

PROJECT DESCRIPTION

I. GENERAL

THIS PROJECT INVOLVES THE RECONSTRUCTION OF THE EXISTING TRAFFIC SIGNAL AND INSTALL APS, CPS AND UPGRADING ALL HANDICAP RAMPS TO ADA STANDARDS AT THE INTERSECTION OF MD 414 AND LIVINGSTON ROAD IN PRINCE GEORGE'S COUNTY, MD 414 IS ASSUMED TO RUN IN AN EAST-WEST DIRECTION.

II. INTERSECTION OPERATION

THE INTERSECTION OPERATES IN A NEMA SIX-PHASE, FULL-TRAFFIC-ACTUATED MODE. THERE IS EXCLUSIVE/PERMISSIVE LEFT TURN PHASING FOR BOTH APPROACHES OF MD 414. MD 414 THROUGH MOVEMENTS WILL OPERATE CONCURRENTLY WITH A CONCURRENT PEDESTRIAN PHASE ON THE SOUTH LEG. LIVINGSTON ROAD APPROACHES WILL OPERATE AS A "SIDE STREET SPLIT" WITH AN ALTERNATE PEDESTRIAN PHASE FOR EACH MOVEMENT. THERE IS EMERGENCY VEHICLE PRE-EMPTION FOR THE NORTHBOUND LIVINGSTON ROAD APPROACHES.

EQUIPMENT LIST FOR CONTRACT NO. XX655185

A. EQUIPMENT TO BE FURNISHED BY STATE HIGHWAY ADMINISTRATION

ITEM	QUANTITY	UNIT	DESCRIPTION
9042	1	EA	[UPDATED] CONTROLLER ASC II WITH TELEMETRY
9044	1	EA	[UPDATED] CONTROLLER CABINET, SIZE 6-S
9086	1	EA	[UPDATED] VIDEO DETECTION INTERFACE EQUIPMENT: 1-4 CAMERAS
9570	27	SF	[UPDATED] SHEET ALUMINUM GROUND MOUNTED SIGN
	2	EA	W11-2 (30" x 30")
	2	EA	W16-7p (24" x 12")
	1	EA	S1-1 (36" x 36")
	1	EA	S4-3 (24" x 8")
	110	SF	[UPDATED] SHEET ALUMINUM MAST ARMPOLE MOUNTED SIGN
9571	4	EA	D-3 (VAR. x 16") MAST ARM MOUNTED
	2	EA	M1-5 (6).3 (30" x 51") POLE MOUNTED
	2	EA	M1-5 (6).3 (48" x 72") (POLE MOUNTED)

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

ITEM	QUANTITY	UNIT	DESCRIPTION
1001	3	EA	MAINTENANCE OF TRAFFIC
2001	1	CY	CLASS 2 EXCAVATION
2002	1	CY	TEST PIT EXCAVATION
5001	8	EA	REMOVAL OF EXISTING PERMANENT PAVEMENT MARKINGS SYMBOLS OR LEGENDS
5002	100	LF	5 INCH HEAT APPLIED WHITE OR YELLOW PERMANENT PAVEMENT MARKINGS
5003	1050	LF	REMOVAL OF EXISTING PERMANENT PAVEMENT LINE MARKINGS
5004	600	LF	12 INCH WHITE PREFORMED THERMOPLASTIC PAVEMENT MARKING LINES
5005	150	LF	24 INCH WHITE PREFORMED THERMOPLASTIC PAVEMENT MARKING LINES
5006	240	SF	WHITE PREFORMED THERMOPLASTIC PAVEMENT MARKING LEGENDS AND SYMBOLS
6001	385	LF	STANDARD TYPE A COMBINATION CURB AND GUTTER 12 INCH GUTTER PAN 8 INCH DEPTH
6002	1180	SF	5 INCH CONCRETE SIDEWALK
6003	80	SF	DETECTABLE WARNING SURFACE FOR CURB RAMPS
8001	46	EA	12 INCH LED SIGNAL HEAD SECTION
8002	1	EA	2-WIRE CENTRAL CONTROL UNIT
8004	6	EA	8 INCH LED SIGNAL HEAD SECTION
8008	6	EA	AUDIBLE/TACTILE PEDESTRIAN PUSHBUTTON STATION AND SIGNS
8009	7	EA	BREAKAWAY PEDESTAL POLE (ANY SIZE)
8012	1	EA	EMBEDDED METERED SERVICE PEDESTAL
8015	6	EA	LED 16 INCH COUNTDOWN PEDESTRIAN SIGNAL HEAD
8017	1	EA	MAST ARM POLE & 38' MAST ARM ANY 'T' DIMENSION
8018	1	EA	MAST ARM POLE & 50' MAST ARM ANY 'T' DIMENSION
8022	3	EA	NON-INVASIVE DETECTOR (ANY LENGTH) LEAD IN CABLE UP TO 1000'
8023	1	EA	REMOVE & DISPOSE OF EQUIPMENT (PER ASSIGNMENT)
8026	1	EA	TWIN MAST ARM POLE & 50'/70' MAST ARMS ANY 'T' DIMENSION
8028	4	EA	VIDEO DETECTION CAMERA AND CABLE ANY LENGTH
8030	35	LF	1-CONDUCTOR ELECTRICAL CABLE, NO. 2 AWG/THHN
8032	315	LF	4 CONDUCTOR OPTICOM CABLE
8033	750	LF	DISCONNECT, PULL-BACK & REROUTE CABLES
8037	685-550	LF	UP TO 4 INCH SCHEDULE 80 RIGID PVC CONDUIT-BORED
8039	460-340	LF	UP TO 4 INCH SCHEDULE 80 RIGID PVC CONDUIT-TRENCHED
8040	55	LF	WOOD SIGN SUPPORTS UP TO 4" x 6"
8041	137	SF	INSTALL OVERHEAD OR GROUND MOUNTED SIGN (INCLUDING ALL HARDWARE)
8043	506-400	LF	NO. 6 AWG STRANDED BARE COPPER GROUND WIRE
8046	25	LF	ELECTRICAL CABLE 1-CONDUCTOR NO. 8 AWG-THHN/THWN
8047	10	EA	FURNISH AND INSTALL ELECTRICAL HANDHOLE
8048	1	EA	DISCRIMINATOR MODEL, 4 CHANNEL, NO. 764
8050	2	EA	OPTICOM NO. 721 DETECTOR EYE
8054	710	LF	ELECTRICAL CABLE - 2 CONDUCTOR (NO. 14 AWG)
8056	1665	LF	ELECTRICAL CABLE - 5 CONDUCTOR (NO. 14 AWG)
8057	1915	LF	ELECTRICAL CABLE - 7 CONDUCTOR (NO. 14 AWG)
8063	1	EA	INSTALL CONTROLLER AND CABINET - BASE MOUNT
8068	1	EA	FURNISH AND INSTALL R3-SR (30"x36") FIBER OPTIC TRAFFIC SIGN
8005	5	EA	ADJUST HANDHOLE TO GRADE WITH NEW FRAME AND COVER
8038	80	LF	UP TO 4 INCH SCHEDULE 80 RIGID PVC CONDUIT-SLOTTED

GEOMETRIC LEGEND

--- EXISTING
 --- PROPOSED

UTILITY LEGEND

SD - STORM DRAIN
 G - GAS MAIN
 W - WATER MAIN
 S - SEWER MAIN
 E - ELECTRIC CABLES
 A - AERIAL CABLES
 T - TELEPHONE CABLES
 F - FIBER-OPTIC

CONTACTS

The contact persons for this project are as follows:

Mrs. Felicia Murphy (PG)
 Assistant District Engineer - Traffic
 Phone: (301) 513-7358

Mr. Vernon Stinnett
 Assistant District Engineer - Maintenance
 Phone: (301) 513-7304

Mr. Victor Grafton
 Utility Engineer
 Phone: (301) 513-7350

Mr. Richard L. Daff, Sr.
 Chief, Traffic Operations Division
 Phone: (410) 787-7630

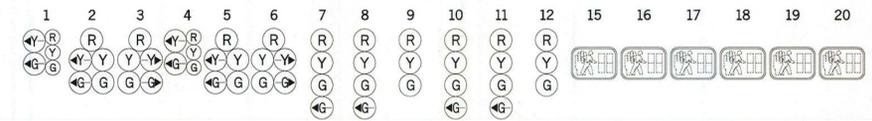
Mr. Ed Rodenhizer
 Supervisor, Signal Operations
 Phone: 410-787-7650

Mr. Sonny Bailey
 Supervisor, Sign Shop
 Phone: 410-787-7676

Mr. Mike Stocker
 Supervisor, Signal Warehouse
 Phone: 410-787-7668

Power Company Representative - PEPCO (PG)
 Mr. Richard Chilcoat, Service Associate
 PEPCO Engineering
 8300 Old Marlboro Pike
 Upper Marlboro, MD 20772
 Phone: (301) 967-5805, Fax: (301) 967-5820
 email: rachilcoat@pepco.com

PHASE CHART

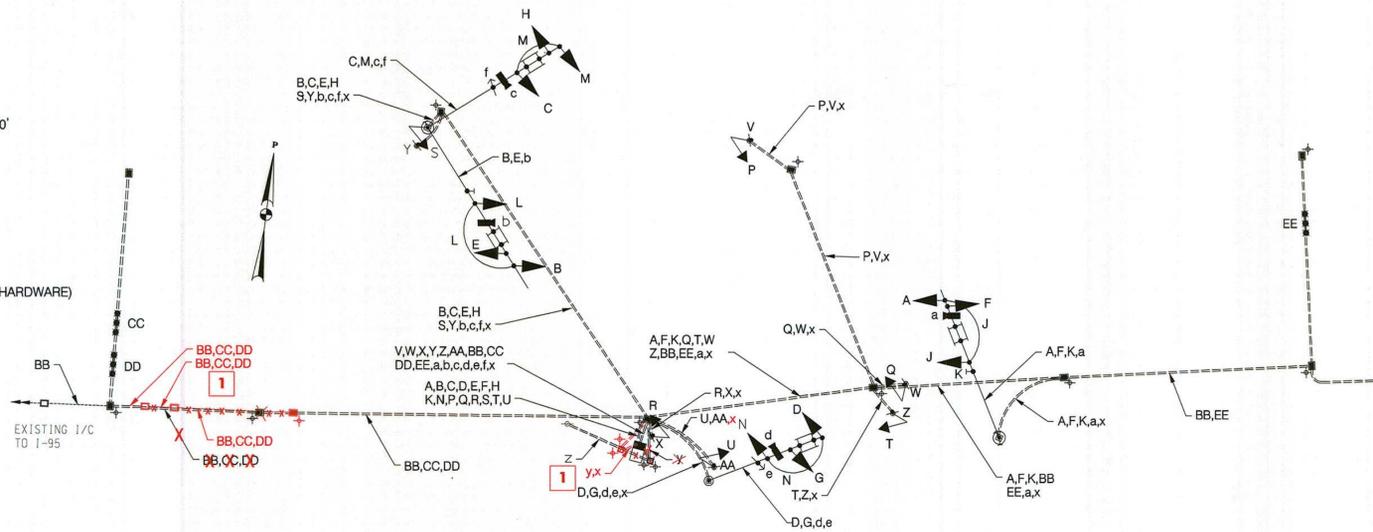


PHASE	1	2	3	4	5	6	7	8	9	10	11	12	15	16	17	18	19	20
PHASE 1 AND 5	+G/R	+G/R	R	+G/R	+G/R	R	R	R	R	R	R	R	DW	DW	DW	DW	DW	DW
1 AND 5 CHANGE TO 1 AND 6, 2 AND 5, OR 2 AND 6																		
PHASE 1 AND 6	+G/G	+G/G	G	R	R	R	R	R	R	R	R	R	DW	DW	DW	DW	DW	DW
1 AND 6 CHANGE	+Y/G	+Y/G	G	R	R	R	R	R	R	R	R	R	DW	DW	DW	DW	DW	DW
PHASE 2 AND 5	R	R	R	+G/G	+G/G	G	R	R	R	R	R	R	DW	DW	DW	DW	DW	DW
2 AND 5 CHANGE	R	R	R	+Y/G	+Y/G	G	R	R	R	R	R	R	DW	DW	DW	DW	DW	DW
PHASE 2 AND 6	G	G	G	G	G	G	R	R	R	R	R	R	DW	DW	DW	DW	WK	WK
PED CLEARANCE	G	G	G	G	G	G	R	R	R	R	R	R	DW	DW	DW	DW	FL/DW/FL/DW	FL/DW/FL/DW
2 AND 6 CHANGE	Y	Y	Y	Y	Y	Y	R	R	R	R	R	R	DW	DW	DW	DW	DW	DW
PHASE 3	R	R	R/G	R	R	R	+G/G	+G/G	G	R	R	R	DW	DW	DW	DW	DW	DW
3 CHANGE	R	R	R/Y	R	R	R	Y	Y	Y	R	R	R	DW	DW	DW	DW	DW	DW
PHASE 3 ALT	R	R	R/G	R	R	R	+G/G	+G/G	G	R	R	R	WK	WK	DW	DW	DW	DW
PED CLEARANCE	R	R	R/G	R	R	R	+G/G	+G/G	G	R	R	R	FL/DW/FL/DW	DW	DW	DW	DW	DW
3 ALT CHANGE	R	R	R/Y	R	R	R	Y	Y	Y	R	R	R	DW	DW	DW	DW	DW	DW
PHASE 4	R	R	R	R	R	R/G	R	R	R	+G/G	+G/G	G	DW	DW	DW	DW	DW	DW
4 CHANGE	R	R	R	R	R	R/Y	R	R	R	Y	Y	Y	DW	DW	DW	DW	DW	DW
PHASE 4 ALT	R	R	R	R	R	R/G	R	R	R	+G/G	+G/G	G	DW	DW	WK	WK	DW	DW
PED CLEARANCE	R	R	R	R	R	R/G	R	R	R	+G/G	+G/G	G	DW	DW	FL/DW/FL/DW	DW	DW	DW
4 ALT CHANGE	R	R	R	R	R	R/Y	R	R	R	Y	Y	Y	DW	DW	DW	DW	DW	DW
FLASHING OPERATION	FL/Y	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

EMERGENCY VEHICLE PRE-EMPTION

PHASE	1	2	3	4	5	6	7	8	9	10	11	12	15	16	17	18	19	20
PHASE 3 PRE-EMPTION	R	R	R	R	R	R	G	G	G	R	R	R	DW	DW	DW	DW	DW	DW
3 PRE-EMP. CHANGE	R	R	R	R	R	R	Y	Y	Y	R	R	R	DW	DW	DW	DW	DW	DW
PHASE 4 PRE-EMPTION	R	R	R	R	R	R	R	R	R	G	G	G	DW	DW	DW	DW	DW	DW
4 PRE-EMP. CHANGE	R	R	R	R	R	R	R	R	R	Y	Y	Y	DW	DW	DW	DW	DW	DW

- WIRING KEY**
- A,B,C,D } 7 CONDUCTOR ELECTRICAL CABLE (NO. 14 AWG)
 - E,F,G,H } 5 CONDUCTOR ELECTRICAL CABLE (NO. 14 AWG)
 - J,L,M,N,P } 5 CONDUCTOR ELECTRICAL CABLE (NO. 14 AWG)
 - Q,R,S,T,U } 2 CONDUCTOR ELECTRICAL CABLE (NO. 14 AWG)
 - V,W,X,Y,Z,AA } 2 CONDUCTOR ELECTRICAL CABLE (NO. 14 AWG)
 - a,b,c } VIDEO CAMERA CABLE
 - d,e,f } EXISTING INTERCONNECT CABLE
 - BB } EXISTING INTERCONNECT CABLE
 - CC,DD,EE } NON-INVASIVE MICRO LOOP PROBES
 - x } NO. 6 AWG STRANDED BARE COPPER GROUND WIRE
 - y } 3 WIRES, 1 CONDUCTOR ELECTRICAL CABLE (NO. 8 AWG THHN/THWN)
 - z } 3 WIRES, 1 CONDUCTOR ELECTRICAL CABLE (NO. 2 AWG THHN)
 - + } GROUND ROD



NOTE:
 THE CONTRACTOR WILL "WORK WITH" PEPCO ON THE INSTALLATION OF THE 3 WIRES, 1 CONDUCTOR ELECTRICAL CABLE (NO. 2 AWG/THHN). IT HAS BEEN ASSUMED THAT DURING THE "WORK WITH" ADDITIONAL CABLE WILL BE COILED AND ATTACHED (TO THE WOOD POLE) TO PEPCO STANDARDS.

1 RED LINE REVISION NO. 1 12/14/2011
 TEDD APPROVAL



STATE OF MARYLAND
 DEPARTMENT OF TRANSPORTATION
 STATE HIGHWAY ADMINISTRATION
 OFFICE OF TRAFFIC & SAFETY
 TRAFFIC ENGINEERING DESIGN DIVISION
 MD 414 (OXON HILL RD) AT LIVINGSTON RD
 OXON HILL, MD

GENERAL INFORMATION PLAN SHEET

SCALE	NTS	DATE	07/11/2011	CONTRACT NO.	XX655185
DESIGNED BY	CW	COUNTY	PRINCE GEORGE'S		
DRAWN BY	CW	LOGMILE	16041400.95		
CHECKED BY	JB	TIMS NO.	J982		
F.A.P. NO.		TOD NO.			