PROJECT DESCRIPTION

I. GENERAL

This portion of the project involves the reconstruction of the existing traffic control signal at the intersection of MD 26 at Courtleigh Drive in Baltimore County, Maryland. MD 26 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 26 through movements operate concurrently with a concurrent pedestrian phase across the north and south legs of the intersection. The Courtleigh Dr. through movements operate concurrently with an actuated pedestrian phase across the east and west legs of the intersection.

The existing controller and phasing shall be utilized.

Three 4-channel rack mounted time delay output 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 three 4-channel rack mounted loop detector amplifiers.
900000	32	SF	Sheet aluminum sign with mast arm mounting hardware: [2 each 16 in. x Var. D-3(1) (Dual Faced).
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 Code No.	Quantity	Units	Description
203030	Lump Sum	CY	Test pit excavation.
700000	5	LS	Selective hedge trimming.
818021	1	EA	21 ft. steel twin mast arm pole with 50 ft. mast arms [Note: four 1-3/4 in. x 90 in. anchor bolts].
818036	1	EA	21 ft. steel mast arm pole with a 50 ft. mast arm [Note: four 1-3/4 in. x 90 in. anchor bolts].
800000	1	EA	21 ft. steel mast arm pole with a 70 ft. mast arm [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	9	EA	8 in. black faced traffic signal head section with mast arm mounting hardware.
800000	24	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	4	EA	Install pedestrian pushbutton assembly.
800000	32	SF	Install sign - mast arm mounted.
800000	3	SF	Install sign - pole mounted.
811001	4	EA	Handhole.
862102	175	LF	Sawcut for signal loop detector.
862101	480	LF	Loop detector wire (No. 14 A.W.G.) encased in flexible tubing.
861104	760	LF	2-conductor (aluminum shielded) electrical cable (No. 14 A.W.G.).
861105	450	LF	2-conductor electrical cable (No. 14 A.W.G.).
861107	620	LF	5-conductor electrical cable (No. 14 A.W.G.).
861108	1365	LF	7-conductor electrical cable (No. 14 A.W.G.).
861117	5	LF	3-wire (No. 4 A.W.G.) electrical cable.
802501	320	LF	Bare copper stranded ground wire (No. 6 A.W.G.).
805160	5	LF	1 in. liquid tight flexible non-metalic conduit for loop detector sleeve.
800000	270	LF	2 in. polyvinyl chloride [Schedule 80] electrical conduit - trenched.
805105	90	LF	2 in. polyvinyl chloride [Schedule 80] electrical conduit - bored.
800000	50	LF	3 in. polyvinyl chloride [Schedule 80] electrical conduit - trenched.
805115	20	LF	3 in. polyvinyl chloride [Schedule 80] electrical conduit - bored.
800000	30	LF	4 in. polyvinyl chloride [Schedule 80] electrical conduit - trenched.
805118	10	LF	4 in. polyvinyl chloride [Schedule 80] electrical conduit - bored.
805155	65	LF	4 in. polyvinyl chloride [Schedule 80] electrical conduit - slotted in roadway.
801004	11.9	CY	Concrete foundation for traffic signal equipment.
837001	5	EA	Ground rod - 3/4 in. 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-5) underground electrical service.
800000	1	EA	2 in. weatherhead.
805023	25	LF	2 in. polyvinyl chloride [Schedule 80] electrical conduit - riser.
800000	2	EA	Microloop probe (set of three) with 500 ft. lead-in cable.
800000	1	EA	Cut, clean, and cap mast arm.
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. Joseph McMahon
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Mr. Richard L. Daff
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The Power Company Representative is:
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Mr. Bernie Thurman
7317 Parkway Drive South
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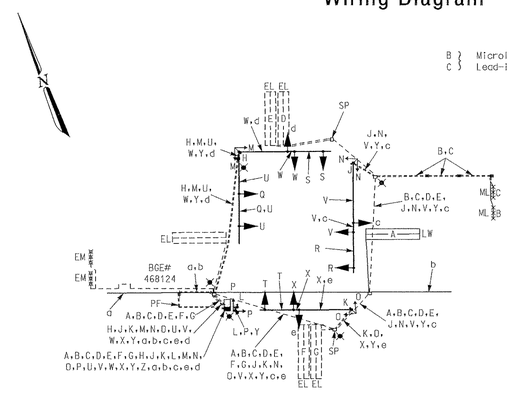
410-859-9030

Phase Chart

Phase 2 & 6	G	G	G	G	G	R	R	R	R	R	R	WK	DW	
Ped Clearance	G	G	G	G	G	R	R	R	R	R	R	FL/DW	DW	
2 & 6 Change	Y	Y	Y	Y	Y	R	R	R	R	R	R	DW	DW	
Phase 4 & 8	R	R	R	R	R	G	G	G	G	G	G	DW	DW	
4 & 8 Change	R	R	R	R	R	Y	Y	Y	Y	Y	Y	DW	DW	
Phase Alt 4 & Alt 8	R	R	R	R	R	G	G	G	G	G	G	DW	WK	
Ped Clearance	R	R	R	R	R	G	G	G	G	G	G	DW	FL/DW	
Alt 4 & Alt 8 Change	R	R	R	R	R	Y	Y	Y	Y	Y	Y	DW	DW	
Flashing Operation	FL/Y	FL/Y	FL/Y	FL/Y	FL/Y	FL/R	FL/R	FL/R	FL/R	FL/R	FL/R	DARK	DARK	

Wiring Diagram



B } Microloop Probe
C } Lead-in Cable

A, E, F, D } 2-Conductor Cable (Aluminum Shielded)

H, J, K, L } 2-Conductor Electrical Cable (No. 14 A.W.G.)

M, Q, N, R, O, S, P, T } 5-Conductor Electrical Cable (No. 14 A.W.G.)

U, c, V, d, W, e, X } 7-Conductor Electrical Cable (No. 14 A.W.G.)

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

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

a — Existing Interconnect Cable (Old Court Rd. - Courtleigh Dr. Run)

b — 12-Pair Voice Grade Telemetry Interconnect Cable (No. 19 A.W.G.) (Courtleigh Dr. - Rolling Rd. Run)

EL — Existing Loop Detector Wire

EM — Existing Microloop Probe

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

ML — Existing Microloop Probe

SP — Splice Loop Wire To New Aluminum Shielded Cable

PF — Proposed 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 Courtleigh Drive

DRAWN BY:	J.E.S.	F.A.P. NO.	SEE TITLE SHEET	TS NO. 3971	SHEET NO.
CHECKED BY:		S.H.A. NO.	BA273A22		
SCALE:	N/A	COUNTY:	Baltimore	T.I.M.S. NO. XXX	6 OF 8
DATE:	December 16, 1999	LOG MILE:	03026006.59		

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