PROJECT DESCRIPTION

I. General

This project involves the modification of an existing traffic control signal in conjunction with geometric improvements at the intersection of Georgia Avenue (MD 97) and Olney Sandy Spring Road/Laytonsville Road (MD 108) in Montgomery County, Maryland. MD 97 is assumed to run in a North-South direction.

II. Intersection Operation

The phasing operation will be changed from a split phase on MD 97 to a concurrent phase. Both Northbound and Southbound left turns will be exclusive only.

III. Special Notes

1. Maintenance of traffic will be handled by the Contractor utilizing the following standard plates for traffic control: 104.00-13, 104.00-19, 104.00-21 - 104.00-24, 104.17-02, 104.39-02, 104.4-02, 104.41-02, 104.48-02, 104.49-02, 104.81-01
2. The following contact persons for the project are as follows:

Mr. Richard L. Daff, Sr. Chief, Traffic Operations Design Division Phone # (410) 787-7630	Mr. Robert Gonzales Engineer III (Montgomery County) Phone # (240) 777-8761
Mr. Raleigh Medley Asst. District Engineer - Maintenance Phone # (301) 513-7304	Mr. Augestine Rebish Asst. District Engineer - Utility Phone # (301) 513-7350
Mr. Lee Starkloff District Engineer - Traffic Phone # (301) 513-7358	Mr. Ed Rodenhizer Signal Shop Supervisor Phone # (410) 787-7652

3. ALL DISCONNECTING AND CONNECTING OF TRAFFIC SIGNAL INTERCONNECT CABLE SHALL BE THE RESPONSIBILITY OF THE MONTGOMERY COUNTY DPW&T. CONTACT MR. ROBERT GONZALES AT (240) 777-8761 AT LEAST 72 HOURS PRIOR TO INITIATING ANY CONSTRUCTION WORK

EQUIPMENT LIST A.

EQUIPMENT TO BE FURNISHED BY SHA.

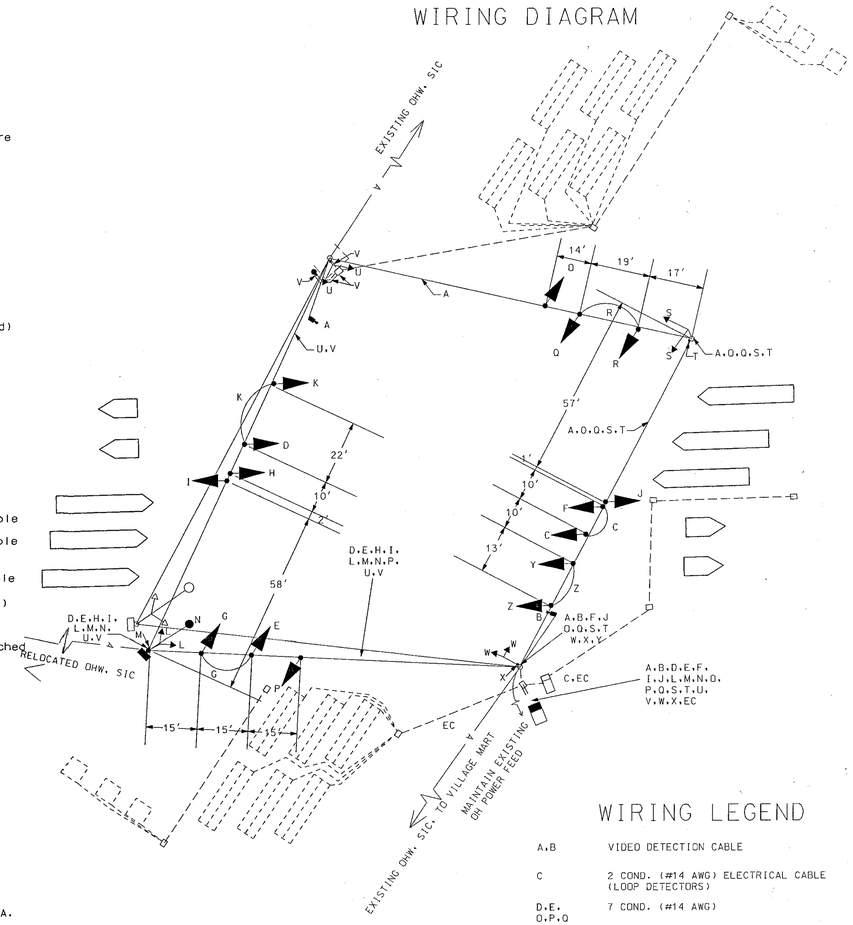
ITEM NO.	QUANTITY	UNITS	DESCRIPTION
	1	EA	Furnish non-inventory 32' strain pole and anchor bolts (Note: four - 1 3/4in. x 90 in. anchor bolts.)
9504	140	SF	Furnish sheet aluminum signs consisting of: 3 EA R3-5L (30"x36") 6 EA D3-2 DUAL FACED (16"xVAR") 1 EA R3-5R (30"x36") 1 EA R3-6 (30"x36") 2 EA R10-12 (30"x36") 1 EA M3-2 (24"X12") 1 EA M1-5 (30"X24") 1 EA M6-1 (21"X15")
	1	LS	Remove and relocate existing TMC camera assembly, mast arm, and cabinet (by Montgomery County).
9084	1	EA	Furnish Size 6 Cabinet, Montgomery Co., with LAU and video interface
9042	1	EA	Furnish controller ASC II with telemetry module

EQUIPMENT LIST B.

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

ITEM NO.	QUANTITY	UNITS	DESCRIPTION
1001	LS	LS	Maintenance of Traffic.
2002	4	CY	Test pit excavation
6004	25	SF	4 inch concrete sidewalk
8001	1	EA	Furnish and install video detection cable (250 ft.)
8003	1	EA	Furnish and install video detection cable (500 ft.)
8006	1	EA	Cut, clean & cap traffic signal structure
8010	8	EA	Furnish and install 12 in., one way pedestrian signal head section
8011	47	EA	Furnish and install 12 in. vehicle signal head section.
8013	2	EA	Furnish and install 15' Bracket Arm for Signal Structure
8019	6	EA	Furnish and install 8" vehicle signal head section
8030	1	EA	Furnish and install ped pole
8032	4	EA	Furnish and install pedestrian push button assemblies, and sign.
8041	1	EA	Install 32' steel strain pole and anchor bolts (Note: four - 1 3/4in. x 90 in. anchor bolts.)
8048	LS	LS	Remove and dispose of existing signal equipment.
8049	2	EA	Furnish and install video detection camera.
8053	20	LF	Furnish and install 4" schedule 80 PVC conduit (trenched)
8057	4.5	CY	Concrete for signal pole foundation.
8058	18	EA	Furnish and install wood sign supports 4"x4"
8060	150	LF	Furnish and install stranded bare copper ground wire (#6 AWG)
8074	9.2	SF	Install ground-mounted sign.
8075	130	SF	Install overhead sign.
8080	1	EA	Furnish and install 3/4in. diameter X 10 ft. ground rod
8082	775	LF	Furnish and install 2-conductor (#14 AWG) electrical cable
8084	1600	LF	Furnish and install 5-conductor (#14 AWG) electrical cable
8085	1100	LF	Furnish and install 7-conductor (#14 AWG) electrical cable
8089	275	LF	Furnish and install steel tether wire (1/4 inch diameter)
8090	275	LF	Furnish and install steel span wire (3/8 inch diameter)
8091	30	LF	Furnish and install 2 inch PVC Electrical Conduit - Trenched
8093	1	EA	Install controller and cabinet, base mount.
NEG	LS	LS	Mobilization.
NEG	100	LF	Pull Back and Reroute Existing Cables.

WIRING DIAGRAM



WIRING LEGEND

A.B	VIDEO DETECTION CABLE
C	2 COND. (#14 AWG) ELECTRICAL CABLE (LOOP DETECTORS)
D.E. O.P.Q	7 COND. (#14 AWG)
F.G.H. I.J.K.R	5 COND. (#14 AWG)
L.S.U.W	5 COND. (#14 AWG) (PED HEADS)
M.T.V.X	2 COND. (#14 AWG) (PUSH BUTTONS)
N	TMC WIRING (RELOCATED) OR NEW BY OTHERS
EC	EXISTING CABLE

PHASE CHART

	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16,18	17,19	20,22	21,23
Phase 1 & 5	◄R-	◄R-	◄R-	R	R	◄R-	◄R-	R	R	◄G-R	◄G-R	R	◄G-R	◄G-R	R	DW	DW	DW	DW
1 & 5 Change	THE CONTROLLER MAY SKIP TO PHASES 1 & 6 OR 2 & 5 OR 2 & 6															DW	DW	DW	DW
Phase 1 & 6	◄R-	◄R-	◄R-	R	R	◄R-	◄R-	R	R	◄G-G	◄G-G	G	R	R	R	DW	DW	W	DW
1 Change	◄R-	◄R-	◄R-	R	R	◄R-	◄R-	R	R	◄Y-G	◄Y-G	R	R	R	R	DW	DW	W	DW
Phase 2 & 5	◄R-	◄R-	◄R-	R	R	◄R-	◄R-	R	R	R	R	R	◄G-G	◄G-G	G	DW	DW	DW	W
5 Change	◄R-	◄R-	◄R-	R	R	◄R-	◄R-	R	R	R	R	R	◄Y-G	◄Y-G	G	DW	DW	DW	W
Phase 2 & 6	◄R-	◄R-	◄R-	R	R	◄R-	◄R-	R	R	G	G	G	G	G	G	DW	DW	W	W
Ped. Clear	◄R-	◄R-	◄R-	R	R	◄R-	◄R-	R	R	G	G	G	G	G	G	DW	DW	FL/DW	FL/DW
2 & 6 Change	◄R-	◄R-	◄R-	R	R	◄R-	◄R-	R	R	Y	Y	Y	Y	Y	Y	DW	DW	DW	DW
Phase 3 & 7	◄G-	◄G-	◄G-	R	R	◄G-	◄G-	R	R	R	R	R	R	R	R	DW	DW	DW	DW
3 & 7 Change	THE CONTROLLER MAY SKIP TO PHASES 3 & 8 OR 4 & 7 OR 4 & 8																		
Phase 3 & 8	◄G-	◄G-	◄G-	G	G	◄G-	◄G-	R	R	R	R	R	R	R	R	DW	DW	DW	DW
3 Change	◄Y-	◄Y-	◄Y-	G	G	◄Y-	◄Y-	R	R	R	R	R	R	R	R	DW	DW	DW	DW
Phase 4 & 7	◄R-	◄R-	◄R-	R	R	◄R-	◄R-	G	G	R	R	R	R	R	R	DW	DW	DW	DW
7 Change	◄R-	◄R-	◄R-	R	R	◄R-	◄R-	G	G	R	R	R	R	R	R	DW	DW	DW	DW
Phase 4 & 8	◄R-	◄R-	◄R-	G	G	◄R-	◄R-	G	G	R	R	R	R	R	R	DW	DW	DW	DW
4 & 8 Change	◄R-	◄R-	◄R-	Y	Y	◄R-	◄R-	Y	Y	R	R	R	R	R	R	DW	DW	DW	DW
4 & 8 Alt.	◄R-	◄R-	◄R-	G	G	◄R-	◄R-	G	G	R	R	R	R	R	R	WK	WK	DW	DW
Ped. Clear'	◄R-	◄R-	◄R-	G	G	◄R-	◄R-	G	G	R	R	R	R	R	R	FL/DW	FL/DW	DW	DW
4 & 8 Change	◄R-	◄R-	◄R-	Y	Y	◄R-	◄R-	Y	Y	R	R	R	R	R	R	DW	DW	DW	DW
Flashing Operation	FL/◄R-	FL/◄R-	FL/◄R-	FL/R	FL/R	FL/◄R-	FL/◄R-	FL/R	FL/R	FL/Y	FL/Y	FL/Y	FL/Y	FL/Y	FL/Y	Dark	Dark	Dark	Dark

EQUIPMENT LIST C.

EQUIPMENT TO BE REMOVED AND RETURNED TO SHA.

QUANTITY	UNITS	SPECIFICATION SECTION	DESCRIPTION
None:	All materials removed by the contractor shall become property of the contractor		

WELLS & ASSOCIATES, LLC

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Phone: (703) 917-6620 Fax: (703)917-0739
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MARYLAND DOT - STATE HIGHWAY ADMINISTRATION
Office of Traffic & Safety

TRAFFIC ENGINEERING DESIGN DIVISION

TRAFFIC SIGNAL MODIFICATION PLAN

MD 97 (GEORGIA AVENUE) &
MD 108 (OLNEY SANDY SPRING ROAD)

DRAWN BY: WT	F.A.P. NO. ---		TS NO. 1218F	SHEET NO.	
CHECKED BY: CT	S.H.A. NO. MD 97/MD 108				
SCALE: NTS	COUNTY: MONTGOMERY		T.I.M.S. NO. F464	2 OF 2	
DATE: 5/7/03	LOG MILE: 15.00-97/11.89				