

PROJECT DESCRIPTION

I. GENERAL

This project involves the installation of a Fire House Signal with interconnect at the Bunker Hill Fire Station on US 1 (Rhode Island Ave). US 1 (Rhode Island Ave) is assumed to run a north-south direction.

II. INTERSECTION OPERATION

- The intersections of US 1 (Rhode Island Ave) / MD 208 (38 th St) and US 1 (Rhode Island Ave) / 37 th St shall be interconnected with the Bunker Hill Fire Station Signal. The Fire House Signal shall rest in a Flashing "Red" mode until pre-empted by the fire station pushbutton. During pre-emption, the eastbound traffic signals at the intersection of US 1 (Rhode Island Ave) / MD 208 (38 th St) shall operate in a "Green" phase while the remaining directions shall operate in a "Red" phase. Likewise, the Fire House Signal shall operate in a Flashing "Yellow" phase. Lastly, during pre-emption, the westbound traffic signals at the intersection of US 1 (Rhode Island Ave) / 37 th St shall operate in a "Green" phase while the while the westbound direction operates in a "Red" phase.
- A existing, eight-phase controller with all necessary equipment housed a NEMA size "6" base-mounted cabinet at the intersection of US 1 (Rhode Island Ave) / MD 208 (38 th St) shall be utilized for the operation of the Fire House Signal.

III. SPECIAL NOTES

- The Contractor shall be responsible for terminating all signal cables, excluding interconnect, to the appropriate terminals and shall properly label each cable.
- All controller cabinet wiring will be performed by the S.H.A. Signal Shop Contact Mr. Ed Rodenhizer (Dave Swartz) at (410) 787-7650 seventy-two hours in advance of intended work.
- 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 SUPPLIED AND INSTALLED BY THE MSHA SIGNAL SHOP

ITEM NO.	DESCRIPTION	QUANTITY
9007	NEMA load switch	1 EA
9010	Relay (110/120 volt) 11 pin	3 EA
Neg.	Relay base	3 EA

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

ITEM NO.	DESCRIPTION	QUANTITY
1001	Maintenance of traffic per assignment.	2 EA
2001	Class 2 Excavation. (for sidewalk removal)	2 C.Y.
2002	Test Pit Excavation	1 C.Y.
6004	4" concrete sidewalk.	155 S.F.
1 8005	Re-ring existing span	2 EA
8011	Furnish and install 12" vehicular traffic signal head section	4 EA
1 8015	Install 3" weatherhead	2 EA
8019	Furnish and install 8" vehicular traffic signal head section.	2 EA
8024	Furnish and install 27' mast arm pole and 70' mast arm.	1 EA
8051	Furnish and install 3" schedule 80 rigid polyvinyl chloride conduit - trenched	<del>590</del> L.F. 480
8059	Furnish and install concrete for signal foundation.	5 C.Y.
8062	Furnish and install No. 6 AWG stranded bare copper ground wire.	<del>40</del> L.F. 440
8066	Furnish and install 3" schedule 80 rigid polyvinyl chloride conduit - bored.	335 L.F.
8074	Furnish and install electrical handhole.	8 EA
8078	Furnish and install 12-pair communication cable, jelly-filled, (underground).	1240 L.F.
1 8082	Furnish and install ground rod - 3/4" x 10'.	<del>1</del> EA 2
1 8086	Furnish and install electrical cable - 5 conductor (No. 14 AWG).	<del>920</del> L.F. 700
1 Neg.	Furnish and install electrical cable - 5 conductor (No. <del>10</del> 12 AWG).	<del>700</del> L.F. 920

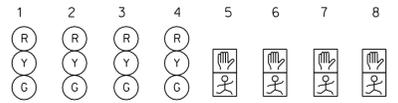
EQUIPMENT LIST (CONT.)

C. EQUIPMENT TO BE REMOVED AND RETURNED TO SHA

There are no signal materials to be removed for this project.

PHASE CHART

US 1 (RHODE ISLAND AVE) AT 37 TH ST



	1	2	3	4	5	6	7	8
PHASE 2 & 6	G	G	G	G	DW	DW	DW	DW
2 & 6 CHANGE	Y	Y	Y	Y	DW	DW	DW	DW
PHASE 4 & 8 PED	R	R	R	R	WK	WK	WK	WK
PED CLEAR	R	R	R	R	FL/DW	FL/DW	FL/DW	FL/DW
4 & 8 PED CHANGE	R	R	R	R	DW	DW	DW	DW
FIREHOUSE PRE-EMPT	R	R	G	G	DW	DW	DW	DW
PRE-EMPT CHANGE	R	R	Y	Y	DW	DW	DW	DW
FLASHING OPERATION	FL/Y	FL/Y	FL/Y	FL/Y	DARK	DARK	DARK	DARK

The 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

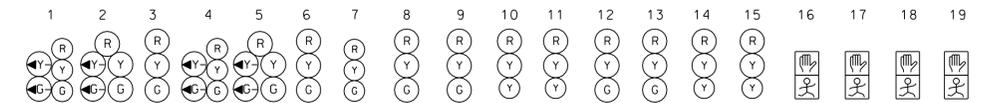
Mr. Augie Rebish  
Assistant District Engineer - Utility  
Phone: (301) 513-7350

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

The power company representative is:

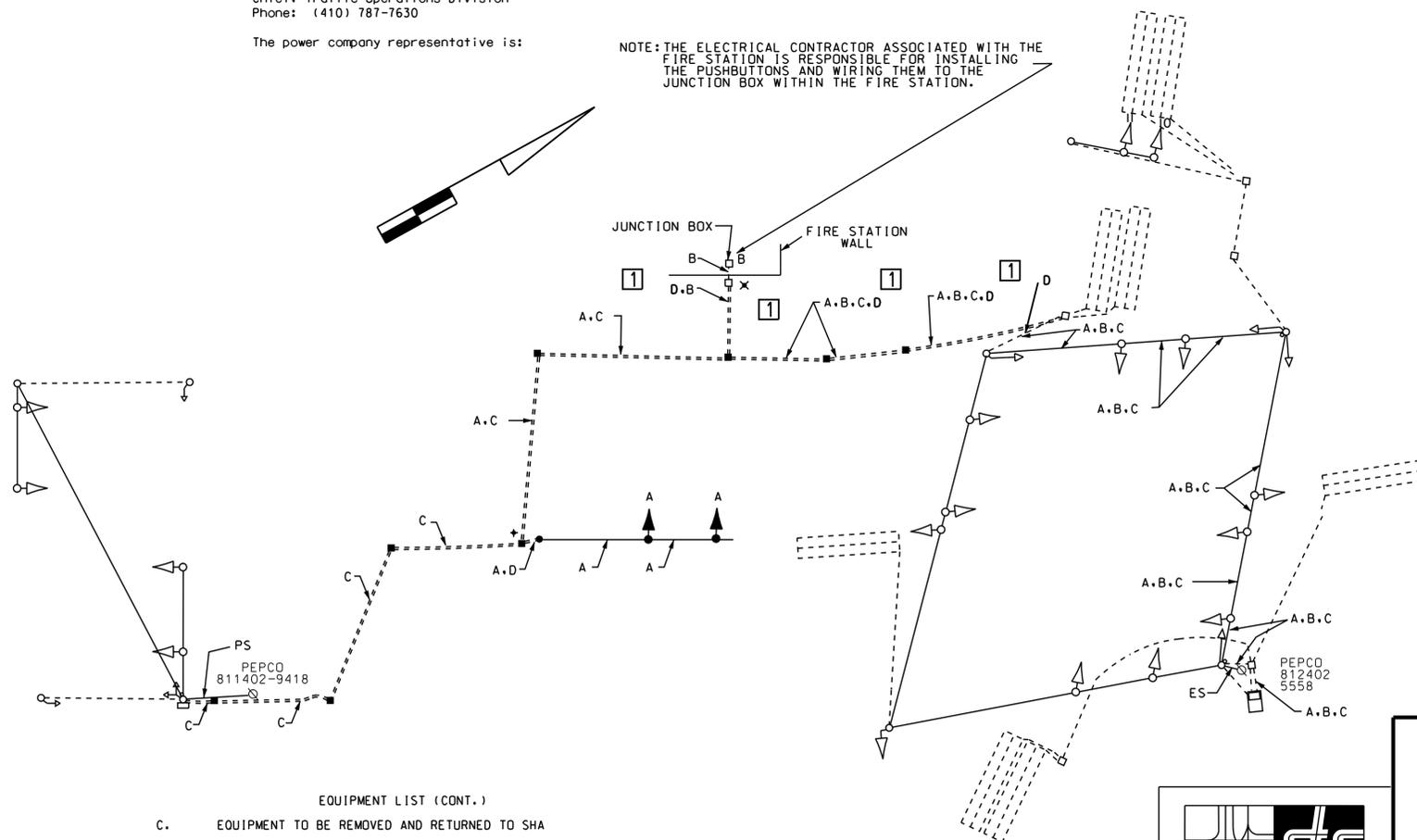
PHASE CHART

US 1 (RHODE ISLAND AVE) AT MD 208 (38 TH ST)



	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19		
PHASE 1 & 5	←G→/R	←G→/R	R	←G→/R	←G→/R	R	R	R	R	R	R	R	R	R	R	FL/R	FL/R	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	R	R	R	R	R	FL/R	FL/R	DW	DW	DW	DW
1 & 6 CHANGE	←Y→/G	←Y→/G	G	R	R	R	R	R	R	R	R	R	R	R	R	FL/R	FL/R	DW	DW	DW	DW
PHASE 2 & 5	R	R	R	←G→/G	←G→/G	G	R	R	R	R	R	R	R	R	R	FL/R	FL/R	WK	WK	DW	DW
2 & 5 CHANGE	R	R	R	←Y→/G	←Y→/G	G	R	R	R	R	R	R	R	R	R	FL/R	FL/R	WK	WK	DW	DW
PHASE 2 & 6	G	G	G	G	G	G	R	R	R	R	R	R	R	R	R	FL/R	FL/R	WK	WK	DW	DW
PED CLEAR	G	G	G	G	G	G	R	R	R	R	R	R	R	R	R	FL/R	FL/R	FL/DW	FL/DW	DW	DW
2 & 6 CHANGE	Y	Y	Y	Y	Y	Y	R	R	R	R	R	R	R	R	R	FL/R	FL/R	DW	DW	DW	DW
PHASE 4 & 8	R	R	R	R	R	R	G	G	G	FL/Y	FL/Y	G	G	G	FL/R	FL/R	DW	DW	DW	DW	DW
4 & 8 CHANGE	R	R	R	R	R	R	Y	Y	Y	Y	Y	Y	Y	Y	Y	FL/R	FL/R	DW	DW	DW	DW
PHASE 4 & 8 ALT	R	R	R	R	R	R	G	G	G	FL/Y	FL/Y	G	G	G	FL/R	FL/R	DW	DW	WK	WK	WK
PED CLEARANCE	R	R	R	R	R	R	G	G	G	FL/Y	FL/Y	G	G	G	FL/R	FL/R	DW	DW	FL/DW	FL/DW	FL/DW
4 & 8 ALT CHANGE	R	R	R	R	R	R	Y	Y	Y	Y	Y	Y	Y	Y	Y	FL/R	FL/R	DW	DW	DW	DW
FIREHOUSE PRE-EMPT	←G→/G	←G→/G	G	R	R	R	R	R	R	R	R	R	R	R	R	FL/Y	FL/Y	DW	DW	DW	DW
PRE-EMPT CHANGE	←Y→/Y	←Y→/Y	Y	R	R	R	R	R	R	R	R	R	R	R	R	Y	Y	DW	DW	DW	DW
FLASHING OPERATION	FL/Y	FL/Y	FL/Y	FL/Y	FL/Y	FL/Y	FL/R	DARK	DARK	DARK	DARK	DARK	DARK								

WIRING DIAGRAM



NOTE: THE ELECTRICAL CONTRACTOR ASSOCIATED WITH THE FIRE STATION IS RESPONSIBLE FOR INSTALLING THE PUSHBUTTONS AND WIRING THEM TO THE JUNCTION BOX WITHIN THE FIRE STATION.

**WIRING KEY**

- 1 A - 5-CONDUCTOR ELECTRICAL CABLE (NO. 14 A.W.G.)
- 1 B - 5-CONDUCTOR ELECTRICAL CABLE (NO. 10 A.W.G.)
- C - 12-PAIR VOICE GRADE INTERCONNECT CABLE (OVERHEAD)
- D - STRANDED BARE COPPER GROUND WIRE (NO. 6 A.W.G.)
- ES - EXISTING SERVICE TO BE MAINTAINED BY PEPCO
- ⊕ - GROUND ROD

NOTE:  
Firehouse pushbutton will preempt signal at 38th street. 38th street will drive signals heads in front of firehouse and preempt the signal at 37th street thru relay package.

1 REDLINE REVISION 10/15/2003

**MARYLAND DOT - STATE HIGHWAY ADMINISTRATION**  
Office of Traffic & Safety  
**TRAFFIC ENGINEERING DESIGN DIVISION**  
US 1 @ BUNKER HILL FIRE STATION  
GENERAL INFORMATION SHEET

DRAWN BY:	F.A.P. NO.	TS NO.	SHEET NO.
CHECKED BY:	S.H.A. NO.	TS 240C	
SCALE: NONE	COUNTY: PRINCE GEORGE'S	T.I.M.S. NO. E 913	3 OF 3
DATE: 5/2/02	LOG MILE:		