

PROJECT DESCRIPTION

I. GENERAL

This portion of the project involves the reconstruction of the existing traffic control signal at the intersection of MD 144 (Frederick Rd.) and Melvin Ave./Sanford Ave. in Baltimore County, Maryland. MD 144 is considered to run in an east/west direction.

II. INTERSECTION OPERATION

The intersection currently operates in a NEMA four (4) phase, full-traffic-actuated mode. The MD 144 through movements operate concurrently. The Melvin Ave./Sanford Ave. movements currently operate concurrently.

The intersection phasing is to be modified to operate as a side street split operation with an actuated pedestrian phase across the west leg of the intersection.

The existing controller is to be relocated to new base mounted cabinet with two 4-channel rack mounted time delay output loop detector amplifiers.

EQUIPMENT LIST

A. Equipment to be supplied by MD-S.H.A. and installed by Contractor.

Item No.	Quantity	Units	Description
9079	1	EA	Standard S.H.A. traffic base mounted cabinet.
9090	77.3	SF	Seet aluminium sign with mast arm mounting hardware. [2 each 32 in. x var. D-3(1)]. [2 each 16 in. x Var. D-3(1)]. [2 each 24 in. x 72 in M 95-1].
9090	1.5	SF	Sheet aluminum sign with pole mounting hardware [2 each 9 in. x 12 in. R 10-4(1)] (Sign to read: Pushbutton To Cross Frederick Rd.).
9096	2	EA	Pedestrian pushbutton assembly.
9097	4	EA	Sign hardware-24 in form tube.
9098	4	EA	Sign hardware-30 in form tube.
9104	2	EA	Sign hardware - under mast arm astro bracket 84 in. cable.

B. Equipment to be furnished and/or installed by the Contractor.

Item No.	Quantity	Units	Description
1001	2	EA	Maintenance of traffic.
1003	Lump Sum	LS	Mobilization.
2001	3	CY	Test pit excavation.
2004	72	SF	Class II excavation (4 in. sidewalk remove/replace).
5003	760	LF	12 in. HAPPTFM - white for crosswalk.
5004	80	LF	24 in. HAPPTFM - white for stop line.
8001	10.65	CY	Concrete foundation for signal equipment.
8003	3	EA	10 ft. pedestal pole on break away transformer base.
8006	4	EA	Cut, clean, galvanize, and cap traffic signal structure.
8010	70	LF	Steel span wire - 1/4 in. diameter.
8016	4	EA	Microloop probe set with 500 ft. lead-in.
8018	4	EA	Install pushbutton with sign.
8020	1	EA	Install cabinet and controller base mount.
8021	675	LF	Sawcut for signal loop detector.
8023	25	LF	1 in liquid flexible non-metallic conduit loop detector sleeves.
8024	60	LF	2 in. polyvinyl chloride [Schedule 80] electrical conduit - trenched.
8027	15	LF	3 in. polyvinyl chloride [Schedule 80] electrical conduit - trenched.
8028	100	LF	3 in. polyvinyl chloride [Schedule 80] electrical conduit - slotted in roadway.
8030	50	LF	4 in. polyvinyl chloride [Schedule 80] electrical conduit - trenched.
8031	120	LF	4 in. polyvinyl chloride [Schedule 80] electrical conduit - slotted in roadway.
8033	5	EA	Handhole.
8034	6	EA	Ground rod - 3/4 in. diameter x 10 ft. length.
8040	900	LF	Loop detector wire (No. 14 A.W.G. encased in flexible tubing.
8041	120	LF	2-conductor (aluminum shielded) electrical cable (No. 14 A.W.G.).
8042	760	LF	2-conductor electrical cable (No. 14 A.W.G.).
8044	955	LF	5-conductor electrical cable (No. 14 A.W.G.).
8045	425	LF	7-conductor electrical cable (No. 14 A.W.G.).
8047	100	LF	Electrical cable - 1-conductor (No. 4 A.W.G.) THHN/THWN.
8048	420	LF	Bare copper stranded ground wire (6 A.W.G.).
8051	30	LF	4 in. x 6 in. wood post supports.
8052	25	SF	Install ground mounted sign.
8053	77.3	SF	Install overhead sign.
8060	1	EA	Remove/dispose of existing material/equipment per assignment.
8066	1	EA	Control and distribution equipment (120/240 V, one phase, three wire system) for a type B-7 overhead electrical service.
8071	5	EA	Point structure (Installed) all mast arms, poles, mast arms, and pedestal poles (Black Color of Federal* 595a-27047) unless otherwise specified.
8076	1	EA	Mast arm pole and 38 ft. mast arm.
8080	1	EA	Mast arm pole and twin 50 ft./50 ft. mast arms.
8084	26	EA	12 in. black faced vehicular traffic signalhead section with mast arm mounting hardware.
8087	2	EA	12 in. pedestrian signalhead section with pole mounting hardware.
8087	8	EA	12 in. pedestrian signalhead section with post top mounting.
Neg.	Lump Sum	LS	Brick paver replacement/repair work.

CONTACT LIST

The contact persons for District #4 are as follows:

Mr. Dave Malkowski  
District Engineer  
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Mr. Randall Scott  
Assistant District Engineer - Traffic  
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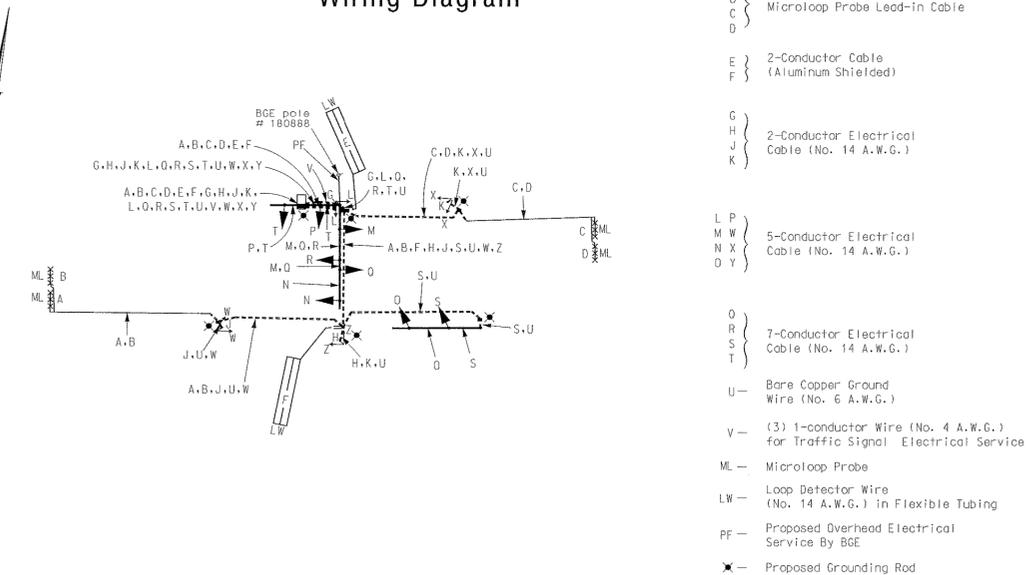
Mr. Richard L. Daff  
Chief, Traffic Operations Division  
410-787-7630

The Power Company Representative is:  
Baltimore Gas and Electric Company  
Mr. Bernnie Thurman (Supervisor)  
7317 Parkway Drive South  
Hanover, Maryland 21076  
410-859-9070

Phase Chart

	1	2	3	4	5	6	7	8	9-12	13-16
Phase 2 & 6	G	G	G	G	R	R	R	R	WK	DW
Ped Clearance	G	G	G	G	R	R	R	R	FL/DW	DW
2 & 6 Change	Y	Y	Y	Y	R	R	R	R	DW	DW
Phase 3	R	R	R	R	G	G	R	R	DW	DW
3 Change	R	R	R	R	Y	Y	R	R	DW	DW
Phase 4	R	R	R	R	R	R	G	G	DW	DW
4 Change	R	R	R	R	R	R	Y	Y	DW	DW
Phase All 3 & 4	R	R	R	R	G	G	G	G	DW	WK
Ped Clearance	R	R	R	R	G	G	G	G	DW	FL/DW
All 3 & 4 Change	R	R	R	R	Y	Y	Y	Y	DW	DW
Flashing Operation	FL/Y	FL/Y	FL/Y	FL/Y	FL/R	FL/R	FL/R	FL/R	DARK	DARK

Wiring Diagram



Revision "A"

The Traffic Group, Inc.  
410-931-6600  
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APPROVALS

TEAM LEADER, TRAFFIC ENGINEERING DESIGN DIVISION

ASST. CHIEF TRAFFIC ENGINEERING DESIGN DIVISION

CHIEF, TRAFFIC ENGINEERING DESIGN DIVISION

DIRECTOR, TRAFFIC & SAFETY

**MARYLAND DOT - STATE HIGHWAY ADMINISTRATION**  
*Office of Traffic & Safety*  
**TRAFFIC ENGINEERING DESIGN DIVISION**  
(General Information Plan)  
**MD 144 (Frederick Road) at Melvin Avenue/Sanford Avenue**

DRAWN BY: Frank Hoeckel	F.A.P. NO. N/A	TS NO. xxx
CHECKED BY: [Signature]	S.H.A. NO. BA-55-185E	SHEET NO. 2 OF 4
SCALE: N/A	COUNTY: Baltimore	T.I.M.S. NO. C808GG2
DATE: February 21, 2000	LOG MILE: XXX	