PROJECT DESCRIPTION

I. GENERAL

This project involves the reconstruction of the existing traffic control signal at the intersection of MD 210 (Indian Head Hwy.) and Old Fort Road (North) in Prince George's County, Maryland. MD 210 is considered to run in a north/south direction.

II. INTERSECTION OPERATION

The intersection is to be modified to operate in a NEMA eight (8) phase, full-traffic-actuated mode. There will be exclusive left turn phases for both the north and southbound movements of MD 210. The MD 210 through movements will operate concurrently. There will be exclusive/permissive left turn phase for both the east and westbound movements of Old Fort Road (North). The Old Fort Road (North) through movements will operate concurrently with an actuated pedestrian movement across the south leg of the intersection.

The existing cabinet/controller will be utilized. The existing video detection equipment shall be utilized. One four channel rack mounted loop detector amplifier shall added to the existing cabinet.

EQUIPMENT LIST

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

None.

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

Quantity	Units	Specification Section	Description
4	EA	818	12 in. x 32 ft. (2-Ply) steel strain pole.
1	EA	818	10 ft. steel pedestal pole with break away transformer base.
4	EA	814	12 in., one-way, three section (RA,YA,GA) adjustable black faced traffic signal head with span wire mounting hardware and tunnel visors.
6	EA	814	12 in., one-way, three section (R,Y,G) adjustable black faced traffic signal head with span wire mounting hardware and tunnel visors.
2	EA	814	12 in., one-way, five section (R,Y,YA,G,GA) adjustable black faced traffic signal head with span wire mounting hardware and tunnel visors.
2	EA	814	12 in./8 in./, one-way, five section (12 in.YA, GA,/ 8 in. R,Y,G) adjustable black faced signal head with span wire mounting hardware and tunnel visors.
1	EA	814	12 in., one-way, two section (symbolic DW, WK) adjustable pedestrian signal head with pole mounting hardware and cut-away visors.
1	EA	814	12 in., one way, two section (symbolic DW,WK) adjustable pedestrian signal head with post top mounting hardware and cut-away visors.
2	EA	817	Pedestrian pushbutton assembly with pushbutton sign.
1	EA	---	4-channel rack mounted loop detector amplifier.
2	EA	813	36 in. x 42 in R 10-12 sign - span wire mount.
1	EA	813	30 in. x 36 in. R 3-5(R) sign - span wire mount.
2	EA	813	30 in. x 42 in. R 3-5(R) (Mod) sign - span wire mount.
2	EA	806	15 ft. luminaire arm.
1	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.
4	CY	205	Test pit excavation.
3	EA	811	Handhole.
275	LF	815	Sawcut for signal loop detector.
675	LF	810	Loop detector wire (No. 14 A.W.G.) encased in flexible tubing.
25	LF	810	1-conductor electrical cable (No. 4 A.W.G.) (3 pieces).
1725	LF	810	2-conductor (aluminum shielded) electrical cable (No. 14 A.W.G.).
325	LF	810	2-conductor electrical cable (No. 14 A.w.G.).
325	LF	810	3-conductor electrical cable (No. 14 A.W.G.).
1300	LF	810	5-conductor electrical cable (No. 14 A.W.G.).
850	LF	810	7-conductor electrical cable (No. 14 A.W.G.).
330	LF	810	3-M Opticom Cable.
4	EA	---	Video detection camera cable (two-200 ft., one-300 ft., one-400 ft.)
75	LF	810	2- conductor tray cable (No. 12 A.W.G.).
50	LF	810	Bare copper ground wire (No. 6 A.W.G.)
1	EA	---	Electrical utility service equipment (120/240 V, one phase, three wire system) for a type B-7 overhead electrical Service.
1	EA	---	2 in. PVC elbow in existing cabinet base
1	LF	819	4 in. PVC conduit elbow in existing cabinet base.
650	LF	805	3/8in. steel span wire.
20	LF	805	1in. liquid tight flexible non-metallic conduit for loop detector sleeve.
70	LF	805	2 in. polyvinyl chloride (Schedule 80) electrical conduit - bored.
75	LF	805	2 involving chloride (Schedule 80) electrical conduit - trenched.
50	LF	805	3 in. polyvinyl chloride (Schedule 80) electrical conduit - trenched.
20	CY	801	4 in. polyvinyl chloride (Schedule 80) electrical conduit - trenched.
13.0	EA	807	Concrete foundation for traffic signal equipment.
3	EA	804	Ground rod -3/4in. diameter x 10 ft. length.
725	LF	556	12 in. wide HAPPTPM - white for crosswalk.
215	LF	556	24 in. wide HAPPTPM - white for stop line.
1	EA	---	Relocate existing opticom.
6	EA	---	Relocate existing sign.
170	LF	---	Remove existing pavement marking by grinding.
Lump Sum	LS	---	Removal of existing traffic signal equipment.
Lump Sum	LS	---	Relocate existing cameras.
Lump Sum	LS	---	As-built for S.H.A. (on CADD).

C. SHA forces shall remove the auxiliary equipment from the controller cabinet.

CONTACT LIST

The contact persons for District #3 are as follows:

PG - Mr. Majib Shakib
Assistant District Engineer - Traffic
PG - 301-513-7358

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

Mr. Randy Brown
Assistant District Engineer - Maintenance
301-513-7304

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

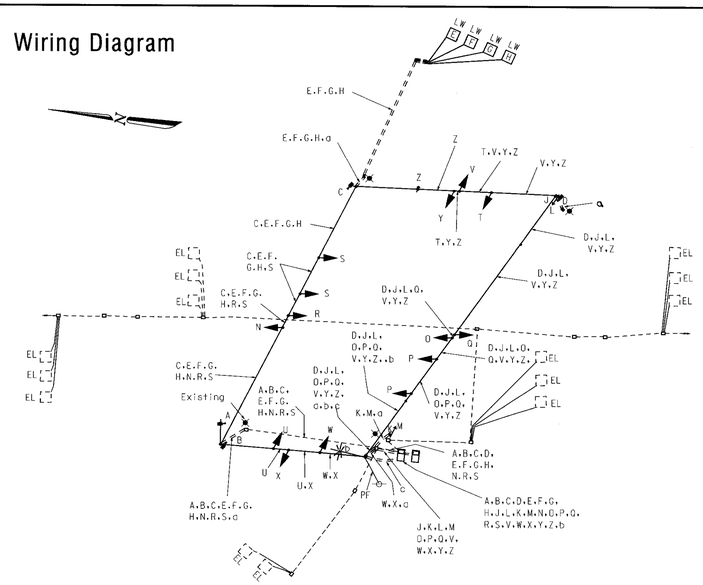
The Power Company Representative is:

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

Phase Chart

	1,2	3,4	5,6	7,8	9	10	11	12	13	14	15,16
Phase 1 & 5	G	R	G	R	R	R	R	R	R	R	DW
1 & 5 Change to Phase 1 & 6 or Phase 2 & 5 or Phase 2 & 6											
Phase 1 & 6	G	G	R	R	R	R	R	R	R	R	DW
1 Change	Y	G	R	R	R	R	R	R	R	R	DW
Phase 2 & 5	R	R	G	G	R	R	R	R	R	R	DW
5 Change	R	R	Y	G	R	R	R	R	R	R	DW
Phase 2 & 6	R	G	R	G	R	R	R	R	R	R	DW
2 & 6 Change	R	Y	R	Y	R	R	R	R	R	R	DW
Phase 3 & 7	R	R	R	R	R, G	R, G	R	R, G	R, G	R	DW
3 & 7 Change to Phase 3 & 8 or Phase 4 & 7 or phase 4 & 8											
Phase 3 & 8	R	R	R	R	G, G	G, G	G	R	R	R	DW
3 Change	R	R	R	R	G, Y	G, Y	G	R	R	R	DW
Phase 4 & 7	R	R	R	R	R	R	R	G, G	G, G	G	DW
7 Change	R	R	R	R	R	R	R	G, Y	G, Y	G	DW
Phase 4 & 8	R	R	R	R	G	G	G	G	G	G	DW
4 & 8 Change	R	R	R	R	Y	Y	Y	Y	Y	Y	DW
Phase Alt 4 & 8	R	R	R	R	G	G	G	G	G	G	WK
Ped Clearance	R	R	R	R	G	G	G	G	G	G	FL/DW
Alt 4 & 8 Change	R	R	R	R	Y	Y	Y	Y	Y	Y	DW
Pre Emption 1 Phase 3 & 8	R	R	R	R	R	R	R	G	G	G	DW
Flashing Operation	FL/R	FL/Y	FL/R	FL/Y	FL/R	FL/R	FL/R	FL/R	FL/R	FL/R	DARK

Wiring Diagram



A, B, C, D — Video Camera Detection Camera Cable (per manufacturing Specifications)

E, F, G, H — 2-Conductor Cable (Aluminum Shielded)

J, K — 2-Conductor Electrical Cable (No. 14 A.W.G.)

L, M — 3-Conductor Electrical Cable (No. 14 A.W.G.)

N, R, O, S, P, T, Q, U — 5-Conductor Electrical Cable (No. 14 A.W.G.)

V, W, X, Y — 7-Conductor Electrical Cable (No. 14 A.W.G.)

Z — 3-M Opticom Cable

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

b — 2-Conductor Tray Cable (No. 12 A.W.G.)

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

EL — Existing Loop Detector Wire

LW — Loop Detector Wire (No. 14 A.W.G.) in Flexible Tubing

— Proposed Grounding Rod

PF — Proposed Overhead Electrical Service By PEPCO

Revision " J"

The Traffic Group
The Traffic Group, Inc.
410-931-6600
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MARYLAND DOT - STATE HIGHWAY ADMINISTRATION
Office of Traffic & Safety
TRAFFIC ENGINEERING DESIGN DIVISION
(General Information Plan)

MD 210 (Indian Head Hwy.) at Old Fort Road (North)

DRAWN BY:	Frank Hoeckel	F.A.P. NO.	N/A	TS NO. 1173K-61	SHEET NO.
CHECKED BY:	John Dirndorfer	S.H.A. NO.	BW996M82		
SCALE:	N/A	COUNTY:	Prince George's	T.I.M.S. NO. F896	2 OF 2
DATE:	June 2, 2004	LOG MILE:	16021009.89		

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