PROJECT DESCRIPTION

GENERAL

THIS PROJECT INVOLVES SIGNAL MODIFICATION DUE TO THE GEOMETRIC MODIFICATIONS AT THE INTERSECTION OF US 40 AND ROLLING ROAD IN BALTIMORE COUNTY. THE SIGNAL MODIFICATION INCLUDES NEW SIGNAL HEADS, SIGNS, PAVEMENT MARKINGS, AND DETECTORS FOR ALL APPROACHES. A NEW INTERCONNECT CABLE BETWEEN THE CONTROLLER AT ROLLING ROAD AND THE CONTROLLER AT THE PIKE PARK PLAZA SIGNAL AND NEW PHASING FOR ROLLING ROAD.

INTERSECTION OPERATION

1. NORMAL OPERATION

THE INTERSECTION WILL OPERATE IN A NEMA EIGHT PHASE, FULL-TRAFFIC ACTUATED MODE, WITH THE US 40 APPROACHES RUNNING CONCURRENTLY AND THE ROLLING RD. APPROACHES RUNNING CONCURRENTLY.

EAST AND WESTBOUND US 40 WILL HAVE EXCLUSIVE LEFT TURN PHASES.
NORTH AND SOUTHBOUND ROLLING ROAD WILL HAVE EXCLUSIVE LEFT TURN PHASES.

AN ALTERNATE PEDESTRAIN PHASE WILL BE PROVIDED ACROSS THE WEST LEG OF US 40.

PROJECT CONTACTS

THE CONTACT PERSONS FOR DISTRICT #4 ARE AS FOLLOWS:

MR. DAVE MALKOWSKI
DISTRICT ENGINEER
PHONE: 410-321-2810

MR. JOSEPH MCMAHON
DISTRICT UTILITY ENGINEER
PHONE: 410-321-2841

MR. RANDALL SCOTT
ASSISTANCE DISTRICT ENGINEER-TRAFFIC
PHONE: 410-321-2780

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

MR. DAVID RAMSEY
ASSISTANCE DISTRICT ENGINEER-MAINTENANCE
PHONE: 410-321-2761

EQUIPMENT LIST

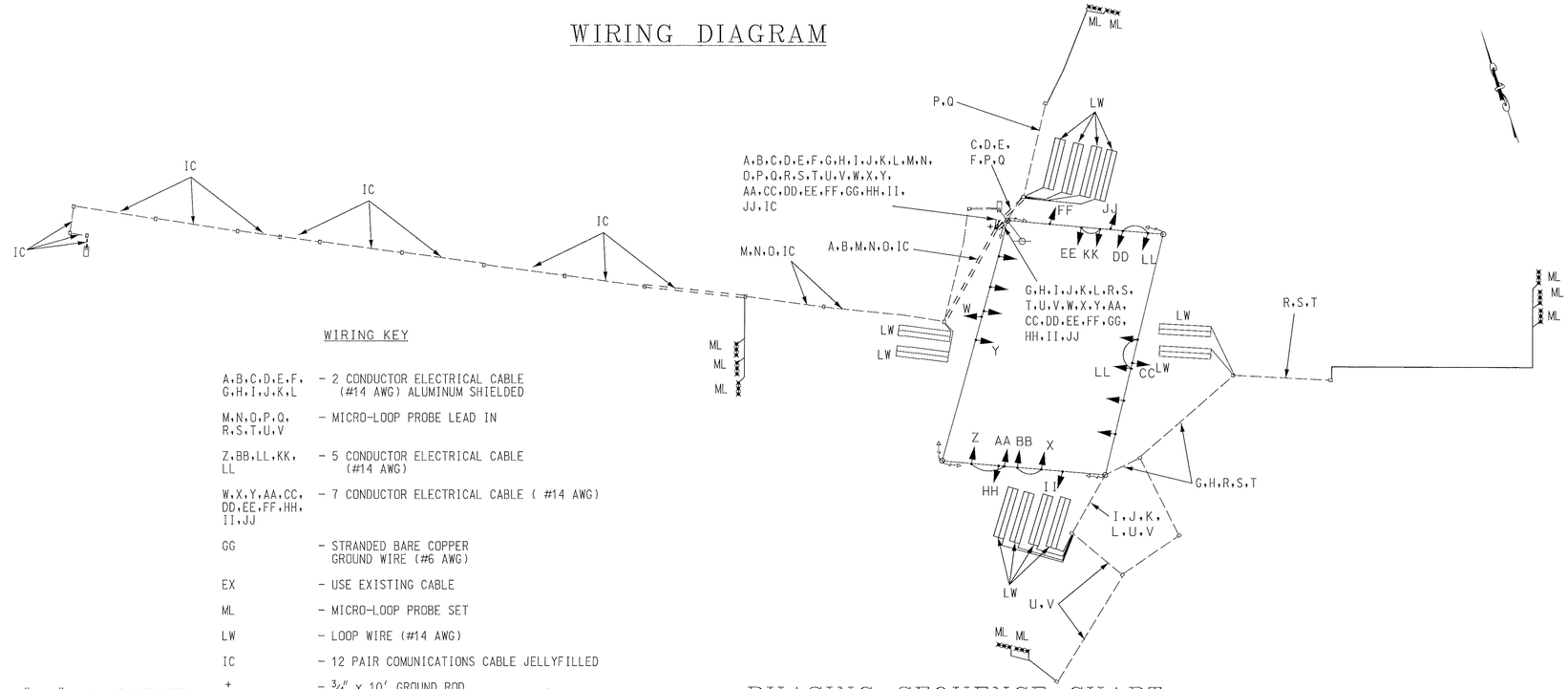
A. EQUIPMENT TO BE SUPPLIED BY THE SHA.

CAT CODE	ITEM	QUANTITY		DESCRIPTION
900000		203	SF	FLAT SHEET ALUM. SIGN-BLUE OR GREEN
				1 EA SHIELD ASSEMBLY (EAST,US 40, RIGHT ARROW) (24"X51") POLE MOUNTED
				1 EA SHIELD ASSEMBLY (WEST,US 40, RIGHT ARROW) (24"X51") POLE MOUNTED
				1 EA SHIELD ASSEMBLY (EAST,US 40, LEFT ARROW) (36"X75") POLE MOUNTED
				1 EA SHIELD ASSEMBLY (WEST,US 40, LEFT ARROW) (36"X75") POLE MOUNTED
				4 EA R3-5 (LEFT TURN ONLY) (30"X36") SPAN WIRE MOUNTED
				4 EA W11A-2 (PEDESTRIAN CROSSING) (30"X30"), W13-4 (ON RAMP) (24"X36") GROUND MOUNTED
				4 EA W11A-2 (PEDESTRIAN CROSSING) (30"X30"), M6-2L (DIAGONAL ARROW) (21"X15") GROUND MOUNTED
				4 EA W11A-2 (PEDESTRIAN CROSSING) (30"X30"), M6-2R (DIAGONAL ARROW) (21"X15") GROUND MOUNTED
900000		22	SF	FLAT SHEET ALUM. SIGN-BLUE OR GREEN
				2 EA D-3(1) (Rolling RD) (VAR.X16") SPAN WIRE MOUNTED

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

CAT CODE	ITEM	QUANTITY		DESCRIPTION
110320		1	EA	MAINTENANCE OF TRAFFIC
500000		960	LF	12 INCH HEAT APPLIED WHITE PERMANENT PREFORMED THERMOPLASTIC PAVEMENT MARKINGS
500000		220	LF	24 INCH HEAT APPLIED WHITE PERMANENT PREFORMED THERMOPLASTIC PAVEMENT MARKINGS
500000		12	EA	HEAT APPLIED PERMANENT PREFORMED THERMOPLASTIC PAVEMENT MARKING ARROW
655104		20	SF	4 INCH CONCRETE SIDEWALK
800000		8	EA	ADJUST HANDHOLE TO GRADE
800000		1	EA	FURNISH AND INSTALL 3 INCH WEATHERHEAD
800000		5	EA	FURNISH AND INSTALL MICROLOOP PROBE SET WITH 500 FT LEAD-IN
800000		5	EA	FURNISH AND INSTALL MICROLOOP PROBE SET WITH 1000 FT LEAD-IN
862102		1950	LF	FURNISH AND INSTALL SAWCUT FOR SIGNAL (LOOP DETECTOR)
805160		132	LF	FURNISH AND INSTALL 1 INCH LIQUID TIGHT FLEXIBLE NON METALLIC CONDUIT FOR DETECTOR SLEEVE
800000		35	LF	FURNISH AND INSTALL 2 INCH SCH 80 RIGID PVC CONDUIT - TRENCHED
800000		440	LF	FURNISH AND INSTALL 3 INCH SCH 80 RIGID PVC CONDUIT - TRENCHED
805150		45	LF	FURNISH AND INSTALL 3 INCH SCH 80 RIGID PVC CONDUIT - SLOTTED
800000		20	LF	FURNISH AND INSTALL 4 INCH SCH 80 RIGID PVC CONDUIT - TRENCHED
811001		2	EA	FURNISH AND INSTALL ELECTRICAL HANDHOLE
837001		1	EA	FURNISH AND INSTALL GROUND ROD -3/4INCH DIAMETER X 10 FOOT LENGTH
822002		2800	LF	FURNISH AND INSTALL 12-PAIR COMMUNICATION CABLE JELLYFILLED UNDERGROUND
862101		5575	LF	FURNISH AND INSTALL LOOP WIRE ENCASED IN FLEXIBLE TUBING (NO 14 AWG)
861104		2805	LF	FURNISH AND INSTALL ELECTRICAL CABLE - 2 CONDUCTOR (ALUMINUM SHIELDED)
861107		100	LF	FURNISH AND INSTALL ELECTRICAL CABLE - 5 CONDUCTOR (NO 14 AWG)
861108		2110	LF	FURNISH AND INSTALL ELECTRICAL CABLE - 7 CONDUCTOR (NO 14 AWG)
802501		20	LF	FURNISH AND INSTALL NO 6 AWG STRANDED BARE COPPER GROUND WIRE
801106		228	LF	FURNISH AND INSTALL WOOD SIGN SUPPORTS 4 INCH x 6 INCH
800000		1	EA	REMOVE AND DISPOSE OF EXISTING FOUNDATION 12 INCHES BELOW GRADE
800000		1	EA	REMOVE AND DISPOSE OF EXISTING MATERIAL AND EQUIPMENT
800000		1	EA	ADJUST AND RERING EXISTING SPAN WIRE
800000		60	EA	FURNISH AND INSTALL 12 INCH VEHICULAR BLACK FACED POLYCARBONATE TRAFFIC SIGNAL HEAD SECTION
800000		6	EA	FURNISH AND INSTALL 8 INCH VEHICULAR BLACK FACED POLYCARBONATE TRAFFIC SIGNAL HEAD SECTION

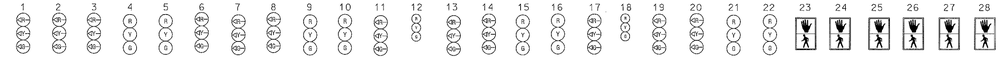
WIRING DIAGRAM



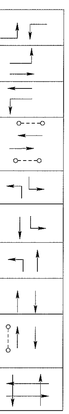
WIRING KEY

A,B,C,D,E,F, G,H,I,J,K,L	- 2 CONDUCTOR ELECTRICAL CABLE (#14 AWG) ALUMINUM SHIELDED
M,N,O,P,Q, R,S,T,U,V	- MICRO-LOOP PROBE LEAD IN
Z,BB,LL,KK, LL	- 5 CONDUCTOR ELECTRICAL CABLE (#14 AWG)
W,X,Y,AA,CC, DD,EE,FF,HH, II,JJ	- 7 CONDUCTOR ELECTRICAL CABLE (#14 AWG)
GG	- STRANDED BARE COPPER GROUND WIRE (#6 AWG)
EX	- USE EXISTING CABLE
ML	- MICRO-LOOP PROBE SET
LW	- LOOP WIRE (#14 AWG)
IC	- 12 PAIR COMUNICATIONS CABLE JELLYFILLED
+	- 3/4" x 10' GROUND ROD

PHASING SEQUENCE CHART



	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28
Phase 1 & 5	G	G	G	R	R	G	G	G	R	R	R	R	R	R	R	R	R	R	R	R	R	R	DW	DW	DW	DW	DW	DW
1 & 5 Change	to 1 & 6 or 2 & 5 or 2 & 6																											
Phase 1 & 6	G	G	G	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	DW	DW	DW	DW	DW	DW
1 Change	Y	Y	Y	G	G	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	DW	DW	DW	DW	DW	DW
Phase 2 & 5	R	R	R	G	G	G	G	G	G	G	R	R	R	R	R	R	R	R	R	R	R	R	DW	DW	DW	DW	DW	DW
5 Change	R	R	R	R	R	Y	Y	Y	G	G	R	R	R	R	R	R	R	R	R	R	R	R	DW	DW	DW	DW	DW	DW
Phase 2 & 6	R	R	R	G	G	R	R	R	G	G	R	R	R	R	R	R	R	R	R	R	R	R	WK	WK	WK	WK	DW	DW
PED Clear	R	R	R	G	G	R	R	R	G	G	R	R	R	R	R	R	R	R	R	R	R	R	FL/DW	FL/DW	FL/DW	FL/DW	DW	DW
2 & 6 Change	R	R	R	Y	Y	R	R	R	Y	Y	R	R	R	R	R	R	R	R	R	R	R	R	DW	DW	DW	DW	DW	DW
Phase 3 & 7	R	R	R	R	R	R	R	R	R	R	G	R	G	G	R	R	G	R	G	G	R	R	DW	DW	DW	DW	DW	DW
3 & 7 Change	to 1 & 6 or 2 & 5 or 2 & 6																											
Phase 3 & 8	R	R	R	R	R	R	R	R	R	R	G	G	G	G	G	G	R	R	R	R	R	R	DW	DW	DW	DW	DW	DW
3 Change	R	R	R	R	R	R	R	R	R	R	Y	G	Y	Y	G	G	R	R	R	R	R	R	DW	DW	DW	DW	DW	DW
Phase 7 & 4	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	G	G	G	G	G	G	DW	DW	DW	DW	DW	DW
7 Change	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	Y	G	Y	Y	G	G	DW	DW	DW	DW	DW	DW
Phase 4 & 8	R	R	R	R	R	R	R	R	R	R	R	G	R	R	G	G	R	G	R	R	G	G	DW	DW	DW	DW	DW	DW
4 Change	R	R	R	R	R	R	R	R	R	R	R	Y	R	R	Y	Y	R	Y	R	R	Y	Y	DW	DW	DW	DW	DW	DW
Alt Phase 4 & 8	R	R	R	R	R	R	R	R	R	R	R	G	R	R	G	G	R	G	R	R	G	G	DW	DW	DW	DW	WK	WK
PED Clear	R	R	R	R	R	R	R	R	R	R	R	G	R	R	G	G	R	G	R	R	G	G	DW	DW	DW	DW	FL/DW	FL/DW
Alt 4 & 8 Change	R	R	R	R	R	R	R	R	R	R	R	Y	R	R	Y	Y	R	Y	R	R	Y	Y	DW	DW	DW	DW	DW	DW
Flashing Operation	FL/R	FL/R	FL/R	FL/Y	FL/Y	FL/R	FL/R	FL/R	FL/Y	FL/Y	FL/R	FL/R	FL/R	FL/R	FL/R	FL/R	FL/R	FL/R	FL/R	FL/R	FL/R	FL/R	DARK	DARK	DARK	DARK	DARK	DARK



TS-3 OF 3

BAI BRUDIS & ASSOCIATES, INC.
CONSULTING ENGINEERS

9220 RUMSEY ROAD; SUITE 210
COLUMBIA, MARYLAND 21045
(410)-884-3607

REVISIONS	APPROVALS
	TEAM LEADER, TRAFFIC ENGINEERING DESIGN DIVISION
	ASST. CHIEF TRAFFIC ENGINEERING DESIGN DIVISION
	CHIEF, TRAFFIC ENGINEERING DESIGN DIVISION
	DIRECTOR, TRAFFIC & SAFETY

MARYLAND DOT - STATE HIGHWAY ADMINISTRATION
Office of Traffic & Safety
TRAFFIC ENGINEERING DESIGN DIVISION
US 40 & ROLLING ROAD

DRAWN BY: YLT	F.A.P. NO.		TS NO. TS #284-F-61	SHEET NO.
CHECKED BY: RJM	S.H.A. NO.			
SCALE: NTS	COUNTY: BALTIMORE		T.I.M.S. NO. 0471	16 OF 25
DATE: 1/7/00	LOG MILE: 03004001.60			