PROJECT DESCRIPTION

I. General

This project involves the reconstruction of an existing traffic control signal in conjunction with geometric improvements at the intersection of Rock Spring Drive at MD 187 (Old Georgetown Road) in Montgomery County, Maryland. MD 187 is assumed to run in a North-South direction.

II. Intersection Operation

The intersection will operate in a NEMA six-phase fully traffic-actuated mode with northbound and southbound exclusive left-turn phases for MD 187. Eastbound Rock Spring Drive and westbound private drive shall each operate in a split phase.

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 District #3 are as follows:

Mr. Randy Brown
Asst. District Engineer-Maintenance
Phone #(301) 513-7304

Mr. Joe Geckel
Asst. District Engineer-Utility
Phone #(301) 513-7350

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

Mr. Lee Starkloff
Asst. District Engineer-Traffic
Phone # (301) 513-7318

A. EQUIPMENT LIST

EQUIPMENT TO BE FURNISHED BY ADMINISTRATION

QUANTITY -- None

B. EQUIPMENT LIST

EQUIPMENT TO BE FURNISHED AND INSTALLED BY THE CONTRACTOR

QUANTITY	UNITS	SPECIFICATION SECTION	DESCRIPTION
LS	LS	104	Maintenance of Traffic.
LS	LS	814	Mobilization.
3	CY	205	Test pit excavation.
300	LF	555	Remove existing pavement marking any width
12	LF	555	Furnish and install 24 in. white thermoplastic, heat-applied, pavement marking tape.
200	LF	555	Furnish and install 5 in. white thermoplastic, heat-applied, pavement marking tape.
220	LF	555	Furnish and install 12 in. white thermoplastic, heat-applied, pavement marking tape.
4	EA	555	Furnish and install permanent preformed pavement marking tape arrow.
11	CY	801	Furnish and install concrete for signal foundation.
5	EA	804	Furnish and install ground rod -¾ in. diameter X 10 ft.
325	LF	805	Furnish and install 4 in. schedule 80 rigid PVC conduit (slotted).
20	LF	805	Furnish and install 3 in. schedule 80 rigid PVC conduit (trenched).
10	LF	805	Furnish and install 2 in. schedule 80 rigid PVC conduit (trenched).
2	EA	806	Furnish and install 250 watt high pressure sodium lamp and luminaire with photo cell.
350	LF	810	Furnish and install 2-conductor electrical copper-type Cable (No. 12 AWG).
1600	LF	810	Furnish and install 5-conductor electrical cable (No. 14 AWG).

EQUIPMENT LIST

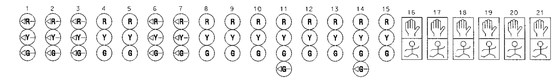
EQUIPMENT TO BE FURNISHED AND INSTALLED BY THE CONTRACTOR.

QUANTITY	UNITS	SPECIFICATION SECTION	DESCRIPTION
450	LF	810	Furnish and install 7-conductor electrical cable (No. 14 AWG).
375	LF	810	Furnish and install No. 6 AWG standard bare copper ground wire.
LS	LS	810	Re-route existing 25 pair interconnect cable.
4	EA	811	Furnish and install electrical handhole.
6	EA	813	Install ground-mounted signs.
108	SF	813	Install overhead signs - for signals.
150	SF	814	Furnish sheet aluminum signs consisting of: 6 EA R10-4(I) (9 in. X 12 in.) 1 EA R3-9L (30 in. X 36 in.) 3 EA R4-7 (24 in. X 30 in.) 1 EA R3-5R (30 in. X 36 in.) 2 EA W11-2 (30 in. X 30 in.) 3 EA R10-10 (24 in. X 30 in.) 1 EA R1-1 (36 in. X 36 in.) 2 EA M6-2L (21 in. X 15 in.) 6 EA D3-2 (16 in. X VAR)
49	EA	814	Furnish and install 12in. 1 way 3 vehicular traffic signal head section - mast arm mount.
6	EA	814	Furnish and install 12in. Pedestrician traffic signal head section.
1	EA	816	Furnish and install Econolite ASC II eight-phase fully actuated controller and cabinet with system package - base mount.
2	EA	817	Install pedestrian push button and R10-4(I) sign.
2	EA	818	Furnish and install 20 ft lighting arm on signal structure.
1	EA	SP	Furnish and install 27 ft. steel pole with twin 70 ft. and 70 ft. mast arms.
1	EA	SP	Furnish and install 27 ft. steel pole with twin 70 ft. and 60 ft. mast arms.
1	EA	SP	Furnish and install 14 ft. breakaway pedestal pole.
LS	LS	SP	Remove and dispose of existing signal equipment.
4	EA	814	Furnish and install Autoscope Detection Unit.
1	EA	800	Furnish and install video detection co-axial cable (500 ft).
3	EA	800	Furnish and install video detection co-axial cable (250 ft).
4	EA	xxx	Cut, clean, galvanize, and cap mast arm.

C. EQUIPMENT TO BE RETURNED TO THE ADMINISTRATION

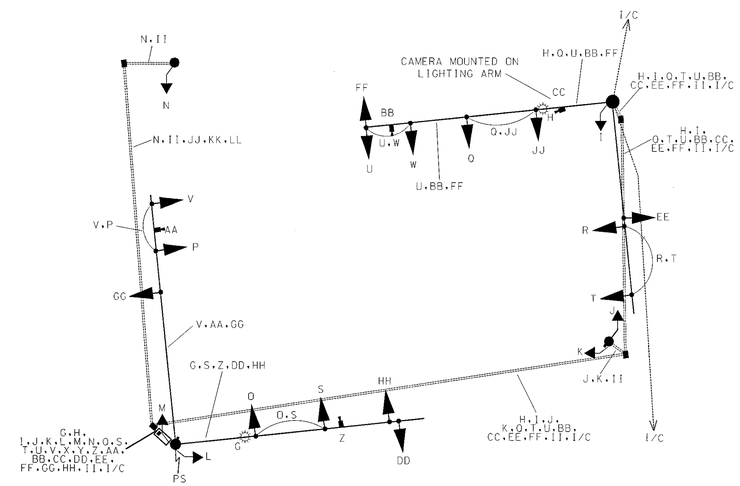
SHA FORCES SHALL REMOVE THE CONTROLLER AND ALL AUIXILLARY EQUIPMENT FROM THE CONTROLLER CABINET. THE CABINET AND ALL OTHER MATERIALS TO BE REMOVED BY CONTRACTOR SHALL BECOME THE PROPERTY OF THE CONTRACTOR.

PHASE CHART



	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21
	SR	SR	SR	R	R	SR	SR	R	R	R	R	R	R	R	R						
	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y						
	XB	XB	XB	G	G	XB	XB	G	G	G	G	G	G	G	G						
											XB			XB							
PHASE 1 + 5	G	G	G	R	R	G	G	R	R	R	R	R	R	R	R	DW	DW	DW	DW	DW	DW
1 + 5 CHANGE	1+5 CHANGE TO 1+6,2+5 or 2+6																				
PHASE 1 + 6	G	G	G	G	G	R	R	R	R	R	R	R	R	R	R	DW	DW	DW	DW	DW	DW
1 + 6 CHANGE	Y	Y	Y	G	G	R	R	R	R	R	R	R	R	R	R	DW	DW	DW	DW	DW	DW
PHASE 2 + 5	R	R	R	R	R	G	G	G	G	R	R	R	R	R	R	DW	DW	DW	DW	DW	DW
2 + 5 CHANGE	R	R	R	R	R	Y	Y	G	G	R	R	R	R	R	R	DW	DW	DW	DW	DW	DW
PHASE 2 + 6	R	R	R	G	G	R	R	G	G	R	R	R	R	R	R	W	W	W	W	DW	DW
PED CLEAR	R	R	R	G	G	R	R	G	G	R	R	R	R	R	R	FLDW	FLDW	FLDW	FLDW	DW	DW
2 + 6 CHANGE	R	R	R	Y	Y	R	R	Y	Y	R	R	R	R	R	R	DW	DW	DW	DW	DW	DW
PHASE 3	R	R	R	R	R	R	R	R	R	R	R	R	R	G	G	DW	DW	DW	DW	DW	DW
3 CHANGE	R	R	R	R	R	R	R	R	R	R	R	R	Y	Y	Y	DW	DW	DW	DW	DW	DW
PHASE 4	R	R	R	R	R	R	R	R	R	G	G	G	R	R	R	DW	DW	DW	DW	DW	DW
4 CHANGE	R	R	R	R	R	R	R	R	R	Y	Y	Y	R	R	R	DW	DW	DW	DW	DW	DW
ALT PHASE 4	R	R	R	R	R	R	R	R	R	G	G	G	R	R	R	DW	DW	DW	DW	W	W
PED CLEAR	R	R	R	R	R	R	R	R	R	G	G	G	R	R	R	DW	DW	DW	DW	FLDW	FLDW
ALT 4 CHANGE	R	R	R	R	R	R	R	R	R	Y	Y	Y	R	R	R	DW	DW	DW	DW	DW	DW
FLASHING OPERATION	FLR	FLR	FLR	FLY	FLY	FLR	FLR	FLY	FLY	FLR	FLR	FLR	FLR	FLR	FLR	DARK	DARK	DARK	DARK	DARK	DARK

WIRING DIAGRAM



WIRING LEGEND

G-H	2-CONDUCTOR ELECTRICAL COPPER-TYPE CABLE (NO. 12 AWG)
I-N	5-CONDUCTOR ELECTRICAL CABLE (NO. 14 AWG) (FOR PEDS AND/OR BUTTONS)
DD-HH	5-CONDUCTOR ELECTRICAL CABLE (NO. 14 AWG)
S-W	7-CONDUCTOR ELECTRICAL CABLE (NO. 14 AWG)
I/C	25-PAIR TWISTED INTERCONNECT CABLE (NO. 19 AWG)
BSR	POWER SERVICE (TO BE COORDINATED WITH PEPCO)
Z.AA.BB.CC	CO-AXIAL CABLE FOR AUTOSCOPE DETECTION UNIT
II	#6 BARE COPPER WIRE

DATE: AUG. 29, 2000
DES. CD | DWN. CAD
SCALE: 1" = 20'
PROJECT/FILE NO. 5805
SHEET NO. X

WELLS & ASSOCIATES, LLC
TRANSPORTATION, TRAFFIC, AND PARKING CONSULTANTS
1420 Spring Hill Rd., Suite 600
McLean, VA 22102
Phone: (703) 917-6620 Fax: (703)917-0739
170 Jennifer Rd., Suite 260
Annapolis, MD 21401
Phone: (301) 970-2402 Fax: (410)266-9189

REVISIONS

8	RECONSTRUCTION OF SIGNAL DUE TO GEOMETRIC IMPROVEMENTS	CON. # BW966W82	9/27/02	

MARYLAND DOT - STATE HIGHWAY ADMINISTRATION
Office of Traffic & Safety
TRAFFIC ENGINEERING DESIGN DIVISION
ROCK SPRING DRIVE AND
MD 187 (OLD GEORGETOWN ROAD)

DRAWN BY: JAW	F.A.P. NO.		TS NO. 4049A	SHEET NO.
CHECKED BY: LES	S.H.A. NO.	M08995172		
SCALE: 1" = 20'	COUNTY:	MONTGOMERY	T.I.M.S. NO. E189	2 OF 2
DATE: 9/27/02	LOG MILE:	I50I8703.5I		