DRILL HOLES

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BORDER REV. DATE: June 1, 2004

PROJECT DESCRIPTION

I. GENERAL

This project involves the reconstruction of the existing traffic control signal at the intersection of MD 108 and Snowden River Parkway in Howard County, Maryland. MD 108 is considered to run in an east/west direction.

II. INTERSECTION OPERATION

The intersection is to operate in a NEMA eight (8) phase, full-traffic-actuated mode. There will be an exclusive left tun phase for both the east and westbound movements of MD 108. The MD 108 through movements will operate concurrently. There will be exclusive lead/lag left turn phase for both the north and southbound movements of Snowden River Parkway. The Snowden River Parkway through movements

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

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	Description
Lump Sum	LS	Mobilization.
Lump Sum	LS	Maintenance of traffic.
2	EA	27 ft. steel mast arm pole with a 70 ft. mast arm
2	EA	27 ft. steel mast arm pole with a 60 ft. mast arm
11	EA	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.
8	EA	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.
1	EA	Standard S.H.A. traffic signal controller, base mounted NEMA 6 cabinet,, video detection interface, telemetry interface equipment, and four-channel loop detector amplifiers (Note: controller and cabinet shall be purchased from Econlite and delivered to the S.H.A. signal shop for wiring and testing. Contact Ed Rodenhizer (410) 787-7650).
1	EA	SHA NEMA 5 traffic signal cabinet for Uninterruptible Power Supply (UPS) equipment.
6	EA	Terra Video Detection Camera.
1985	LF	Terra Video Detection Camera cable (No. 18 A.W.G.).
4	EA	16 in. x Var. D-3(1) (Dual Faced) sign with mast arm mounting hardware.
7	EA	30 in. x 36 in. R 3-5(L) sign with mast arm mounting hardware.
2	EA	48 IN. x 75 in. shield assembly sign with pole mounting hardware.
2	EA	30 in. x 50 in. shield assembly sign with pole mounting hardware.
1	EA	30 in. x42 in W9-2(43)(L) sign with mast arm mounting hardware.
45	EA	4 in. x 6 in. wood sign supports.
4	EA	Non-invasive probe (set of 3) with 1000 ft. lead-in cable.
1	EA	10 ft luminaire arm.
3	EA	20 ft. luminaire arm.
4	EA	250 W H.P.S. lamp and luminaire.
4	CY	Test pit excavation.
12	EA	Handhole.
70	LF	Sawcut for signal loop wire.
65	LF	Loop detector wire encased in flexible tubing.
90	LF	1 - conductor electrical cable (8 A.W.G.).
750	LF	2-conductor electrical tray cable (No. 12 A.W.G.).
825	LF	5-conductor electrical cable (No. 14 A.W.G.).
1920	LF	7-conductor electrical cable (No. 14 A.W.G.).
550	LF	Bare copper stranded ground wire (No. 6 A.W.G.).
18	LF	1 in liquid flexible conduit for detector sleeve.
25	LF	2 in polyvinyl chloride (Schedule 80) electrical conduit - trenched.
90	LF	3 in. polyvinyl chloride (Schedule 80) electrical conduit - trenched.
410	LF	3 in. polyvinyl chloride (Schedule 80) electrical conduit - bored.
45	LF	4 in. polyvinyl chloride (Schedule 80) electrical conduit - trenched.
450	LF	4 in. polyvinyl chloride (Schedule 80) electrical conduit - bored.
22.50	CY	Concrete foundation for traffic signal equipment.
10	EA	Ground rod -¾in. diameter x 10 ft. length.
5	EA	Remove and dispose of existing concrete foundation 12 inches below grade.
1	EA	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 - 100 amp. electrical pedestal.
185	LF	24 in. Thermoplastic Pavement Markings - White for stop line.
Lum Sum	LS	Remove and dispose of existing signal equipment.

CONTACT LIST

The contact persons are as follows:

Mr. John Concannon
Assistant District Engineer - Traffic
301-624-8140

Ms. Andrea Abend
District Utility Engineer
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
Chief, Signal Operations
410-787-7652

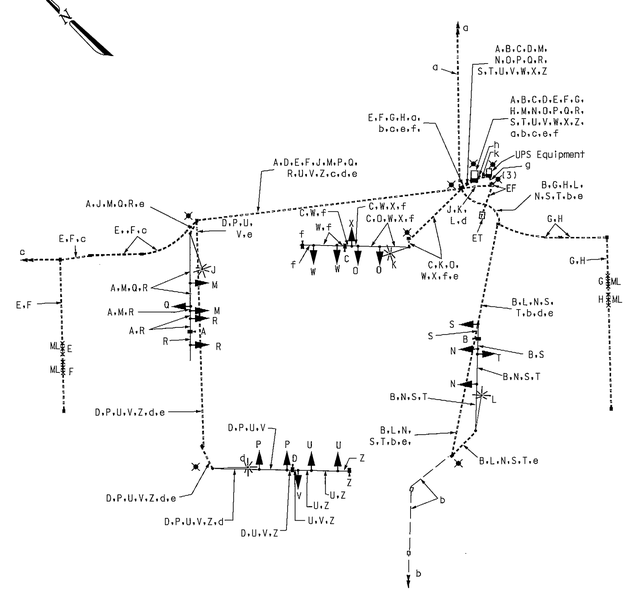
The Power Company Representative is:
Baltimore Gas & Electric Company
7317 Parkway Drive South
Hanover , Maryland 21075
410-859-9070
WMS # 00018371O

Phase Chart

	1	2,3	4,5	6	7	8,9	10	11,12	13,14	15	16,17	18,19
Phase 1 & 5	G	G	R	G	G	R	R	R	R	R	R	R
1 & 5 Change to Phase 1 & 6 or Phase 2 & 6												
Phase 1 & 6	R	R	R	G	G	G	R	R	R	R	R	R
1 Change	R	R	R	Y	Y	G	R	R	R	R	R	R
Phase 2 & 5	G	G	G	R	R	R	R	R	R	R	R	R
5 Change	Y	Y	G	R	R	R	R	R	R	R	R	R
Phase 2 & 6	R	R	G	R	R	G	R	R	R	R	R	R
2 & 6 Change	R	R	Y	R	R	Y	R	R	R	R	R	R
Phase 3 & 8	R	R	R	R	R	R	G	G	G	R	R	R
3 Change	R	R	R	R	R	R	Y	Y	G	R	R	R
Phase 4 & 8	R	R	R	R	R	R	R	R	G	R	R	G
8 Change	R	R	R	R	R	R	R	R	Y	R	R	G
Phase 4 & 7	R	R	R	R	R	R	R	R	R	G	G	G
7 Change	R	R	R	R	R	R	R	R	R	Y	Y	Y
Flashing Operation	FL/R	FL/R	FL/Y	FL/R	FL/R	FL/Y	FL/R	FL/R	FL/R	FL/R	FL/R	FL/R

NOTE:
Phase 3 & 7 will operate in a lead/lag operation.

Wiring Diagram



A D, B Z, C f — Video Detector Cable

E G, F H — Non-Invasive Micro-loop Detector Lead-in Cable

g, h — 1-Conductor (No. 8 A.W.G.) (3 pieces) for Traffic Signal Electrical Service

J L, K d — 2-Conductor Tray Cable (No. 12 A.W.G.)

M, N, O, P — 5-Conductor Electrical Cable (No. 14 A.W.G.)

Q U, R V, S W, T X — 7-Conductor Electrical Cable (No. 14 A.W.G.)

a — Existing Interconnect Cable Snowden River Parkway - MD 100 Run

b — 7-conductor (No. 14 A.W.G.) cable. Snowden River Parkway - Shoppping Center Run

c — 12-Pair Voice Grade Telemetry Interconnect Cable (No. 19 A.W.G.) Snowden River Parkway - Richards Valley Rd/Brother Partnership Ct Run

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

EL — Existing Loop Detector

EF — Underground Electrical Service By BGE

ET — Existing Electrical Transformer # 86035

✕ — Proposed Grounding Rod

ML — Micro-loop Detector (Non-Invasive)

NOTE

These plans are approved for construction for a period of one (1) year from the date of approval. Should construction not begin within this time frame these plans shall be null and void without a re-review from the Traffic Engineering design Division.

The Traffic Group
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STATE OF MARYLAND
DEPARTMENT OF TRANSPORTATION
STATE HIGHWAY ADMINISTRATION

OFFICE OF TRAFFIC & SAFETY
TRAFFIC ENGINEERING DESIGN DIVISION

MD 108 @ SNOWDEN RIVER PKWY

GENERAL INFORMATION PLAN

SCALE N/A DATE Dec 7, 2009 CONTRACT NO. BW-996M82

DESIGNED BY Frank Hoeckel
DRAWN BY Frank Hoeckel
CHECKED BY CJW
F.A.P. NO. N/A

COUNTY HOWARD
LOGMILE 13010813.30
T.I.M.S. NO. I-633
TOD NO.

DRAWING NO. TS - GI-3581-F SHEET NO. 4 OF 6

F:\2002\2002-1107\sht\TEDP\MD 108 @ Snowden - GI.dgn 12/7/2009