BORDER REV: DATE: June 1, 2004

PROJECT DESCRIPTION

I. GENERAL

This project involves the modification of an existing Traffic Control Signal at the intersection of MD 7A (Revolution Street) and Juniata Street in Harford County. Exclusive/ Permissive left turn phases shall be installed for the MD 7A approaches. Video camera detection shall be used for both MD7A approaches. MD 7A (Revolution Street) is assumed to run an east-west direction.

II. INTERSECTION OPERATION

1. The intersection is to operate in a NEMA six-phase, semi-actuated mode, with the MD 7A (Revolution Street) approaches continuing to run concurrently. Exclusive/Permissive left turn phases shall now be provided for both approaches of MD 7A (Revolution Street) The pedestrian phases with pushbutton actuation across both legs of MD 7A (Revolution Street) shall now have Countdown Pedestrian Signal Heads and they shall remain in operation. The pedestrian phases across Juniata Street shall now have Countdown Pedestrian Signal Heads and they shall remain on recall. The Juniata Street approaches shall also continue to run concurrently.

2. The existing full-traffic-actuated, eight-phase controller with all necessary equipment housed in a NEMA size "5" pole-mounted cabinet shall be utilized at this intersection.

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.

The contact persons for District #4 are as follows:

Mr. Randall Scott
Assistant District Engineer - Traffic
Phone: (410) 321-2781

Mr. Steve Marciszewski
Assistant District Engineer - Maintenance
Phone: (410) 321-2761

Mr. Michael Pasquariello
Assistant District Engineer - Utility
Phone: (410) 321-2841

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

Mr. Ed Rodenhizer
Signal Shop
410-787-7652

Mr. Sonny Bailey
Sign Shop
410-787-7670

EQUIPMENT LIST

[1] A. EQUIPMENT TO BE SUPPLIED BY S.H.A..

ITEM NO.	DESCRIPTION	QUANTITY
9086	Video detection interface equipment: 1-4 cameras (To be installed by signal shop).	1 EA
9570	Sheet aluminum signs to consist of: (ground mount)	14.5 SF
	S1-1 "SCHOOL" sign, (36" x 36")	1 EA
	S4-4(1) "AHEAD" sign, (15" x 30")	1 EA
	W16-9p "FINES DOUBLE" sign (30"x12")	1 EA
[1] 9571	Sheet aluminum signs to consist of: (mast arm or pole mount)	53 ~~38~~ SF
	D3-2 "Revolution St " sign, (variable x 16") (dual faced) mast arm.	2 EA
[1]	GUIDE SHIELD ASSEMBLY ~~(36"x75")~~ pole mounted. 24"x51" M3-4 "WEST" ~~(30"x15")~~ 24"x12" M1-5 "MD 7" ~~(36"x36")~~ 24"x24" M6-1 "left arrow" ~~(30"x24")~~ 21"x15"	1 EA
[1]	GUIDE SHIELD ASSEMBLY ~~(36"x75")~~ pole mounted. 24"x51" M3-2 "EAST" ~~(30"x15")~~ 24"x12" M1-5 "MD 7" ~~(36"x36")~~ 24"x24" M6-1 "left arrow" ~~(30"x24")~~ 21"x15"	1 EA
	GUIDE SHIELD ASSEMBLY (24"x51") pole mounted. M3-4 "WEST"(24"X12") M1-5 "MD 7"(24"X24") M6-1 "right arrow "(21"X15")	1 EA
	GUIDE SHIELD ASSEMBLY (24"x51") pole mounted. M3-2 "EAST"(24"X12") M1-5 "MD 7"(24"X24") M6-1 "right arrow "(21"X15")	1 EA

EQUIPMENT LIST (CONT.)

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

ITEM NO.	DESCRIPTION	QUANTITY
1001	Maintenance of traffic per assignment.	1 EA
5003	12" white lead free reflective thermoplastic pavement marking.	380 L.F.
5004	24" white lead free reflective thermoplastic pavement marking.	50 L.F.
8002	12" red or green LED signal head section.	24 EA
8003	12" yellow LED signal head section.	14 EA
8011	8" LED (R,Y,G) signal head section.	6 EA
8017	Control cable, 300', video detection camera to controller	1 EA
8018	Control cable, 100', video detection camera to controller	1 EA
8024	LED 16" countdown pedestrian signal head.	8 EA
8028	Remove and dispose of existing equipment per assignment.	1 EA
8042	Wood sign supports 4"x6".	16 L.F.
8063	Install ground mounted sign.	14.5 SF
[1] 8064	Install overhead mounted sign.	53 ~~38~~ SF
8065	Video detector camera.	2 EA
8078	Electrical cable - 5 conductor (No. 14 AWG).	395 L.F.
8079	Electrical cable - 7 conductor (No. 14 AWG).	235 L.F.

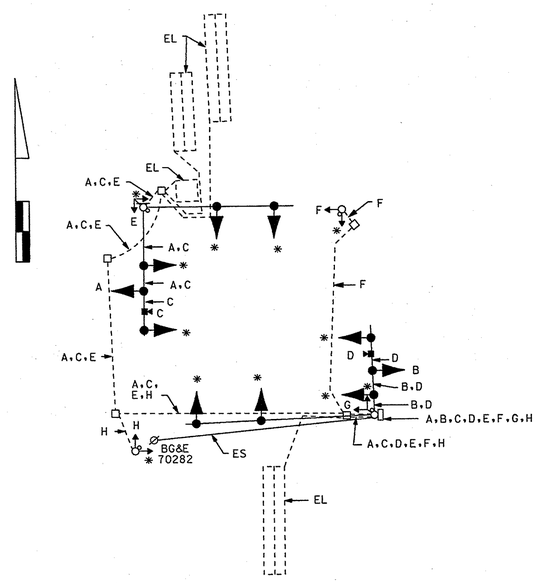
C. EQUIPMENT TO BE REMOVED

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

PHASE CHART

	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18
PHASE 1 & 5	G-/R	G-/R	R	G-/R	G-/R	R	R	R	R	R	DW	DW	DW	DW	DW	DW	DW	DW
CHANGES TO PHASES 1 & 6, 2 & 5 OR 2 & 6																		
PHASE 1 & 6	G-/G	G-/G	G	R	R	R	R	R	R	R	DW	WK	WK	DW	DW	DW	DW	DW
1 & 6 CHANGE	Y-/G	Y-/G	G	R	R	R	R	R	R	R	DW	WK	WK	DW	DW	DW	DW	DW
PHASE 2 & 5	R	R	R	G-/G	G-/G	G	R	R	R	R	WK	DW	DW	WK	DW	DW	DW	DW
2 & 5 CHANGE	R	R	R	Y-/G	Y-/G	G	R	R	R	R	WK	DW	DW	WK	DW	DW	DW	DW
PHASE 2 & 6	G	G	G	G	G	G	R	R	R	R	WK	WK	WK	WK	DW	DW	DW	DW
PED CLEAR / COUNTDOWN	G	G	G	G	G	G	R	R	R	R	FL/DW	FL/DW	FL/DW	FL/DW	DW	DW	DW	DW
2 & 6 CHANGE	Y	Y	Y	Y	Y	Y	R	R	R	R	DW	DW	DW	DW	DW	DW	DW	DW
PHASE 4 & 8	R	R	R	R	R	R	G	G	G	G	DW	DW	DW	DW	DW	DW	DW	DW
4 & 8 CHANGE	R	R	R	R	R	R	Y	Y	Y	Y	DW	DW	DW	DW	DW	DW	DW	DW
PHASE 4 & 8 ALT	R	R	R	R	R	R	G	G	G	G	DW	DW	DW	DW	WK	WK	WK	WK
PED CLEAR / COUNTDOWN	R	R	R	R	R	R	G	G	G	G	DW	DW	DW	DW	FL/DW	FL/DW	FL/DW	FL/DW
4 & 8 ALT CHANGE	R	R	R	R	R	R	Y	Y	Y	Y	DW	DW	DW	DW	DW	DW	DW	DW
FLASHING OPERATION	FL/Y	FL/Y	FL/Y	FL/Y	FL/Y	FL/Y	FL/R	FL/R	FL/R	FL/R	DARK	DARK	DARK	DARK	DARK	DARK	DARK	DARK

WIRING DIAGRAM



WIRING KEY

A, B } 7-CONDUCTOR ELECTRICAL CABLE (NO. 14 A.W.G)

C - CONTROL CABLE 300' VIDEO CAMERA

D - CONTROL CABLE 100' VIDEO CAMERA

E, F, G, H } 5-CONDUCTOR ELECTRICAL CABLE (NO. 14 A.W.G)

* - USE EXISTING WIRING

EL - LOOP WIRE (NO. 14 A.W.G.) EXISTING

LW - LOOP WIRE (NO. 14 A.W.G.)

ES - EXISTING OVERHEAD SERVICE TO BE MAINTAINED BY BG&E

[1] REDLINE REVISION NO.1
1/27/2006
MODIFY SHIELD ASSEMBLY SIGN SIZE

REVISION "8"

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

4946G1.DGN D6-58

PLOTTED: $DATETIME$
FILE: $FILE$

STATE OF MARYLAND
DEPARTMENT OF TRANSPORTATION
STATE HIGHWAY ADMINISTRATION

MD 7A (REVOLUTION STREET) AND JUNIATA STREET

HAVRE DE GRACE, MARYLAND

SCALE NONE	DATE 10/7/05	CONTRACT NO. AT7825185	
DESIGNED BY JA		COUNTY HARFORD	
DRAWN BY RC		LOGMILE 12A00701.16	
CHECKED BY		TIMS NO. H193	
F.A.P. NO.		TOD NO.	
TS NO. 1079B	DRAWING NO.	OF	SHEET NO. 2 OF 2