PROJECT DESCRIPTION

I. GENERAL

THIS PROJECT INVOLVES THE RECONSTRUCTION OF THE EXISTING TRAFFIC CONTROL SIGNAL WITH INTERCONNECT AT THE INTERSECTION OF MD 450 (ANNAPOLIS RD) AND 71ST AVE IN PRINCE GEORGE'S COUNTY. THE PROJECT WILL REPLACE EXISTING GREEN STRAIN POLES WITH MAST ARM POLES AND UPGRADE ALL PEDESTRIAN CROSSINGS TO APS/CPS. MD 450 IS ASSUMED TO RUN IN AN EAST-WEST DIRECTION.

II. INTERSECTION OPERATION

1. THE INTERSECTION SHALL OPERATE IN A NEMA SIX (6) PHASE, FULLY-ACTUATED MODE. BOTH EASTBOUND AND WESTBOUND MD 450 APPROACHES AND THE PEDESTRIAN MOVEMENT ACROSS 71ST AVE SHALL OPERATE CONCURRENTLY. THERE IS A LEADING EXCLUSSIVE/PERMISSIVE LEFT TURN PHASE FOR BOTH EASTBOUND AND WESTBOUND MD 450 LEFT TURN MOVEMENTS. AN ACTUATED AUDIBLE PEDESTRIAN PHASE SHALL BE PROVIDED TO CROSS 71ST. BOTH NORTHBOUND AND SOUTHBOUND APPROACHES OF 71ST AVE SHALL OPERATE CONCURRENTLY. AN ALTERNATIVE PEDESTRIAN PHASE WITH AUDIBLE PEDESTRIAN SIGNALS SHALL BE PROVIDED TO CROSS MD 450.

2. A PROPOSED NEMA FULL-TRAFFIC-ACTUATED, EIGHT (8) PHASE MASTER CONTROLLER IN A NEMA SIZE "S" BASE MOUNTED CABINET SHALL BE INSTALLED AT THIS LOCATION.

III. SPECIAL NOTES

APS WILL FUNCTION AS FOLLOWS:
TO CROSS MD 450 (ANNAPOLIS RD)

1. WHEN A PEDESTRIAN LOCATES AND PRESSES THE PUSHBUTTON FOR AN EXTENDED TIME, THE PUSHBUTTON UNIT WILL ANNOUNCE THE FOLLOWING MESSAGE: "WAIT TO CROSS ANNAPOLIS AT 71ST, WAIT."
2. WHEN THE WALK PHASE BEGINS, THE PUSHBUTTON UNIT WILL PROVIDE A RAPID TICK WHICH WILL LAST FOR THE DURATION OF THE WALK PHASE.

TO CROSS 71ST AVE

1. WHEN A PEDESTRIAN LOCATES AND PRESSES THE PUSHBUTTON FOR AN EXTENDED TIME, THE PUSHBUTTON UNIT WILL ANNOUNCE THE FOLLOWING MESSAGE: "WAIT TO CROSS 71ST AT ANNAPOLIS, WAIT."
2. WHEN THE WALK PHASE BEGINS, THE PUSHBUTTON UNIT WILL PROVIDE A RAPID TICK WHICH WILL LAST FOR THE DURATION OF THE WALK PHASE.

CONTACTS

DISTRICT (DISTRICT 3 - PRINCE GEORGE'S)

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OFFICE OF TRAFFIC AND SAFETY

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LANDOVER HILLS, MD 20784

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→R	G→R	R	G→R	G→R	R	R	R	R	R	R	R	DW	DW	DW	DW	DW	DW	DW	DW
1 & 5 CHANGE	PHASE 1 & 5 CHANGE MAY CHANGE TO PHASE 1 & 6, 2 & 5 OR 2 & 6																			
PHASE 1 & 6	G→G	G→G	G	R	R	R	R	R	R	R	R	R	DW	DW	DW	DW	DW	WK	WK	DW
1 & 6 CHANGE	Y→G	Y→G	G	R	R	R	R	R	R	R	R	R	DW	DW	DW	DW	DW	WK	WK	DW
PHASE 2 & 5	R	R	R	G→G	G→G	G	R	R	R	R	R	R	DW	WK	WK	DW	DW	DW	DW	DW
2 & 5 CHANGE	R	R	R	Y→G	Y→G	G	R	R	R	R	R	R	DW	WK	WK	DW	DW	DW	DW	DW
PHASE 2 & 6	G	G	G	G	G	G	R	R	R	R	R	R	DW	WK	WK	DW	DW	WK	WK	DW
PED. CLEARANCE	G	G	G	G	G	G	R	R	R	R	R	R	DW	FL/DW	FL/DW	DW	DW	FL/DW	FL/DW	DW
2 & 6 CHANGE	Y	Y	Y	Y	Y	Y	R	R	R	R	R	R	DW	DW	DW	DW	DW	DW	DW	DW
PHASE 4 & 8	R	R	R	R	R	R	G	G	G	G	G	G	DW	DW	DW	DW	DW	DW	DW	DW
4 & 8 CHANGE	R	R	R	R	R	R	Y	Y	Y	Y	Y	Y	DW	DW	DW	DW	DW	DW	DW	DW
PHASE 4 ALT&8 ALT	R	R	R	R	R	R	G	G	G	G	G	G	WK	DW	DW	WK	WK	DW	DW	WK
PED. CLEARANCE	R	R	R	R	R	R	G	G	G	G	G	G	FL/DW	DW	DW	FL/DW	FL/DW	DW	DW	FL/DW
4 ALT+8 ALT CHANGE	R	R	R	R	R	R	Y	Y	Y	Y	Y	Y	DW	DW	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	DARK	DARK

TOD NO: XY128-10
SHA NO: PG818B56
MD 450 (Annapolis Rd) @ 71st Avenue

EQUIPMENT LIST

A. EQUIPMENT TO BE FURNISHED BY STATE HIGHWAY ADIMISTRATION

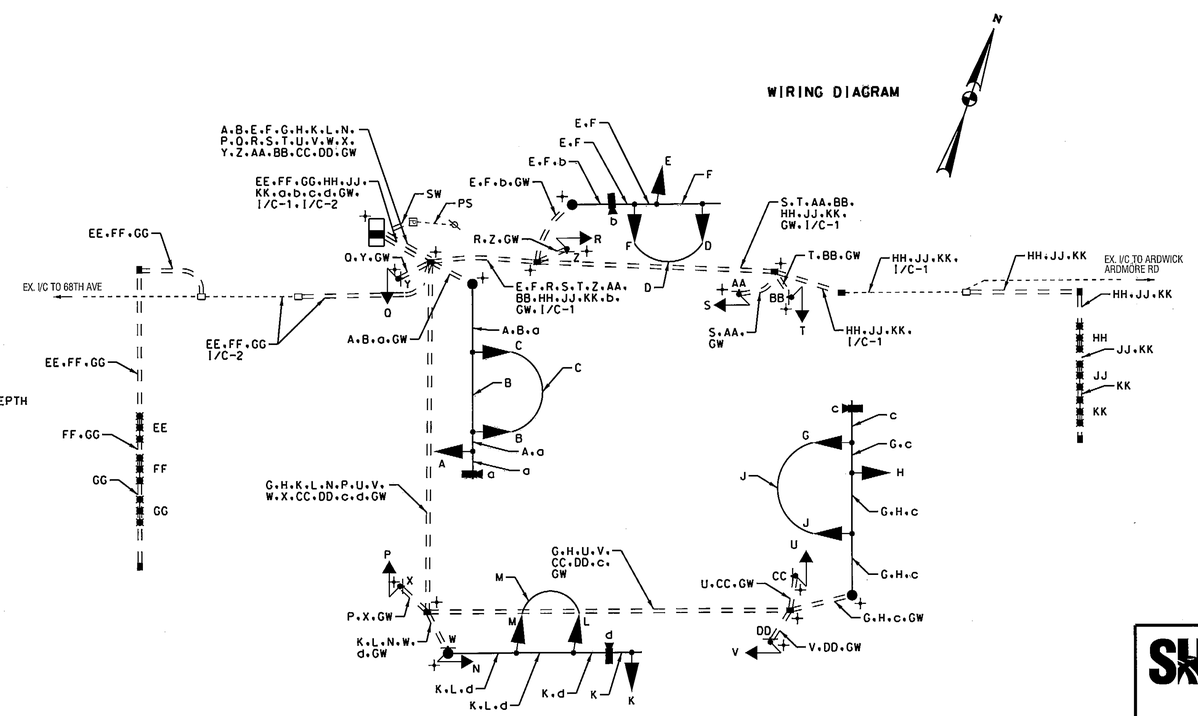
ITEM NO.	QUANTITY	DESCRIPTION
9104	1 EA	CONTROLLER CABINET, SIZE "S" W/CTRL, VIDEO INT; 1-8 CAM
9570	113.5 SF	SHEET ALUMINUM GROUND MOUNTED SIGN
		8 EA - S1-1 (36"x36"); W16-7p (24"x12")
		2 EA - R4-7(1) (18"x30")
		2 EA - OM1-3 (18"x18")
		1 EA - M3-2 (24"x12"); M5-1 (30"x24"); M6-1 (15"x12")
		1 EA - R4-7 (24"x30")
9571	99.5 SF	SHEET ALUMINUM MAST ARM / POLE MOUNTED SIGN
		2 EA - D-3(1) 'ANNAPOLIS RD' (VARx16") DUAL FACE
		2 EA - D-3(1) '71ST AVE' (VARx16") DUAL FACE
		1 EA - M1-5(6) 'EAST/ MD 450/ <-' (48"x72")
		1 EA - M1-5(6) 'EAST/ MD 450/ ->' (30"x48")
		1 EA - M1-5(6) 'WEST/ MD 450/ <-' (48"x72")
		8 EA - R10-3(1) PUSHBUTTON SIGN (9"x15")

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

ITEM NO.	QUANTITY	DESCRIPTION
1001	3 EA	MAINTENANCE OF TRAFFIC
2002	7 CY	TEST PIT EXCAVATION
5003	1595 LF	REMOVAL OF EXISTING PERMANENT PAVEMENT LINE MARKINGS
5004	1166 LF	12 INCH WHITE PREFORMED THERMOPLASTIC PAVEMENT MARKING LINES
5005	145 LF	24 INCH WHITE PREFORMED THERMOPLASTIC PAVEMENT MARKING LINES
6001	200 LF	STANDARD TYPE A COMBINATION CURB AND GUTTER 12 INCH GUTTER PAN 8 INCH DEPTH
6002	1900 SF	5 INCH CONCRETE SIDEWALK
6003	110 SF	DETECTABLE WARNING SURFACE FOR CURB RAMPS
8001	44 EA	12 INCH LED SIGNAL HEAD SECTION
8002	1 EA	2-WIRE CENTRAL CONTROL UNIT
8008	8 EA	AUDIBLE/TACTILE PEDESTRIAN PUSHBUTTON STATION AND SIGNS
8009	7 EA	BREAKAWAY PEDESTAL POLE (ANY SIZE)
8013	7 EA	INSTALL BREAKAWAY PEDESTAL POLE - ANY SIZE
8014	1 EA	INSTALL CONTROLLER AND CABINET BASE MOUNT (ANY SIZE)
8016	8 EA	LED 16 INCH COUNTDOWN PEDESTRIAN SIGNAL HEAD
8018	1 EA	MAST ARM POLE & 38' MAST ARM ANY 'T' DIMENSION
8019	3 EA	MAST ARM POLE & 50' MAST ARM ANY 'T' DIMENSION
8023	6 EA	NONINVASIVE DETECTOR (ANY LENGTH) LEAD IN CABLE UP TO 1000'
8024	1 EA	REMOVE & DISPOSE OF EQUIPMENT (PER ASSIGNMENT)
8029	4 EA	VIDEO DETECTION CAMERA AND CABLE ANY LENGTH
8034	950 LF	DISCONNECT, PULL-BACK & REROUTE CABLES
8038	495 LF	UP TO 4 INCH SCHEDULE 80 RIGID PVC CONDUIT-BORED
8040	600 LF	UP TO 4 INCH SCHEDULE 80 RIGID PVC CONDUIT-TRENCHED
8041	216 LF	WOOD SIGN SUPPORTS UP TO 4' X 6'
8042	213 SF	INSTALL OVERHEAD OR GROUND MOUNTED SIGN (INCLUDING ALL HARDWARE)
8044	535 LF	NO. 6 AWG STRANDED BARE COPPER GROUND WIRE
8047	45 LF	ELECTRICAL CABLE 1-CONDUCTOR NO. 8 AWG-THHN/THWN
8048	10 EA	FURNISH AND INSTALL ELECTRICAL HANDHOLE
8055	1305 LF	ELECTRICAL CABLE - 2 CONDUCTOR (NO. 14 AWG)
8057	1400 LF	ELECTRICAL CABLE - 5 CONDUCTOR (NO. 14 AWG)
8058	1690 LF	ELECTRICAL CABLE - 7 CONDUCTOR (NO. 14 AWG)

C. IF THE CABINET IS TO BE REMOVED 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 SIGNAL CONTRACTOR UPON COMPLETION OF THE NEW SIGNAL.

WIRING DIAGRAM



WIRING KEY

A,B,E,F,G,H,K,L	- 7 CONDUCTOR ELECTRICAL CABLE (NO. 14 AWG)
C,D,J,M,N,P,Q,R,S,T,U,V	- 5 CONDUCTOR ELECTRICAL CABLE (NO. 14 AWG)
W,X,Y,Z,AA,BB,CC,DD	- 2 CONDUCTOR ELECTRICAL CABLE (NO. 14 AWG)
EE,FF,GG,HH,JJ,KK	- MICRLOOP PROBE LEAD-IN CABLE
a,b,c,d,	- VIDEO DETECTION LEAD-IN CABLE
SW	- 3-1 CONDUCTOR ELECTRICAL CABLE (#8 AWG THHN/THWN)
GW	- 1 CONDUCTOR (NO. 6 AWG) STRANDED BARE COPPER GROUND WIRE
PS	- EXISTING POWER FEED
I/C-1	- RE-ROUTED 12-PAIR INTERCONNECT TO ARDWICK ARDMORE RD
I/C-2	- RE-ROUTED 12-PAIR INTERCONNECT TO 68TH AVE
+	- PROPOSED GROUND ROD

SHA
STATE OF MARYLAND
DEPARTMENT OF TRANSPORTATION
STATE HIGHWAY ADMINISTRATION
OFFICE OF TRAFFIC & SAFETY
TRAFFIC ENGINEERING DESIGN DIVISION
MD 450 (ANNAPOLIS RD) AT 71ST AVE
SIGNAL RECONSTRUCTION
HYATTSVILLE, MD

GENERAL INFORMATION SHEET

SCALE NTS DATE MARCH 15, 2013 CONTRACT NO. XY1285185

DESIGNED BY JEK
DRAWN BY JEK
CHECKED BY MF
A.P. NO.
COUNTY PRINCE GEORGE'S
LOGMILE 16045002.81
TIMS NO. L363
TOD NO.

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CONTRACT NO. 650C-GI | DRAWING SG-03 OF 03 | SHEET NO. 03 OF 03

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