PROJECT DESCRIPTION

I. GENERAL

This project involves the installation of a new Traffic Control Signal at US 13 (Bus.) and Pollitt Drive (Wal-Mart Ent) and the re-cutting of loop detectors affected by the new geometrics at US 13 (Bus.) MD 513 (Cedar Lane) in Wicomico County. The existing interconnect cable along US 13 (Bus.) shall be cut and pulled back into the proposed cabinet at the Wal-Mart Entrance. New interconnect cable will be installed between Pollitt Dr.(Wal-Mart Ent.) and MD 513. The street lighting is existing at Cedar Lane and shall be provided at Pollitt Dr.(Wal-Mart Ent.).

US 13 (Business) is assumed to run in a north-south direction.

II. INTERSECTION OPERATION

US 13 (Bus.) and MD 513 (Cedar Lane)

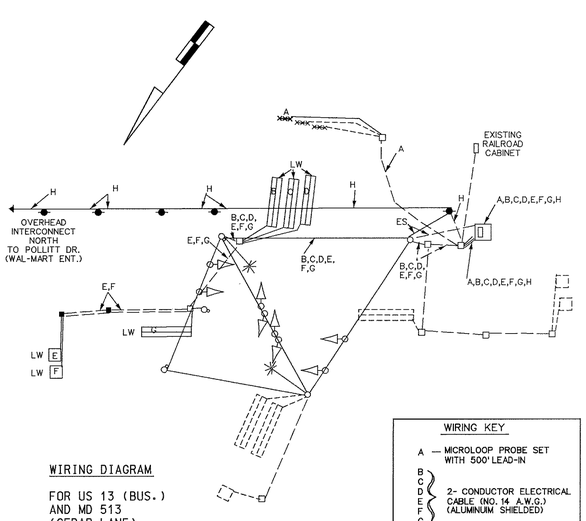
1. The intersection operation at US 13 (Bus.) and MD 513 (Cedar Lane) shall remain the same.
2. The existing base- mounted cabinet shall be utilized for the installation of new interconnect cable.

US 13 (Bus.) and Pollitt Drive (Wal-Mart Ent.)

1. The intersection at Pollit Dr.(Wal-Mart Ent.) is to operate in a NEMA two- phase semi-actuated mode (half signal). With US 13 (Bus.) northbound approach being stopped for the traffic entering Pollitt Dr. (Wal-Mart Ent.). Railroad pre-emption is mainline green.
2. A full-traffic-actuated, eight-phase controller with one (1) four-channel, rack mount loop detector amplifiers,and detector rack power supply and all necessary equipment housed in a NEMA size "6 " base-mounted cabinet shall be installed at this intersection.

III. SPECIAL NOTES:

1. All field wiring to the existing controller cabinet shall be terminated to the appropriate controller cabinet connector by the Contractor and labeled. All other controller cabinet wiring will be performed by the S.H.A. Signal Shop. Contact Mr. Ed Rodenhizer at (410) 787-7650 seventy-two (72) hours in advance of intended work.



WIRING DIAGRAM

FOR US 13 (BUS.) AND MD 513 (CEDAR LANE)

WIRING KEY

A — MICROLOOP PROBE SET WITH 500' LEAD-IN

B, C, D, E, F, G — 2- CONDUCTOR ELECTRICAL CABLE (NO. 14 A.W.G.) (ALUMINUM SHIELDED)

H — 12-PAIR, VOICE GRADE COMMUNICATION CABLE

LW — LOOP WIRE (NO. 14 A.W.G.)

ES — MAINTAIN EXISTING ELECTRICAL SERVICE

NOTE: ALL EXISTING ELECTRICAL NOT INDENTIFIED SHALL BE MAINTAINED.

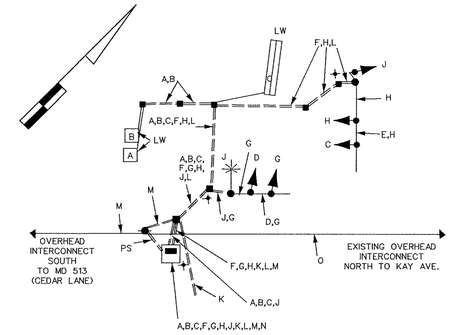
EQUIPMENT LIST

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

QUANTITY	SPEC. SECTION	DESCRIPTION
L.S.	106	Mobilization
L.S.	106	Maintenance of traffic.
300 S.F.	104	Temporary traffic signs.
15 U.D.	105	Flashing arrow panels.
2 C.Y.	204	Test pit excavation.
8 C.Y.	801	Furnish and install concrete for signal foundation.
1 EA.	818	Furnish and install 27' steel pole with a 38' (cut to 26') mast arm. (Note: 4 anchor bolts will be 1½" x 60").
1 EA	818	Furnish and install 27' steel pole with a 50' mast arm (Note: 4 anchor bolts will be 1¾" x 90").
35 S.F.	813	Ground mounted sheet aluminum signs to consist of:
		1 EA. R6-1R " ONE WAY" sign, (36" x 12")
		2 EA. W3-3 "NEW SIGNAL AHEAD" sign, (48" x 48")
30 S.F.	813	Overhead mounted sheet aluminum signs to consist of:
		1 EA. D2-3 "ARROW Pollitt DR/ Pollitt DR ARROW" dual faced sign, (variable x 16") mast arm mounted.
		1 EA. R10-10 "LEFT TURN SIGNAL" sign, (24" x 30") pole mounted.
		1 EA. R3-5R "RIGHT TURN ONLY" sign, (30" x 36") span wire mounted.
		1 EA. M3-1 "NORTH" (30" x 15"), M4-3 "BUSINESS" (30" x 15"), M1-4 "US 13" (30" x 30"), M5-1 "RIGHT ARROW" (30" x 24") signs, manufactured in one panel (120" x 30") pole mounted.
1 EA.	951	Furnish and install 24" white, heat applied permanent preformed thermoplastic pavement marking material.
1 EA.	951	Furnish and install railroad crossing, heat applied permanent preformed thermoplastic pavement marking material.(All inclusive - see typical on sheet 2 of 5).
210 L.F.	951	Furnish and install heat applied permanent preformed thermoplastic pavement marking arrow.
3 EA.	951	Furnish and install heat applied permanent preformed thermoplastic pavement marking letter.
4 EA.	814	12", one-way, three-section (R,Y,G) traffic signal head with adjustable bracket for mast arm mounting and tunnel visors.
1 EA.	814	12" , one-way, three-section (RA,YA,GA) traffic signal head with adjustable brackets for pole mounted and tunnel visors. 3M OPTICALLY PROGRAMMED
1 EA.	816	Eight-phase, full-traffic-actuated, solid state digital controller with one (1) 4-channel, rack mount loop detector amplifiers with detector rack power supply, and all necessary equipment housed in a NEMA size "6" base-mounted cabinet.

EQUIPMENT LIST (CON'T.).

QUANTITY	SPEC. SECTION	DESCRIPTION
1100 L.F.	815	Furnish and install sawcut (loop detector).
125 L.F.	805	Furnish and install 1" galvanized steel electrical conduit (detector wire sleeve).
825 L.F.	805	Furnish and install 3" polyvinyl chloride electrical conduit (Schedule 80) (trenched).
40 L.F.	805	Furnish and install 4" polyvinyl chloride electrical conduit (Schedule 80) (trenched).
122 L.F.	805	Furnish and install 4" polyvinyl chloride electrical conduit (Schedule 80) (bored).
9 EA.	811	Furnish and install handhole (frame and cover).
235 L.F.	804	Furnish and install No.6 A.W.G. stranded bare copper ground wire.
3 EA.	804	Furnish and install ground rod (3/4"dia. x 10" length).
4100 L.F.	810	Furnish and install loop wire (No. 14 A.W.G.) encased in¼" flexible tubing.
4130 L.F.	810	Furnish and install 2-conductor electrical cable (No. 14 A.W.G.) (aluminum shielded).
110 L.F.	810	Furnish and install 3-conductor electrical cable (No. 14 A.W.G.).
60 L.F.	810	Furnish and install 5-conductor electrical cable (No. 14 A.W.G.).
600 L.F.	810	Furnish and install 7-conductor electrical cable (No. 14 A.W.G.).
120 L.F..	810	Furnish and install 2-conductor electrical cable (No. 12 A.W.G.) typeTHHN tray cable.
1 EA.	807	Furnish and install control and distribution equipment.
1280 L.F.	810	Furnish and install 12-pair, voice grade communication cable, (overhead).
30 L.F.	810	Furnish and install 3 - wire electrical cable (No. 4 A.W.G.).
1 EA.	806	Furnish and install 250 watt HPS luminaire with photo cell.
1 EA.	808	Furnish and install 10' lighting bracket arm for traffic signal structure.
72 L.F.	812	Furnish and install wood post support (4" x 6").
18 L.F.	812	Furnish and install wood post support (4" x 4").
2 EA.		Remove existing handhole.
1080 L.F.		Remove existing interconnect cable.
200 S.F.		Relocate existing interconnect cable.
1 EA.		Furnish and install microloop probe set with 500' lead-in.



WIRING DIAGRAM

FOR US 13 (BUS.) AND POLLITT DR. (WAL-MART ENT.)

WIRING KEY

A, B, C — 2- CONDUCTOR ELECTRICAL CABLE (NO. 14 A.W.G.) (ALUMINUM SHIELDED)

D, E — 5- CONDUCTOR ELECTRICAL CABLE (NO. 14 A.W.G.)

F, G, H — 7- CONDUCTOR ELECTRICAL CABLE (NO. 14 A.W.G.)

J — 2- CONDUCTOR (NO. 12 A.W.G.) TRAY TYPE THHN CABLE

K — 3- CONDUCTOR ELECTRICAL CABLE (NO. 14 A.W.G.)

L — STRANDED BARE COPPER GROUND WIRE (NO. 6 A.W.G.)

M — 12-PAIR, VOICE GRADE COMMUNICATION CABLE

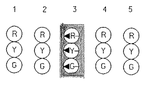
N — 3- WIRE ELECTRICAL CABLE (NO.4 A.W.G.) THHN/THWN

O — 12-PAIR, VOICE GRADE COMMUNICATION CABLE

LW — LOOP WIRE (NO. 14 A.W.G.)

PS — PROPOSED UNDERGROUND SERVICE FROM CONNECTIV POWER

GROUND ROD (3/4" DIA. X 10')



PHASE 1	R	R	G	G	G	
1 CHANGE	R	R	Y	Y	Y	
PHASE 2	G	G	R	R	R	
2 CHANGE	Y	Y	R	R	R	
PRE-EMPTION	G	G	R	R	R	
PRE-EMP CHANGE	Y	Y	R	R	R	
FLASHING OPERATION	FL/Y	FL/Y	FL/RA	FL/R	FL/R	

PHASE CHART

FOR US 13(BUS.) AND POLLITT DR. (WAL-MART ENT.)

STREET TRAFFIC STUDIES, LTD.
400 Crain Highway
Glen Burnie, Maryland 21061
Ph (410) 590-5500
Fax (410) 590-6637

3634GI.DGN

MARYLAND DOT - STATE HIGHWAY ADMINISTRATION
Office of Traffic & Safety
TRAFFIC ENGINEERING DESIGN DIVISION

GENERAL INFORMATION SHEET

US 13 (BUS.) AND MD513 NORTH TO POLLITT DRIVE

DRAWN BY: Milesky	F.A.P. NO.		TS NO. 3979-GI	SHEET NO. 4 OF 4
CHECKED BY: RRZ JCT	S.H.A. NO.	BW996M82		
SCALE: N\A MAR	COUNTY:	WICOMICO	T.I.M.S. NO. D-593	
DATE: 1/3/00	LOG MILE:			

JAN 03 2003