

**PROJECT DESCRIPTION**

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THIS PROJECT INVOLVES REPLACING THE EXISTING PEDESTRIAN SIGNALS WITH COUNTDOWN PEDESTRIAN SIGNALS AND INSTALLING AUDIBLE PUSH BUTTONS. MODIFICATIONS INCLUDE REPLACING HANDHOLES, INSTALLING NEW CONDUIT AND IMPACTED CABLES, AND REPLACING THE EXISTING POLE-MOUNTED CONTROLLER CABINET WITH BASE-MOUNTED CABINET. MD 177 IS ASSUMED TO RUN IN THE EAST-WEST DIRECTION.

**INTERSECTION OPERATION**  
THE EXISTING PHASING AT THE INTERSECTION WILL REMAIN.

**CONTROLLER REQUIREMENTS**  
INSTALL A FULL-TRAFFIC-ACTUATED, EIGHT-PHASE CONTROLLER WITH TELEMETRY EQUIPMENT, CONFLICT MONITOR WITH BATTERY BACK-UP, AND ASSOCIATED HARNESSSES HOUSED IN A NEMA '6' BASE MOUNTED CABINET.

**PROJECT CONTACTS**

THE CONTACT PERSONS FOR SHA ARE AS FOLLOWS:

CONTACTS FOR DISTRICT 5:  
MS. KIMBERLY TRAN  
ASSISTANT DISTRICT ENGINEER,  
TRAFFIC  
410-841-1003

CONTACTS FOR OFFICE OF TRAFFIC AND SAFETY:  
MR. RICHARD DAFF SR.  
CHIEF, TRAFFIC OPERATIONS  
410-787-7630

MR. JOHN S. MAYS  
ASSISTANT DISTRICT ENGINEER,  
MAINTENANCE  
410-841-1013

MR. ROBERT SNYDER  
ASSISTANT DIVISION CHIEF,  
TRAFFIC OPERATIONS  
410-787-7630

MR. JOE HURTEY  
UTILITIES ENGINEER  
410-841-1039

MR. ED RODENHIZER  
CHIEF, SIGNAL OPERATIONS  
410-787-7650

MR. EUGENE BAILEY  
CHIEF, SIGN OPERATIONS  
410-787-7676

MR. MIKE STOCKER  
SIGNAL SHOP WAREHOUSE  
410-787-7656

**EQUIPMENT LIST "A"**

A. EQUIPMENT TO BE SUPPLIED BY THE SHA

NONE

**NEMA SIZE 6 BASE MOUNTED CABINET WITH ALL NECESSARY EQUIPMENT**

**EQUIPMENT LIST "C"**

C. EXISTING EQUIPMENT TO BE REMOVED BY THE CONTRACTOR AND DELIVERED TO THE STATE HIGHWAY ADMINISTRATION, 7491 CONNELLEY DRIVE, HANOVER, MARYLAND 21076.

NONE

**SPECIAL NOTES**

APS WILL FUNCTION AS FOLLOWS:

FOR MOUNTAIN ROAD (MD 177)

A. WHEN PEDESTRIAN LOCATES AND PASSES PUSHBUTTON FOR AN EXTENDED TIME, THE PUSHBUTTON UNIT MESSAGE WILL BE "WAIT TO CROSS MOUNTAIN AT OUTING."

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

FOR OUTING AVENUE

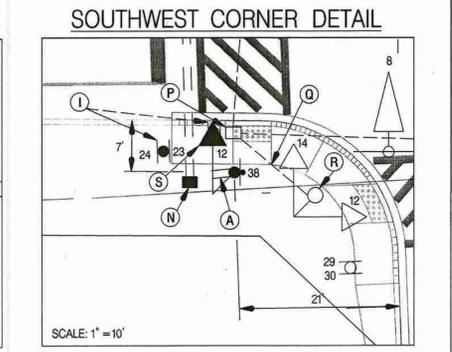
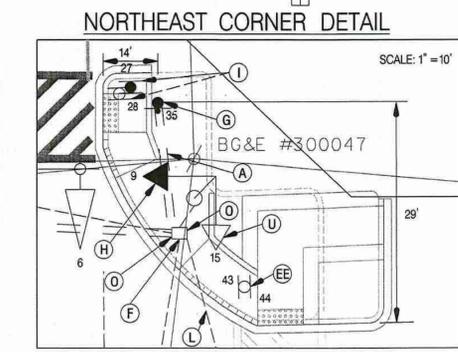
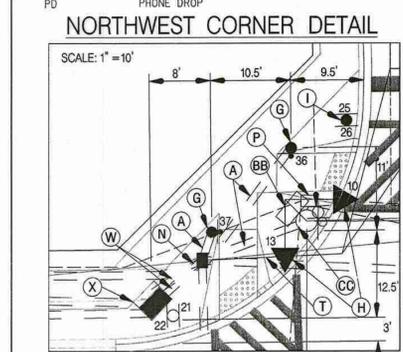
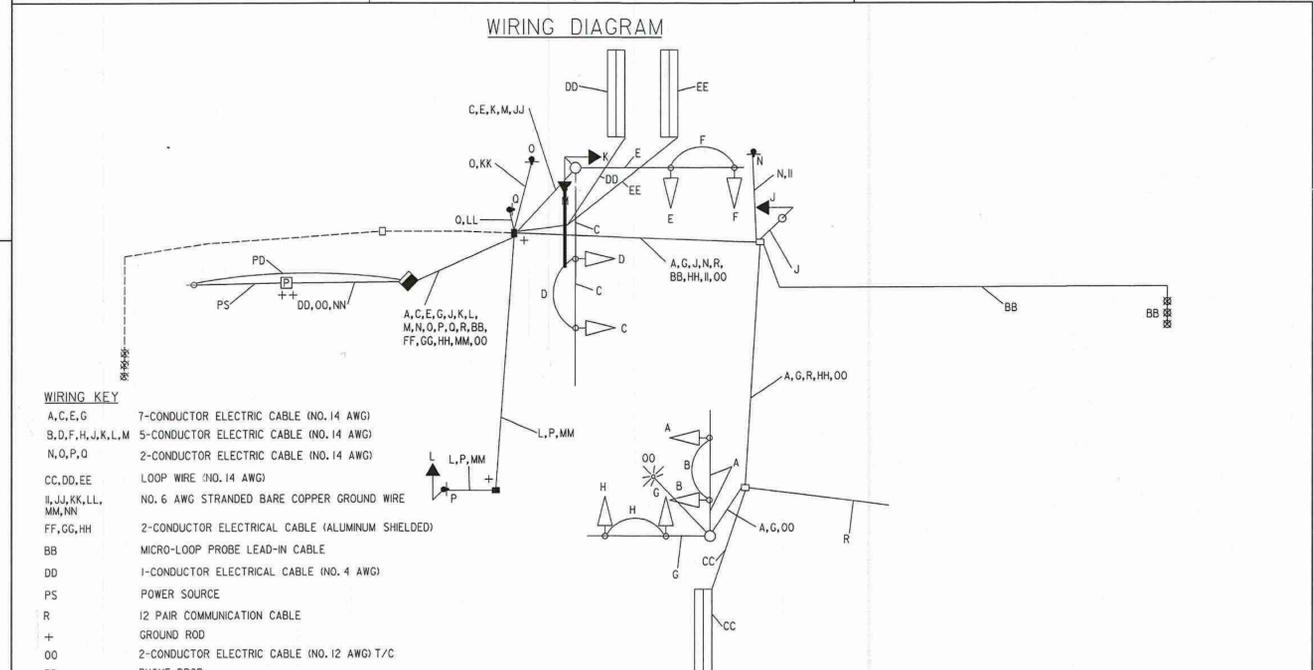
A. WHEN PEDESTRIAN LOCATES AND PASSES PUSHBUTTON FOR AN EXTENDED TIME, THE PUSHBUTTON UNIT MESSAGE WILL BE "WAIT TO CROSS OUTING AT MOUNTAIN."

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

**EQUIPMENT LIST "B"**

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

AX3745133 ITEMS	CATEGORY CODE NO.	SPECIFICATION NUMBER	QUANTITY	DESCRIPTION
5001	500000	549	220 LF	REMOVAL OF EXISTING PAVEMENT MARKINGS
5006	585412	549,556	650 LF	12 INCH WHITE LEAD FREE REFLECTIVE THERMOPLASTIC PAVEMENT MARKINGS
5007	585625	549,556	80 LF	24 INCH WHITE PREFORMED THERMOPLASTIC PAVEMENT MARKINGS
8001	801004	801	5 CY	CONCRETE FOR SIGNAL STRUCTURE FOUNDATION
8002	800000	817	4 EA	AUDIBLE TACTILE PEDESTRIAN PUSH BUTTON
8003	818004	818,821	4 EA	BREAKAWAY PEDESTRIAN POLE - ANY SIZE
8004	800000	814	4 EA	16 INCH LED PEDESTRIAN COUNTDOWN SIGNAL HEAD
8005	800000	800	1 EA	REMOVE AND DISPOSE PER ASSIGNMENT
8006	800000	817	4 SF	FURNISH AND INSTALL PEDESTRIAN EDUCATION SIGN
8007	802501	804	340 LF	NO. 6 AWG STRANDED BARE COPPER GROUND WIRE
8008	805135	805	225 LF	3 INCH SCHEDULE 80 RIGID PVC CONDUIT - TRENCHED
8009	811001	811	2 EA	FURNISH AND INSTALL ELECTRICAL HANDHOLE
8010	813023	800	220 SF	RELOCATE EXISTING GROUND MOUNTED SIGNS
8011	837001	804	4 EA	GROUND ROD - 3/4 INCH DIAMETER X 10 FOOT LENGTH
8013	861105	810	275 LF	ELECTRICAL CABLE - 2 CONDUCTOR (NO. 14 AWG)
8014	861107	810	375 LF	ELECTRICAL CABLE - 5 CONDUCTOR (NO. 14 AWG)
8016	800000	816	1 EA	APS CENTRAL CONTROL UNIT
8017	862101	810	1430 LF	LOOP WIRE ENCASED IN FLEXIBLE TUBING (NO. 14 AWG)
8018	862102	815	670 LF	SAW CUT FOR SIGNAL (LOOP DETECTOR)
8019	823002	805	15 LF	1 INCH DIAMETER RIGID STEEL CONDUIT, SCHEDULE 40
8020	801104	812	135 LF	WOOD SIGN SUPPORTS 4 INCH X 4 INCH
8022	800000	810,811	310 LF	DISCONNECT, PULL BACK AND REROUTE CABLES
8025	800000	805	1 EA	FURNISH AND INSTALL CONDUIT BEND IN EXISTING FOUNDATION
NEG	800000	805	1 EA	WEATHER HEAD, 4 INCH
NEG	805118	805	160 LF	4 INCH SCHEDULE 80 RIGID PVC CONDUIT - BORED
NEG	805125	805	130 LF	2 INCH SCHEDULE 80 RIGID PVC CONDUIT - TRENCHED
NEG	805155	805	90 LF	4 INCH SCHEDULE 80 RIGID PVC CONDUIT-TRENCHED
NEG	807202	807	1 EA	METERED SERVICE PEDESTAL
NEG	810010	810	40 LF	ELECTRIC CABLE - 1 CONDUCTOR NO. 4 AWG
NEG	810550	810	2 EA	MICROLOOP PROBE, 500 FOOT LEAD IN CABLE
NEG	822002	810	890 LF	12 PAIR COMMUNICATION CABLE, JELLY FILLED
NEG	833062	805	25 LF	4 INCH DIAMETER PVC CONDUIT, SCHEDULE 80 RISER
NEG	861104	810	180 LF	ELECTRICAL CABLE- 2 CONDUCTOR (ALUMINUM SHIELDED)
NEG	861108	810	625 LF	ELECTRICAL CABLE- 7 CONDUCTOR (NO. 14 AWG)
NEG	861107	816	1 EA	FURNISH AND INSTALL BASE MOUNTED CABINET



**PHASING DIAGRAM**

	1	2	3	4	5	6	7	8	9,10	13,14
Phase 2 & 6	G	G	G	G	R	R	R	R	WK	DW
Ped. Clear	G	G	G	G	R	R	R	R	FL/DW	DW
Phase 2 & 6 Change	Y	Y	Y	Y	R	R	R	R	DW	DW
Phase 3	R	R	R	R	G	G	R	R	DW	DW
Phase 3 Change	R	R	R	R	Y	Y	R	R	DW	DW
Phase 4	R	R	R	R	R	R	R	R	G	DW
Phase 4 Change	R	R	R	R	R	R	Y	Y	DW	DW
Phase 4 Alt.	R	R	R	R	R	R	G	G	DW	WK
Ped. Clear	R	R	R	R	R	R	G	G	DW	FL/DW
Phase 4 Alt. Change	R	R	R	R	R	R	Y	Y	DW	DW
Flashing Operation	FL/Y	FL/Y	FL/Y	FL/Y	FL/R	FL/R	FL/R	FL/R	DARK	DARK

NOTE: NO CHANGE TO EXISTING OPERATION

**TEDD REDLINE #1**  
3-17-11 *MJB 3/17/11*

REVISION & CONSULTANT

**WALLACE, MONTGOMERY & ASSOCIATES, LLP**  
 CIVIL AND STRUCTURAL ENGINEERS  
 110 West Road, Suite 300  
 Towson, Maryland 21204  
 (410) 494-9093, (410) 825-5714 Fax  
 www.WallaceMontgomery.com

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

**MD 177 (MOUNTAIN ROAD) AT  
 OUTING AVENUE  
 PASADENA, MARYLAND**

**GENERAL INFORMATION SHEET**

SCALE \_\_\_\_\_ DATE 07/20/08 CONTRACT NO. AX3745133

DESIGNED BY MJB COUNTY ANNE ARJUNDEL  
 DRAWN BY MJB LOGSILE 02045010.71  
 CHECKED BY JLR T.I.M.S. NO. 1718  
 F.A.P. NO. TOD NO. 3889-C

DRAWING NO. 3369C - OF SHEET NO. 3 OF 3