

# PROJECT DESCRIPTION

## GENERAL

THIS PROJECT INVOLVES MODIFICATION TO THE TRAFFIC SIGNAL AT THE INTERSECTION OF MD 60 (LETTERSBURG PIKE) AT STONE HOUSE WAY/ LONG MEADOW DRIVE IN CONJUNCTION WITH PROPOSED GEOMETRIC IMPROVEMENTS. ACCESSIBLE PEDESTRIAN SIGNAL EQUIPMENT WILL BE INSTALLED TO SERVE THE WEST LEG CROSSING. THE PROJECT IS LOCATED IN WASHINGTON COUNTY, MARYLAND. MD 60 IS ASSUMED TO RUN IN A NORTH - SOUTH DIRECTION.

## INTERSECTION OPERATION

THE INTERSECTION OPERATES IN A NEMA SIX-PHASE, FULLY ACTUATED MODE. THE NORTHBOUND AND SOUTHBOUND LEFT-TURN MOVEMENTS OPERATE WITH AN EXCLUSIVE/ PERMISSIVE LEFT-TURN PHASE. THE WESTBOUND AND EASTBOUND MOVEMENTS WILL OPERATE CONCURRENTLY.

## CONTROLLER REQUIREMENTS

USE EXISTING BASE MOUNTED CONTROLLER ASSEMBLY.

## SPECIAL NOTES

- ALL UNDERGROUND UTILITIES SHOWN ON THESE PLANS ARE SCHEMATIC 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 ENGINEER IN THE FIELD IMMEDIATELY SO THAT THE CONFLICT MAY BE RESOLVED.
- THE CONTRACTOR SHALL BE RESPONSIBLE FOR TERMINATING ALL SIGNAL CABLE TO THE APPROPRIATE TERMINALS AND PROPERLY LABEL EACH CABLE SO THAT SHA FORCES CAN MAKE THE FINAL CONNECTIONS. ALL UNUSED SIGNAL CABLES SHALL BE REMOVED AND DISPOSED. CONTACT THE TRAFFIC SIGNAL OPERATIONS SUPERVISOR AT LEAST 72 HOURS PRIOR TO INSTALLATION.
- THE FOLLOWING CONTACT PERSONS FOR THIS PROJECT IN DISTRICT #6 ARE AS FOLLOWS:

MR. ANTHONY CRAWFORD  
DISTRICT ENGINEER  
PHONE: (301) 729-8486

MR. GEORGE SMALL  
ASSISTANT DISTRICT ENGINEER - TRAFFIC  
PHONE: (301) 729-8444

MR. JOHN TRUE  
ASSISTANT DISTRICT ENGINEER - CONSTRUCTION  
PHONE: (301) 729-8411

MR. GARY SHANK  
ASSISTANT DISTRICT ENGINEER - MAINTENANCE  
PHONE: (301) 729-8457

MR. DAVID FELKER  
UTILITY ENGINEER  
PHONE: (301) 729-8439

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

## MESSAGES FOR ACCESSIBLE PEDESTRIAN SIGNAL

LEG	WAIT MESSAGE	WALK MESSAGE
	WHEN PEDESTRIAN LOCATES AND PASSES THE PUSHBUTTON FOR AN EXTENDED TIME, THE PUSHBUTTON UNIT WILL ANNOUNCE THE FOLLOWING MESSAGE:	WHEN THE WALK PHASE BEGINS, THE PUSHBUTTON UNIT WILL PROVIDE EITHER (1) A RAPID TICK WHICH WILL LAST FOR THE DURATION OF THE WALK PHASE OR (2) THE FOLLOWING MESSAGE:
NORTH	"WAIT TO CROSS LETTERSBURG"	RAPID TICK
EAST	"WAIT TO CROSS STONE HOUSE AT LETTERSBURG"	RAPID TICK
WEST	"WAIT TO CROSS LONG MEADOW AT LETTERSBURG"	RAPID TICK

# EQUIPMENT LIST

## A. EQUIPMENT TO BE SUPPLIED BY STATE HIGHWAY ADMINISTRATION

NONE

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

CATEGORY CODE NO.	DESCRIPTION	UNITS	QUANTITY
120500	MAINTENANCE OF TRAFFIC	LS	1
130850	MOBILIZATION	LS	1
203030	TEST PIT EXCAVATION	CY	5
585617	5' WHITE PREFORMED THERMOPLASTIC PAVEMENT MARKING LINES	LF	46
585621	12' WHITE PREFORMED THERMOPLASTIC PAVEMENT MARKING LINES	LF	320
585625	24' WHITE PREFORMED THERMOPLASTIC PAVEMENT MARKING LINES	LF	75
585627	WHITE PREFORMED THERMOPLASTIC PAVEMENT MARKING LEGENDS AND SYMBOLS	SF	45
655120	DETECTABLE WARNING SURFACE FOR CURB RAMPS	SF	30
800000	2 WIRE CENTRAL CONTROL UNIT (APS)	EA	1
800000	AUDIBLE / TACTILE PEDESTRIAN PUSHBUTTON AND SIGN	EA	2
800000	16" LED COUNTDOWN PEDESTRIAN SIGNAL HEAD	EA	2
801004	CONCRETE FOR SIGNAL FOUNDATION	CY	15
801104	WOOD SIGN SUPPORTS 4" x 4"	LF	80
801605	SHEET ALUMINUM SIGNS	SF	46
	1 EACH D-3(1) (VAR. x 16") MAST ARM MOUNTED (LONG MEADOW DR)		
	1 EACH GUIDE SHIELD ASSEMBLY (48" x 75") POLE MOUNTED (SOUTH MD 60 LEFT ARROW)		
	1 EACH GUIDE SHIELD ASSEMBLY (30" x 51") POLE MOUNTED (SOUTH MD 60 RIGHT ARROW)		
	1 EACH R3-SR (30" x 36") MAST ARM MOUNTED (RIGHT ONLY)		
	1 EACH R4-7 (1) (18" x 30") MAST ARM MOUNTED (KEEP RIGHT)		
	1 EACH R3-SL (30" x 36") MAST ARM MOUNTED (LEFT ONLY)		
802501	STRANDED BARE COPPER GROUND WIRE (No. 6 AWG)	LF	280
803016	REMOVE STEEL POST & FOUNDATION	EA	2
805118	4" SCHEDULE 80 RIGID PVC CONDUIT - BORED	LF	210
805135	3" SCHEDULE 80 RIGID PVC CONDUIT - TRENCHED	LF	50
811001	FURNISH AND INSTALL HANDHOLE	EA	2
811002	REMOVE HANDHOLE	EA	2
813014	INSTALL GROUND MOUNTED SIGN	EA	3
816005	CONTROL CABLE 250', VIDEO DETECTION CAMERA TO CONTROLLER	EA	1
816010	CONTROL CABLE 500', VIDEO DETECTION CAMERA TO CONTROLLER	EA	2
818004	10' BREAKAWAY PEDESTAL POLE	EA	2
818041	STEEL POLE WITH A SINGLE 60" MAST ARM	EA	1
818051	STEEL POLE WITH A TWIN 50/60" MAST ARM	EA	1
837001	GROUND ROD - 3/4" DIAMETER x 10' LENGTH	EA	3
860270	8" VEHICULAR SIGNAL HEAD SECTION	EA	6
860284	12" VEHICULAR SIGNAL HEAD SECTION	EA	26
860288	4 CONDUCTOR OPTICON CABLE	LF	750
861105	ELECTRICAL CABLE - 2 CONDUCTOR (No. 14 AWG)	LF	570
861107	ELECTRICAL CABLE - 5 CONDUCTOR (No. 14 AWG)	LF	755
861108	ELECTRICAL CABLE - 7 CONDUCTOR (No. 14 AWG)	LF	1000

## C. EQUIPMENT TO BE REMOVED AND RETURNED TO STATE HIGHWAY ADMINISTRATION

NONE

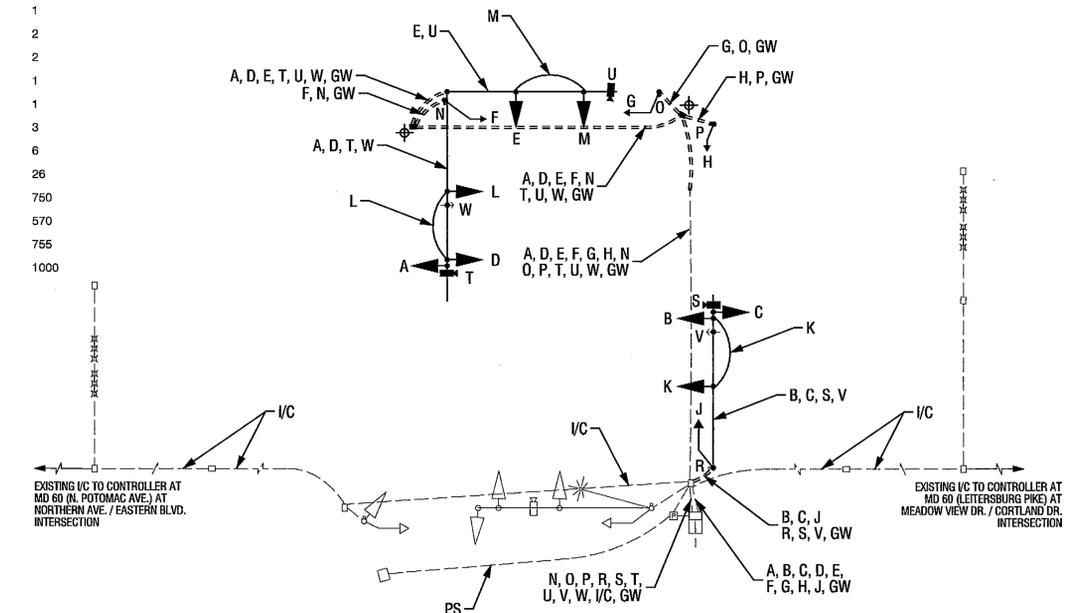
## PHASE CHART

	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18
PHASE 1+5	R/g	R/g	R	R/g	R/g	R	R/g	R	R	R	R	R	DW	DW	DW	DW	DW	DW
PHASE 1+5 CHANGE	NOTE: PHASE 1+5 CAN CHANGE TO PHASE 1+6, PHASE 2+5, OR PHASE 2+6.																	
PHASE 1+6	G/g	G/g	G	R	R	R	R	R	R	R	R	R	DW	DW	DW	DW	DW	DW
PHASE 1+6 CHANGE	Y/g	Y/g	G	R	R	R	R	R	R	R	R	R	DW	DW	DW	DW	DW	DW
PHASE 2+5	R	R	R	G/g	G/g	G	G/g	R	R	R	R	R	DW	DW	DW	DW	DW	DW
PHASE 2+5 CHANGE	R	R	R	Y/g	Y/g	G	G/y	R	R	R	R	R	DW	DW	DW	DW	DW	DW
PHASE 2+6	G	G	G	G	G	G	G	R	R	R	R	R	W	W	W	W	DW	DW
PHASE 2+6 PED CLEAR	G	G	G	G	G	G	G	R	R	R	R	R	FLDW	FLDW	FLDW	FLDW	DW	DW
PHASE 2+6 CHANGE	Y	Y	Y	Y	Y	Y	Y	R	R	R	R	R	DW	DW	DW	DW	DW	DW
PHASE 4+8	R	R	R	R	R	R	R	G	G	G	G	G	DW	DW	DW	DW	DW	DW
PHASE 4+8 CHANGE	R	R	R	R	R	R	R	Y	Y	Y	Y	Y	DW	DW	DW	DW	DW	DW
ALT PHASE 8	R	R	R	R	R	R	R	G	G	G	G	G	DW	DW	DW	DW	W	W
ALT PHASE 8 PED CLEAR	R	R	R	R	R	R	R	G	G	G	G	G	DW	DW	DW	DW	FLDW	FLDW
ALT PHASE 8 CHANGE	R	R	R	R	R	R	R	Y	Y	Y	Y	Y	DW	DW	DW	DW	DW	DW
FLASHING OPERATION	FL/Y	FL/Y	FL/Y	FL/Y	FL/Y	FL/Y	FL/Y	FL/R	FL/R	FL/R	FL/R	FL/R	DARK	DARK	DARK	DARK	DARK	DARK
PRE-EMPTION	G	G	G	G	G	G	G	R	R	R	R	R	DW	DW	DW	DW	DW	DW
PRE-EMPTION CHANGE	G	G	G	G	G	G	G	R	R	R	R	R	DW	DW	DW	DW	DW	DW

## WIRING DIAGRAM LEGEND

A, B, C, D, E	7 CONDUCTOR ELECTRICAL CABLE (No. 14 AWG)
F, G, H, J, K, L, M	5 CONDUCTOR ELECTRICAL CABLE (No. 14 AWG)
N, O, P, R	2 CONDUCTOR ELECTRICAL CABLE (No. 14 AWG)
S, T, U	VIDEO DETECTION CAMERA CONTROL CABLE
V, W	4 CONDUCTOR OPTICON CABLE
GW	STRANDED BARE COPPER GROUND WIRE (No. 6 AWG)
I/C	EXISTING SIGNAL INTERCONNECT CABLE
PS	POWER SOURCE
⊕	GROUND ROD

## WIRING DIAGRAM



BY: WELLS + ASSOCIATES, INC.

**SHA** STATE OF MARYLAND  
DEPARTMENT OF TRANSPORTATION  
STATE HIGHWAY ADMINISTRATION  
OFFICE OF TRAFFIC & SAFETY  
TRAFFIC ENGINEERING DESIGN DIVISION  
**MD 60 (LETTERSBURG PIKE) at  
STONE HOUSE WAY / LONG MEADOW DRIVE**  
HAGERSTOWN, MARYLAND

## GENERAL INFORMATION SHEET

SCALE \_\_\_\_\_ DATE 11 JUNE 2009 CONTRACT NO. **TS-4579B-CI**

DESIGNED BY \_\_\_\_\_ COUNTY WASHINGTON  
DRAWN BY \_\_\_\_\_ NDG / APV LOGMILE 21006000.75  
CHECKED BY \_\_\_\_\_ CT T.I.M.S. NO. **3687**  
F.A.P. NO. \_\_\_\_\_ TOD NO. \_\_\_\_\_

DRAWING NO. TS-4579B-CI SHEET NO. 2 OF 2

**WA** WELLS + ASSOCIATES, INC.  
TRANSPORTATION, TRAFFIC AND PARKING CONSULTANTS  
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Phone: 703-443-1442 Facsimile: 703-443-1225  
1429 Sapping Hill Road, Suite 600, McLean, Virginia 22102  
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PLOTTED:  
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