PROJECT DESCRIPTION

I. GENERAL

This project involves the modification of an existing Traffic Control Signal at the intersection of MD 27 (Liberty Street) and Greene Street in Carroll County. MD 27 (Liberty Road) is assumed to run in a north-south direction.

II. INTERSECTION OPERATION

a) This intersection shall operate in a NEMA four-phase,semi-actuated mode, with the MD 27 (Liberty Rd) approaches continuing to run concurrently. New pedestrian phases with pushbutton actuation shall be provided across both legs of MD 27 (Liberty Road). The Green Street approaches shall also continue to run concurrently.

III. SPECIAL NOTES

1. The Contractor shall be responsible for terminating all signal cables, 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 Rodenhizer at (410) 787-7650 seventy-two hours in advance of intended work.
3. All underground and overhead utilities shown on these plans are schematic only and may not be complete. The Contractor shall be responsible for notifying Miss Utility prior to construction so that all utilities may be located in the field. If the Contractor perceives that a conflict between the utilities and the traffic signal will occur, the Contractor shall notify the Project Engineer immediately so that the conflict may be resolved.

EQUIPMENT LIST

A. EQUIPMENT TO BE FURNISHED BY SHA

ITEM NO.	DESCRIPTION	QUANTITY
9001	Detector rack power supply (To be installed by SHA forces)	1 EA
9016	Detector amplifier 4-channel rack mount (To be installed into the existing cabinet by S.H.A. Forces).	1 EA

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

ITEM NO.	DESCRIPTION	QUANTITY
1001	Maintenance of traffic per assignment.	1 EA
2001	Class 2 Excavation.	4 C.Y.
2002	Test Pit Excavation	2 C.Y.
5003	12" white heat applied permanent preformed thermoplastic pavement marking.	205 L.F.
5004	24" white heat applied permanent preformed thermoplastic pavement marking.	50 L.F.
6003	4" concrete sidewalk.	300 S.F.
8001	Furnish and install 12" pedestrian signal head section	8 EA
8009	Furnish and install breakaway pedestal pole (10').	2 EA
8011	Pedestrian pushbutton and R10-4(1) sign. (Note: Sign to read "PUSHBUTTON TO CROSS LIBERTY ST".)	4 EA
8016	Furnish and install 2" schedule 80 rigid polyvinyl chloride - trenched.	50 L.F.
8021	Detectable warning surface (truncated domes).	24 S.F.
8024	Furnish and install concrete for signal foundation.	2 C.Y.
8026	Furnish and install No. 6 AWG stranded bare copper ground wire.	275 L.F.
8027	1" electrical conduit - galvanized sleeve.	20 EA
8035	Furnish and install 3" schedule 80 rigid polyvinyl chloride - slotted.	45 L.F.

EQUIPMENT LIST (CONT.)

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

ITEM NO.	DESCRIPTION	QUANTITY
8037	Furnish and install 1" liquid tight flexible non-metallic conduit for detector sleeve.	10 L.F.
8045	Furnish and install electrical handhole.	3 EA
8053	Furnish and install ground rod -5/4" x 10'.	2 EA
8058	Furnish and install electrical cable - 2 conductor (aluminum shielded) (No. 14 AWG)	130 L.F.
8059	Furnish and install electrical cable - 2 conductor (No. 14 AWG).	460 L.F.
8060	Furnish and install electrical cable - 3 conductor (No. 14 AWG).	480 L.F.
8063	Furnish and install loop wire encased in flexible tubing (No. 14 AWG).	1375 L.F.
8064	Furnish and install saw cut for signal (loop detector).	375 L.F.

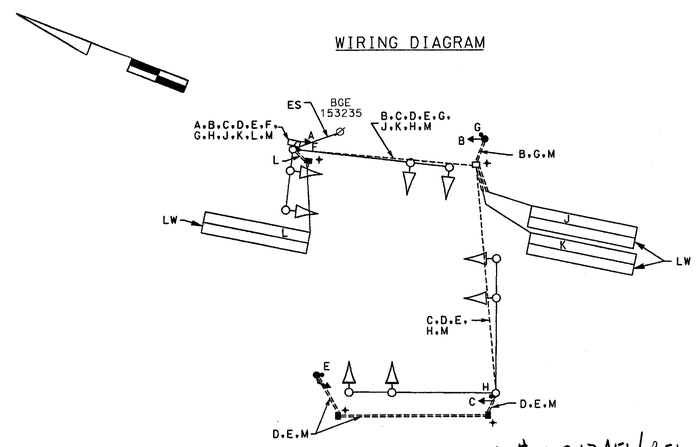
C. EQUIPMENT TO BE REMOVED

All removed signal materials are to become property of the contractor.

PHASE CHART

	1	2	3	4	5	6	7	8	9	10	11	12
PHASE 2 & 6	R	R	R	R	G	G	G	G	DW	DW	DW	DW
2 & 6 CHANGE	R	R	R	R	Y	Y	Y	Y	DW	DW	DW	DW
PHASE 4 & 8	G	G	G	G	R	R	R	R	DW	DW	DW	DW
4 & 8 CHANGE	Y	Y	Y	Y	R	R	R	R	DW	DW	DW	DW
PHASE 2 & 6 ALT	R	R	R	R	G	G	G	G	WK	WK	WK	WK
PED CLEAR	R	R	R	R	G	G	G	G	FL/DW	FL/DW	FL/DW	FL/DW
2 & 6 CHANGE ALT	R	R	R	R	Y	Y	Y	Y	DW	DW	DW	DW
FLASHING OPERATION	FL/R	FL/R	FL/R	FL/R	FL/Y	FL/Y	FL/Y	FL/Y	DARK	DARK	DARK	DARK

WIRING DIAGRAM



WIRING KEY

- A, B, C, D — 3-CONDUCTOR ELECTRICAL CABLE (NO. 14 A.W.G)
- E, F, G, H — 2-CONDUCTOR ELECTRICAL CABLE (NO. 14 A.W.G)
- J, K, L — 2-CONDUCTOR ELECTRICAL CABLE (NO. 14 A.W.G) ALUMINUM SHIELDED
- M - STRANDED BARE COPPER GROUND WIRE (NO. 6 A.W.G.)
- LW - LOOP WIRE (NO. 14 A.W.G.)
- ES - EXISTING OVERHEAD SERVICE TO BE MAINTAINED BY BGE
- + - GROUND ROD

The contact persons for District #7 are as follows:

Mr. John Concannon
Assistant District Engineer - Traffic
Phone: (310) 624-8141

Mr. Dave Coyne
Assistant District Engineer - Maintenance
Phone: (310) 624-8106

Mr. Jim Buckalew
District Engineer - Utility
Phone: (301) 624-8110

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

Mr. Ed Rodenhizer
Signal Shop
410-787-7652

The power company representative is:

N/A

SHA# CL 317A51/B51 TOD# AT582-08

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

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

MD 27 (LIBERTY ST) AND GREEN STREET

DRAWN BY: ROB CICCHINI	F.A.P. NO.		TS NO. 1116D	SHEET NO. 2 OF 2
CHECKED BY: J W ALLEN	S.H.A. NO.			
SCALE: NONE	COUNTY: CARROLL		T.I.M.S. NO. 6376	
DATE: 8/13/04	LOG MILE: 06002718.38			

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