PROJECT DESCRIPTION

GENERAL

THIS PROJECT INVOLVES THE MODIFICATION OF THE EXISTING TRAFFIC CONTROL SIGNAL WITH STREET LIGHTING AND INTERCONNECT AT THE INTERSECTION OF MD 118 (GERMANTOWN ROAD) AND OBSERVATION DRIVE IN MONTGOMERY COUNTY, MARYLAND. MD 118 IS ASSUMED TO RUN IN A NORTH-SOUTH DIRECTION.

INTERSECTION OPERATION

THE INTERSECTION WILL CONTINUE TO OPERATE IN NEMA SIX PHASE, SEMI-TRAFFIC-ACTUATED MODE WITH THE MD 118 APPROACHES OPERATING CONCURRENTLY AND THE OBSERVATION DRIVE APPROACHES OPERATING CONCURRENTLY. A PROTECTED ONLY LEFT-TURN PHASE IS PROVIDED FOR THE NORTHBOUND MD 118 APPROACH AND PROTECTED/PERMITTED LEFT-TURN PHASING IS PROVIDED FOR THE SOUTHBOUND MD 118 APPROACH. LED COUNTDOWN PEDESTRIAN SIGNAL HEADS AND NEW PUSHBUTTON ACTUATION WILL BE INSTALLED ACROSS THE NORTH LEG OF MD 118 AND THE EAST AND WEST LEGS OF OBSERVATION DRIVE. ALL PEDESTRIAN PUSHBUTTONS WILL BE APS. INTERSECTION LIGHTING IS PROVIDED ON ALL FOUR CORNERS. INTERCONNECT THAT CURRENTLY EXISTS NORTH TO MD 355 AND SOUTH TO I-270 WILL BE MAINTAINED.

NEW AUDIBLE, PUSHBUTTON-ACTUATED, PEDESTRIAN PHASES WILL BE PROVIDED ACROSS THE NORTH LEG OF MD 118 AND THE EAST AND WEST LEGS OF OBSERVATION DRIVE.

APS MESSAGE FOR CROSSING MD 118 (GERMANTOWN ROAD):

A. WHEN PEDESTRIAN LOCATES AND PRESSES PUSHBUTTON FOR AN EXTENDED TIME, THE PUSHBUTTON UNIT WILL ANNOUNCE "WAIT TO CROSS GERMANTOWN AT OBSERVATION, WAIT".

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

APS MESSAGE FOR CROSSING OBSERVATION DRIVE:

A. WHEN PEDESTRIAN LOCATES AND PRESSES PUSHBUTTON FOR AN EXTENDED TIME, THE PUSHBUTTON UNIT WILL ANNOUNCE "WAIT TO CROSS OBSERVATION AT GERMANTOWN, WAIT".

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

CONTROLLER REQUIREMENTS

A NEW TYPE 'S' BASE MOUNTED CABINET AND EIGHT-PHASE CONTROLLER WITH VIDEO INTERFACE EQUIPMENT, UNINTERRUPTIBLE POWER SUPPLY, AND 2 WIRE CENTRAL CONTROL UNIT WILL BE INSTALLED.

EQUIPMENT LIST "A"

A. EQUIPMENT TO BE SUPPLIED BY SHA:

ITEM NO.	QUANTITY	UNIT	DESCRIPTION
900000	1	EA	CONTROLLER CABINET, SIZE "S" W/CTRL, VIDEO INT. 1-8 CAM
900000	1	EA	UPS EQUIPMENT FOR "S" CABINET
900000	2	EA	4 CHANNEL DETECTOR AMPLIFIER
900000	1	EA	CABINET EXTENSION BASE, SIZE "S"
900000	8	SF	SHEET ALUMINUM GROUND MOUNTED SIGN
			- 1 EACH OM1-3 (18"x18")
			- 1 EACH R4-7 (24"x30")
900000	74	SF	SHEET ALUMINUM MAST ARM / POLE MOUNTED SIGN
			- 1 EACH M1-5(6) (30"x48") "NORTH", "118", RIGHT ARROW
			- 1 EACH M1-5(6) (30"x48") "SOUTH", "118", RIGHT ARROW
			- 1 EACH M1-5(6) (48"x72") "NORTH", "118", LEFT ARROW
			- 1 EACH M1-5(6) (48"x72") "SOUTH", "118", LEFT ARROW
			- 2 EACH R10-3(1) (9"x15") "GERMANTOWN ROAD" - POLE MOUNTED
			- 4 EACH R10-3(1) (9"x15") "OBSERVATION DRIVE" - POLE MOUNTED

PROJECT CONTACTS

THE CONTACT PERSONS FOR SHA ARE AS FOLLOWS:

MS. ANYESHA MOOKHERJEE
ASSISTANT DISTRICT ENGINEER - TRAFFIC
PHONE: (301) 513-7404

MR. TOM FOUNTAIN
ASSISTANT DISTRICT ENGINEER - MAINTENANCE
PHONE: (301) 513-7304

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

MR. VICTOR GRAFTON
DISTRICT UTILITY ENGINEER
PHONE: (301) 513-7350

MS. CORREN JOHNSON
CHIEF - TRAFFIC OPERATIONS DIVISION
PHONE: (410) 787-7630

MR. MIKE STOCKER
SUPPLY OFFICE IV (SIGNAL SHOP WAREHOUSE)
PHONE: (410) 787-7696

MR. EUGENE BAILY
CHIEF - SIGN OPERATIONS SECTION
PHONE: (410) 787-7670

MR. PAUL WILSON
PEPCO
PHONE: (301) 548-4332

THE CONTACT PERSON FOR MCDPWT IS AS FOLLOWS:

MR. KAMUL HAMUD
MONTGOMERY COUNTY DEPARTMENT OF TRANSPORTATION
PHONE: (240) 777-8761

VACANT
MONTGOMERY COUNTY SIGNAL SHOP
PHONE: (301) 279-1291

EQUIPMENT LIST "B"

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

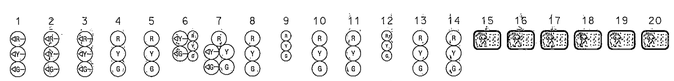
ITEM NO.	QUANTITY	UNIT	DESCRIPTION
100000	1	EA	MAINTENANCE OF TRAFFIC (PER INTERSECTION)
201032	30	CY	CLASS 2 EXCAVATION
203030	3	CY	TEST PIT EXCAVATION
585617	10	LF	5 INCH WHITE PREFORMED THERMOPLASTIC PAVEMENT MARKING LINES
585621	550	LF	12 INCH WHITE PREFORMED THERMOPLASTIC PAVEMENT MARKING LINES
585625	100	LF	24 INCH WHITE PREFORMED THERMOPLASTIC PAVEMENT MARKING LINES
585700	1100	LF	REMOVAL OF EXISTING PAVEMENT MARKING LINES, ANY WIDTH
600000	220	LF	TYPE A COMBINATION CURB AND GUTTER ANY HEIGHT OR DEPTH
600000	230	LF	TYPE A CURB ANY HEIGHT OR DEPTH
655105	1260	SF	5 INCH CONCRETE SIDEWALK
655120	85	SF	DETECTABLE WARNING SURFACE FOR CURB RAMPS
704345	90	SY	PLACING FURNISHED TOPSOIL 4 INCH DEPTH
708220	90	SY	TURFGRASS SOD ESTABLISHMENT
800000	1	EA	2-WIRE APS CENTRAL CONTROL UNIT
800000	6	EA	AUDIBLE/TACTILE PEDESTRIAN PUSHBUTTON STATION AND SIGNS
800000	6	EA	16 INCH LED COUNTDOWN PEDESTRIAN SIGNAL HEAD
800000	6	EA	5 FOOT OR 10 FOOT PEDESTAL POLE WITH BREAKAWAY COUPLINGS, FOUNDATION & GROUND ROD
800000	1	EA	100 AMP EMBEDDED METERED SERVICE PEDESTAL, CONCRETE COLLAR & GROUND RODS
800000	1	EA	REMOVE & DISPOSE OF EXISTING SIGNAL EQUIPMENT (PER SIGNALIZED INTERSECTION LOCATION)
800000	1	EA	INSTALL CONTROLLER AND CABINET BASE MOUNT (ANY SIZE) INCLUDING F&I FOUNDATION & GROUND ROD
800000	200	LF	1 - CONDUCTOR ELECTRICAL CABLE, NO. 2/0 AWG, TYPE THHN
800000	100	LF	DISCONNECT, PULL-BACK & REROUTE CABLES
800000	200	LF	UP TO 4 INCH SCHEDULE 80 RIGID PVC CONDUIT - BORED OR SLOTTED
800000	200	LF	UP TO 4 INCH SCHEDULE 80 RIGID PVC CONDUIT-TRENCHED
800000	26	LF	WOOD SIGN SUPPORTS UP TO 4 INCH X 6 INCH
800000	82	SF	INSTALL OVERHEAD OR GROUND MOUNTED SIGN (INCLUDING ALL HARDWARE)
800000	1	EA	THIRD PARTY CONCRETE TESTING (PER INTERSECTION)
802501	300	LF	NO. 6 AWG STRANDED BARE COPPER GROUND WIRE
810022	50	LF	ELECTRICAL CABLE 1-CONDUCTOR NO. 8 AWG-THHN/THWN
811001	1	EA	FURNISH AND INSTALL ELECTRICAL HANDHOLE
813023	5	SF	RELOCATE EXISTING GROUND MOUNTED SIGNS
861105	1400	LF	ELECTRICAL CABLE - 2 CONDUCTOR (NO. 14 AWG)
861107	1500	LF	ELECTRICAL CABLE - 5 CONDUCTOR (NO. 14 AWG)

EQUIPMENT LIST "C"

C. EQUIPMENT TO BE REMOVED AND RETURNED TO SHA:

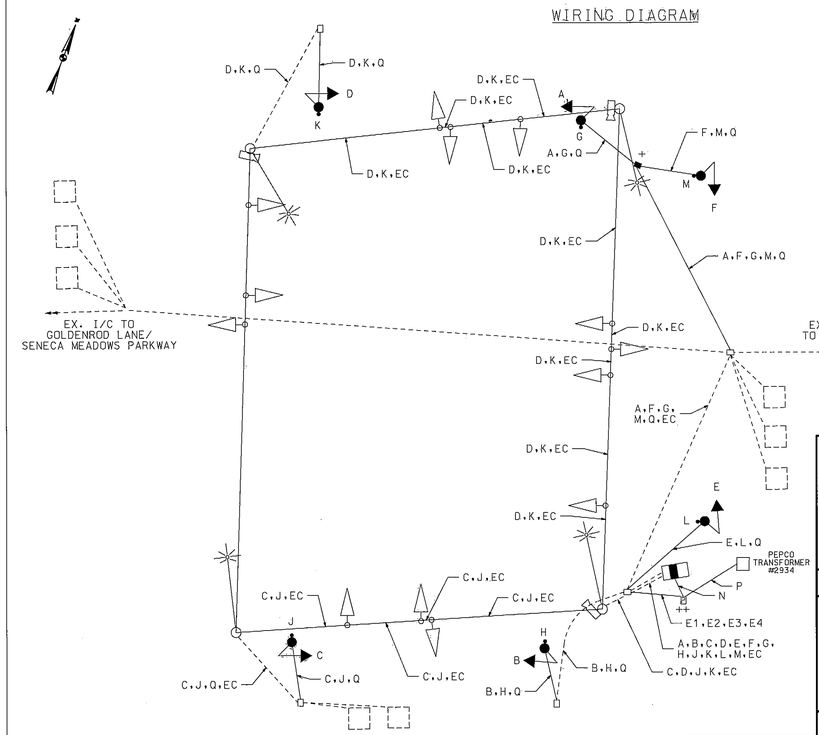
EXISTING SIGNAL CONTROLLERS AND ALL ASSOCIATED EQUIPMENT IN CABINETS.

PHASE CHART



	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
PHASE 1 + 5	←G-	←G-	←G-	R	R	←G-/R	←G-/R	R	R	R	R	R	R	R	DW	DW	DW	DW	DW	DW
1 + 5 CHANGE	1 + 5 MAY 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	W	W	DW	DW	DW
1 + 6 CHANGE	←Y-	←Y-	←Y-	Y	Y	R	R	R	R	R	R	R	R	R	DW	W	W	DW	DW	DW
PHASE 2 + 5	←R-	←R-	←R-	R	R	←G-/G	←G-/G	G	R	R	R	R	R	R	W	DW	DW	W	DW	DW
2 + 5 CHANGE	←R-	←R-	←R-	R	R	←Y-/G	←Y-/G	G	R	R	R	R	R	R	W	DW	DW	W	DW	DW
PHASE 2 + 6	←R-	←R-	←R-	G	G	G	G	G	R	R	R	R	R	R	W	W	W	W	DW	DW
PED CLEARANCE	←R-	←R-	←R-	G	G	G	G	G	R	R	R	R	R	R	FL/DW	FL/DW	FL/DW	FL/DW	DW	DW
2 + 6 CHANGE	←R-	←R-	←R-	Y	Y	Y	Y	Y	R	R	R	R	R	R	DW	DW	DW	DW	DW	DW
PHASE 4 + 8	←R-	←R-	←R-	R	R	R	R	R	G	G	G	G	G	G	DW	DW	DW	DW	DW	DW
4 + 8 CHANGE	←R-	←R-	←R-	R	R	R	R	R	Y	Y	Y	Y	Y	Y	DW	DW	DW	DW	DW	DW
PHASE 4 + 8 ALT	←R-	←R-	←R-	R	R	R	R	R	G	G	G	G	G	G	DW	DW	DW	DW	W	W
PED CLEARANCE	←R-	←R-	←R-	R	R	R	R	R	G	G	G	G	G	G	DW	DW	DW	DW	FL/DW	FL/DW
4 + 8 ALT CHANGE	←R-	←R-	←R-	R	R	R	R	R	Y	Y	Y	Y	Y	Y	DW	DW	DW	DW	DW	DW
FLASHING OPERATION	FL/←R	FL/←R	FL/←R	FL/Y	FL/Y	FL/Y	FL/Y	FL/Y	FL/R	FL/R	FL/R	FL/R	FL/R	FL/R	DARK	DARK	DARK	DARK	DARK	DARK

WIRING DIAGRAM



PROPOSED ELECTRICAL CABLE

A,B,C, D,E,F } 5-CONDUCTOR ELECTRICAL CABLE (NO. 14 AWG)

G,H,J, K,L,M } 2-CONDUCTOR ELECTRICAL CABLE (NO. 14 AWG)

N } 3 1-CONDUCTOR ELECTRICAL CABLE (NO. 8 AWG)

P } 3 1-CONDUCTOR ELECTRICAL CABLE (NO. 2/0 AWG)

Q } STRANDED BARE COPPER GROUND WIRE (NO. 6 AWG)

EXISTING ELECTRICAL CABLE

EC } EXISTING ELECTRICAL CABLE TO REMAIN

E1,E2, E3,E4 } PULLED BACK AND REROUTED TRAY CABLE

LEGEND

+ - 3/4 IN. X 10 FT. GROUND ROD

McCormick Taylor
Engineers & Planners Since 1946
509 South Exeter Street
4th Floor
Baltimore, Maryland 21202
(410) 662-7400

BY: NJMonaco

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

MD 118 (GERMANTOWN ROAD) AT OBSERVATION DRIVE
GERMANTOWN, MARYLAND

GENERAL INFORMATION SHEET

SCALE NONE DATE AUGUST 12, 2013 CONTRACT NO. XY2385185

DESIGNED BY NJM COUNTY MONTGOMERY
DRAWN BY SPM LOGMILE 15011806.78
CHECKED BY BSH T.I.M.S. NO. M005
F.A.P. NO. T.O.D. NO.

T.S. NO. 2474B-GI SG-03 OF SG-03 SHEET NO. 3 OF 3

PLOTTED: Monday, August 12, 2013 AT 03:27 PM
FILE: I:\5212 - TEDD\23 (PB 151) - MD 118, MD 185 Signals\Design\Engineering\PlanSet\MD 118 at Observation Drive (TS 2474)\SG-N001_TS2474B.dgn