PROJECT DESCRIPTION

I. GENERAL

This portion of the project involves the reconstruction of the existing traffic control signal at the intersection of MD 26 and Milford Mill Road in Baltimore County, Maryland. MD 26 is considered to run in an east/west direction.

II. INTERSECTION OPERATION

The intersection is to continue to operate in a NEMA six (6) phase, full-traffic-actuated mode. There is an exclusive/permissive left turn phase for the east and westbound movements of MD 26. The MD 26 through movements operate concurrently with concurrent pedestrian phases across the north and south legs of the intersection. The Milford Mill Road movements operate in a side street split mode with an actuated pedestrian phase across the west leg of the intersection.

An additional actuated pedestrian phase across the east leg of the intersection will be installed as part of this project.

The existing controller shall be utilized.

Five 4-channel rack mounted loop detector amplifiers housed in a base mounted cabinet are to be installed at this location.

A. Equipment to be furnished by MD-SHA and installed by Contractor.

Category Code No.	Quantity	Units	Description
900000	1	EA	Standard S.H.A. traffic signal base mounted cabinet, with five 4-channel rack mounted loop detector amplifiers.
900000	94	SF	Sheet aluminum sign with mast arm mounting hardware: [2 each 36 in. x 42 in. R 10-12] [1 each 30 in. x 36 in. R 3-5(L)] [1 each 30 in. x 36 in. R 3-5(R)] [1 each 30 in. x 36 in. R 3-6(L)] [2 each 16 in. x Var. D-3(1) (Dual Faced)] [1 each 30 in. x 30 in. R 10-11b] [2 each 16 in. x 60 in. M 95-1].
900000	3	SF	Sheet aluminum sign with pole mounting hardware: [4 each 9 in. x 12 in. R 10-4(1)]. (Sign to read: Push Button to Cross Liberty Rd.)
900000	4	EA	Pushbutton assembly.

B. Equipment to be furnished and/or installed by the Contractor.
All equipment in this list shall have catalog cuts submitted for approval prior to installation.

Category CodeNo.	Quantity	Units	Description
203030	5	CY	Test pit excavation.
500000	785	LF	12 in. wide HAPPTPM - white for crosswalk.
500000	145	LF	24 in. wide HAPPTPM - white for stop line.
818036	1	EA	27 ft. steel mast arm pole with a 50 ft. mast arm (Note: four 1-3/4 in. x 90 in. anchor bolts).
818041	1	EA	21 ft. steel mast arm pole with a 60 ft. mast arm [Note: four 2 in. x 90 in. anchor bolts].
800000	1	EA	23 ft. steel twin mast arm pole with 50 ft. and 70 ft. mast arms [Note: four 2 in. x 90 in. anchor bolts].
868003	1	EA	10 ft. steel pedestal pole with break away transformer base [Note: four 1 in. x 40 in.anchor bolts].
800000	12	EA	8 in. black faced traffic signal head section with mast arm mounting hardware.
800000	36	EA	12 in. black faced traffic signal head section with mast arm mounting hardware.
800000	12	EA	12 in. pedestrian signal head section with pole mounting hardware.
800000	4	EA	12 in. pedestrian signal head section with post top mounting hardware.
871202	1	EA	Install base mounted cabinet/controller.
800000	2	EA	Install pedestrian pushbutton assembly.
800000	94	SF	Install sign - mast arm mounted.
800000	3	SF	Install sign - pole mounted.
811001	18	EA	Handhole.
862102	1195	LF	Sawcut for signal loop detector.
862101	3755	LF	Loop detector wire (No. 14 A.W.G.) encased in flexible tubing.
861116	205	LF	2-conductor tray cable (No. 12 A.W.G.).
861104	3270	LF	2-conductor (aluminum shielded) electrical cable (No. 14 A.W.G.).
861105	600	LF	2-conductor electrical cable (No. 14 A.W.G.).
861107	745	LF	5-conductor electrical cable (No. 14 A.W.G.).
861108	2055	LF	7-conductor electrical cable (No. 14 A.W.G.).
861117	50	LF	3-wire (No. 4 A.W.G.) electrical cable.
861102	20	LF	3-wire (No. 8 A.W.G.) electrical cable.
802501	405	LF	Bare copper stranded ground wire (No. 6 A.W.G.).
805160	80	LF	1 in. liquid tight flexible non-metalic conduit for loop detector sleeve.
800000	435	LF	2 in. polyvinyl chloride [Schedule 80] electrical conduit - trenched.
805105	200	LF	2 in. polyvinyl chloride [Schedule 80] electrical conduit - bored.
805145	265	LF	2 in. polyvinyl chloride [Schedule 80] electrical conduit - slotted in roadway.
800000	90	LF	3 in. polyvinyl chloride [Schedule 80] electrical conduit - trenched.
805115	410	LF	3 in. polyvinyl chloride [Schedule 80] electrical conduit - bored.
805150	155	LF	3 in. polyvinyl chloride [Schedule 80] electrical conduit - slotted in roadway.
800000	80	LF	4 in. polyvinyl chloride [Schedule 80] electrical conduit - trenched.
805118	40	LF	4 in. polyvinyl chloride [Schedule 80] electrical conduit - bored.
805155	195	LF	4 in. polyvinyl chloride [Schedule 80] electrical conduit - slotted in roadway.
801004	13.9	CY	Concrete foundation for traffic signal equipment.
837001	6	EA	Ground rod -3/4in. diameter x 10 ft. length.
838003	1	EA	Control and distribution equipment (120/240 V, one phase, three wire system) for a MD-SHA (Type B-8) overhead electrical service.
800000	2	EA	2 in. weatherhead.
805023	30	LF	2 in. polyvinyl chloride [Schedule 80] electrical riser.
800000	7	EA	Microloop probe (set of three) with 500 ft. lead-in cable.
800000	2	EA	Microloop probe (set of three) with 1000 ft. lead-in cable.
800000	1	EA	Cut, clean, and cap mast arm.
866103	1	EA	15 ft. luminaire arm.
831010	1	EA	250 W HPS lamp and luminaire.
801104	32	LF	4 ft. x 4 ft. wood sign support.
800000	2	EA	Relocate existing pole mounted sign to wood sign support.
800000	Lump Sum	LS	Remove and disposal of existing traffic signal equipment.

CONTACT LIST

The contact persons for District *4 are as follows:

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Mr. Richard L. Daff
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The Power Company Representative is:
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Mr. Bernie Thuman
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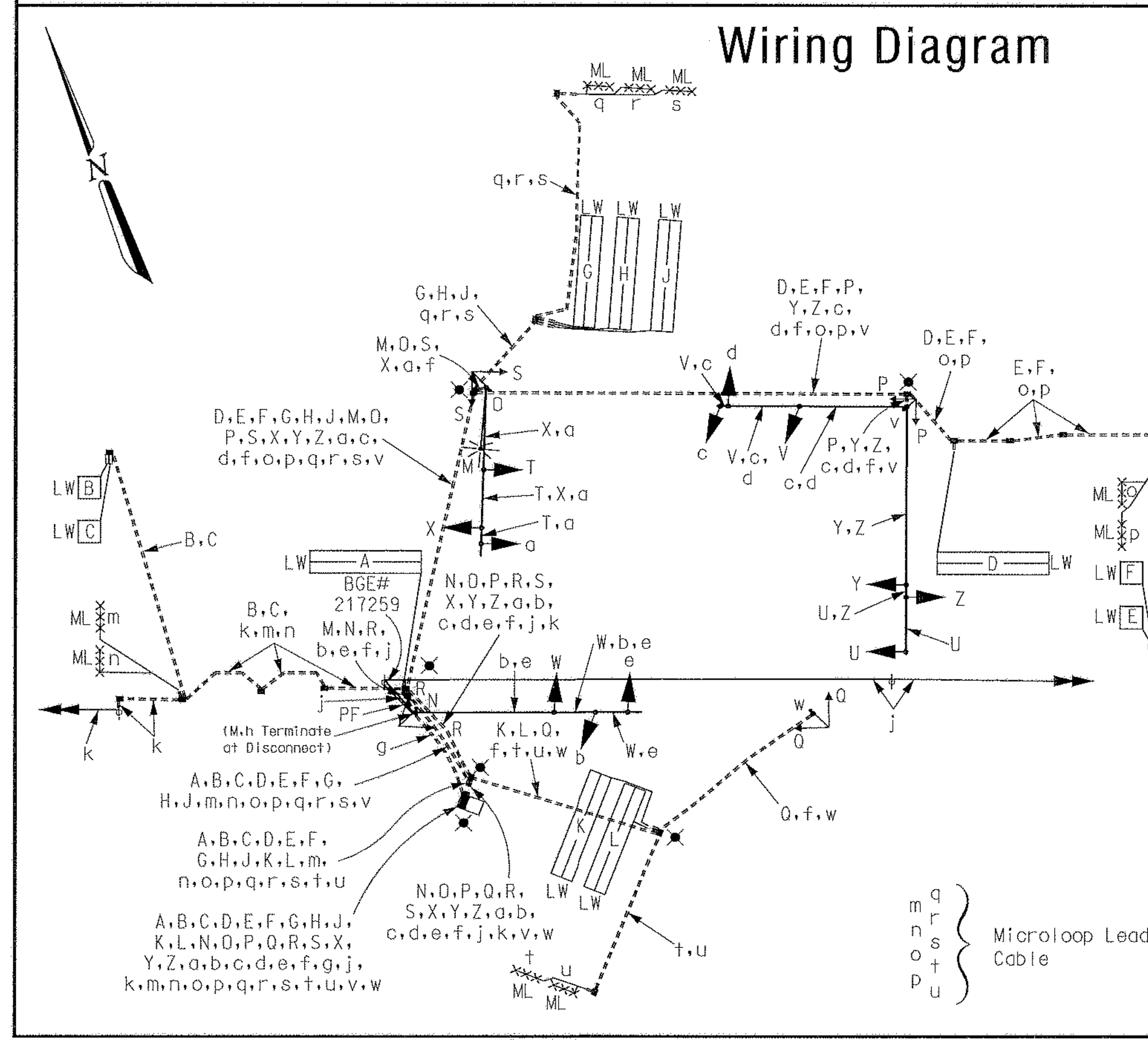
Phase Chart

	1	2	3	4	5	6	27	7	8	28	9	10	11-14	15,16	31,32
Phase 1 & 5	R ←G	R ←G	R	R ←G	R ←G	R	R	R	R	R	R	R	DW	DW	DW
1 & 5 Change to Phase 1 & 6 or Phase 2 & 5 or Phase 2 & 6															
Phase 1 & 6	G ←G	G ←G	G	R	R	R	R	R	R	R	R	R	DW	DW	DW
1 Change	G ←Y	G ←Y	G	R	R	R	R	R	R	R	R	R	DW	DW	DW
Phase 2 & 5	R	R	R	G ←G	G ←G	G	R	R	R	R	R	R	DW	DW	DW
5 Change	R	R	R	G ←Y	G ←Y	G	R	R	R	R	R	R	DW	DW	DW
Phase 2 & 6	G	G	G	G	G	G	R	R	R	R	R	R	WK	DW	DW
Ped Clearance	G	G	G	G	G	G	R	R	R	R	R	R	FL/DW	DW	DW
2 & 6 Change	Y	Y	Y	Y	Y	Y	R	R	R	R	R	R	DW	DW	DW
Phase 3	R	R	R	R	R	R	G ←G	G ←G	G	R	R	R	DW	DW	DW
3 Change	R	R	R	R	R	R	Y	Y	Y	R	R	R	DW	DW	DW
Phase Alt 3	R	R	R	R	R	R	G ←G	G ←G	G	R	R	R	DW	DW	WK
Ped Clearance	R	R	R	R	R	R	G ←G	G ←G	G	R	R	R	DW	DW	FL/DW
Alt 3 Change	R	R	R	R	R	R	Y	Y	Y	R	R	R	DW	DW	DW
Phase 4	R	R	R	R	R	R	R	R	R	G ←G	G ←G	G	DW	DW	DW
4 Change	R	R	R	R	R	R	R	R	R	Y	Y	Y	DW	DW	DW
Phase Alt 4	R	R	R	R	R	R	R	R	R	G ←G	G ←G	G	DW	WK	DW
Ped Clearance	R	R	R	R	R	R	R	R	R	G ←G	G ←G	G	DW	FL/DW	DW
Alt 4 Change	R	R	R	R	R	R	R	R	R	Y	Y	Y	DW	DW	DW
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	DARK	DARK	DARK

Wiring Diagram



A B C / D H, E J, F K, G L — 2-Conductor Cable (Aluminum Shielded)

M — 2-Conductor Tray Cable (No. 14 A.W.G.)

N v, O w — 2-Conductor Electrical Cable (No. 14 A.W.G.)

P T, Q U, R V, S W — 5-Conductor Electrical Cable (No. 14 A.W.G.)

X b, Y c, Z d, a e — 7-Conductor Electrical Cable (No. 14 A.W.G.)

f — Bare Copper Ground Wire (No. 6 A.W.G.)

g — 3-Wire (No. 4 A.W.G.) for Traffic Signal Electrical Service

h — 3-Wire (No. 8 A.W.G.) for Traffic Lighting Electrical Service

j — Existing Interconnect Cable (Milford Mill Rd. - Washington Rd. Run)

k — 12-Pair Voice Grade Telemetry Interconnect Cable (No. 19 A.W.G.) (Rolling Rd. - Milford Mill Rd. Run)

ML — Microloop Probe

LW — Loop Detector Wire (No. 14 A.W.G.) in Flexible Tubing

m n o p / q r s t u — Microloop Lead-in Cable

PF — Proposed Overhead Electrical Service By BG&E

— Proposed Grounding Rod

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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 26 at Milford Mill Road

DRAWN BY:	J.E.S.	F.A.P. NO.	SEE TITLE SHEET	TS NO. 3969	SHEET NO.
CHECKED BY:		S.H.A. NO.	BA273A22		
SCALE:	N/A	COUNTY:	Baltimore	T.I.M.S. NO.	
DATE:	December 28, 1999	LOG MILE:	03026007.50	XXX	2 OF 8

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