PROJECT DESCRIPTION
GENERAL

THIS PROJECT INVOLVES THE RECONSTRUCTION OF THE EXISTING TRAFFIC SIGNAL AT THE INTERSECTION OF MD108 (WATERLOO ROAD) AND OLD MONTGOMERY ROAD IN HOWARD COUNTY.

INTERSECTION OPERATION

A CONTROLLER HOUSED IN A BASE MOUNTED CABINET SHALL BE INSTALLED AT THIS LOCATION. THE INTERSECTION WILL OPERATE IN A FULLY ACTUATED MODE USING 5 NEMA PHASES.

SPECIAL NOTES

1. THE FOLLOWING CONTACT PERSONS FOR DISTRICT #7 ARE AS FOLLOWS:

PROJECT CONTACTS:

MR. JOHN CONCANNON, ASSISTANT DISTRICT ENGINEER - TRAFFIC
PHONE: (301) 624-8141
MR. DAVE COYNE, ASSISTANT DISTRICT ENGINEER- MAINTENANCE
PHONE: (301) 624-8105
MR. JAMES BUCKALEW, ENGINEER - UTILITY
PHONE: (301) 624-8116
MR. RICHARD L. DAFF, SR. CHIEF TRAFFIC OPERATIONS DIVISION
PHONE: (410) 787-7630

2. MAINTENANCE OF TRAFFIC WILL BE HANDLED BY THE CONTRACTOR UTILIZING THE STANDARD PLATES FOR TRAFFIC CONTROL:

EQUIPMENT LIST

A. EQUIPMENT TO BE FURNISHED BY THE ADMINISTRATION AND INSTALLED BY THE CONTRACTOR

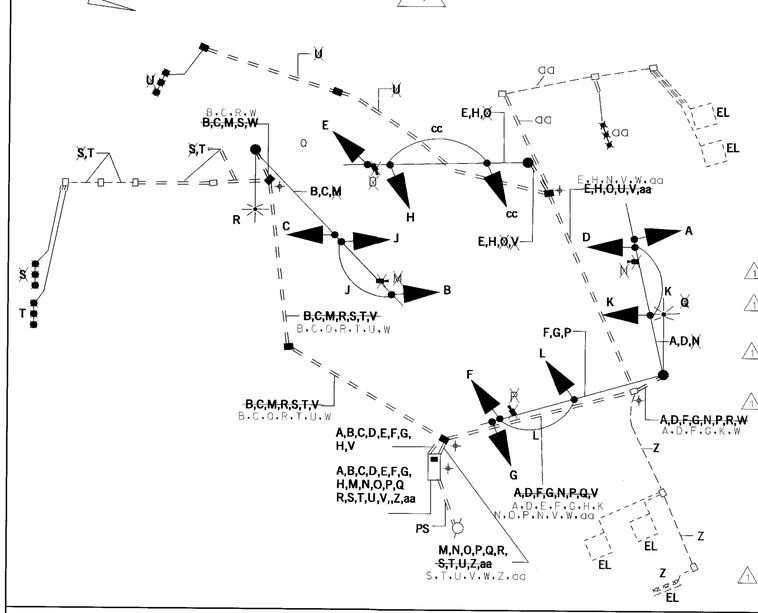
CATEGORY CODE NO.	DESCRIPTION	UNITS	QUANTITY
963010	FOUR CHANNEL LOOP DETECTOR AMPLIFIER RACK MOUNTED	EA	3
971017	EIGHT PHASE (FULLY ACTUATED) CONTROLLER AND BASE MOUNTED CABINET	EA	1
973023	FLAT SHEET ALUMINUM SIGNS CONSISTING OF:	SF	150
	R10-12 (36"X42") MAST ARM MOUNT	EA	2
	D3-2 (16" X VAR.) MAST ARM MOUNT	EA	4
	GUIDE SHIELD ASSEMBLY (30"X51")	EA	2
	GUIDE SHIELD ASSEMBLY (48"X75")	EA	2
	R3-6(L) 30"X36" MAST ARM MOUNT	EA	1
	R3-5(R) 30"X36" MAST ARM MOUNT	EA	1

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

CATEGORY CODE NO.	DESCRIPTION	UNITS	QUANTITY
203030	TEST PIT EXCAVATION	CY	3
585452	24" HEAT APPL. WHT. PERM. PREF. THERMO. PVT. MARK.	LF	110
800000	2 INCH SCHED. 80 PVC CONDUIT - TRENCHED	LF	15
801004	CONCRETE FOR SIGNAL FOUNDATION	CY	11
805118	4 INCH SCHEDULE 80 RIGID PVC CONDUIT - BORED	LF	210
805135	3 INCH SCHEDULE 80 RIGID PVC CONDUIT - TRENCHED	LF	450
805140	4 INCH SCHEDULE 80 RIGID PVC CONDUIT - TRENCHED	LF	75
1 805160	1 INCH LIQUID TIGHT, FLEXIBLE NON-METALLIC CONDUIT FOR DETECTOR SLEEVE	LF	~~10~~ 30
807400	ELEC. UTILITY SER. EQUIP. 120/240V 60 AMP	EA	1
810555	INSTALL MICROLOOP PROBE 1000 FOOT LEAD IN CABLE	EA	4
811001	FURNISH AND INSTALL HANDHOLE	EA	8
~~1 816001~~	~~FURNISH AND INSTALL VIDEO DETECTOR CAMERA~~	~~EA~~	~~4~~
~~1 816010~~	~~CONTROL CABLE, 500 FOOT, VIDEO DETECTION CAMERA TO CONTROLLER~~	~~EA~~	~~4~~
818021	STEEL POLE WITH TWIN 50 FOOT MAST ARM	EA	2
818036	STEEL POLE WITH SINGLE 50 FOOT MAST ARM	EA	2
831010	250 WATT HPSV LUMINAIRE W/PHOTOCELL	EA	2
832020	BARE COPPER GROUND WIRE, NO. 6 AWG	LF	305
837001	GROUND ROD - 3 /4 INCH DIAMETER X 10 FOOT LENGTH	EA	5
860270	8 INCH VEHICULAR TRAFFIC SIGNAL HEAD SECTION	EA	12
860272	12 INCH VEHICULAR TRAFFIC SIGNAL HEAD SECTION	EA	36
862102	SAWCUT FOR SIGNAL LOOP DETECTOR	LF	100
832017	ELECTRICAL CABLE- 1 CONDUCTOR (NO. 4 AWG)	LF	75
861107	ELECTRICAL CABLE- 5 CONDUCTOR (NO. 14 AWG)	LF	84
861108	ELECTRICAL CABLE- 7 CONDUCTOR (NO. 14 AWG)	LF	1430
861116	ELECTRICAL CABLE- 2 CONDUCTOR (NO. 12 AWG)	LF	300
866103	15' LIGHTING ARM FOR SIGNAL STRUCTURE	EA	2
871202	INSTALL CONTROLLER AND CABINET - BASE MOUNT	EA	1
873001	REMOVE AND SALVAGE EXISTING EQUIPMENT	LS	LS
1 805011	1" ELECTRICAL CONDUIT-GALVANIZED SLEEVE	LF	35
1 861104	ELECTRICAL CABLE-2-CONDUCTOR NO 14AWG (ALUMINUM SHIELDED)	LF	600
1 862102	SAW CUT FOR SIGNAL LOOP DETECTOR	LF	650
1 862101	LOOP WIRE ENCASED IN 1/4" FLEXIBLE TUBING (NO 14 AWG)	LF	2200

C. MATERIALS TO BE REMOVED BY THE CONTRACTOR.
ALL MATERIALS TO BE REMOVED BY THE CONTRACTOR SHALL BECOME PROPERTY OF THE CONTRACTOR. THE SHA SIGNAL SHOP SHALL REMOVE AND RETAIN THE CONTROLLER AND ALL INCIDENTAL EQUIPMENT.

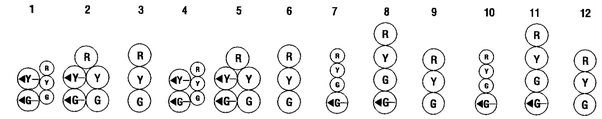
1 WIRING DIAGRAM



KEY

A B C D E F G H	7 CONDUCTOR ELECTRICAL CABLE (NO. 14 AWG)
J K L cc	5 CONDUCTOR ELECTRICAL CABLE (NO. 14 AWG)
M N O P Q	~~VIDEO DETECTION CABLE 500 FOOT LEAD IN~~ 2- CONDUCTOR NO 14AWG (ALUMINUM SHIELDED)
1 Ø S R	2 CONDUCTOR ELECTRICAL CABLE (NO. 12 AWG) TRAY CABLE
1 X T U aa	MICROLOOP PROBE WITH 1000 FT LEAD IN CABLE
1 V W	1 CONDUCTOR (NO. 6 AWG) STRANDED COPPER GROUND WIRE
Z	EXISTING LOOP DETECTOR OR PROBE TO BE DISCONNECTED AND REROUTED INTO PROPOSED CABINET
PS	POWER SERVICE UNDERGROUND
EL	EXISTING LOOP OR PROBE
✦	GROUND ROD
1 LW	LOOP WIRE ENCASED IN 1/4" FLEXIBLE TUBING (NO 14AWG)

PHASE CHART



	1	2	3	4	5	6	7	8	9	10	11	12
PHASE 1 AND 5	◂G/G	◂G/G	R	◂G/G	◂G/G	R	R	R	R	R	R	R
1 AND 5 CHANGE TO 1 AND 6,2 AND 5, OR 2 AND 6												
PHASE 1 AND 6	R	R	R	◂G/G	◂G/G	G	R	R	R	R	R	R
1 AND 6 CHANGE	R	R	R	◂Y/Y	◂Y/Y	Y	R	R	R	R	R	R
PHASE 2 AND 5	◂G/G	◂G/G	G	R	R	R	R	R	R	R	R	R
2 AND 5 CHANGE	◂Y/G	◂Y/G	Y	R	R	R	R	R	R	R	R	R
PHASE 2 AND 6	G	G	G	G	G	G	R	R	R	R	R	R
2 AND 6 CHANGE	Y	Y	Y	Y	Y	Y	R	R	R	R	R	R
PHASE 3	R	R	R	R	R	R	G ◂G	G ◂G	G	R	R	R
3 CHANGE	R	R	R	R	R	R	Y	Y	Y	R	R	R
PHASE 4	R	R	R	R	R	R	R	R	R	G ◂G	G ◂G	G
4 CHANGE	R	R	R	R	R	R	R	R	R	Y	Y	Y
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

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

MD 108 AT OLD MONTGOMERY ROAD

DRAWN BY: JAMES ALLEN Jr.	F.A.P. NO.		TS NO. 1611B	SHEET NO.
CHECKED BY:	S.H.A. NO.			18 OF 31
SCALE: 1" = 20'	COUNTY:	HOWARD	T.I.M.S. NO.	
DATE: MARCH, 2002	LOG MILE:	13010813.60		

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