PROJECT DESCRIPTION

GENERAL

THIS PROJECT INVOLVES THE INSTALLATION OF A NEW TRAFFIC CONTROL SIGNAL AT THE INTERSECTION OF MD 146 (DULANEY VALLEY ROAD) AND LOCUSTVALE ROAD/GOUCHER COLLEGE ENT. IN BALTIMORE COUNTY, MARYLAND. MD 146 IS ASSUMED TO RUN IN A NORTH-SOUTH DIRECTION.

INTERSECTION OPERATION

THE INTERSECTION WILL OPERATE IN A NEMA FIVE-PHASE, FULL-TRAFFIC-ACTUATED MODE WITH THE MD 146 APPROACHES OPERATING CONCURRENTLY AND THE LOCUSTVALE ROAD/GOUCHER COLLEGE APPROACHES OPERATING CONCURRENTLY.

EXCLUSIVE/PERMISSIVE LEFT-TURN PHASING IS PROVIDED FOR THE SOUTHBOUND MD 146 APPROACH.

A RIGHT TURN OVERLAP PHASE IS PROVIDED FOR THE GOUCHER COLLEGE APPROACH.

AN ALTERNATE PEDESTRIAN PHASE IS PROVIDED ACROSS THE SOUTH LEG OF MD 146 AND GOUCHER COLLEGE ENT.

CONTROLLER REQUIREMENTS

INSTALL A FULL-TRAFFIC-ACTUATED, EIGHT-PHASE CONTROLLER WITH TWO (2) FOUR-CHANNEL, TIME-DELAY-OUTPUT LOOP DETECTOR AMPLIFIERS WITH SYSTEM PACKAGE AND ASSOCIATED HARNESSES HOUSED IN A NEMA SIZE "6" BASE MOUNTED CABINET.

PHONE DROP

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.

MAINTENANCE OF TRAFFIC

THE FOLLOWING TRAFFIC CONTROL STANDARDS SHALL BE REFERENCED FOR THE PROJECT.

STANDARD NO. MD-104.04-01 (SHOULDER WORK)
STANDARD NO. MD-104.04-03 (LEFT LANE CLOSURE)
STANDARD NO. MD-104.04-05 (RIGHT LANE CLOSURE)
STANDARD NO. MD-104.04-07 (CENTER LANE CLOSURE)
STANDARD NO. MD-104.04-13 (LEFT TURN BAY CLOSURE)
STANDARD NO. MD-104.04-15 (INTERSECTION LEFT LANE, TURN BAY)

PROJECT CONTACTS

THE CONTACT PERSONS FOR SHA ARE AS FOLLOWS:

MR. RANDALL SCOTT
ASSISTANT DISTRICT ENGINEER - TRAFFIC
PHONE: (410) 321-2781/2785

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

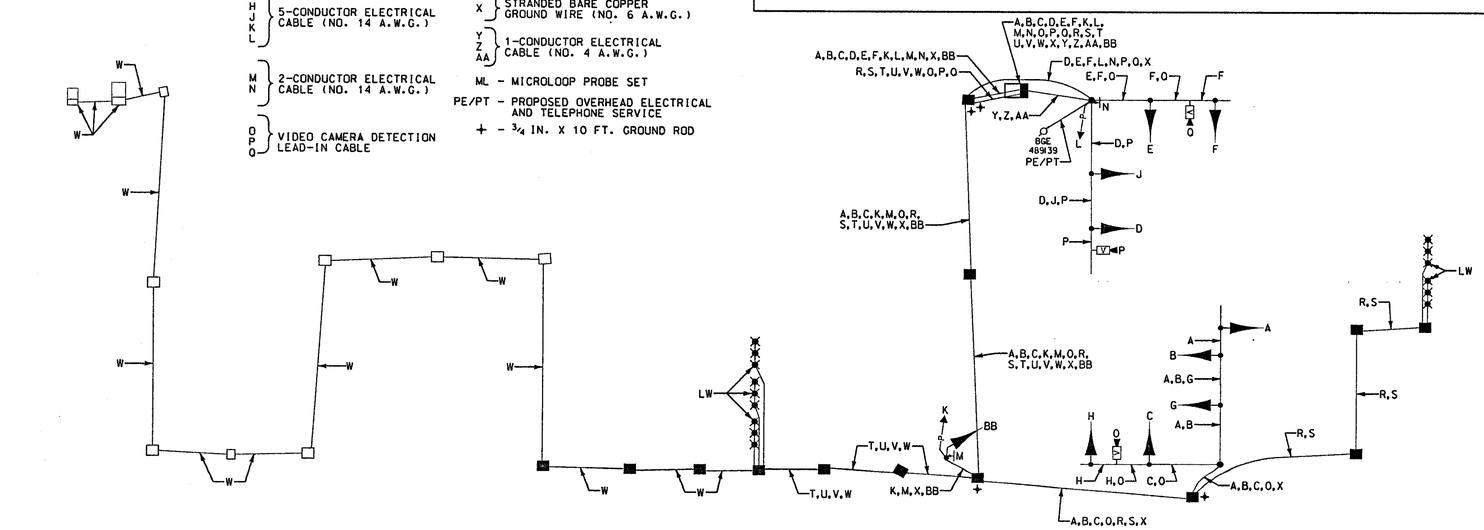
MS. SUENETTE POPE
DISTRICT UTILITY ENGINEER
PHONE: (410) 321-2841

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

WIRING DIAGRAM

WIRING KEY

A B C D E F BB — 7-CONDUCTOR ELECTRICAL CABLE (NO. 14 A.W.G.)
G H J K L — 5-CONDUCTOR ELECTRICAL CABLE (NO. 14 A.W.G.)
M N — 2-CONDUCTOR ELECTRICAL CABLE (NO. 14 A.W.G.)
O P Q — VIDEO CAMERA DETECTION LEAD-IN CABLE
R S T U V — MICROLOOP PROBE LEAD-IN
W — 12-PAIR COMMUNICATION CABLE (JELLY-FILLED)
X — STRANDED BARE COPPER GROUND WIRE (NO. 6 A.W.G.)
Y Z AA — 1-CONDUCTOR ELECTRICAL CABLE (NO. 4 A.W.G.)
ML - MICROLOOP PROBE SET
PE/PT - PROPOSED OVERHEAD ELECTRICAL AND TELEPHONE SERVICE
+ - 3/4 IN. X 10 FT. GROUND ROD



EQUIPMENT LIST "A"

A. EQUIPMENT TO BE SUPPLIED BY THE SHA

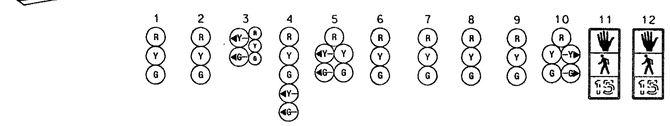
ITEM NO.	QUANTITY	DESCRIPTION
9016	2 EACH	FOUR-CHANNEL, TIME-DELAY-OUTPUT, LOOP DETECTOR AMPLIFIER
9044	1 EACH	EIGHT-PHASE, FULL-TRAFFIC-ACTUATED CONTROLLER WITH INTERSECTION MONITOR HOUSED IN A NEMA SIZE "6" BASE MOUNTED CABINET
9086	1 EACH	VIDEO INTERFACE EQUIPMENT: 1-4 CAMERAS
9571	80 S.F.	SHEET ALUMINUM SIGNS TO CONSIST OF :
		- 1 EACH R3-5(R) SIGN (30 IN. x 36 IN.) - MAST ARM MOUNT
		- 4 EACH D-3(1) SIGN (VARIABLE x 16 IN.) DUAL FACED - MAST ARM MOUNT
		- 2 EACH W3-3 SIGN (36 IN. x 36 IN.) WITH "NEW" PANEL (24 IN. x 24 IN.) AND FLAG - GROUND MOUNT
		- 2 EACH R10-4(1) SIGN (9 IN. x 12 IN.) - MAST ARM MOUNT

EQUIPMENT LIST "C"

C. EQUIPMENT TO BE REMOVED AND RETURNED TO SHA

ALL REMOVED SIGNAL MATERIALS SHALL BECOME PROPERTY OF THE CONTRACTOR

PHASE CHART



	1	2	3	4	5	6	7	8	9	10	11	12
PHASE 2 + 5	R	R	G ← G	G ← G	G ← G	G	R	R	R	R → G	DW	DW
2 + 5 CHANGE	PHASE 2 + 5 MAY CHANGE TO PHASE 2 + 6											
PHASE 2 + 6	G	G	G	G	G	G	R	R	R	R	DW	DW
2 + 6 CHANGE	Y	Y	Y	Y	Y	Y	R	R	R	R	DW	DW
PHASE 4 + 8	R	R	R	R	R	R	G	G	G	G	DW	DW
4 + 8 CHANGE	R	R	R	R	R	R	Y	Y	Y	Y	DW	DW
PHASE 4 + 8 ALT	R	R	R	R	R	R	G	G	G	G	WK	WK
PED CLEARANCE	R	R	R	R	R	R	G	G	G	G	FL/DW	FL/DW
4 + 8 ALT CHANGE	R	R	R	R	R	R	Y	Y	Y	Y	DW	DW
FLASHING OPERATION	FL/Y	FL/Y	FL/Y	FL/Y	FL/Y	FL/Y	FL/R	FL/R	FL/R	FL/R	DARK	DARK

EQUIPMENT LIST "B"

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

ITEM NO.	QUANTITY	DESCRIPTION
1001	1 EACH	MAINTENANCE OF TRAFFIC
2001	10 C.Y.	CLASS 2 EXCAVATION
2002	4 C.Y.	TEST PIT EXCAVATION
5001	50 L.F.	5 INCH HEAT APPLIED WHITE PERMANENT PREFORMED THERMOPLASTIC PAVEMENT MARKINGS
5002	100 L.F.	5 INCH HEAT APPLIED YELLOW PERMANENT PREFORMED THERMOPLASTIC PAVEMENT MARKINGS
5003	100 L.F.	REMOVAL OF EXISTING PERMANENT PAVEMENT LINE MARKINGS - ANY WIDTH
5005	200 L.F.	12 INCH HEAT APPLIED WHITE PERMANENT PREFORMED THERMOPLASTIC PAVEMENT MARKINGS
5006	150 L.F.	24 INCH HEAT APPLIED WHITE PERMANENT PREFORMED THERMOPLASTIC PAVEMENT MARKINGS
5008	1 EACH	HEAT APPLIED WHITE PERMANENT PREFORMED THERMOPLASTIC PAVEMENT MARKING ARROWS
6004	535 S.F.	4 INCH CONCRETE SIDEWALK
8001	11 C.Y.	CONCRETE FOR SIGNAL FOUNDATION
8008	2 EACH	CONTROL CABLE, 200 FT. VIDEO DETECTION CAMERA TO CONTROLLER
8010	1 EACH	CONTROL CABLE, 400 FT. VIDEO DETECTION CAMERA TO CONTROLLER
8117	54 S.F.	DETECTABLE WARNING SURFACE
8018	1 EACH	PED POLE (ANY SIZE)
8019	1 EACH	REMOVE AND DISPOSE OF EXISTING MATERIAL AND EQUIPMENT AS PER ASSIGNMENT
8021	1 EACH	TWIN MAST ARM POLE (15' T) & 50 FT/60 FT MAST ARMS
8029	37 L.F.	WOOD SIGN SUPPORTS 4 INCH x 6 INCH
8030	325 L.F.	NO. 6 A.W.G. STRANDED BARE COPPER GROUND WIRE
8031	15 L.F.	1 IN. ELECTRICAL CONDUIT - GALVANIZED RISER
8036	270 L.F.	3 INCH SCHEDULE 80 RIGID PVC CONDUIT - BORED
8037	190 L.F.	4 INCH SCHEDULE 80 RIGID PVC CONDUIT - BORED
8038	50 L.F.	2 INCH SCHEDULE 80 RIGID PVC CONDUIT - TRENCHED
8039	1000 L.F.	3 INCH SCHEDULE 80 RIGID PVC CONDUIT - TRENCHED
8040	90 L.F.	4 INCH SCHEDULE 80 RIGID PVC CONDUIT - TRENCHED
8044	20 L.F.	1 INCH LIQUID TIGHT FLEXIBLE NON-METALLIC CONDUIT FOR DETECTOR WIRE SLEEVE
8046	1 EACH	ELECTRICAL UTILITY SERVICE EQUIPMENT 120/240 VOLTS 60 AMPS
8047	100 L.F.	ELECTRICAL CABLE - 1 CONDUCTOR NO. 4 A.W.G - THHN/THWN
8050	5 EACH	MICROLOOP PROBE SET WITH 1000 FOOT LEAD-IN CABLE
8053	13 EACH	FURNISH AND INSTALL ELECTRICAL HANDHOLE
8055	26 S.F.	INSTALL GROUND MOUNTED SIGN
8056	54 S.F.	INSTALL OVERHEAD SIGN
8057	3 EACH	VIDEO DETECTION CAMERA
8065	1 EACH	STEEL POLE WITH A TWIN 50 FT. AND 70 MAST ARMS
8069	1925 L.F.	12-PAIR COMMUNICATION CABLE, JELLYFILLED (UNDERGROUND)
8074	4 EACH	GROUND ROD - 3/4 INCH DIAMETER x 10 FOOT LENGTH
8075	3 EACH	8 INCH VEHICULAR TRAFFIC SIGNAL HEAD SECTION
8076	35 EACH	12 INCH VEHICULAR TRAFFIC SIGNAL HEAD SECTION
8082	300 L.F.	ELECTRICAL CABLE - 2 CONDUCTOR (NO. 14 A.W.G)
8084	365 L.F.	ELECTRICAL CABLE - 5 CONDUCTOR (NO. 14 A.W.G)
8085	1535 L.F.	ELECTRICAL CABLE - 7 CONDUCTOR (NO. 14 A.W.G)
8088	100 L.F.	SAW CUT FOR SIGNAL (LOOP DETECTOR)
8095	1 EACH	INSTALL CONTROLLER AND CABINET - BASE MOUNT
NEG.	2 EACH	FURNISH AND INSTALL POLARO 2-WIRE NAVIGATOR AUDIBLE PEDESTRIAN SIGNAL WITH 9"x12" SIGN, BLACK FACE PLATE OPTION 'A' AND BRAILLE TEXT
NEG.	1 EACH	FURNISH AND INSTALL CENTRAL CONTROL UNIT
NEG.	2 EACH	COUNTDOWN PEDESTRIAN SIGNAL HEAD

WR&A
Whitman, Requardt and Associates, LLP
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Baltimore, Maryland 21231
(410) 235-3450

MARYLAND DOT - STATE HIGHWAY ADMINISTRATION
Office of Traffic & Safety
TRAFFIC ENGINEERING DESIGN DIVISION
GENERAL INFORMATION SHEET
MD 146 (DULANEY VALLEY RD.) AND LOCUSTVALE RD./GOUCHER COLLEGE ENT.

DRAWN BY:	S. BLOSS	F.A.P. NO.		TS NO.	SHEET NO.
CHECKED BY:	N. LEARY	S.H.A. NO.	AT3565185	TS-4361	
SCALE:	NONE	COUNTY:	BALTIMORE	T.I.M.S. NO.	
DATE:	12/3/2004	LOG MILE:	03014600.53	6368	3 OF 3

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