PROJECT DESCRIPTION

I. GENERAL

This project involves the installation of pedestrian movements for the north, west and east legs of the intersection of MD 4 (Pennsylvania Ave.) and Donnell Drive in Prince George's County. In addition, a traffic signal for the northbound approach of MD 4 shall be removed from the strain pole and installed onto the existing span wire. All traffic signals on this span wire shall be upgraded to black faced. The existing traffic signal has street lighting and is part of the MD 4 Interconnect System. MD 4 is assumed to run in a north-south direction.

II. INTERSECTION OPERATION

1. The intersection will continue to operate in a NEMA (6) six -phase, fully-acuated made. Exclusive left turns for both MD 4 approaches shall remain in operation. The MD 4 through approaches shall continue to run concurrently. The Donnell Drive approaches shall continue to operate as a split phase. A pedestrian phase with pushbutton actuation shall be provided across the north leg of MD 4. Pedestrian phases across both legs of Donnell Drive shall be provided and shall be on recall.

2. An eight-phase, full-traffic-actuated, ASC II local controller with four (4) four-channel, rack mount loop detector amplifiers, detector rack power supply, opticom card rack with discriminator module housed in a NEMA size "6" base-mounted cabinet shall be installed at this intersection on the existing cabinet's foundation.

III. SPECIAL NOTES

1. The Contractor shall be responsible for terminating all signal cables, excluding interconnect, to the appropriate terminals and shall properly label each cable.

2. All controller cabinet wiring will be performed by the S.H.A. Signal Shop Contact Mr. Ed Radenbizer(Dave Swartz) at (410) 787-7650 seventy-two hours in advance of intended work.

The following contact persons for District #3 are as follows:

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

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

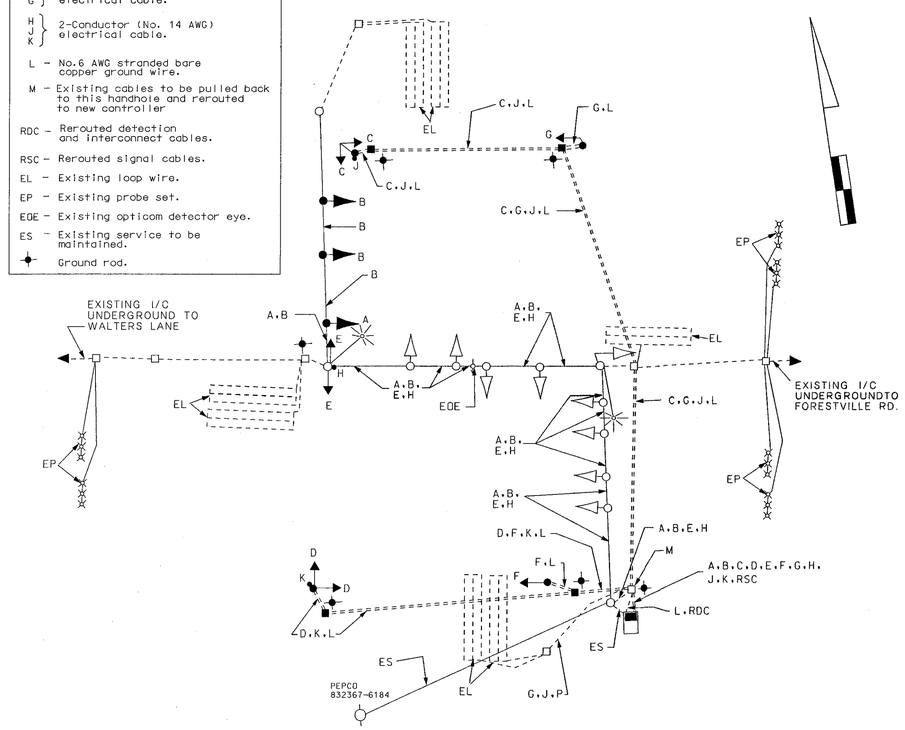
Mr. Augie Rebish
Assistant District Engineer - Utility
Phone: (301) 513-7350

Mr. Richard L. Daff, Sr.
Chief, Traffic Operations Division
Phone: (410) 787-7630

Wiring Key

- A, B, C, D, E — 5-Conductor (No. 14 AWG) electrical cable.
- F, G — 3-Conductor (No. 14 AWG) electrical cable.
- H, J, K — 2-Conductor (No. 14 AWG) electrical cable.
- L – No.6 AWG stranded bare copper ground wire.
- M – Existing cables to be pulled back to this handhole and rerouted to new controller
- RDC – Rerouted detection and interconnect cables.
- RSC – Rerouted signal cables.
- EL – Existing loop wire.
- EP – Existing probe set.
- EOE – Existing opticom detector eye.
- ES – Existing service to be maintained.
- Ground rod.

WIRING DIAGRAM

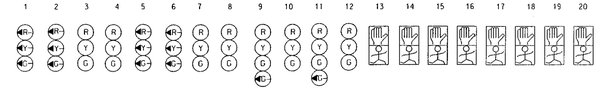


EQUIPMENT LIST

A. EQUIPMENT TO BE FURNISHED BY THE SHA AND INSTALLED BY THE CONTRACTOR.

ITEM NO.	QUANTITY	DESCRIPTION
9001	1 EA	Detector rack power supply (To be instaled by SHA forces)
9016	4 EA	Detector amplifier 4-channel rack mount (To be installed into the existing cabinet by S.H.A. Forces).
9042	1 EA	Controller ASC II with telemetry with card rack, two detector panels, opticom rack card and discriminator module.
9044	1 EA	Controller cabinet, size "6"
9571	59.5 SF	Sheet aluminum signs to consist of:
	1 EA	R4-7 "Keep Right Symbol" (24"x 30") pole-mounted sign.
	1 EA	M3-3 "SOUTH"(30"x15"), M1-5 "MD 4"(36"x36"), M6-1 "left arrow"(30"x24"), shield assembly pole-mounted sign (total size 36"x75")
	1 EA	M3-4 "NORTH"(30"x15"), M1-5 "MD 4"(36"x36"), M6-1 "left arrow"(30"x24"), shield assembly pole-mounted sign (total size 36"x75")
	1 EA	M3-4 "NORTH"(24"x12"), M1-5 "MD 4"(24"x24"), M6-1 "right arrow"(21"x15"), shield assembly pole-mounted sign (total size 24"x51")
	1 EA	M3-2 "SOUTH"(24"x12"), M1-5 "MD 4"(24"x24"), M6-1 "right arrow"(21"x15"), shield assembly pole-mounted sign (total size 24"x51")
9572	10 SF	Sheet aluminum signs to consist of: (Green)
	1 EA	D3-2 "Pennsylvania AVE" dual faced span-mounted sign VECHICLES WHEN FLASHING (varible X 16")

PHASE CHART



	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
PHASE 1 & 5	G	G	R	R	G	G	R	R	R	R	R	R	DW	DW	DW	DW	DW	DW	DW	DW
1 CHANGE	CHANGE TO PHASE 1 & 6 OR PHASE 2 & 5																			
PHASE 1 & 6	G	G	G	G	R	R	R	R	R	R	R	R	DW	WK	WK	DW	DW	DW	DW	DW
1 CHANGE	Y	Y	G	G	R	R	R	R	R	R	R	R	DW	WK	WK	DW	DW	DW	DW	DW
PHASE 2 & 5	R	R	R	R	G	G	G	G	R	R	R	R	WK	DW	DW	WK	DW	DW	DW	DW
5 CHANGE	R	R	R	R	Y	Y	G	G	R	R	R	R	WK	DW	DW	WK	DW	DW	DW	DW
PHASE 2 & 6	R	R	G	G	R	R	G	G	R	R	R	R	WK	WK	WK	WK	DW	DW	DW	DW
PED CLEARANCE	R	R	G	G	R	R	G	G	R	R	R	R	FL/DW	FL/DW	FL/DW	FL/DW	DW	DW	DW	DW
2 & 6 CHANGE	R	R	Y	Y	R	R	Y	Y	R	R	R	R	DW	DW	DW	DW	DW	DW	DW	DW
PHASE 3	R	R	R	R	R	R	R	R	R	R	G/G	G	DW	DW	DW	DW	DW	DW	DW	DW
3 CHANGE	R	R	R	R	R	R	R	R	R	R	Y	Y	DW	DW	DW	DW	DW	DW	DW	DW
PHASE 4	R	R	R	R	R	R	R	R	G/G	G	R	R	DW	DW	DW	DW	DW	DW	DW	DW
4 CHANGE	R	R	R	R	R	R	R	R	Y	Y	R	R	DW	DW	DW	DW	DW	DW	DW	DW
ALT PHASE 3	R	R	R	R	R	R	R	R	R	R	G/G	G	DW	DW	DW	DW	WK	WK	WK	WK
PED CLEARANCE	R	R	R	R	R	R	R	R	R	R	G/G	G	DW	DW	DW	DW	FL/DW	FL/DW	FL/DW	FL/DW
ALT 3 CHANGE	R	R	R	R	R	R	R	R	R	R	Y	Y	DW	DW	DW	DW	DW	DW	DW	DW
FLASHING OPERATION	FL/RA	FL/RA	FL/Y	FL/Y	FL/RA	FL/RA	FL/Y	FL/Y	FL/R	FL/R	FL/R	FL/R	DARK	DARK	DARK	DARK	DARK	DARK	DARK	DARK

EQUIPMENT LIST cont.

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

ITEM NO	QUANTITY	DESCRIPTION
1001	2 EA	Maintenance of traffic per assignment.
2001	6 C.Y.	Class 2 excavation.
2002	4 C.Y.	Test pit excavation.
5004	460 L.F.	12" white heat applied permanent preformed thermoplastic pavement marking.
6002	110 L.F.	Standard type A combination curb and gutter 12" gutter pan 8" depth.
6004	560 S.F.	4" concrete sidewalk.
8005	1 EA	Adjust and re-ring existing span wire.
8010	16 EA	Furnish and install 12" pedestrian signal head section
8011	9 EA	Furnish and install 12" traffic signal head section
8030	4 EA	10' pedestal pole with breakaway base.
8032	3 EA	Pedestrian pushbutton and R10-3C sign. (Note: Sign to read "PUSHBUTTON TO CROSS MD 4".)
8042	1 EA	Remove and disposal of the materials and equipment.
8051	55 L.F.	Furnish and install 3" schedule 80 rigid polyvinyl chloride conduit - trenched
8052	385 L.F.	Furnish and install 4" schedule 80 rigid polyvinyl chloride conduit - bored
8053	20 L.F.	Furnish and install 4" schedule 80 rigid polyvinyl chloride conduit - trenched
8059	3 C.Y.	Furnish and install concrete for signal foundation.
8062	700 L.F.	Furnish and install No. 6 AWG stranded bare copper ground wire.
8074	4 EA	Furnish and install electrical handhole.
8077	69.5 S.F.	Install overhead sign.
8082	4 EA	Furnish and install ground rod -¾" x 10'.
8084	745 L.F.	Furnish and install electrical cable - 2 conductor (No. 14 AWG).
8085	300 L.F.	Furnish and install electrical cable - 3 conductor (No. 14 AWG).
8086	1090 L.F.	Furnish and install electrical cable -5 conductor (No. 14 AWG).
8095	1 EA	Install controller and cabinet base-mounted.
Neg.	lump sum	Pull back and reroute signal cables
Neg.	1 EA	Furnish and install concrete collar and lid.
Neg.	1 EA	Furnish and install 2" weatherhead.
Neg.	1 EA	Furnish and install 2" blind coupling.
Neg.	2 EA	Pedestrian education R10-3C sign. (Top portion to be left blank).

C. EQUIPMENT TO BE REMOVED.

ALL REMOVED SIGNAL MATERIALS ARE TO BECOME PROPERTY OF THE CONTRACTOR.

STREET TRAFFIC STUDIES, LTD.
420 Crain Hwy. N.W.
Glen Burnie, MD 21061
Ph (410) 590-5500
Fax (410) 590-5637
4126.DGN TASK-38

MARYLAND DOT - STATE HIGHWAY ADMINISTRATION
Office of Traffic & Safety
TRAFFIC ENGINEERING DESIGN DIVISION
MD 4(PENNSYLVANIA AVE.) AND DONNELL DR.
GENERAL INFORMATION SHEET

DRAWN BY: E.MILESKY	F.A.P. NO.	AC-STPG-000S(786)E	TS NO. 4159A	SHEET NO. 2 OF 2
CHECKED BY: RRZ	S.H.A. NO.	~~PG-192A/ARE PEE~~ ~~PG-193A/ARE BCE~~		
SCALE: NONE	COUNTY:	PRINCE GEORGE'S	T.I.M.S. NO. F 018	
DATE: 5/22/02	LOG MILE:	16000410.40		