

**PROJECT DESCRIPTION**  
GENERAL

This project involves the modification of the traffic signal at the Intersection of MD 146 (Dulaney Valley Road) at Dulaney Plaza/Towsontown Center in Baltimore County.

**INTERSECTION OPERATION**

The Intersection is to operate in a NEMA 6 phase, full-traffic-actuated mode. There will be an exclusive left turn phase for the north and southbound movement of MD 146 (Dulaney Valley Road). The through movements will operate concurrently with an actuated audible pedestrian movement across the south leg of the intersection. The Dulaney Plaza and Towsontown Center through movements will operate concurrently with an actuated pedestrian movement across the east leg of the intersection. Existing cabinet/controller to be utilized. APS 2-wire central control unit to be installed in cabinet.

**SPECIAL NOTES**

**PROJECT CONTACTS:**

1. The following contact persons for this project are as follows:  
 Randall Scott, Assistant District Engineer - Traffic  
 Phone: (410)-321-2781  
 David Craghton, Assistant District Engineer - Construction  
 Phone: (410)-321-2821  
 Steven Maroliszowski, Assistant District Engineer - Maintenance  
 Phone: (410)-321-2761  
 Michael Pasquarillo, Utility Engineer  
 Phone: (410)-321-2841  
 Richard Daff, Chief - Traffic Operations  
 Phone: 410-788-7630  
 Edward Rodenhizer, Signal Operations  
 Phone: (410)-787-7652

**EQUIPMENT LIST**

A. Equipment to be supplied by the administration.  
None.

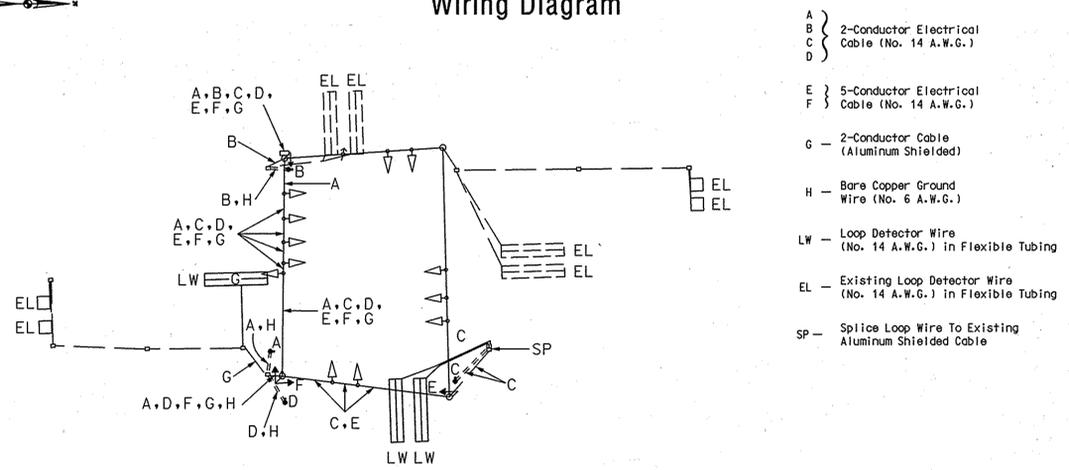
B. Equipment to be furnished and/or installed by the contractor.

Quantity	Units	Specification Section	Description
Lump Sum	LS	108	Mobilization.
Lump Sum	LS	104	Maintenance of traffic.
4	EA	818	5 ft. steel pedestal pole with break away transformer base.
2	EA	814	16 in., one-way, one section L.E.D. (Countdown Indications) adjustable pedestrian signal head with pole mounting hardware and cut-away visors.
1	EA	814	16 in., two-way, one section L.E.D. (Countdown Indications) adjustable pedestrian signal head with pole mounting hardware and cut-away visors.
1	EA	817	Central Control Unit for audible pedestrian pushbutton.
4	EA	817	Audible pedestrian pushbutton assembly with a 9 in. x 15 in. R10-311 pushbutton sign.
4	CY	205	Test pit excavation.
450	LF	815	Sawcut for signal loop detector.
1545	LF	810	Loop detector wire (No. 14 A.W.G.) enclosed in flexible tubing.
200	LF	810	2-conductor (aluminum shielded) electrical cable (No. 14 A.W.G.).
700	LF	810	2-conductor electrical cable (No. 14 A.W.G.).
400	LF	810	5-conductor electrical cable (No. 14 A.W.G.).
60	LF	804	Bare copper stranded ground wire (No. 6 A.W.G.).
15	LF	805	1 in. liquid tight flexible non-metallic conduit for loop detector sleeve.
60	LF	805	2 in. polyvinyl chloride (Schedule 80) electrical conduit - trenched.
4	CY	801	Concrete foundation for traffic signal equipment.
310	LF	549	12 in. wide HAPPTPM - white for crosswalk.
135	LF	549	24 in. wide HAPPTPM - white for stop line.
175	LF	---	Remove existing pavement marking by grinding.
1	LS	---	Remove and dispose of existing signal equipment.

**Phase Chart**

	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
PHASE 1 AND 5	←G- ←G-	R	R	←G- ←G-	R	R	R	R	R	R	R	R	DW	DW	DW	DW
1 AND 5 CHANGE TO 1 AND 6, 2 AND 5, OR 2 AND 6																
PHASE 1 AND 6	←G- ←G-	G	G	←R- ←R-	R	R	R	R	R	R	R	R	DW	DW	DW	DW
1 AND 6 CHANGE	←Y- ←Y-	G	G	←R- ←R-	R	R	R	R	R	R	R	R	DW	DW	DW	DW
PHASE 2 AND 5	←R- ←R-	R	R	←G- ←G-	G	G	R	R	R	R	R	R	DW	DW	DW	DW
5 CHANGE	←R- ←R-	R	R	←Y- ←Y-	G	G	R	R	R	R	R	R	DW	DW	DW	DW
PHASE 2 AND 6	R	R	G	G	R	R	G	G	R	R	R	R	WK	WK	DW	DW
PED CLEARANCE	←R- ←R-	G	G	←R- ←R-	G	G	R	R	R	R	R	R	FL/DW	FL/DW	DW	DW
2 AND 6 CHANGE	←R- ←R-	Y	Y	←R- ←R-	Y	Y	R	R	R	R	R	R	DW	DW	DW	DW
PHASE 4 AND 8	←R- ←R-	R	R	←R- ←R-	R	R	G	G	G	G	G	G	DW	DW	DW	DW
4 AND 8 CHANGE	←R- ←R-	R	R	←R- ←R-	R	R	Y	Y	Y	Y	Y	Y	DW	DW	DW	DW
PHASE 4 ALT AND 8 ALT	←R- ←R-	R	R	←R- ←R-	R	R	G	G	G	G	G	G	DW	DW	WK	WK
PED CLEARANCE	←R- ←R-	R	R	←R- ←R-	R	R	G	G	G	G	G	G	DW	DW	FL/DW	FL/DW
4 ALT AND 8 ALT CHANGE	←R- ←R-	R	R	←R- ←R-	R	R	Y	Y	Y	Y	Y	Y	DW	DW	DW	DW
FLASHING OPERATION	FL/ ←R-	FL/ ←R-	FL/Y	FL/Y	FL/ ←R-	FL/ ←R-	FL/Y	FL/Y	FL/R	FL/R	FL/R	FL/R	DARK	DARK	DARK	DARK

**Wiring Diagram**



NOTE: Use existing 5-conductor for pedestrian signal heads to be replaced

**SHA** STATE OF MARYLAND  
 DEPARTMENT OF TRANSPORTATION  
 STATE HIGHWAY ADMINISTRATION  
 OFFICE OF TRAFFIC & SAFETY  
 TRAFFIC ENGINEERING DESIGN DIVISION

MD 146 (Dulaney Valley Rd) @ Dulaney Plaza  
 and Towsontown Centre North Entrance

**GENERAL INFORMATION PLAN**

SCALE: N/A DATE: June 8, 2007 CONTRACT NO.: BW996M82

DESIGNED BY: F. Brownley COUNTY: Baltimore  
 DRAWN BY: F. Brownley LOGMILE: 03014600.25  
 CHECKED BY: TMS NO. 1533  
 FAP NO. N/A TOD NO.

TS NO. DRAWING - OF SHEET NO. 4 OF 4

BY: F. Brownley