PROJECT DESCRIPTION
GENERAL

THIS PORTION OF THE PROJECT INVOLVES THE RECONSTRUCTION OF THE EXISTING TRAFFIC SIGNAL AT THE INTERSECTION OF MD 650 (NEW HAMPSHIRE AVENUE) AND LOCKWOOD DRIVE IN MONTGOMERY COUNTY.

INTERSECTION OPERATION

A SYSTEM CONTROLLER HOUSED IN A BASE MOUNTED CABINET SHALL BE INSTALLED AT THIS LOCATION. THIS INTERSECTION WILL OPERATE IN A FULLY ACTUATED MODE USING 6 NEMA PHASES.

SPECIAL NOTES

1. THE FOLLOWING CONTACT PERSONS FOR THIS PROJECT ARE:

PROJECT CONTACTS:

MR. LEE STARKLOFF, ASSISTANT DISTRICT ENGINEER-TRAFFIC
PHONE: (301) 513-7300
MR. RALEIGH MEDLEY, ASSISTANT DISTRICT ENGINEER-MAINTENANCE
PHONE: (301) 513-7300
MR. DENNIS MCMAHON, ASSISTANT DISTRICT ENGINEER-CONSTRUCTION
PHONE: (301) 513-7336
MR. AUGIE REBISH, ASSISTANT DISTRICT ENGINEER-UTILITY
PHONE: (301) 513-7300
MR. RICHARD L. DAFF, Sr., CHIEF TRAFFIC OPERATIONS DIVISION
PHONE: (410) 787-7630
MR. BOBBY GONZALES, TRAFFIC ENGINEER MCDPWT
PHONE: (240) 777-2190

2. MAINTENANCE OF TRAFFIC WILL BE HANDLED BY THE CONTRACTOR USING STANDARD MDSHA PLATES FOR TRAFFIC CONTROL.

EQUIPMENT LIST

A. EQUIPMENT TO BE SUPPLIED BY THE ADMINISTRATION.

CATEGORY CODE NO.	DESCRIPTION	UNITS	QUANTITY
900000	BASE MOUNTED (SIZE 6) CABINET (NSHA SPECIFICATIONS) WITH ECONOLITE ASC II 2100 CONTROLLER, SSM 12 E CONFLICT MONITOR, VIDEO INTERFACE EQUIPMENT, LAU PANEL AND RELAY PACKAGE WIRED TO MONTGOMERY COUNTY SPECIFICATIONS.	EA	1
973023	FLAT SHEET ALUMINUM SIGNS CONSISTING OF:	SF	230
	R3-5L (30"x36")	EA	5
	R3-5R (30"X36")	EA	1
	R3-6 (30"x36")	EA	2
	D-3(2) (16" X VAR.)	EA	8
	OH-1 (36" X 60") MAST ARM MOUNT	EA	1
	R10-4C (MOD)(12"X9")	EA	2

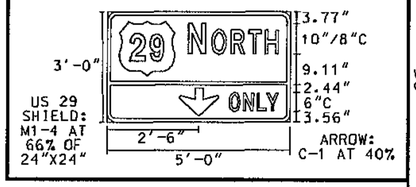
B. EQUIPMENT TO BE FURNISHED AND/OR INSTALLED BY THE CONTRACTOR.

CATEGORY CODE NO.	DESCRIPTION	UNITS	QUANTITY
203030	TEST PIT EXCAVATION	CY	5
585620	12" HEAT APPL. WHT. THER. PERM. PVT. MAR.	LF	1000
585624	24" HEAT APPL. WHT. THER. PERM. PVT. MAR.	LF	220
801004	CONCRETE FOR SIGNAL FOUNDATION	CY	21
813015	INSTALL OVERHEAD SIGN	SF	230
805125	2 INCH SCHEDULE 80 RIGID PVC CONDUIT - TRENCHED	LF	115
805135	3 INCH SCHEDULE 80 RIGID PVC CONDUIT - TRENCHED	LF	200
805140	4 INCH SCHEDULE 80 RIGID PVC CONDUIT - TRENCHED	LF	40
805155	4 INCH SCHEDULE 80 RIGID PVC CONDUIT - SLOTTED	LF	710
807400	ELECTRICAL UTILITY SERVICE EQUIPMENT 120/240 VOLTS 60 AMPS	EA	1
811001	FURNISH AND INSTALL ELECTRICAL HANDHOLE	EA	7
800000	RELOCATE VIDEO DETECTION CAMERA	EA	4
816005	CONTROL CABLE, 250 FOOT, VIDEO DETECTION CAMERA TO CONTROLLER	EA	1
816010	CONTROL CABLE, 500 FOOT, VIDEO DETECTION CAMERA TO CONTROLLER	EA	3
⚠1 818051	STEEL POLE WITH TWIN 70 FOOT AND 50 FOOT MAST ARMS	EA	2
831010	250 WATT HIGH PRESSURE SODIUM LAMP AND LUMINAIRE WITH PHOTOCELL	EA	4
802501	STRANDED BARE COPPER GROUND WIRE, NO 6 AWG	LF	670
837001	GROUND ROD - 3/4 INCH DIAMETER X 10 FOOT LENGTH	EA	5
818004	10 FOOT BREAKAWAY PEDESTAL POLE	EA	3
860272	12 INCH VEHICULAR TRAFFIC SIGNAL HEAD SECTION	EA	40
861105	ELECTRICAL CABLE - 2 CONDUCTOR (NO 14 AWG)	LF	650
861106	ELECTRICAL CABLE - 3 CONDUCTOR (NO 14 AWG)	LF	450
861107	ELECTRICAL CABLE - 5 CONDUCTOR (NO 14 AWG)	LF	1300
861108	ELECTRICAL CABLE - 7 CONDUCTOR (NO 14 AWG)	LF	900
861116	ELECTRICAL CABLE - 2 CONDUCTOR (NO 12 AWG)	LF	1100
861117	ELECTRICAL CABLE - 3 WIRE (NO. 4 AWG)	LF	100
865001	PUSHBUTTON AND SIGN	EA	2
866103	15 FOOT LIGHTING ARM ON SIGNAL STRUCTURE	EA	4
871202	INSTALL CONTROLLER AND CABINET - BASE MOUNT	EA	1
800000	REMOVE AND DISPOSE OF EXISTING SIGNAL EQUIPMENT	LS	1

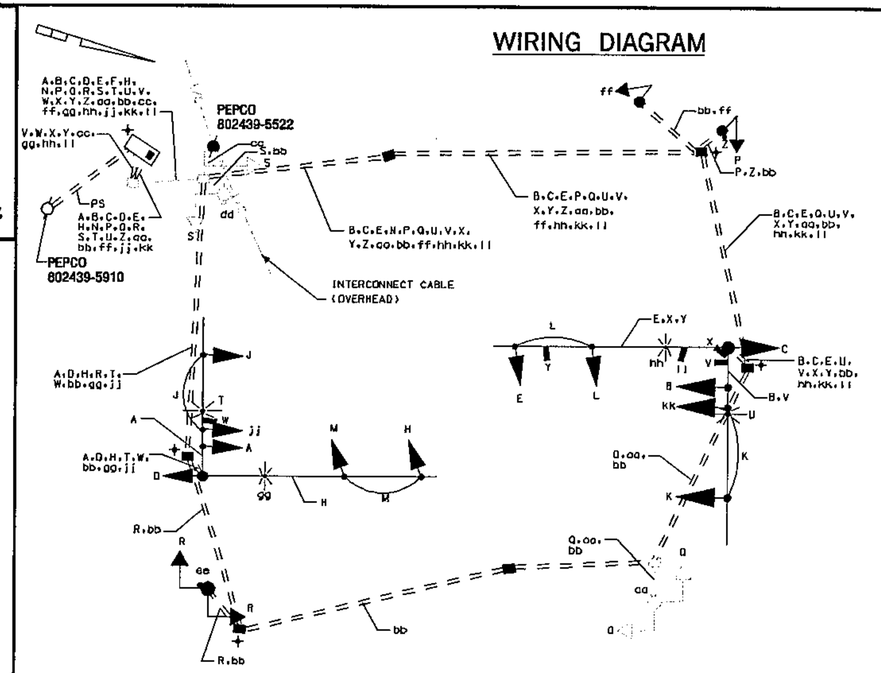
C. MATERIALS TO BE REMOVED BY THE CONTRACTOR.

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

OH-1 SIGN LAYOUT DETAIL



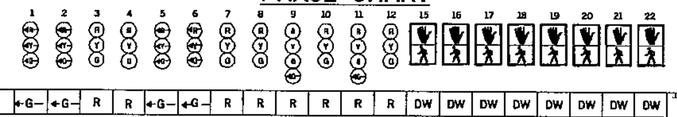
WIRING DIAGRAM



KEY

A B C D E H J K	7 CONDUCTOR ELECTRICAL CABLE (NO. 14 AWG)
J K L M Q R S	5 CONDUCTOR ELECTRICAL CABLE (NO. 14 AWG)
P ff	3 CONDUCTOR ELECTRICAL CABLE (NO. 14 AWG)
Z aa dd ee	2 CONDUCTOR ELECTRICAL CABLE (NO. 14 AWG)
T U gg hh	2 CONDUCTOR ELECTRICAL CABLE (NO. 12 AWG) TRAY CABLE
W	VIDEO DETECTION CABLE 250 FEET
V X Y ii	VIDEO DETECTION CABLE 500 FEET
bb	1 CONDUCTOR (NO. 6 AWG) STRANDED COPPER GROUND WIRE
oo	12 PAIR INTERCONNECT CABLE (SEE INTERCONNECT PLAN)
PS	POWER SERVICE UNDERGROUND 3 WIRE 1-CONDUCTOR # 4 AWG
⏚	GROUND ROD

PHASE CHART



	1	2	3	4	5	6	7	8	9	10	11	12	15	16	17	18	19	20	21	22
PHASE 1 AND 5	←G–	←G–	R	R	←G–	←G–	R	R	R	R	R	R	DW	DW	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	←R–	←R–	R	R	R	R	R	R	DW	WK	WK	DW	DW	DW	DW	DW
PED CLEARANCE	←G–	←G–	G	G	←R–	←R–	R	R	R	R	R	R	DW	FL/DW	FL/DW	DW	DW	DW	DW	DW
1 AND 6 CHANGE	←Y–	←Y–	Y	Y	←R–	←R–	R	R	R	R	R	R	DW	DW	DW	DW	DW	DW	DW	DW
PHASE 2 AND 5	←R–	←R–	R	R	←G–	←G–	G	G	R	R	R	R	WK	DW	DW	WK	DW	DW	DW	DW
PED CLEARANCE	←R–	←R–	R	R	←G–	←G–	G	G	R	R	R	R	FL/DW	DW	DW	FL/DW	DW	DW	DW	DW
2 AND 5 CHANGE	←R–	←R–	R	R	←Y–	←Y–	Y	Y	R	R	R	R	DW	DW	DW	DW	DW	DW	DW	DW
PHASE 2 AND 6	←R–	←R–	G	G	←R–	←R–	G	G	R	R	R	R	WK	WK	WK	WK	DW	DW	DW	DW
PED CLEARANCE	←R–	←R–	G	G	←R–	←R–	G	G	R	R	R	R	FL/DW	FL/DW	FL/DW	FL/DW	DW	DW	DW	DW
2 AND 6 CHANGE	←R–	←R–	Y	Y	←R–	←R–	Y	Y	R	R	R	R	DW	DW	DW	DW	DW	DW	DW	DW
PHASE 3	←R–	←R–	R	R	←R–	←R–	R	R	R	R	G/←G–	G	DW	DW	DW	DW	DW	DW	DW	DW
3 CHANGE	←R–	←R–	R	R	←R–	←R–	R	R	R	R	Y	Y	DW	DW	DW	DW	DW	DW	DW	DW
PHASE 3 ALT	←R–	←R–	R	R	←R–	←R–	R	R	R	R	G/←G–	G	DW	DW	DW	DW	DW	WK	WK	DW
PED CLEARANCE	←R–	←R–	R	R	←R–	←R–	R	R	R	R	G/←G–	G	DW	DW	DW	DW	DW	FL/DW	FL/DW	DW
3 ALT CHANGE	←R–	←R–	R	R	←R–	←R–	R	R	R	R	Y	Y	DW	DW	DW	DW	DW	DW	DW	DW
PHASE 4	←R–	←R–	R	R	←R–	←R–	R	R	G/←G–	G	R	R	DW	DW	DW	DW	DW	DW	DW	DW
4 CHANGE	←R–	←R–	R	R	←R–	←R–	R	R	Y	Y	R	R	DW	DW	DW	DW	DW	DW	DW	DW
PHASE 4 ALT	←R–	←R–	R	R	←R–	←R–	R	R	G/←G–	G	R	R	DW	DW	DW	DW	WK	DW	DW	WK
PED CLEARANCE	←R–	←R–	R	R	←R–	←R–	R	R	G/←G–	G	R	R	DW	DW	DW	DW	FL/DW	DW	DW	FL/DW
4 ALT CHANGE	←R–	←R–	R	R	←R–	←R–	R	R	Y	Y	R	R	DW	DW	DW	DW	DW	DW	DW	DW
FLASHING OPERATION	FL/R	FL/R	FL/Y	FL/Y	FL/R	FL/R	FL/Y	FL/Y	FL/R	FL/R	FL/R	FL/R	DARK	DARK	DARK	DARK	DARK	DARK	DARK	DARK

SG 8

⚠1 ADDENDUM NO. 1
6/4/2003

SABRA, WANG & ASSOCIATES, INC.
1504 JOH AVENUE
SUITE 160
BALTIMORE, MD 21227
WWW.SABRA-WANG.COM

MARYLAND DOT - STATE HIGHWAY ADMINISTRATION
Office of Traffic & Safety
TRAFFIC ENGINEERING DESIGN DIVISION
GENERAL INFORMATION PLAN

MD 650 (NEW HAMPSHIRE AVENUE) AND LOCKWOOD DRIVE

DRAWN BY: S. SMITH	F.A.P. NO. SEE TITLE SHEET	TS NO. 2552 C	SHEET NO.
CHECKED BY: K. RINIKER	S.H.A. NO. M0900517I		
SCALE: NTS	COUNTY: MONTGOMERY	T.I.M.S. NO. E966	165 OF 223
DATE: MARCH 2003	LOG MILE: 15065002.54		

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