PROJECT DESCRIPTION

GENERAL

THIS PROJECT INVOLVES THE MODIFICATION OF THE EXISTING INTERSECTION CONTROL BEACON TO A FULL-TRAFFIC-ACTUATED CONTROL SIGNAL AT THE INTERSECTION OF MD 140 AND HUGHES SHOP ROAD/OLD TANEYTOWN ROAD IN CARROL COUNTY. IN ADDITION, A HAZARD IDENTIFICATION BEACON WILL BE INSTALLED ON EASTBOUND MD 140. MD 140 IS ASSUMED TO RUN IN AN EAST-WEST DIRECTION.

INTERSECTION OPERATION

THE INTERSECTION WILL OPERATE IN A NEMA FOUR-PHASE, FULL-TRAFFIC-ACTUATED MODE WITH THE MD 140 APPROACHES OPERATING CONCURRENTLY AND THE HUGHES SHOP ROAD/OLD TANEYTOWN ROAD APPROACHES OPERATING CONCURRENTLY.

CONTROLLER REQUIREMENTS

INSTALL A FULL-TRAFFIC-ACTUATED, EIGHT-PHASE CONTROLLER WITH TWO (2), FOUR-CHANNEL, TIME-DELAY-OUTPUT LOOP DETECTOR AMPLIFIERS HOUSED IN THE EXISTING NEMA SIZE "5" POLE MOUNTED CABINET.

MAINTENANCE OF TRAFFIC

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

STANDARD NO. MD-104.00 - 104.00-30

STANDARD NO. MD-104.31-01 (FLAGGING OPERATION)

STANDARD NO. MD-104.33-01 (SHOULDER WORK)

STANDARD NO. MD-104.35-01 (LANE SHIFT)

STANDARD NO. MD-104.32-01 (INTERSECTION FLAGGING OPERATION)

PROJECT CONTACTS

THE CONTACT PERSONS FOR SHA ARE AS FOLLOWS:

MR. ROBERT FISHER
DISTRICT ENGINEER
PHONE: (301) 624-8140

MR. JOHN CONCANNON
ASSISTANT DISTRICT ENGINEER - TRAFFIC
PHONE: (301) 624-8141

MR. LEON KERNS
ACTING ASSISTANT DISTRICT ENGINEER - MAINTENANCE
PHONE: (410) 624-8140

MR. JOHN WRIGHT
ACTING DISTRICT UTILITIES ENGINEER
PHONE: (310) 729-8436

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

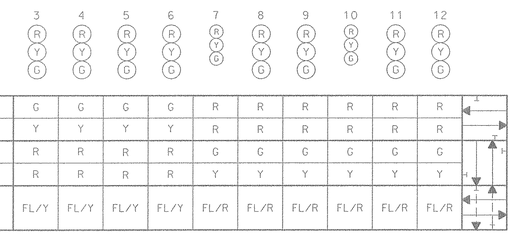
EQUIPMENT LIST "A"

A. EQUIPMENT TO BE SUPPLIED BY THE SHA

ITEM NO.	QUANTITY	DESCRIPTION
9002	2 EACH	FOUR-CHANNEL, TIME-DELAY-OUTPUT, LOOP DETECTOR AMPLIFIER
9087	1 EACH	EIGHT-PHASE, FULL-TRAFFIC-ACTUATED CONTROLLER
9089	150 S.F.	SHEET ALUMINUM SIGNS TO CONSIST OF :
		- 2 EACH W3-3 SIGN (36 IN. X 36 IN.) WITH "NEW" PANEL (30 IN. X30 IN.) AND FLAGS - GROUND MOUNT
		- 1 EACH W3-3 SIGN (48 IN. X 48 IN.) WITH "NEW" PANEL (30 IN. X30 IN.) AND FLAGS - GROUND MOUNT
		1 EACH W3-3 SIGN (48 IN. X 48 IN.) WITH "NEW" PANEL (30 IN. X 30 IN.) AND FLAGS - POLE MOUNT
		- 1 EACH W3-3(2) SIGN (120 IN. X 60 IN.) - MAST ARM MOUNT
		- 1 EACH * D-3(2) SIGN BLACK ON YELLOW (96 IN. X 32 IN.) - GROUND MOUNT
9000	1 EACH	21 FT. MAST ARM POLE AND 52 FT. MAST ARM

* WORD SPACING FOR "OLD TANEYTOWN RD" COMPRESSED TO 0.50 FACTOR

PHASE CHART



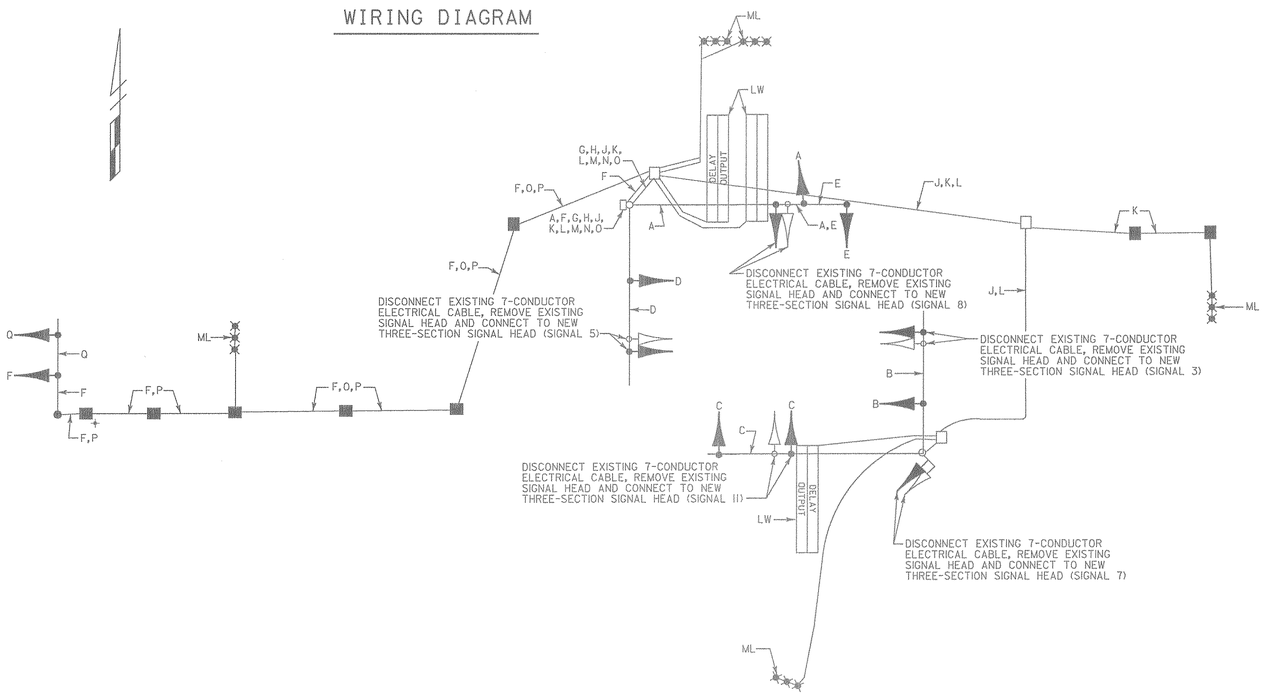
	3	4	5	6	7	8	9	10	11	12
PHASE 2 + 6	G	G	G	G	R	R	R	R	R	R
2 + 6 CHANGE	Y	Y	Y	Y	R	R	R	R	R	R
PHASE 4 + 8	R	R	R	R	G	G	G	G	G	G
4 + 8 CHANGE	R	R	R	R	Y	Y	Y	Y	Y	Y
FLASHING OPERATION	FL/Y	FL/Y	FL/Y	FL/Y	FL/R	FL/R	FL/R	FL/R	FL/R	FL/R

EQUIPMENT LIST "B"

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

ITEM NO.	QUANTITY	DESCRIPTION
1001	1 EACH	MAINTENANCE OF TRAFFIC PER ASSIGNMENT
2001	1 C.Y.	TEST PIT EXCAVATION
5004	90 L.F.	24 IN. WHITE HEAT APPLIED PERMANENT PREFORMED THERMOPLASTIC PAVEMENT MARKINGS
5007	180 L.F.	REMOVE EXISTING PAVEMENT MARKINGS - ANY WIDTH
8001	5 C.Y.	FURNISH AND INSTALL CONCRETE FOR SIGNAL FOUNDATION
8006	1 EACH	CUT, CLEAN, GALVANIZE AND CAP TRAFFIC SIGNAL STRUCTURE
8016	3 EACH	FURNISH AND INSTALL MICROLOOP PROBE SET WITH 500 FT. LEAD-IN
8017	2 EACH	FURNISH AND INSTALL MICROLOOP PROBE SET WITH 1000 FT. LEAD-IN
8021	700 L.F.	FURNISH AND INSTALL SAW CUT FOR SIGNAL (LOOP DETECTOR)
8022	70 L.F.	FURNISH AND INSTALL 1 IN. ELECTRICAL CONDUIT - GALVANIZED SLEEVED
8023	40 L.F.	FURNISH AND INSTALL 1 IN. LIQUID-TIGHT FLEXIBLE NON-METALLIC CONDUIT FOR DETECTOR SLEEVE
8024	1275 L.F.	FURNISH AND INSTALL 2 IN. SCHEDULE 80 RIGID PVC CONDUIT - TRENCHED
8026	25 L.F.	FURNISH AND INSTALL 2 IN. SCHEDULE 80 RIGID PVC CONDUIT - BORED
8030	20 L.F.	FURNISH AND INSTALL 4 IN. SCHEDULE 80 RIGID PVC CONDUIT - TRENCHED
8031	60 L.F.	FURNISH AND INSTALL 4 IN. SCHEDULE 80 RIGID PVC CONDUIT - SLOTTED
8033	8 EACH	FURNISH AND INSTALL ELECTRICAL HANDHOLE
8034	1 EACH	FURNISH AND INSTALL GROUND ROD - 3/4 IN. DIAMTER X 10 FT. LENGTH
8040	1450 L.F.	FURNISH AND INSTALL LOOP WIRE ENCASED IN FLEXIBLE TUBING (NO. 14 A.W.G.)
8041	375 L.F.	FURNISH AND INSTALL ELECTRICAL CABLE - 2 CONDUCTOR (ALUMINUM SHIELDED)
8043	30 L.F.	FURNISH AND INSTALL ELECTRICAL CABLE - 3 CONDUCTOR (NO. 14 A.W.G.)
8044	100 L.F.	FURNISH AND INSTALL ELECTRICAL CABLE - 5 CONDUCTOR (NO. 14 A.W.G.)
8045	80 L.F.	FURNISH AND INSTALL ELECTRICAL CABLE - 7 CONDUCTOR (NO. 14 A.W.G.)
8048	1085 L.F.	FURNISH AND INSTALL NO. 6 A.W.G. STRANDED BARE COPPER GROUND WIRE
8051	80 L.F.	FURNISH AND INSTALL WOOD SIGN SUPPORTS 4 IN. X 6 IN.
8052	77 S.F.	INSTALL GROUND MOUNTED SIGN
8053	73 S.F.	INSTALL OVERHEAD SIGN
8060	1 EACH	REMOVE AND DISPOSE OF EXISTING MATERIAL AND EQUIPMENT PER ASSIGNMENT
8074	1 EACH	INSTALL MAST ARM POLE AND SINGLE MAST ARM (ANY SIZE)
8084	26 EACH	FURNISH AND INSTALL 12 IN. VEHICULAR TRAFFIC SIGNAL HEAD SECTION
8085	6 EACH	FURNISH AND INSTALL 8 IN. VEHICULAR TRAFFIC SIGNAL HEAD SECTION
NEG.	1200 L.F.	FURNISH AND INSTALL 5-CONDUCTOR ELECTRICAL CABLE (NO. 12 A.W.G.)
NEG.	250 L.F.	FURNISH AND INSTALL 3/4 IN. SCHEDULE 80, PVC CONDUIT

WIRING DIAGRAM



WIRING KEY

- A — 7-CONDUCTOR ELECTRICAL CABLE (NO. 14 A.W.G.)
- B, C, D, E — 5-CONDUCTOR ELECTRICAL CABLE (NO. 14 A.W.G.)
- F — 5-CONDUCTOR ELECTRICAL CABLE (NO. 12 A.W.G.)
- G, H, J — 2-CONDUCTOR ELECTRICAL CABLE ALUMINUM SHIELDED (NO. 14 A.W.G.)
- K, L, M, N, O — MICROLOOP PROBE LEAD-IN
- P — STRANDED BARE COPPER GROUND WIRE (NO. 6 A.W.G.)
- Q — 3-CONDUCTOR ELECTRICAL CABLE (NO. 14 A.W.G.)
- LW - LOOP WIRE (NO. 14 A.W.G.)
- ML - MICROLOOP PROBE SET
- + - 3/4 IN. X 10 FT. GROUND ROD

WR&A
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Baltimore, Maryland 21218
(410) 235-3450

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

GENERAL INFORMATION SHEET
MD 140 AND HUGHES SHOP ROAD

DRAWN BY: S.BLOSS	F.A.P. NO. CL845A51/B51	TS NO. TS-3645A	SHEET NO.
CHECKED BY: N.LEARY	S.H.A. NO.		
SCALE: NONE	COUNTY: CARROLL	T.I.M.S. NO. D 513	2 OF 2
DATE: 12-8-99	LOG MILE:		

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