

PROJECT DESCRIPTION

This project involves the installation of E/P phasing along W/B MD 320, upgrading the E/B MD 320 E/P phasing and installing new loops.

PROJECT CONTACTS

Mr. Charlie Watkins
District Engineer
301-513-7300

Mr. Majid Shakib
Assistant District Engineer (Traffic)
301-513-7358

Mr. Randy Brown
Assistant District Engineer (Maintenance)
301-513-7304

Mr. Augie Rebish
Utilities Engineer
301-513-7350

Mr. Richard Daff
Chief Traffic Operations Division
410-787-7630

Mr. Bob Gonzales
Montgomery County Signals
240-777-8761

A. EQUIPMENT TO BE FURNISHED BY STATE HIGHWAY ADMINISTRATION"

ITEM NO.	QUANTITY	DESCRIPTION"
9089	15 SF	FLAT SHEET ALUM SIGN-YELLOW, ORANGE, & SILVER (SF)" 2 EA. R10-12 (30" X 36")
9090	6 SF	FLAT SHEET ALUM. SIGN-BLUE OR GREEN (SF) 1 EA. D3-2 DUAL FACED (12" X VARIABLE)

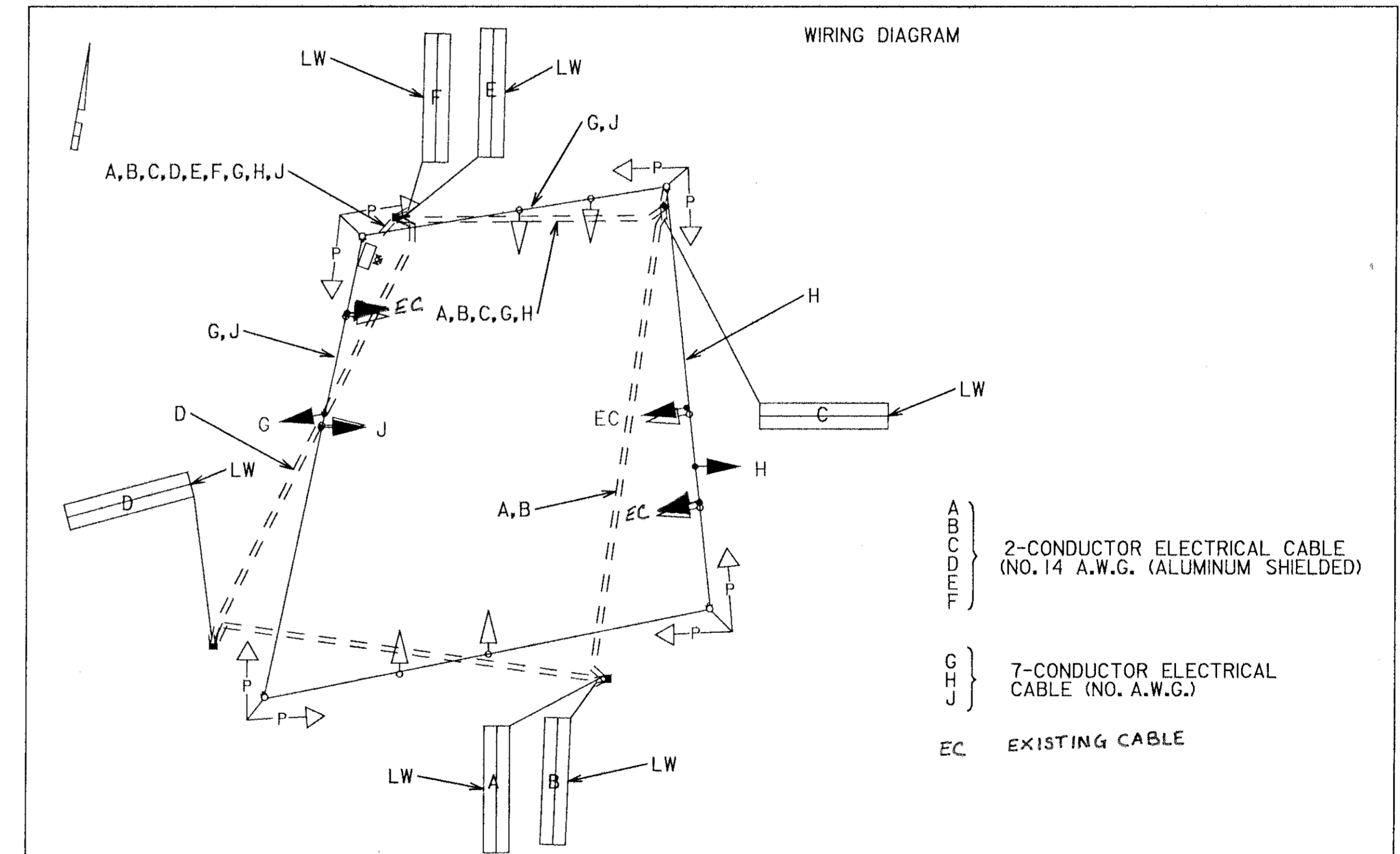
B. EQUIPMENT TO BE FURNISHED AND/OR INSTALLED BY CONTRACTOR

ITEM NO.	QUANTITY	DESCRIPTION
1001	2 EA	MAINTENANCE OF TRAFFIC
2004	4 CY	CLASS 2 EXCAVATION
6001	314 SF	4 INCH CONCRETE SIDEWALK
6009	30 LF	FURNISH AND INSTALL DEPRESSED CURB AND GUTTER
8008	1 EA	FURNISH AND INSTALL 3" WEATHER HEAD INTO EXISTING POLE
8021	772 LF	FURNISH AND INSTALL SAW CUT FOR SIGNAL (LOOP DETECTOR)
8023	35 LF	FURNISH AND INSTALL 1 INCH LIQUID TIGHT FLEXIBLE NON-METALLIC CONDUIT FOR DETECTOR SLEEVE
8031	380 LF	FURNISH AND INSTALL 4 INCH SCHEDULE 80 RIGID PVC CONDUIT - SLOTTED
8033	4 EA	FURNISH AND INSTALL ELECTRICAL HANDHOLE
8040	2846 LF	FURNISH AND INSTALL LOOP WIRE ENCASED IN FLEXIBLE TUBING (NO. 14 AWG)
8041	910 LF	FURNISH AND INSTALL ELECTRICAL CABLE - 2 CONDUCTOR (ALUMINUM SHIELDED)
8045	370 LF	FURNISH AND INSTALL ELECTRICAL CABLE - 7 CONDUCTOR (NO 14 AWG)
8053	21 SF	INSTALL OVERHEAD SIGN
8061	1 EA	INSTALL CONDUIT BEND IN EXISTING BASE
8084	20 EA	FURNISH AND INSTALL 12 INCH VEHICULAR TRAFFIC SIGNAL HEAD SECTION (POLYCARBONATE BLACK FACED)
8085	6 EA	FURNISH AND INSTALL 8 INCH VEHICULAR TRAFFIC SIGNAL HEAD SECTION (POLYCARBONATE BLACK FACED)

PHASE CHART

Phase	1	2	3	4	5	6	7	8	9	10	11,14	12,13	16,17	15,18	
Phase 1 & 5	<G-R	<G-R	R	<G-R	<G-R	R	R	R	R	R	DW	DW	DW	DW	
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	DW	DW	DW	DW	
1 Change	<Y-G	<Y-G	G	R	R	R	R	R	R	R	DW	DW	DW	DW	
Phase 2 & 5	R	R	R	<G-G	<G-G	G	R	R	R	R	DW	DW	DW	DW	
5 Change	R	R	R	<Y-G	<Y-G	G	R	R	R	R	DW	DW	DW	DW	
Phase 2 & 6	G	G	G	G	G	G	R	R	R	R	WK	WK	DW	DW	
2 & 6 Ped Clear	G	G	G	G	G	G	R	R	R	R	FL/DW	FL/DW	DW	DW	
2 & 6 Change	Y	Y	Y	Y	Y	Y	R	R	R	R	DW	DW	DW	DW	
Phase 4 & 8	R	R	R	R	R	R	G	G	G	G	DW	DW	DW	DW	
4 & 8 Change	R	R	R	R	R	R	Y	Y	Y	Y	DW	DW	DW	DW	
Phase 4 & 8 Alt.	R	R	R	R	R	R	G	G	G	G	DW	DW	WK	WK	
4 & 8 Ped. Clear	R	R	R	R	R	R	G	G	G	G	DW	DW	FL/DW	FL/DW	
4 & 8 Alt. Change	R	R	R	R	R	R	Y	Y	Y	Y	DW	DW	DW	DW	
Flashing	FL/Y	FL/Y	FL/Y	FL/Y	FL/Y	FL/Y	FL/R	FL/R	FL/R	FL/R	DARK	DARK	DARK	DARK	
Operation	FL/Y	FL/Y	FL/Y	FL/Y	FL/Y	FL/Y	FL/R	FL/R	FL/R	FL/R	DARK	DARK	DARK	DARK	

WIRING DIAGRAM



REVISIONS	APPROVALS	MARYLAND DOT - STATE HIGHWAY ADMINISTRATION Office of Traffic & Safety TRAFFIC ENGINEERING DESIGN DIVISION MD 320 (Piney Branch) at MD 787 (Flower Ave.)	
TEAM LEADER, TRAFFIC ENGINEERING DESIGN DIVISION ASST. TRAFFIC ENGINEERING DESIGN DIVISION TRAFFIC ENGINEERING DESIGN DIVISION DIRECTOR, TRAFFIC & SAFETY		DRAWN BY: J. Henkel CHECKED BY: SCALE: Not to Scale DATE: 7/99	F.A.P. NO. S.H.A. NO. COUNTY: MONTGOMERY LOG MILE: 15032001.63
(A) INSTALL W/B E/P PHASING MD 320 UPGRADE E/B E/P FOR MD 320 AND REPLACE ALL LOOPS TMS#419		TS NO. 2648A T.I.M.S. NO. D419	SHEET NO. 02 OF 02