PROJECT DESCRIPTION

GENERAL

THIS PROJECT INVOLVES THE RECONSTRUCTION OF THE EXISTING TRAFFIC CONTROL SIGNAL AT THE INTERSECTION OF MD 45 (YORK ROAD) AND RIDGELY ROAD DUE TO THE WIDENING OF MD 45. MD 45 IS ASSUMED TO RUN IN A NORTH-SOUTH DIRECTION.

INTERSECTION OPERATION

THE INTERSECTION WILL OPERATE IN A NEMA SIX-PHASE, FULL-TRAFFIC-ACTUATED MODE WITH THE MD 45 APPROACHES OPERATING CONCURRENTLY AND THE RIDGELY ROAD APPROACHES OPERATING SPLIT-PHASED.

EXCLUSIVE/PERMISSIVE LEFT-TURN PHASING IS PROVIDED FOR THE NORTHBOUND AND SOUTHBOUND MD 45 APPROACHES. AN OVERLAP PHASE IS PROVIDED FOR THE SOUTHBOUND MD 45 RIGHT-TURN, AND EASTBOUND AND WESTBOUND ARE SPLIT PHASED.

PEDESTRIAN INDICATIONS WILL BE PROVIDED ACROSS THE SOUTH, EAST AND WEST LEGS. PEDESTRIAN SIGNALS WILL BE COUNTDOWN TYPE.

CONTROLLER REQUIREMENTS

FULL-TRAFFIC-ACTUATED, EIGHT-PHASE CONTROLLER WITH SIX (6) TWO-CHANNEL, TIME-DELAY-OUTPUT LOOP DETECTOR AMPLIFIERS, AND ASSOCIATED HARNESSES HOUSED IN A NEMA SIZE "6" BASE MOUNTED CABINET.

SPECIAL NOTE

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.

PROJECT CONTACTS

THE CONTACT PERSONS FOR SHA ARE AS FOLLOWS:

MR. RANDALL SCOTT
ASSISTANT DISTRICT ENGINEER - TRAFFIC
PHONE: (410) 321-2781

MR. STEVE MARCISZEWSKI
ASSISTANT DISTRICT ENGINEER - MAINTENANCE
PHONE: (410) 321-2761

MR. MIKE PASQUARIELLO
DISTRICT UTILITY ENGINEER
PHONE: (410) 321-2841

MR. RICHARD L. DAFF, SR.
CHIEF, TRAFFIC OPERATIONS DIVISION
PHONE: (410) 787-7630

WIRING DIAGRAM

A,B,C,D,E,F,G,H,J — 7-CONDUCTOR ELECTRICAL CABLE (NO. 14 A.W.G.)

K,L,M — 5-CONDUCTOR ELECTRICAL CABLE (NO. 14 A.W.G.)

N,P,Q,R,S,T,U,V,W,X,Y,Z — 3-CONDUCTOR ELECTRICAL CABLE (NO. 14 A.W.G.)

AA,BB,CC,DD,EE,FF — 2-CONDUCTOR ELECTRICAL CABLE (NO. 14 A.W.G.)

GG,HH — 2-CONDUCTOR ELECTRICAL CABLE (NO. 12 A.W.G.)

JJ,KK,LL,MM — VIDEO DETECTION LEAD-IN CABLE

NN,PP — MICROLOOP PROBE LEAD-IN

QQ — STRANDED BARE COPPER GROUND WIRE (NO. 6 A.W.G.)

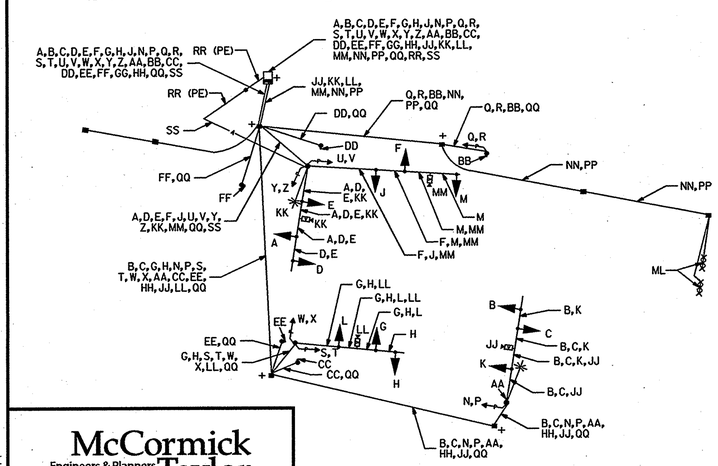
RR — 3-WIRE FOR ELECTRICAL SERVICE (NO. 4 A.W.G.)

SS — 12-PAIR COMMUNICATION CABLE (SEE INTERCONNECT PLANS)

ML - MICROLOOP PROBE SET

PE - PROPOSED UNDERGROUND ELECTRICAL SERVICE

+ - 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: WJWARNER

EQUIPMENT LIST "A"

A. EQUIPMENT TO BE SUPPLIED BY SHA:

ITEM NO.	QUANTITY	UNIT	DESCRIPTION
900000	1	EA	10 FOOT BREAKAWAY PEDESTAL POLE
900000	1	EA	STEEL POLE WITH A TWIN 50 FOOT AND 70 FOOT MAST ARMS
963007	6	EA	TWO-CHANNEL, TIME-DELAY-OUTPUT, LOOP DETECTOR AMPLIFIER
971017	1	EA	EIGHT-PHASE, FULL-TRAFFIC-ACTUATED CONTROLLER WITH SYSTEM PACKAGE HOUSED IN A NEMA SIZE "6" BASE MOUNTED CABINET
973023	94	SF	SHEET ALUMINUM SIGNS TO CONSIST OF:
			- 2 EACH R3-5L SIGN (30 IN. x 36 IN.) - MAST ARM MOUNT
			- 2 EACH R3-5R SIGN (30 IN. x 36 IN.) - MAST ARM MOUNT
			- 1 EACH R3-6L SIGN (30 IN. x 36 IN.) - MAST ARM MOUNT
			- 2 EACH D-3(1) SIGN (VARIABLE x 16 IN.) - MAST ARM MOUNT
			- 1 EACH M95-1-NL (MOD) SIGN (72 IN. x 40 IN.) - MAST ARM MOUNT
			- 1 EACH M95-1-NR (MOD) SIGN (72 IN. x 40 IN.) - MAST ARM MOUNT
			- 6 EACH R10-4(1) SIGN (9 IN. x 12 IN.) - POLE MOUNT
974024	2	EA	STEEL POLE WITH A SINGLE 50 FOOT MAST ARM

PHASE CHART

	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18
PHASE 1 + 5	R	R	R	R	R	R	R	R	R	R	R	R	DW	DW	DW	DW	DW	DW
1 + 5 CHANGE	PHASE 1 + 5 MAY CHANGE TO PHASE 1 + 6, PHASE 2 + 5, OR PHASE 2 + 6												DW	DW	DW	DW	DW	DW
PHASE 1 + 6	R	R	G	R	R	R	R	R	R	R	R	R	DW	DW	DW	DW	DW	DW
1 + 6 CHANGE	R	R	G	R	R	R	R	R	R	R	R	R	DW	DW	DW	DW	DW	DW
PHASE 2 + 5	R	R	R	R	R	G	R	R	R	R	R	R	DW	DW	DW	DW	DW	DW
2 + 5 CHANGE	R	R	R	R	R	G	R	R	R	R	R	R	DW	DW	DW	DW	DW	DW
PHASE 2 + 6	G	G	G	G	G	G	R	R	R	R	R	R	DW	DW	DW	DW	DW	DW
2 + 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	R	R	R	G	G	G	R	R	R	DW	DW	DW	DW	DW	DW
3 CHANGE	R	R	R	R	R	R	Y	Y	Y	R	R	R	DW	DW	DW	DW	DW	DW
OVERLAP A	R	R	R	R	R	G	G	G	G	R	R	R	DW	DW	DW	DW	DW	DW
OVERLAP A CHANGE	R	R	R	R	R	Y	Y	Y	Y	R	R	R	DW	DW	DW	DW	DW	DW
PHASE 4	R	R	R	R	R	R	R	R	R	G	G	G	DW	DW	DW	DW	DW	DW
4 CHANGE	R	R	R	R	R	R	R	R	R	Y	Y	Y	DW	DW	DW	DW	DW	DW
PHASE 2 + 6 ALT.	G	G	G	G	G	G	R	R	R	R	R	R	W	W	W	W	DW	DW
PED CLEARANCE	G	G	G	G	G	G	R	R	R	R	R	R	FL/DW	FL/DW	FL/DW	FL/DW	DW	DW
2 + 6 ALT. CHANGE	Y	Y	Y	Y	Y	Y	R	R	R	R	R	R	DW	DW	DW	DW	DW	DW
PHASE 3 ALT.	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	G	G	G	G	G	G	DW	DW	DW	DW	FL/DW	FL/DW
3 ALT. CHANGE	R	R	R	R	R	R	Y	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/R	FL/R	FL/R	FL/R	FL/R	FL/R	DARK	DARK	DARK	DARK	DARK	DARK

EQUIPMENT LIST "B"

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

ITEM NO.	QUANTITY	UNIT	DESCRIPTION
800000	5	EA	16 INCH PEDESTRIAN LED SIGNAL HEAD SECTION - POLE MOUNT (COUNTDOWN)
800000	1	EA	16 INCH PEDESTRIAN LED SIGNAL HEAD SECTION - PEDESTAL POLE MOUNT (COUNTDOWN)
800000	6	EA	AUDIBLE/TACTILE PEDESTRIAN PUSHBUTTON STATION
801004	20	CY	CONCRETE FOR SIGNAL FOUNDATION
802501	500	LF	NO. 6 AWG STRANDED BARE COPPER GROUND WIRE
805050	1	EA	WEATHER HEAD, 3 INCH
805140	475	LF	4 INCH SCHEDULE 80 RIGID PVC CONDUIT-TRENCHED
805155	600	LF	4 INCH SCHEDULE 80 RIGID PVC CONDUIT-SLOTTED
805160	10	LF	1 INCH LIQUID TIGHT FLEXIBLE NON-METALLIC CONDUIT FOR DETECTOR SLEEVE
807202	1	EA	10 FOOT BREAKAWAY PEDESTAL POLE
810550	2	EA	MICROLOOP PROBE, 500 FOOT LEAD IN CABLE
811001	8	EA	INSTALL ELECTRICAL HANDHOLE
813014	5	SF	INSTALL GROUND MOUNTED SIGN
813015	89	SF	INSTALL OVERHEAD SIGN
816001	4	EA	VIDEO DETECTION CAMERA
816005	2	EA	CONTROL CABLE, 250 FOOT, VIDEO DETECTION CAMERA TO CONTROLLER
816010	2	EA	CONTROL CABLE, 500 FOOT, VIDEO DETECTION CAMERA TO CONTROLLER
818004	4	EA	10 FOOT BREAKAWAY PEDESTAL POLE
821003	5	EA	BREAKAWAY SUPPORT SYSTEM FOR SIGNAL STRUCTURE
831010	2	EA	250 WATT HIGH PRESSURE SODIUM LAMP AND LUMINAIRE
837001	5	EA	GROUND ROD - 3/4 INCH DIAMETER X 10 FOOT LENGTH
860270	6	EA	8 INCH VEHICULAR TRAFFIC LED SIGNAL HEAD SECTION
860272	44	EA	12 INCH VEHICULAR TRAFFIC LED SIGNAL HEAD SECTION
860292	4	EA	CUT, CLEAN, GALVANIZE AND CAP TRAFFIC SIGNAL STRUCTURE
861105	1000	LF	ELECTRICAL CABLE - 2 CONDUCTOR (NO. 14 AWG)
861106	1550	LF	ELECTRICAL CABLE - 3 CONDUCTOR (NO. 14 AWG)
861107	75	LF	ELECTRICAL CABLE - 5 CONDUCTOR (NO. 14 AWG)
861108	1550	LF	ELECTRICAL CABLE - 7 CONDUCTOR (NO. 14 AWG)
861116	300	LF	ELECTRICAL CABLE - 2 CONDUCTOR (NO. 12 AWG)
861117	50	LF	ELECTRICAL CABLE - 3 WIRE (NO. 4 AWG)
866104	2	EA	20 FOOT LIGHTING ARM ON SIGNAL STRUCTURE
866204	2	EA	INSTALL STEEL POLE AND SINGLE MAST ARM
866205	1	EA	INSTALL STEEL POLE AND TWIN MAST ARMS
871117	1	EA	INSTALL CONTROLLER AND CABINET - BASE MOUNT
873001	1	LS	REMOVE AND DISPOSE OF EXISTING EQUIPMENT

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 AND RELOCATE EXISTING VIDEO INTERFACE EQUIPMENT TO NEW CONTROLLER CABINET. THE CABINET AND ALL OTHER MATERIALS TO BE REMOVED BY THE CONTRACTOR SHALL BECOME THE PROPERTY OF THE CONTRACTOR.

PHASE 1

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

MARYLAND 45 (YORK ROAD) WIDENING
CAVAN DRIVE TO RIDGELY ROAD

GENERAL INFORMATION - MD 45 at Ridgely Road

SCALE NONE DATE _____ CONTRACT NO. BA7065171

DESIGNED BY _____ COUNTY BALTIMORE
DRAWN BY _____ LOGMILE 03004504.42
CHECKED BY _____ T.I.M.S. NO. F159
F.A.P. NO. SEE TITLE SHEET TOD NO. _____

DRAWING NO. 4590E SS-10 OF SS-25 SHEET NO. 78 OF 137

PLOTTED: 03/02/2006
FILE: G:\4674\10\DESIGN\ENGINEERING\PLANSET\SS10MD45.DGN