F.H.W.A. REGION NO.	STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
3	MD	SEE BELOW	2	2

PROJECT DESCRIPTION

GENERAL

THIS PROJECT INVOLVES MODIFICATION TO THE EXISTING TRAFFIC CONTROL SIGNAL AND STREET LIGHTING AT MD 542 AND CROMWELL BRIDGE ROAD IN BALTIMORE COUNTY.

INTERSECTION OPERATION

THIS INTERSECTION CURRENTY OPERATES IN A NEMA SIX-PHASE, FULL TRAFFIC-ACTUATED MODE WITH EXCLUSIVE/PERMISSIVE LEFT TURNS FOR EAST AND WEST BOUND CROMWELL BRIDGE ROAD.

EQUIPMENT LISTS

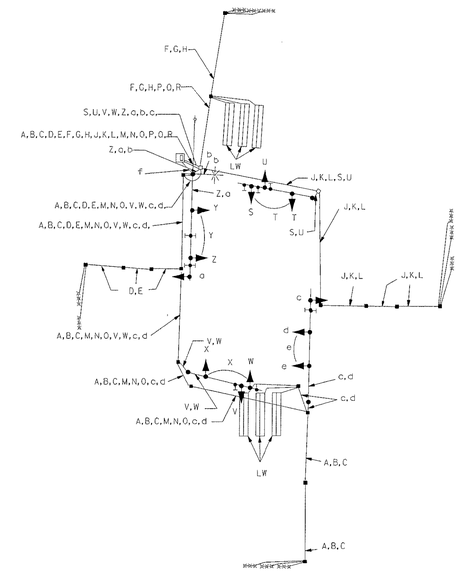
A. EQUIPMENT TO BE SUPPLIED BY ADMINISTRATION.

ITEM	QUANTITY	DESCRIPTION
9000	4 EA.	8"/12" ONE-WAY, FIVE-SECTION SIGNAL HEAD (8" R,Y,G., 12" YA,GA)
9000	4 EA.	12" ONE-WAY, FIVE-SECTION SIGNAL HEAD (R,Y,YA,G,GA)
9000	4 EA.	12" ONE-WAY, THREE-SECTION (R,Y,G) SIGNAL HEAD
9000	10.5 S.F.	R3-7a (LEFT TURN MUST TURN LEFT AT COWPENS AVE.) 36" x 42", 1 EACH
9000	12 S.F.	D3-2 DUAL FACE SIGN (CROMWELL BRIDGE ROAD) 12" x 72", 2 EACH
9000	11 EA.	MICROLOOP PROBE SET
9094	42 S.F.	R10-12 SIGN (LEFT TURN YIELD ON GREEN) 36" x 42", SPAN MOUNT, 4 EACH

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

ITEM	QUANTITY	DESCRIPTION
1001	1 EA.	MAINTENANCE OF TRAFFIC SPEED GREATER THAN OR EQUAL YO 40 M.P.H.
2001	1 C.Y.	TEST PIT EXCAVATION
2005	4 C.Y.	REMOVAL OF EXISTING SIDEWALK
2006	60 L.F.	REMOVAL OF EXISTING COMBINATION CURB AND GUTTER
5001	180 L.F.	F & I 6" YELLOW PERMANENT PREFORMED PAVEMENT MARKING TAPE
5003	450 L.F.	F & I 12" WHITE PERMANENT PREFORMED PAVEMENT MARKING TAPE
5005	200 L.F.	F & I 24" WHITE PERMANENT PREFORMED PAVEMENT MARKING TAPE
5008	1040 L.F.	REMOVE EXISTING PAVEMENT MARKINGS - ANY WIDTH
6001	385 S.F.	F & I 4" CONCRETE SIDEWALK
6002	75 L.F.	F & I STANDARD TYPE A COMBINATION CURB AND GUTTER 12" GUTTER PAN 8" DEPTH
6010	60 L.F.	F & I DEPRESSED CURB AND GUTTER
8001	12 C.Y.	F & I CONCRETE SIGNAL FOUNDATION
8011	12 EA.	INSTALL SIGNAL HEAD (ANY TYPE)
8015	11 EA.	INSTALL MICROLOOP PROBE SET
8022	1240 L.F.	F & I SAWCUT
8023	90 L.F.	F & I 1" ELECTRICAL CONDUIT - GALVANIZED SLEEVE
8024	70 L.F.	F & I 1" LIQUID TIGHT FLEXIBLE NON-METALLIC CONDUIT
8025	960 L.F.	F & I 2" SCHEDULE 40 RIGID PVC CONDUIT - TRENCHED
8026	40 L.F.	F & I 2" SCHEDULE 80 RIGID PVC CONDUIT - SLOTTED
8027	450 L.F.	F & I 2" SCHEDULE 80 RIGID PVC CONDUIT - BORED
8028	30 L.F.	F & I 3" SCHEDULE 40 RIGID PVC CONDUIT - TRENCHED
8031	10 L.F.	F & I 4" SCHEDULE 40 RIGID PVC CONDUIT - TRENCHED
8035	16 EA.	F & I ELECTRICAL HANDHOLE
8037	4 EA.	F & I GROUND ROD - 3/4" DIAMETER X 10' LENGHT
8043	1850 L.F.	F & I LOOP WIRE ENCASED IN FLEXIBLE TUBING (NO. 14 AWG.)
8044	450 L.F.	F & I ELECTRICAL CABLE- 2 CONDUCTOR (ALUMINUM SHIELDED) ELECTRICAL CABLE
8047	90 L.F.	F & I ELECTRICAL CABLE 5 CONDUCTOR (NO.14 AWG.)
8048	1740 L.F.	F & I ELECTRICAL CABLE 7 CONDUCTOR (NO.14 AWG.)
8049	65 L.F.	F & I ELECTRICAL CABLE 2 CONDUCTOR (NO. 12 AWG.)
8051	90 L.F.	F & I ELECTRICAL CABLE 1 - CONDUCTOR (NO. 8 AWG.)
8052	55 L.F.	F & I #6 AWG. STRANDED BARE COPPER GROUND WIRE
8053	175 L.F.	F & I ELECTRICAL CABLE 1 - CONDUCTOR (NO. 4 AWG.)
8057	78.5 S.F.	OVERHEAD MOUNTED SIGN - INSTALLATION
8059	1 EA.	F & I 250 WATT HPS LUMINAIRE WITH PHOTOCELL
8060	1 EA.	F & I LIGHTING BRACKET ARM FOR TRAFFIC SIGNAL STRUCTURE
8061	5 EA.	REMOVE AND DISPOSE OF EXISTING FOUNDATION 12" BELOW GRADE
8062	1 EA.	REMOVAL OF EXISTING CONTROLLER, CABINET AND GALVANIZED SIGNAL STRUCTURE
8063	1 EA.	DELIVERY OF REMOVED CONTROLLER, CABINET AND GALVANIZED SIGNAL STRUCTURE
8064	1 EA.	REMOVE EXISTING MATERIAL AND EQUIPMENT PER ASSIGNMENT
8066	1 EA.	RESURVEY AND ASBUILT TRAFFIC CONTROL DEVICE
8070	15 L.F.	F & I 2" ELECTRICAL CONDUIT PVC SCHEDULE 80 - TRENCHED
8076	1 EA.	F & I CONTROL AND DISTRUBITION EQUIPMENT (120/240V, 1 PHASE 3 WIRE SYSTEM)
8099	2 EA.	F & I MAST ARM POLE AND 60 FT. MAST ARM
8100	2 EA.	F & I MAST ARM POLE AND 70 FT. MAST ARM
NEGOTIATE	7 C.Y.	F & I COMMON BORROW (CATEGORY CODE NO. 202065)

WIRING DIAGRAM



A,B,C,D,E,F,G,H,J,K,L PROBE WIRE

M,N,O,P,Q,R LOOP WIRE

b 2-CONDUCTOR (12 AWG.)

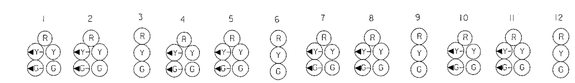
S,U,V,W,Z,a,c,d 7-CONDUCTOR

T,X,Y,e 5-CONDUCTOR

f 1-CONDUCTOR (#4 AWG.)

NOTE: LOCATE GROUND RODS IN HANDHOLES CLOSEST TO POLES.

PHASING CHART



	1	2	3	4	5	6	7	8	9	10	11	12
Phase 1 & 5	◄G-R	◄G-R	R	◄G-R	◄G-R	R	R	R	R	R	R	R
1 & 5 Change	THE CONTROLLER MAY SKIP TO PHASES 1 & 6 OR 2 & 5 OR 2 & 6											
Phase 1 & 6	◄G-G	◄G-G	G	R	R	R	R	R	R	R	R	R
1 Change	◄Y-G	◄Y-G	Y	R	R	R	R	R	R	R	R	R
Phase 2 & 5	R	R	R	◄G-G	◄G-G	G	R	R	R	R	R	R
5 Change	R	R	R	◄Y-G	◄Y-G	Y	R	R	R	R	R	R
Phase 2 & 6	G	G	G	G	G	G	R	R	R	R	R	R
2 & 6 Change	Y	Y	Y	Y	Y	Y	R	R	R	R	R	R
Phase 3 & 7	R	R	R	R	R	R	◄G-R	◄G-R	R	◄G-R	◄G-R	R
3 & 7 Change	THE CONTROLLER MAY SKIP TO PHASES 3 & 8 OR 4 & 7 OR 4 & 8											
Phase 3 & 8	R	R	R	R	R	R	◄G-G	◄G-G	G	R	R	R
3 Change	R	R	R	R	R	R	◄Y-G	◄Y-G	Y	R	R	R
Phase 4 & 7	R	R	R	R	R	R	R	R	R	◄G-G	◄G-G	G
7 Change	R	R	R	R	R	R	R	R	R	◄Y-G	◄Y-G	Y
Phase 4 & 8	R	R	R	R	R	R	G	G	G	G	G	G
4 & 8 Change	R	R	R	R	R	R	Y	Y	Y	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

REVISIONS	APPROVALS
	ASST. DIVISION CHIEF, TEDD
	ASST. DISTRICT ENGINEER, TRAFFIC
	CHIEF, TRAFFIC ENGINEERING DESIGN DIVISION
6 INSTALL SIGNALS, POLES, SIGNS LOOP DETECTORS, LIGHTING, RAISED ISLAND AND PROBES. 1/24/96	DIRECTOR, OFFICE OF TRAFFIC & SAFETY

SHA MOS: AW103A59, AW103B59
FAP NO.: STP-330(065)93

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

MD 542 (LOCH RAVEN BLVD.) AT CROMWELL BRIDGE RD.
GENERAL INFORMATION

DATE 3 /11/ 81

DRAWN BY: JG JBG	F.A.P. NO. N/A	PLAN SHEET NO.: TS-1816	SHEET NO. 2 OF 2
CHECK BY:	S.H.A. NO. AW 555-504-476		
SCALE: 1"=20'	COUNTY BALTIMORE		

LOG # 03054202.62