PROJECT DESCRIPTION

I. GENERAL
This project involves installation of a new traffic control device at the intersection of MD 30 and Hallie Avenue in Carroll County, Maryland.
MD 30 is considered to run in a north/south direction.
Modifications include the widening of MD 30 and construction of the intersection.

INTERSECTION OPERATION
The intersection will operate in a NEMA 6 phase, full-traffic-actuated mode.
There will be an exclusive/permissive left turn phase for both the north and southbound movements of MD 30.
The through movements will operate concurrently with an actuated accessible pedestrian movement across the east and west leg of the intersection. The Hallie Avenue through movements will operate concurrently with an actuated accessible pedestrian movement across the south leg of the intersection.
An eight phase, full-traffic-actuated, solid state digital controller with intersection monitor and harness, battery back-up, APS 2-wire central control unit and video detection equipment housed in a base mounted cabinet are to be installed at this location.

CONTACT LIST

The contact persons for District #7 are as follows:
Mr. John Concannon
Assistant District Engineer - Traffic
301-624-8140

Ms. Andrea Abend
Assistant District Engineer - Utility
301-624-8115

Mr. Raymond F. Johnson
Assistant District Engineer - Maintenance
301-624-8105

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

Mr. Edward Rodenhizer
Supervisor, Signal Operations
410-787-7652

The Power Company Representative is:
Baltimore Gas & Electric
7317 Parkway Drive South
Hanover, Maryland 21076
410-859-9070
WMS*

EQUIPMENT LIST

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

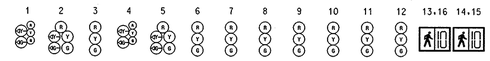
None.

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
2	EA	818	27 ft. steel mast arm pole with a 50 ft. mast arm.
2	EA	818	27 ft. steel mast arm pole with a 60 ft. mast arm.
2	EA	818	10 ft. steel pedestal pole with break away transformer base.
1	EA	816	Standard S.H.A. traffic signal controller, base mounted cabinet, video detection interface panel, and 2 four-channel loop detector amplifiers (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).
8	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.
2	EA	814	12 in., one-way, five section L.E.D. (R,Y,YA,G,GA) adjustable black faced traffic signal head with mast arm mounting hardware and tunnel visors.
2	EA	814	12 in./8 in., one-way, five section L.E.D. (12 in. YA, GA/ 8 in. R,Y,G) adjustable black faced traffic signal head with mast arm mounting hardware and tunnel visors.
4	EA	814	16 in., L.E.D. one-way, one section countdown pedestrian signal head with pole mounting hardware.
2	EA	814	16 in., L.E.D. one-way, one section countdown pedestrian signal head with post-top mounting hardware.
4	EA	---	Video Detection Camera and cable. (1- 100 LF, 1- 200 LF, 2 - 300 LF)
4	EA	813	16 in. x Var. D-30 (Dual-faced) sign with mast arm mounting hardware.
6	EA	813	9 in. x 15 in. R 10-3(I) pedestrian education sign.
2	EA	813	30 in. x 36 in. R 3-5(L) sign with mast arm mounting hardware.
2	EA	813	30 in. x 51 in. Shield Assembly with pole mounting hardware.
2	EA	813	48 in. x 75 in. Shield Assembly with pole mounting hardware.
2	EA	813	48 in. x 48 in. W 3-3 "NEW" sign for ground mounting.
6	EA	817	APS (Audible Pedestrian Signal) pushbutton and sign.
1	EA	817	APS 2-wire central control unit.
4	EA	---	Non-invasive Micro-loop probe (set of 3) with 500 ft. lead-in cable.
4	EA	---	Non-invasive Micro-loop 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 luminaire.

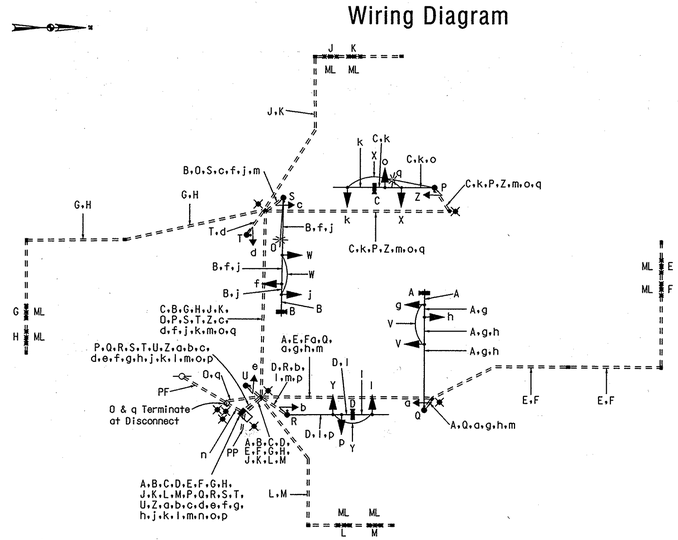
Quantity	Units	Specification Section	Description
Lump Sum	LS	108	Mobilization.
Lump Sum	LS	104	Maintenance of traffic.
7	CY	205	Test pit excavation.
18	EA	811	Handhole.
30	LF	810	1-conductor electrical cable (No. 4 A.W.G.).
480	LF	810	2-conductor electrical tray cable (No. 12 A.W.G.).
635	LF	810	2-conductor electrical cable (No. 14 A.W.G.).
755	LF	810	5-conductor electrical cable (No. 14 A.W.G.).
2375	LF	810	7-conductor electrical cable (No. 14 A.W.G.).
370	LF	804	Bare copper stranded ground wire (No. 6 A.W.G.).
30	LF	805	2 in. polyvinyl chloride [Schedule 80] electrical conduit - trenched.
980	LF	805	3 in. polyvinyl chloride [Schedule 80] electrical conduit - trenched.
215	LF	805	3 in. polyvinyl chloride [Schedule 80] electrical conduit - bored.
50	LF	805	4 in. polyvinyl chloride [Schedule 80] electrical conduit - trenched.
290	LF	805	4 in. polyvinyl chloride [Schedule 80] electrical conduit - bored.
19.5	CY	801	Concrete foundation for traffic signal equipment.
8	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 an underground electrical power service as per MD-SHA Typical No. 807.05-01 (200 amp. electrical pedestral).
64	LF	812	4 in. x 6 in. wood sign support.

Phase Chart



Phase 1 & 5	R G	R G	R	R G	R G	R	R	R	R	R	R	R	DW	DW	
1 & 5 Change to Phase 1 & 6 or Phase 2 & 5 or Phase 2 & 6															
Phase 1 & 6	G G	G G	G	R	R	R	R	R	R	R	R	R	DW	DW	
1 Change	G Y	G Y	G	R	R	R	R	R	R	R	R	R	DW	DW	
Phase 2 & 5	R	R	R	G G	G G	G	R	R	R	R	R	R	DW	DW	
5 Change	R	R	R	G Y	G Y	G	R	R	R	R	R	R	DW	DW	
Phase 2 & 6	G	G	G	G	G	G	R	R	R	R	R	R	WK	DW	
Ped Clearance	G	G	G	G	G	G	R	R	R	R	R	R	FL/DW	DW	
2 & 6 Change	Y	Y	Y	Y	Y	Y	R	R	R	R	R	R	DW	DW	
Phase 4 & 8	R	R	R	R	R	R	G	G	G	G	G	G	DW	DW	
4 & 8 Change	R	R	R	R	R	R	Y	Y	Y	Y	Y	Y	DW	DW	
Phase Alt 4 + 8	R	R	R	R	R	R	G	G	G	G	G	G	DW	WK	
Ped Clearance	R	R	R	R	R	R	G	G	G	G	G	G	DW	FL/DW	
Alt 4 + 8 Change	R	R	R	R	R	R	Y	Y	Y	Y	Y	Y	DW	DW	
Flashing Operation	FL/Y	FL/Y	FL/Y	FL/Y	FL/Y	FL/Y	FL/R	FL/R	FL/R	FL/R	FL/R	FL/R	DARK	DARK	

Wiring Diagram



A, B, C, D — Video Detector Cable

E J, F K, G L, H M — Non-Invasive Micro-loop Detector Lead-in Cable

O, q — 2-Conductor Tray Cable (No. 12 A.W.G.)

P S, Q T, R U — 2-Conductor Electrical Cable (No. 14 A.W.G.)

V a, W b, X c, Y d, Z e — 5-Conductor Electrical Cable (No. 14 A.W.G.)

f k, g l, h o, j p — 7-Conductor Electrical Cable (No. 14 A.W.G.)

m — Bare Copper Ground Wire (No. 6 A.W.G.)

PF — Proposed Underground Electrical Service By BGE

— Proposed Grounding Rod

ML — Micro-loop Detector (Non-Invasive)

PP — Proposed Phone Service By Verizon

n — 1-Conductor (No. 4 A.W.G.) (3 pieces) for Traffic Signal Electrical Service

The Traffic Group, Inc.
Suite H
9900 Franklin Square Drive
Baltimore, Maryland 21236
410-931-6600
1-800-583-8411
Fax 410-931-6601

BY: JStarck

STATE OF MARYLAND
DEPARTMENT OF TRANSPORTATION
STATE HIGHWAY ADMINISTRATION

OFFICE OF TRAFFIC & SAFETY
TRAFFIC ENGINEERING DESIGN DIVISION

Hallie Hill Farm
MD 30 (HANOVER PIKE) at HALLIE AVE.

GENERAL INFORMATION SHEET

SCALE N/A DATE August 29, 2007 CONTRACT NO. BW996M82

DESIGNED BY J. Storck COUNTY Carroll
DRAWN BY J. Storck LOGMILE 06003007.74
CHECKED BY TIMS NO. H905
FAP NO. TOD NO.

TS NO. 4566-GI | DRAWING – OF | SHEET NO. 2 OF 2

PLOTTED: Thursday, September 20, 2007 AT 09:31 AM
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