PROJECT DESCRIPTION

I. GENERAL

This project involves the installation of a new traffic control signal at the intersection of US 301 (Crain Hwy.) and Beech Tree Pkwy./ Swanson Rd. in Prince George's Co., Maryland. US 301 is considered to run in a north/south direction.

II. INTERSECTION OPERATION

The intersection is to operate in a NEMA six (6) phase, full-traffic-actuated mode. There will be an exclusive left turn phase for both the north and southbound movements of US 301. The US 301 through movements will operate concurrently. The Beech Tree Pkwy./ Swanson Rd. through movements will operate concurrently.

An eight phase, full-traffic-actuated, solid state digital controller with intersection monitor and harness, battery back-up, video detection equipment, and (1) four-channel rack mounted time delay output loop detector amplifier housed in a base mounted cabinet are to be installed at this location.

CONTACT LIST

The contact persons for District #3 are as follows:

Mr. Lee Starkloff
Assistant District Engineer - Traffic
301-513-7358

Mr. Augie Rebish
Assistant District Engineer - Utility
301-513-7350

Mr. Wayne Mowdy
Assistant District Engineer - Maintenance
301-513-7304

Mr. Richard L. Daff
Chief, Traffic Operations Division
410-787-7630

The Power Company Representative is:

PEPCO
Richard Chilcoat
Customer Representative
Telephone: 1-301-967-5805
Address: 8300 Old Marlboro Pike
Upper Marlboro, MD 20772

EQUIPMENT LIST

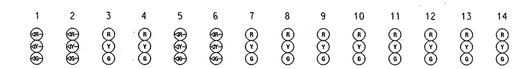
A. S.H.A. furnished equipment material.

None.

B. Equipment to be furnished and installed by the Contractor.
All equipment in this list shall have catalog cuts submitted for approval prior to installation.

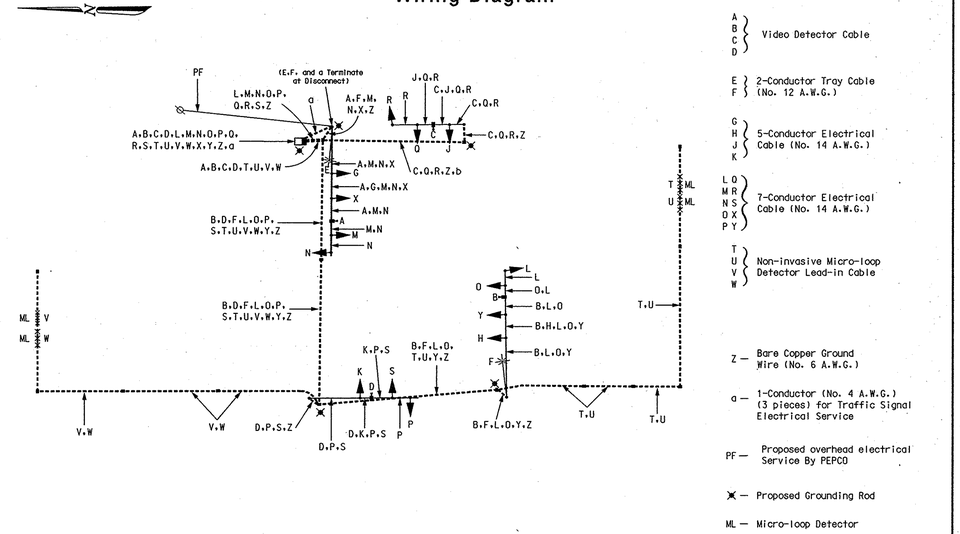
Quantity	Units	Specification Section	Description
Lump Sum	LS	108	Mobilization.
Lump Sum	LS	104	Maintenance of traffic.
1	EA	818	27 ft. steel mast arm pole with a 38 ft. mast arm.
1	EA	818	27 ft. steel mast arm pole with a 60 ft. mast arm.
2	EA	818	27 ft. steel mast arm pole with a 70 ft. mast arm.
1	EA	816	Standard S.H.A. traffic signal controller, base mounted cabinet, one (1) four-channel loop detector amplifier, and video camera detection equipment. (Note: Controller and cabinet shall be purchased from Econolite and delivered to the S.H.A. signal shop for wiring and testing. Contact Mr. Ed Rodenhizer (410) 787-7650).
4	EA	---	Video detector camera with cable: 1 camera - 100 ft. of cable. 1 camera - 200 ft. of cable. 1 camera - 300 ft. of cable. 1 camera - 400 ft. of cable.
10	EA	814	12 in., one-way, three section L.E.D. (R,Y,G) adjustable black faced traffic signal head with mast arm mounting hardware and tunnel visors.
4	EA	814	12 in., one-way, three section L.E.D. (RA,YA,GA) adjustable black faced traffic signal head with mast arm mounting hardware and tunnel visors.
1	EA	813	30 in. x 36 in. R 3-5(R) sign with mast arm mounting hardware.
1	EA	813	30 in. x 36 in. R 3-6(L) sign with mast arm mounting hardware.
2	EA	813	16 in. x Var. D-3(1) sign with mast arm mounting hardware.
2	EA	813	16 in. x Var. D-3(1) (Dual Face) sign with mast arm mounting hardware.
1	EA	813	24 in. x 30 in. R 4-7 sign for ground mounting.
2	EA	813	36 in. x 48 in. R 4-7 sign for ground mounting.
4	EA	813	48 in. x 96 in. D-3(3) sign for ground mounting.
4	EA	813	48 in. x 48 in. W 3-3 "NEW" sign for ground mounting.
2	EA	813	72 in. x 24 in. M-95-1 sign with mast arm mounting hardware.
4	EA	---	Non-invasive probe (set of 3) with 1000 ft. lead-in cable.
2	EA	806	20 ft. luminaire arm.
2	EA	806	250 W H.P.S. lamp and luminarie.
5	CY	205	Test pit excavation.
15	EA	811	Handhole.
50	LF	810	1-conductor electrical cable (No. 4 A.W.G.) (3 pieces).
380	LF	810	2-conductor electrical tray cable (No. 12 A.W.G.).
100	LF	810	5-conductor electrical cable (No. 14 A.W.G.).
2290	LF	810	7-conductor electrical cable (No. 14 A.W.G.).
390	LF	804	Bare copper stranded ground wire (No. 6 A.W.G.).
15	LF	805	2 in. polyvinyl chloride [Schedule 80] electrical conduit - trenched.
825	LF	805	3 in. polyvinyl chloride [Schedule 80] electrical conduit - trenched.
190	LF	805	3 in. polyvinyl chloride [Schedule 80] electrical conduit - bored.
15	LF	805	4 in. polyvinyl chloride [Schedule 80] electrical conduit - trenched.
340	LF	805	4 in. polyvinyl chloride [Schedule 80] electrical conduit - bored.
16.25	CY	801	Concrete foundation for traffic signal equipment.
5	EA	804	Ground rod - 3/4 in. diameter x 10 ft. length.
1	EA	807	Electrical utility service equipment (120/240 V, one phase, three wire system) for a MD-SHA Typ. No. 807.04-01 Overhead electrical service.
1	EA	549	HAPPTPM symbol - white "ONLY".
2	EA	549	HAPPTPM symbol - white "Thru-Left Arrow".
2	EA	549	HAPPTPM symbol - white "Right Arrow".
200	LF	549	24 in. wide HAPPTPM - white for stop line.
47	LF	812	4 in. x 4 in. wood sign support.
256	LF	812	4 in. x 6 in. wood sign support.
130	LF	---	Remove existing pavement marking by grinding.
1	EA	---	Remove existing ground mounted sign.
Lump Sum	LS	---	As-built for S.H.A. [on CADD].

Phase Chart



Phase 1 & 5	G	G	R	R	G	G	R	R	R	R	R	R	R	R	
1 & 5 Change to Phase 1 & 6 or Phase 2 & 5 or Phase 2 & 6															
Phase 1 & 6	G	G	G	G	R	R	R	R	R	R	R	R	R	R	
1 Change	Y	Y	G	G	R	R	R	R	R	R	R	R	R	R	
Phase 2 & 5	R	R	R	R	G	G	G	G	R	R	R	R	R	R	
5 Change	R	R	R	R	Y	Y	G	G	R	R	R	R	R	R	
Phase 2 & 6	R	R	G	G	R	R	G	G	R	R	R	R	R	R	
2 & 6 Change	R	R	Y	Y	R	R	Y	Y	R	R	R	R	R	R	
Phase 4 & 8	R	R	R	R	R	R	R	R	G	G	G	G	G	G	
4 & 8 Change	R	R	R	R	R	R	R	R	Y	Y	Y	Y	Y	Y	
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	FL/R	FL/R	

Wiring Diagram



The Traffic Group
The Traffic Group, Inc.
410-931-6600
Fax 410-931-6601

MARYLAND DOT - STATE HIGHWAY ADMINISTRATION
Office of Traffic & Safety
TRAFFIC ENGINEERING DESIGN DIVISION
(General Information Plan)
US 301 at Beech Tree Pkwy./ Swanson Rd.

DRAWN BY: J. Storck	F.A.P. NO. N/A	TS NO. 4441-GI	SHEET NO.
CHECKED BY:	S.H.A. NO. BW996M82		
SCALE: N/A	COUNTY: Prince George's Co.	T.I.M.S. NO. G-712	2 OF 2
DATE: May 2, 2006	LOG MILE: 16030116.06		

f:\2004\2004-0315\dsn\gdsn.dgn 5/2/2006