

PROJECT DESCRIPTION

GENERAL

THIS PROJECT INVOLVES THE MODIFICATION OF THE EXISTING TRAFFIC CONTROL SIGNAL AT THE INTERSECTIONS OF MD 22 (CHURCHVILLE ROAD) AND MOORES MILL ROAD AND MD 22 AND MD 543 (FOUNTAIN GREEN ROAD) AND THE INSTALLATION OF INTERCONNECT AND SYSTEM DETECTION ON MD 22 BETWEEN THE INTERSECTIONS JOHN CARROLL HIGH SCHOOL AND MD 543 IN HARFORD COUNTY, MARYLAND. MD 22 IS ASSUMED TO RUN IN AN EAST-WEST DIRECTION.

INTERSECTION OPERATION

- MD 22 AND JOHN CARROLL HIGH SCHOOL
THE INTERSECTION OPERATION WILL REMAIN THE SAME.
- MD 22 AND BRIERHILL DRIVE
THE INTERSECTION OPERATION WILL REMAIN THE SAME.
- MD 22 AND MOORES MILL ROAD
THE INTERSECTION OPERATION WILL REMAIN THE SAME.
AN ALTERNATE PEDESTRIAN PHASE WILL BE PROVIDED ACROSS MD 22 AND PEDESTRIAN INDICATIONS WILL BE PROVIDED ACROSS MOORES MILL ROAD.
- MD 22 AND MD 543
THE INTERSECTION OPERATION WILL REMAIN THE SAME.
AN ALTERNATE PEDESTRIAN PHASE WILL BE PROVIDED ACROSS MD 22 AND PEDESTRIAN INDICATIONS WILL BE PROVIDED ACROSS MD 543.

TYPICAL MESSAGES FOR ACCESSIBLE PED SIGNALS

MD 22 (CHURCHVILLE ROAD) AND MOORES MILL ROAD

- EAST LEG - MD 22 (CHURCHVILLE ROAD) AND MOORES MILL ROAD

TYPICAL INTERSECTION, STREETS AT 90 DEGREES

WAIT: "WAIT TO CROSS CHURCHVILLE AT MOORES MILL" *
WALK: RAPID TICK

- SOUTH LEG - MOORES MILL ROAD AND MD 22 (CHURCHVILLE ROAD)

TYPICAL INTERSECTION, STREETS AT 90 DEGREES

WAIT: "WAIT TO CROSS MOORES MILL AT CHURCHVILLE" *
WALK: RAPID TICK

MD 22 (CHURCHVILLE ROAD) AND MD 543 (FOUNTAIN GREEN ROAD)

- EAST LEG - MD 22 (CHURCHVILLE ROAD) AND MD 543 (FOUNTAIN GREEN ROAD)

TYPICAL INTERSECTION, STREETS AT 90 DEGREES

WAIT: "WAIT TO CROSS CHURCHVILLE ROAD AT FOUNTAIN GREEN." *
WALK: RAPID TICK

- SOUTH LEG - MD 543 (FOUNTAIN GREEN ROAD) AND MD 22 (CHURCHVILLE ROAD)

TYPICAL INTERSECTION, STREETS AT 90 DEGREES

WAIT: "WAIT TO CROSS FOUNTAIN GREEN AT CHURCHVILLE" *
WALK: RAPID TICK

* MESSAGE USED IF DISTANCE FROM NEAREST PUSHBUTTON FOR PERPENDICULAR CROSSING IS < 10'
** MESSAGE USED IF CROSSWALK DIVERGES FROM OR CONVERGES WITH PARALLEL TRAFFIC

NOTE: MESSAGES FOR INTERSECTION CONFIGURATIONS, VARYING FROM THE ABOVE ARE TO BE APPROVED BY THE DIRECTOR, OFFICE OF TRAFFIC AND SAFETY.

CONTROLLER REQUIREMENTS

- MD 22 AND JOHN CARROLL HIGH SCHOOL

THE EXISTING BASE MOUNTED CABINET AND CONTROLLER WILL BE USED. INSTALL QUICK CONNECT BLOCK AND HARNESS FOR TELEMETRY INTERFACE PANEL AND VIDEO INTERFACE EQUIPMENT (1-4 CAMERAS). THE DETECTOR RACK WILL BE RETRO-FITTED WITH TWO (2) FOUR-CHANNEL, TIME-DELAY-OUTPUT LOOP DETECTOR AMPLIFIERS

- MD 22 AND BRIERHILL DRIVE

THE EXISTING BASE MOUNTED CABINET AND CONTROLLER WILL BE USED. INSTALL QUICK CONNECT BLOCK AND HARNESS FOR TELEMETRY INTERFACE PANEL AND VIDEO INTERFACE EQUIPMENT (1-4 CAMERAS).

- MD 22 (CHURCHVILLE ROAD) AND MOORES MILL ROAD

THE EXISTING BASE MOUNTED CABINET AND CONTROLLER WILL USED.

- MD 22 (CHURCHVILLE ROAD) AND MD 543 (FOUNTAIN GREEN ROAD)

INSTALL A FULL-TRAFFIC-ACTUATED, EIGHT-PHASE CONTROLLER WITH VIDEO INTERFACE EQUIPMENT (1-4) CAMERAS, TWO (2) FOUR-CHANNEL, TIME-DELAY-OUTPUT LOOP DETECTOR AMPLIFIERS WITH SYSTEM PACKAGE, MASTER CONTROLLER WITH TELEMETRY AND INTERSECTION MONITOR WITH BATTERY BACKUP FOR PHONE DROP AND ASSOCIATED HARNESSSES HOUSED IN A NEMA SIZE "6" BASE MOUNTED CABINET.

PHONE DROP

UPON COMPLETION OF THIS PROJECT, THE CONTRACTOR SHALL NOTIFY MR. ROBERT SNYDER OF SHA AT (410) 787-7635 TO ARRANGE FOR THE PHONE LINE INSTALLATION. THE CONTRACTOR IS TO PROVIDE MR. SNYDER THE NEAREST STREET ADDRESS, ZIP CODE, AND PHONE NUMBER.

EQUIPMENT LIST "A"

A. EQUIPMENT TO BE SUPPLIED BY THE SHA

ITEM NO.	QUANTITY	DESCRIPTION
9000	4 EACH	QUICK CONNECT BLOCK AND HARNESS FOR TELEMETRY INTERFACE PANEL
9016	2 EACH	FOUR-CHANNEL, TIME-DELAY-OUTPUT, LOOP DETECTOR AMPLIFIER
9044	1 EACH	EIGHT-PHASE, FULL-TRAFFIC-ACTUATED CONTROLLER WITH INTERSECTION MONITOR HOUSED IN A NEMA SIZE "6" BASE MOUNTED CABINET
9045	1 EACH	CONTROLLER, MASTER ASC 10,000 WITH TELEMETRY
9086	4 EACH	VIDEO INTERFACE EQUIPMENT: 1-4 CAMERAS
9571	44 S.F.	SHEET ALUMINUM SIGNS TO CONSIST OF : - 4 EACH R10-3(1) SIGN (9 IN. x 15 IN.) TO READ "PUSHBUTTON TO CROSS CHURCHVILLE ROAD." - 2 EACH R10-3(1) SIGN (9 IN. x 15 IN.) TO READ "PUSHBUTTON TO CROSS MOORES MILL ROAD" - 2 EACH R10-3(1) SIGN (9 IN. x 15 IN.) TO READ "PUSHBUTTON TO CROSS FOUNTAIN GREEN ROAD" - 2 EACH S1-1 SIGN (30 IN. x 30 IN.) - GROUND MOUNT - 2 EACH S1-1 SIGN (30 IN. x 30 IN.) - POLE MOUNT - 2 EACH W16-7D SIGN (24 IN. x 12 IN.) - GROUND MOUNT - 2 EACH W16-7D SIGN (24 IN. x 12 IN.) - POLE MOUNT - 1 EACH ASSOCIATED SHIELD ASSEMBLY "WEST, MD 22, RIGHT ARROW" (24 IN. x 51 IN.) - GROUND MOUNT - 1 EACH ASSOCIATED SHIELD ASSEMBLY "EAST, MD 22, LEFT ARROW" (24 IN. x 51 IN.) - GROUND MOUNT

EQUIPMENT LIST "C"

C. EQUIPMENT TO BE REMOVED AND RETURNED TO SHA

SHA FORCES SHALL REMOVE THE CONTROLLER AND ALL AUXILIARY EQUIPMENT FROM THE CONTROLLER CABINET. THE CABINET AND ALL OTHER MATERIALS TO BE REMOVED BY THE CONTRACTOR SHALL BECOME THE PROPERTY OF THE CONTRACTOR.

PROJECT CONTACTS

THE CONTACT PERSONS FOR SHA ARE AS FOLLOWS:

MS. ERIN KUHN ASSISTANT DISTRICT ENGINEER - TRAFFIC PHONE: (410) 321-2781/2785	MR. ROBERT SYNDER ASSISTANT CHIEF, TRAFFIC OPERATIONS DIVISION PHONE: (410) 787-7631
MR. ANDRE FUTRELL ASSISTANT DISTRICT ENGINEER - MAINTENANCE PHONE: (410) 321-2761	MR. RICHARD L. DAFF, SR. CHIEF, TRAFFIC OPERATIONS DIVISION PHONE: (410) 787-7630
MR. MIKE PASQUARIELLO ASSISTANT DISTRICT UTILITY ENGINEER PHONE: (410) 321-2841	

MAINTENANCE OF TRAFFIC

THE FOLLOWING TRAFFIC CONTROL STANDARDS SHALL BE REFERENCED FOR THE PROJECT. ADDITIONAL TRAFFIC CONTROL STANDARDS MAY BE USED AS DIRECTED BY THE ENGINEER.

STANDARD NO. MD-104.04-01 (SHOULDER WORK)	STANDARD NO. MD-104.04-13 (LEFT TURN BAY CLOSURE)
STANDARD NO. MD-104.04-03 (LEFT LANE CLOSURE)	STANDARD NO. MD-104.04-15 (INTERSECTION LEFT LANE, TURN BAY)
STANDARD NO. MD-104.04-05 (RIGHT LANE CLOSURE)	
STANDARD NO. MD-104.04-07 (CENTER LANE CLOSURE)	

EQUIPMENT LIST "B"

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

ITEM NO.	QUANTITY	DESCRIPTION
1001	4 EACH	MAINTENANCE OF TRAFFIC
2001	12 C.Y.	CLASS 2 EXCAVATION
2002	8 C.Y.	TEST PIT EXCAVATION
5001	55 L.F.	5 INCH HEAT APPLIED WHITE PERMANENT PREFORMED THERMOPLASTIC PAVEMENT MARKING
5002	110 L.F.	5 INCH HEAT APPLIED YELLOW PERMANENT PREFORMED THERMOPLASTIC PAVEMENT MARKING
5003	1000 L.F.	REMOVAL OF EXISTING PERMANENT PAVEMENT LINE MARKINGS - ANY WIDTH
5005	1025 L.F.	12 INCH HEAT APPLIED WHITE PERMANENT PREFORMED THERMOPLASTIC PAVEMENT MARKINGS
5006	80 L.F.	24 INCH HEAT APPLIED WHITE PERMANENT PREFORMED THERMOPLASTIC PAVEMENT MARKINGS
5007	32 S.F.	WHITE PERFORMED THERMOPLASTIC PAVEMENT MARKING LEGENDS AND SYMBOLS
6002	25 L.F.	STANDARD TYPE A COMBINATION CURB AND GUTTER PAN 8 INCH DEPTH
6004	930 S.F.	5 INCH CONCRETE SIDEWALK
8001	102 EACH	12 INCH LED SIGNAL HEAD SECTION
8002	2 EACH	2 WIRE CENTRAL CONTROL UNIT
8004	24 EACH	8 INCH LED SIGNAL HEAD SECTION
8007	8 EACH	AUDIBLE/TACTILE PEDESTRIAN PUSHBUTTON STATION & SIGNS
8009	1 EACH	CONDUIT BEND IN EXISTING FOUNDATION - ANY SIZE
8011	2 EACH	EMBEDDED METERED SERVICE PEDESTAL
8020	8 EACH	LED 16 INCH COUNTDOWN PEDESTRIAN SIGNAL HEADS
8026	3 EACH	MICROLOOP PROBE (ANY LENGTH) LEAD IN CABLE UP TO 1000 FT
8027	17 EACH	NONINVASIVE DETECTOR (ANY LENGTH) LEAD IN CABLE UP TO 1000 FT
8028	6 EACH	BREAKAWAY PEDESTAL POLE (ANY SIZE)
8029	1 EACH	REM & DISPOSE MAT & EQUIP PER ASSIGN
8034	14 EACH	VIDEO DETECTION TERRA CAMERA & CABLE UP TO 500 FT
8035	5500 L.F.	12 - PAIR COMMUNICATION CABLE, SELF-SUPPORTING OR JELLY FILLED
8041	1440 L.F.	SCHEDULE 80 RIGID PVC CONDUIT UP TO 4 INCHES - BORED
8042	215 L.F.	SCHEDULE 80 RIGID PVC CONDUIT UP TO 4 INCHES - SLOTTED
8043	3140 L.F.	SCHEDULE 80 RIGID PVC CONDUIT UP TO 4 INCHES - TRENCHED
8044	51 L.F.	WOOD SIGN SUPPORTS UP TO 4 X 6
8046	44 S.F.	INSTALL OVERHEAD OR GROUND MOUNTED SIGN (INCLUDING ALL HARDWARE)
8045	97 S.F.	DETECTABLE WARNING SURFACES
8048	830 L.F.	NO. 6 AWG STRANDED BARE COPPER GROUND WIRE
8051	20 L.F.	1 INCH DETECTOR SLEEVE GALVANIZED OR FLEXIBLE LIQUID TIGHT
8053	165 L.F.	ELECTRICAL CABLE 1-CONDUCTOR NO. 4 AWG-THHN/THWN
8054	34 EACH	FURNISH AND INSTALL ELECTRICAL HANDHOLE
8060	1 EACH	CUT, CLEAN, GALVANIZE AND CAP TRAFFIC SIGNAL STRUCTURE
8062	1215 L.F.	ELECTRICAL CABLE - 2 CONDUCTOR (NO. 14 AWG)
8064	1505 L.F.	ELECTRICAL CABLE - 5 CONDUCTOR (NO. 14 AWG)
8065	1675 L.F.	ELECTRICAL CABLE - 7 CONDUCTOR (NO. 14 AWG)
8066	430 L.F.	ELECTRICAL CABLE - 2 CONDUCTOR (NO. 12 AWG) TC
8068	60 L.F.	SAW CUT FOR SIGNAL (LOOP DETECTOR)
8073	1 EACH	INSTALL CONTROLLER AND CABINET - BASE MOUNT

TOD: X06X63.01
SHA: N03H63631/051
MD 22 @ JOHN CARROLL HS to MD 543

SHA STATE OF MARYLAND
DEPARTMENT OF TRANSPORTATION
STATE HIGHWAY ADMINISTRATION
OFFICE OF TRAFFIC & SAFETY
TRAFFIC ENGINEERING DESIGN DIVISION
MD 22 (Churchville Road) Signals
Churchville, MD

GENERAL INFORMATION SHEET

SCALE	NONE	ADVERTISED DATE	3/19/2009	CONTRACT NO.	XX6315195
DESIGNED BY	S. Bloss	COUNTY	HARFORD		
DRAWN BY	S. Bloss	LOGMILE			
CHECKED BY	N. Leary	TMS NO.	G780		
F.A.P. NO.	SEE TITLE SHEET	TOD NO.			
TS NO.	DRAWING	TSP - 12	OF 12	SHEET NO.	12 OF 12



Whitman, Reardon and Associates, LLP
Engineers, Architects and Planners
801 South Caroline Street
Baltimore, Maryland 21231
410-235-3450