEST PIT EXCAVATION	CY	10
5001	REMOVAL OF EXISTING PERMANENT PAVEMENT MARKINGS	LF	370
5006	12" WHITE PREFORMED THERMOPLASTIC PAVEMENT MARKINGS	LF	150
8001	CONCRETE FOR SIGNAL STRUCTURE	CY	0.2
8002	AUDIBLE/TACTILE PEDESTRIAN PUSHBUTTON	EA	2
8003	BREAKAWAY PEDESTRIAN POLE - ANY SIZE	EA	1
8004	LED 16 INCH COUNTDOWN PEDESTRIAN SIGNAL HEAD	EA	2
8005	REMOVE AND DISPOSE PER ASSIGNMENT	EA	1
8006	PEDESTRIAN EDUCATION SIGN 2-R10-3(1) MOD (9"X15")	SF	1.875
8007	NO. 6 STRANDED BARE COPPER GROUND WIRE	LF	25
8008	3 INCH SCHEDULE 80 RIGID PVC CONDUIT - TRENCHED	LF	25
8012	CUT, CLEAN, GALVANIZE AND CAP TRAFFIC SIGNAL STRUCTURE	EA	1
8013	ELECTRICAL CABLE - 2 CONDUCTOR (NO. 14 AWG)	LF	150
8014	ELECTRICAL CABLE - 5 CONDUCTOR (NO. 14 AWG)	LF	450
8016	APS CENTRAL CONTROL UNIT	EA	1

EQUIPMENT LIST "C"

C. EQUIPMENT TO BE REMOVED BY THE CONTRACTOR AND RETURNED TO SHA.

ALL MATERIALS AND EQUIPMENT REMOVED BY THE CONTRACTOR SHALL BECOME THE PROPERTY OF THE CONTRACTOR.



WIRING KEY

A.C	5-CONDUCTOR ELECTRICAL CABLE (NO. 14 AWG)	PF	EXISTING ELECTRICAL POWER FEED
B	2-CONDUCTOR ELECTRICAL CABLE (NO. 14 AWG)	EX	EXISTING 2-CONDUCTOR ELECTRICAL CABLE (NO. 14 AWG)
Z	NO. 6 AWG STRANDED BARE COPPER GROUND WIRE	+	GROUND ROD

PHASING CHART
 NO PHASE CHANGE

GENERAL NOTES

1. THE CONTRACTOR SHALL VERIFY ALL PROPOSED POLE LOCATIONS PRIOR TO INSTALLATION.
2. THE CONTRACTOR SHALL BE RESPONSIBLE FOR TERMINATING ALL SIGNAL CABLE TO THE APPROPRIATE TERMINALS AND PROPERLY LABELING EACH CABLE.
3. ALL UNUSED CABLE SHALL BE REMOVED AND DISPOSED OF BY THE CONTRACTOR.
4. UNDERGROUND 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.
5. ALL TRAFFIC SIGNAL FOUNDATIONS SHALL BE INSTALLED AT THE FINAL SIDEWALK OR CURB GRADE FOR CLOSED SECTIONS, HIGHEST ROADWAY PROFILE GRADE FOR OPEN SECTIONS, TO MEET CLEARANCES AS SPECIFIED IN MD 816.03, MD 818.01, MD 818.02, MD 818.04. THE CONTRACTOR SHALL VERIFY ULTIMATE GRADES PRIOR TO THE INSTALLATION OF ALL SIGNAL EQUIPMENT.
6. ACCESSIBLE PEDESTRIAN CONTROL EQUIPMENT SHALL BE DELIVERED TO THE SHA SIGNAL SHOP FOR TESTING AND PROGRAMMING PRIOR TO INSTALLATION. CONTACT MR. EDWARD RODENHIZER AT 410-787-7652 TO COORDINATE.
7. LOCATION OF ACCESSIBLE PEDESTRIAN SIGNAL PUSHBUTTONS MUST MEET LOCATION REQUIREMENTS OF MUTCD SECTION 4E.09 AND FIGURE 4E.2 AND THE NCHRP PUBLICATION, "ACCESSIBLE PEDESTRIAN SIGNALS: GUIDE TO BEST PRACTICE." IF NOT MET, THE CONTRACTOR IS TO STOP WORK ON PUSHBUTTON LOCATIONS UNTIL A DESIGN WAIVER IS OBTAINED, APPROVED BY THE DIRECTOR, OFFICE OF TRAFFIC AND SAFETY.
8. PUSHBUTTONS ARE TO BE LOCATED SO THAT THEY CAN BE ACTIVATED BY A PERSON IN A WHEELCHAIR REACHING LESS THAN 18" FROM A 60" X 60" LEVEL LANDING AREA WITH A CROSS SLOPE OF LESS THAN OR EQUAL TO 2%.
9. THE 10' SEPARATION BETWEEN PUSHBUTTONS IS TO BE MEASURED FROM FACE OF PUSHBUTTON, NOT CENTER TO CENTER OF POLE.
10. PUSHBUTTON ARROWS ARE TO BE PARALLEL TO THE CROSSING FOR WHICH THEY ARE INTENDED.

SHA STATE OF MARYLAND
 DEPARTMENT OF TRANSPORTATION
 STATE HIGHWAY ADMINISTRATION
 OFFICE OF TRAFFIC & SAFETY
 TRAFFIC ENGINEERING DESIGN DIVISION
 U.S. 1 (WASHINGTON BLVD) @ LOUDON AVE
 ELKCRIDGE, MARYLAND

RK & K RUMMEL, KLEPPER & KAHL, LLP
 CONSULTING ENGINEERS
 81 MOSHER STREET
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REVISIONS	GENERAL INFORMATION SHEET	
	SCALE NONE	DATE 11/2007 CONTRACT NO. AX3755133
	DESIGNED BY BJG	COUNTY HOWARD
	DRAWN BY BJG	LOGMILE 13000108.69
	CHECKED BY DAE	T.I.M.S. NO. I-934
	F.A.P. NO.	TOD NO.
	DRAWING NO. 4289A-GI SG-2 OF 2	SHEET NO. 26 OF 30

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BY: \$USER\$NAME\$