PROJECT DESCRIPTION

PROJECT DESCRIPTION

THIS PROJECT INVOLVES THE REPLACEMENT OF THE EXISTING TRAFFIC SIGNAL AND CONTROLLER WITH A NEW MAST ARM MOUNTED SIGNAL AND VIDEO DETECTION CAMERAS AT THE INTERSECTION OF MD 108 AND LARK BROWN ROAD IN HOWARD COUNTY. THE NEW TRAFFIC CONTROLLER WILL BE CONNECTED TO AN UNDERGROUND INTERCONNECT SYSTEM COMING FROM ADJACENT INTERSECTIONS TO THE EAST. MD 108 IS ASSUMED TO RUN IN A EAST-WEST DIRECTION.

INTERSECTION OPERATION

THE INTERSECTION OPERATES IN A NEMA SIX-PHASE, SEMI-TRAFFIC ACTUATED MODE.

THE SIGNAL SHALL BE INTERCONNECTED TO THE MD 175/MD 108 AND MD 108/GATEWAY OVERLOOK SOUTHERN ENTRANCE INTERSECTIONS TO THE WEST.

CONTROLLER REQUIREMENTS

INSTALL A SEMI-TRAFFIC-ACTUATED, EIGHT-PHASE CONTROLLER WITH ONE (1) FOUR CHANNEL, TELEMETRY EQUIPMENT, VIDEO DETECTOR SYSTEM, MONITOR WITH BATTERY BACK-UP, AND ASSOCIATED HARNESSES HOUSED IN A NEMA '6' BASE MOUNTED CABINET.

THE PRESENCE AND SAMPLING DETECTION REGIONS SHALL BE MONITORED/ACTUATED WITH VIDEO-DETECTION CAMERAS.

PROJECT CONTACTS

CONTACTS FOR DISTRICT 7:

MR. JOHN CONCANNON
ASSISTANT DISTRICT ENGINEER, TRAFFIC
301-624-8140/8141

MR. DAVE COYNE
ASSISTANT DISTRICT ENGINEER, MAINTENANCE
301-624-8105/8106

MS. ANDREA ABEND
UTILITIES ENGINEER
301-624-8115/8116

CONTACTS FOR OFFICE OF TRAFFIC AND SAFETY:

MR. RICHARD DAFF SR.
CHIEF, TRAFFIC OPERATIONS
410-787-7630

MR. ROBERT SNYDER
ASSISTANT DIVISION CHIEF, TRAFFIC OPERATIONS
410-787-7630

MR. ED RODENHIZER
CHIEF, SIGNAL OPERATIONS
410-787-7650

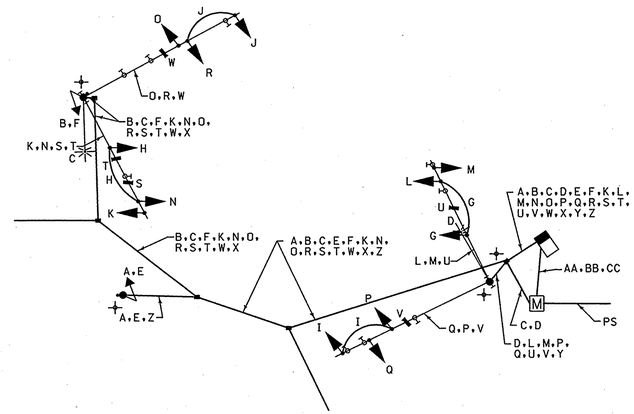
MR. EUGENE BAILEY
CHIEF, SIGN OPERATIONS
410-787-7676

MR. MIKE STOCKER
SIGNAL SHOP WAREHOUSE
410-787-7696

EQUIPMENT LIST 'C'

NONE

WIRING DIAGRAM



WIRING KEY

A,B	2-CONDUCTOR ELECTRIC CABLE (NO. 14 AWG)	S,T,U,V,W	VIDEO DETECTION LEAD IN CABLE
C,D	2-CONDUCTOR ELECTRIC CABLE (NO. 12 AWG) T/C	X,Y,Z	NO. 6 STRANDED BARE COPPER GROUND WIRE
E,F,G H,I,J	5-CONDUCTOR ELECTRIC CABLE (NO. 14 AWG)	AA,BB,CC	1-CONDUCTOR ELECTRICAL CABLE (NO. 8 AWG)
K,L,M,N O,P,Q,R	7-CONDUCTOR ELECTRIC CABLE (NO. 14 AWG)	PS	PROPOSED ELECTRICAL SERVICE
		⏚	3/4" X 10' GROUND ROD

EQUIPMENT LIST 'A'

B. EQUIPMENT TO BE SUPPLIED BY THE STATE HIGHWAY ADMINISTRATION.

ITEM NO.	CATEGORY CODE	QUANTITY	DESCRIPTION
9001	900000	2 EA	VIDEO INTERFACE EQUIPMENT (1-4 CAMERAS)
9002	971017	1 EA	EIGHT-PHASE, SEMI-TRAFFIC-ACTUATED, SOLID STATE DIGITAL CONTROLLER WITH INTERSECTION MONITOR WITH BATTERY BACK-UP AND TELEMENTRY EQUIPMENT. HOUSED IN A NEMA SIZE '6' BASE MOUNTED CABINET.

EQUIPMENT LIST 'B'

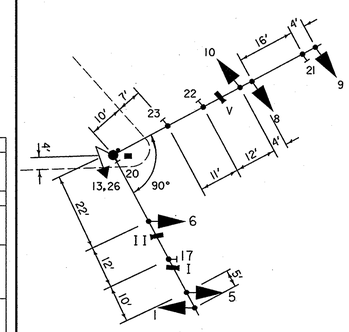
B. EQUIPMENT TO BE FURNISHED AND/OR INSTALLED BY THE CONTRACTOR.

ITEM NO.	CATEGORY CODE	QUANTITY	DESCRIPTION
1007	120500	1 LS	MAINTENANCE OF TRAFFIC
2005	203030	5 CY	TEST PIT EXCAVATION
5008	585412	285 LF	12 INCH WHITE LEAD FREE REFLECTIVE THERMOPLASTIC PAVEMENT MARKINGS
5010	585424	165 LF	24 INCH WHITE LEAD FREE REFLECTIVE THERMOPLASTIC PAVEMENT MARKINGS
8001	800000	30 LF	ELECTRICAL CABLE- 1 CONDUCTOR (NO. 8 AWG)
8002	800000	1 LS	REMOVE AND DISPOSE OF EXISTING EQUIPMENT
8003	800000	1 EA	10 FOOT BREAKAWAY PEDESTAL POLE
8005	800000	2 EA	16 INCH PEDESTRIAN SIGNAL HEAD SECTION
8007	801004	13 CY	CONCRETE FOR SIGNAL FOUNDATION
8010	801605	91 SF	SHEET ALUMINUM SIGN
8013	802501	395 LF	NO. 6 AWG STRANDED BARE COPPER GROUND WIRE
8014	805125	50 LF	2 INCH SCHEDULE 80 RIGID PVC CONDUIT- TRENCHED
8015	805135	85 LF	3 INCH SCHEDULE 80 RIGID PVC CONDUIT- TRENCHED
8016	805140	55 LF	4 INCH SCHEDULE 80 RIGID PVC CONDUIT- TRENCHED
8017	805155	230 LF	4 INCH SCHEDULE 80 RIGID PVC CONDUIT- SLOTTED
8018	807202	1 EA	METERED SERVICE PEDESTAL
8019	811001	5 EA	FURNISH AND INSTALL ELECTRIC HANDHOLE
8020	811002	1 EA	REMOVE ELECTRICAL HANDHOLE
8021	813006	57 SF	RELOCATE SIGNS FROM EXISTING OVERHEAD STRUCTURES
8024	816001	5 EA	VIDEO DETECTION CAMERA
8025	816005	5 EA	CONTROL CABLE, 250 FOOT VIDEO DETECTION CAMERA TO CONTROLLER
8030	818051	2 EA	27 FOOT STEEL POLE WITH TWIN 50 FOOT AND 70 FOOT MAST ARMS
8032	821003	1 EA	BREAKAWAY BASE SUPPORT SYSTEM FOR SIGNAL STRUCTURES
8034	831010	2 EA	250 WATT HIGH PRESSURE SODIUM LAMP AND LUMINAIRE
8035	837001	4 EA	GROUND ROD- 3/4 INCH DIAMETER X 10 FOOT LENGTH
8037	800000	12 EA	8 INCH LED VEHICULAR TRAFFIC SIGNAL HEAD SECTION
8038	860284	36 EA	12 INCH LED VEHICULAR TRAFFIC SIGNAL HEAD SECTION
8039	860292	2 EA	CUT, CLEAN, GALVANIZE AND CAP TRAFFIC SIGNAL STRUCTURE
8040	861105	240 LF	ELECTRICAL CABLE- 2 CONDUCTOR (NO.14 AWG)
8041	861107	340 LF	ELECTRICAL CABLE- 5 CONDUCTOR (NO.14 AWG)
8042	861108	1920 LF	ELECTRICAL CABLE- 7 CONDUCTOR (NO.14 AWG)
8043	861116	435 LF	ELECTRICAL CABLE- 2 CONDUCTOR (NO.12 AWG) T/C
8044	865001	2 EA	PUSHBUTTON AND SIGN
8045	866104	2 EA	20 FOOT LIGHT ARM ON SIGNAL STRUCTURE
8046	871202	1 EA	INSTALL CONTROLLER AND CABINET- BASE MOUNTED

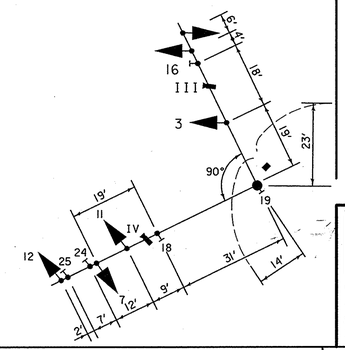
PHASE CHART

	1	2	3	4	5	6	7	8	9	10	11	12	13	14
Phase 1 & 5	R ◄G–	R ◄G–	R	R ◄G–	R ◄G–	R	R	R Y G ◄G–	R	R	R	R	DW	DW
1 & 5 change	THIS PHASE MAY SKIP 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
1 & 6 change	Y ◄Y–	Y ◄Y–	Y	R	R	R	R	R	R	R	R	R	DW	DW
Phase 2 & 5	R	R	R	G ◄G–	G ◄G–	G	R	R	R	R	R	R	DW	DW
2 & 5 change	R	R	R	Y ◄Y–	Y ◄Y–	Y	R	R	R	R	R	R	DW	DW
Phase 2 & 6	G	G	G	G	G	G	R	R	R	R	R	R	DW	DW
2 & 6 change	Y	Y	Y	Y	Y	Y	R	R	R	R	R	R	DW	DW
Phase 4	R	R	R	R	R	R	R	R	R	G ◄G–	G ◄G–	G	DW	DW
4 change	R	R	R	R	R	R	R	R	R	Y	Y	Y	DW	DW
Phase 3	R	R	R	R	R	R	G ◄G–	G ◄G–	G	R	R	R	DW	DW
3 change	R	R	R	R	R	R	Y	Y	Y	R	R	R	DW	DW
Phase 3 alt.	R	R	R	R	R	R	G ◄G–	G ◄G–	G	R	R	R	WK	WK
Ped. clearance	R	R	R	R	R	R	G ◄G–	G ◄G–	G	R	R	R	FL/DW	FL/DW
3 alt. change	R	R	R	R	R	R	Y	Y	Y	R	R	R	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

SOUTHWEST TRAFFIC SIGNAL HEAD AND SIGN LOCATION DETAIL



NORTHEAST TRAFFIC SIGNAL HEAD AND SIGN LOCATION DETAIL



WALLACE, MONTGOMERY & ASSOCIATES, LLP
CIVIL AND STRUCTURAL ENGINEERS
110 West Road
Suite 300
Towson, Maryland 21204

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

MD 108 AND LARK BROWN ROAD

GENERAL INFORMATION SHEET

SG-06

SCALE N.T.S. DATE 07-25-90 CONTRACT NO. BW-355-802-712

DESIGNED BY
DRAWN BY
CHECKED BY
COUNTY HOWARD

TS NO. 2384 D
T.I.M.S. NO. G875
F.A.P. NO.
LOGMILE 13010814.94

DRAWING NO. 6 OF 6

SHEET NO. 44 OF 49

SURVEY BOOK NO.

PLOTTED: WEDNESDAY, AUGUST 24, 2005 AT 03:35 PM
FILE: $FILE$

INDEXED

BY: $USERNAME$