

PROJECT DESCRIPTION

GENERAL

THIS PROJECT INVOLVES THE RECONSTRUCTION OF THE EXISTING TRAFFIC CONTROL SIGNAL AT THE INTERSECTION OF MD 170 (CAMP MEADE RD.) AND ANDOVER RD. IN ANNE ARUNDEL COUNTY, MD 170 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 170 APPROACHES OPERATING CONCURRENTLY AND THE ANDOVER RD. APPROACHES OPERATING CONCURRENTLY.

EXCLUSIVE/PERMISSIVE LEFT-TURN PHASING IS PROVIDED FOR SOUTHBOUND MD 170 APPROACH.

AN ALTERNATE PEDESTRIAN PHASE IS PROVIDED ACROSS THE SOUTH LEG OF MD 170.

WHEN ACTIVATED, THE QUEUE DETECTOR PRE-EMPTS THE TRAFFIC FOR THE ANDOVER ROAD APPROACH.

CONTROLLER REQUIREMENTS

INSTALL A FULL-TRAFFIC-ACTUATED, EIGHT-PHASE CONTROLLER WITH FOUR(4) FOUR-CHANNEL, TIME-DELAY OUTPUT LOOP DETECTOR AMPLIFIERS, INTERSECTION MONITOR WITH BATTERY BACKUP FOR PHONE DROP 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 WITH 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-104.00 - 104.00-30
- STANDARD NO. MD-104.37-01 (LEFT LANE CLOSURE)
- STANDARD NO. MD-104.38-01 (RIGHT LANE CLOSURE)
- STANDARD NO. MD-104.40-01 (INTERSECTION FAR-LEFT LANE CLOSURE)
- STANDARD NO. MD-104.41-01 (INTERSECTION FAR-RIGHT LANE CLOSURE)
- STANDARD NO. MD-104.42-01 (PARTIAL ROADWAY CLOSURE)
- STANDARD NO. MD-104.43-01 (SHOULDER WORK)

PROJECT CONTACTS

THE CONTACT PERSONS FOR SHA ARE AS FOLLOWS:

- MR. PAUL ARMSTRONG
DISTRICT ENGINEER
PHONE: (410) 841-1001
- MR. JOHN MAYS
DISTRICT UTILITIES ENGINEER
PHONE: (410) 841-1005
- MR. LARRY ELLIOTT
ASSISTANT DISTRICT ENGINEER - TRAFFIC
PHONE: (410) 841-1003
- MR. RICHARD L. DAFF, SR.
CHIEF, TRAFFIC OPERATIONS DIVISION
PHONE: (410) 787-7630
- MR. CHARLES GEORGE
ASSISTANT DISTRICT ENGINEER - MAINTENANCE
PHONE: (410) 841-1002

EQUIPMENT LIST "A"

A. EQUIPMENT TO BE SUPPLIED BY THE SHA

ITEM NO.	QUANTITY	DESCRIPTION
9002	4 EACH	FOUR CHANNEL, TIME-DELAY-OUTPUT LOOP DETECTOR AMPLIFIER
9081	1 EACH	EIGHT PHASE, FULL TRAFFIC-ACTUATED CONTROLLER WITH INTERSECTION MONITOR AND HARNESSES HOUSED IN A NEMA SIZE "6" BASE MOUNTED CABINET
9089	142 S.F.	SHEET ALUMINUM SIGNS TO CONSIST OF : - 4 EACH D-3(1) SIGN (VARIABLE x 16 IN.) DUAL FACED - MAST ARM MOUNT - 1 EACH R10-12 SIGN (36 IN. x 42 IN.) - MAST ARM MOUNT - 1 EACH M6-1(L) SIGN (30 IN. x 24 IN.) - GROUND MOUNT - 1 EACH M1-5 SIGN (48 IN. x 36 IN.) - GROUND MOUNT - 1 EACH M3-3 SIGN (30 IN. x 15 IN.) - GROUND MOUNT - 1 EACH ASSOCIATED SHIELD ASSEMBLY "SOUTH, MD 170, RIGHT ARROW (30 IN. x 51 IN.) - POLE MOUNT - 1 EACH ASSOCIATED SHIELD ASSEMBLY "NORTH, MD 170, LEFT ARROW (48 IN. x 75 IN.) - POLE MOUNT - 2 EACH R3-5L SIGN (30 IN. x 36 IN.) - MAST ARM MOUNT - 2 EACH R3-5R SIGN (30 IN. x 36 IN.) - MAST ARM MOUNT
9096	1 EACH	PEDESTRIAN PUSHBUTTON AND R10-4(1) SIGN (NOTE: SIGN TO READ "PUSHBUTTON TO CAMP MEAD ROAD")

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	15 C.Y.	TEST PIT EXCAVATION
5004	30 L.F.	24 INCH WHITE HEAT APPLIED PERMANENT PREFORMED THERMOPLASTIC PAVEMENT MARKINGS
5007	30 L.F.	REMOVE EXISTING PAVEMENT MARKINGS - ANY WIDTH
6001	150 S.F.	4 INCH CONCRETE SIDEWALK
8001	13 C.Y.	FURNISH AND INSTALL CONCRETE FOR SIGNAL FOUNDATION
8003	1 EACH	FURNISH AND INSTALL BREAKAWAY PEDESTAL POLE
8006	3 EACH	CUT, CLEAN, GALVANIZE, AND CAP TRAFFIC SIGNAL STRUCTURE
8016	6 EACH	FURNISH AND INSTALL MICROLOOP PROBE SET WITH 500 FOOT LEAD-IN
8017	1 EACH	FURNISH AND INSTALL MICROLOOP PROBE SET WITH 1000 FOOT LEAD-IN
8018	1 EACH	INSTALL PUSHBUTTON AND SIGN
8020	1 EACH	INSTALL CONTROLLER AND CABINET - BASE MOUNT
8021	1500 L.F.	FURNISH AND INSTALL SAW CUT FOR SIGNAL (LOOP DETECTOR)
8022	50 L.F.	FURNISH AND INSTALL 1 INCH ELECTRICAL CONDUIT - GALVANIZED SLEEVE
8023	120 L.F.	FURNISH AND INSTALL 1 INCH LIQUID TIGHT FLEXIBLE NON-METALLIC CONDUIT FOR DETECTOR SLEEVE
8024	780 L.F.	FURNISH AND INSTALL 2 INCH SCHEDULE 80 RIGID PVC CONDUIT - TRENCHED
8025	30 L.F.	FURNISH AND INSTALL 2 INCH SCHEDULE 80 RIGID PVC CONDUIT - SLOTTED
8027	80 L.F.	FURNISH AND INSTALL 3 INCH SCHEDULE 80 RIGID PVC CONDUIT - TRENCHED
8028	140 L.F.	FURNISH AND INSTALL 3 INCH SCHEDULE 80 RIGID PVC CONDUIT - SLOTTED
8030	50 L.F.	FURNISH AND INSTALL 4 INCH SCHEDULE 80 RIGID PVC CONDUIT - TRENCHED
8033	180 L.F.	FURNISH AND INSTALL 4 INCH SCHEDULE 80 RIGID PVC CONDUIT - SLOTTED
8034	9 EACH	FURNISH AND INSTALL ELECTRICAL HANDHOLE
8040	6 EACH	FURNISH AND INSTALL GROUND ROD - 3/4 INCH DIAMETER x 10 FOOT LENGTH
8041	3200 L.F.	FURNISH AND INSTALL LOOP WIRE ENCASED IN FLEXIBLE TUBING (NO. 14 A.W.G.)
8042	860 L.F.	FURNISH AND INSTALL ELECTRICAL CABLE - 2 CONDUCTOR (ALUMINUM SHIELDED)
8042	230 L.F.	FURNISH AND INSTALL ELECTRICAL CABLE - 2 CONDUCTOR (NO. 14 A.W.G.)
8043	270 L.F.	FURNISH AND INSTALL ELECTRICAL CABLE - 3 CONDUCTOR (NO. 14 A.W.G.)
8044	120 L.F.	FURNISH AND INSTALL ELECTRICAL CABLE - 5 CONDUCTOR (NO. 14 A.W.G.)
8045	1300 L.F.	FURNISH AND INSTALL ELECTRICAL CABLE - 7 CONDUCTOR (NO. 14 A.W.G.)
8048	300 L.F.	FURNISH AND INSTALL NO. 6 A.W.G. STRANDED BARE COPPER GROUND WIRE
8049	45 L.F.	FURNISH AND INSTALL ELECTRICAL CABLE 1 - CONDUCTOR NO. 4 A.W.G. - THHN/THWN
8051	40 L.F.	FURNISH AND INSTALL WOOD SIGN SUPPORTS 4 INCH x 6 INCH
8052	21 S.F.	INSTALL GROUND MOUNTED SIGN
8053	121 S.F.	INSTALL OVERHEAD SIGN
8057	4 EACH	REMOVE AND DISPOSE OF EXISTING FOUNDATION 12 INCH BELOW GRADE
8058	4 EACH	REMOVAL OF EXISTING CONTROLLER, CABINET AND GALVANIZED SIGNAL STRUCTURE
8059	1 EACH	DELIVERY OF REMOVED CONTROLLER, CABINET, AND GALVANIZED SIGNAL STRUCTURE
8060	1 EACH	REMOVE AND DISPOSE OF EXISTING MATERIAL AND EQUIPMENT PER ASSIGNMENT
8066	1 EACH	FURNISH AND INSTALL CONTROLL AND DISTRIBUTION EQUIPMENT (120/240 V. 1 PHASE 3 WIRE SYSTEM)
8082	1 EACH	FURNISH AND INSTALL MAST ARM POLE AND TWIN (50 FOOT/70 FOOT) MAST ARMS
8084	28 EACH	FURNISH AND INSTALL 12 INCH VEHICULAR TRAFFIC SIGNAL HEAD SECTION
8085	9 EACH	FURNISH AND INSTALL 8 INCH VEHICULAR TRAFFIC SIGNAL HEAD SECTION
8087	4 EACH	FURNISH AND INSTALL 12 INCH PEDESTRIAN SIGNAL HEAD SECTION
NEG.	1 EACH	FURNISH AND INSTALL SPECIAL MAST ARM POLE AND TWIN 50 FOOT/60 FOOT MAST ARMS

EQUIPMENT LIST "C"

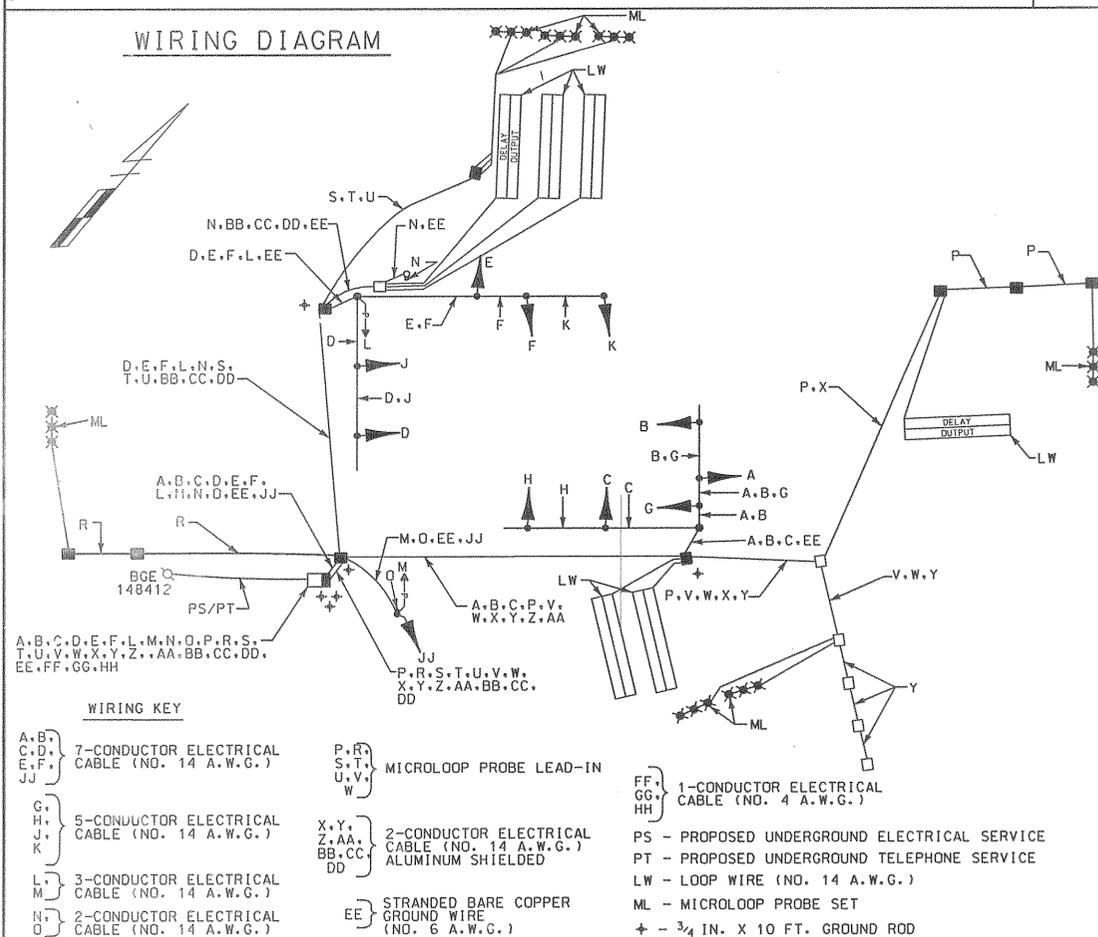
C. EQUIPMENT TO BE REMOVED AND RETURNED TO SHA

- 1 EACH BASE MOUNTED CABINET AND CONTROLLER

PHASE CHART

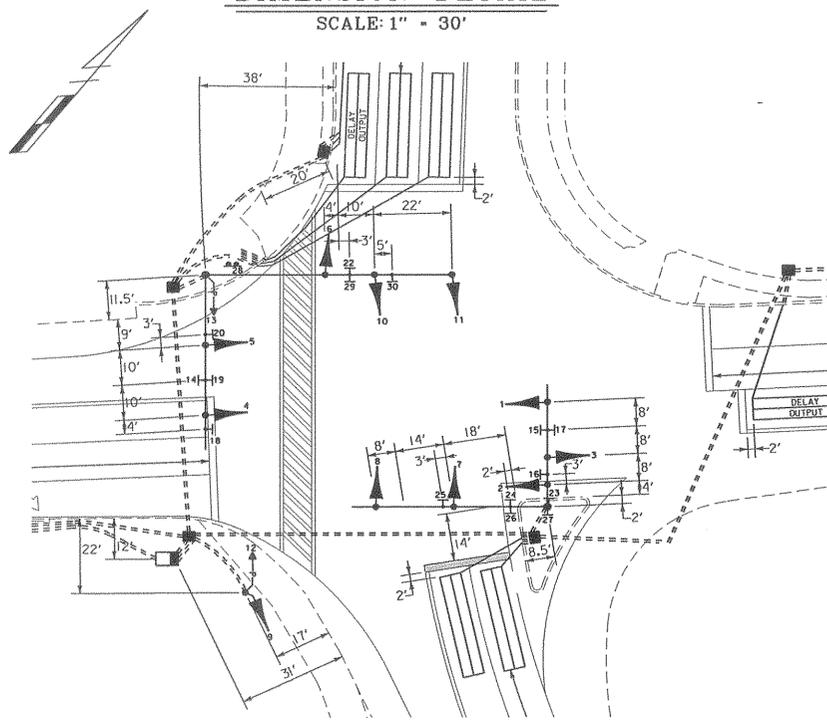
INTERSECTION OPERATION TO REMAIN THE SAME.

WIRING DIAGRAM



DIMENSION DETAIL

SCALE: 1" = 30'



WR&A
Whitman, Reardon
and Associates, LLP
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Baltimore, Maryland 21218
(410) 235-3450

REVISIONS

NO.	DESCRIPTION

MARYLAND DOT - STATE HIGHWAY ADMINISTRATION
Office of Traffic & Safety
TRAFFIC ENGINEERING DESIGN DIVISION
TRAFFIC SIGNALIZATION PLAN
MD 170 & ANDOVER ROAD

DRAWN BY: S.BLOSS	F.A.P. NO.	TS NO.	SHEET NO.
CHECKED BY: NLEARY	S.H.A. NO.	TS-183E	
SCALE: NONE	COUNTY: ANNE ARUNDEL	T.I.M.S. NO.	2 OF 2
DATE: 5/4/01	LOC MILE:		