FHWA REGION NO	STATE	FED. AID PROJ. NO	SHEET NO.	TOTAL SHEETS
3	MD.			

INTERSECTION OPERATION

This intersection is to operate in a NEMA five phase, semi–traffic–actuated mode. There will be exclusive left turns for both the north and southbound movements of MD 5. The through movements for MD 5 will operate concurrently. The Auth Road movement will operate alone.

An eight phase, full–traffic–actuated, solid state digital controller with intersection monitor and harness, battery back–up, five two–channel time delay output loop detector amplifiers, telemetry module, and isolation board and harness housed in a base mounted cabinet are to be installed at this intersection.

CONSTRUCTION DETAILS

A. Install base mounted cabinet/controller with all necessary equipment (Note: two 4 in., 90–degree (Schedule 40) PVC bends, and one 2 in., 90–degree (Schedule 80) PVC bend).

B. Install 12 in. x 32 ft. (2–ply) steel strain pole with 15 ft. luminaire arm and 250W HPSV luminaire, and all necessary equipment for an overhead Type B–14 electrical service (Note: two 3 in., 90–degree (Schedule 40) PVC bends, and one 2 in., 90–degree (Schedule 80) PVC bend). [Use four 1–3/4 in. x 90 in. anchor bolts for each pole.]

C. Install 12 in. x 32 ft. (2–ply) steel strain pole with 20 ft. luminaire arm and 250W HPSV luminaire (Note: one 2 in., 90–degree (Schedule 40) PVC bend). [Use four 1–3/4 in. x 90 in. anchor bolts for each pole.]

D. Install handhole.

E. Install 1 in. liquid tight, non–metallic conduit for loop detector sleeve.

F. Install 2 in. polyvinyl chloride (Schedule 40) electrical conduit – trenched.

G. Install 2 in. polyvinyl chloride (Schedule 80) electrical conduit – trenched.

H. Install 2 in. polyvinyl chloride (Schedule 80) electrical conduit – slotted.

J. Install 3 in. polyvinyl chloride (Schedule 40) electrical conduit – trenched.

K. Install 4 in. polyvinyl chloride (Schedule 40) electrical conduit – trenched.

L. Install 6 ft. x 6 ft. vehicle loop detector (3 turns).

M. Install 6 ft. x 30 ft. quadrupole type vehicle loop detector (2–4–2 turns).

N. Install 3/8 in. steel span wire, vehicle signal heads, and signs as shown.

O. Install 3/8 in. steel span wire and signal head.

P. Use existing handhole. Pull back existing interconnect cable and necessary aluminum shielded cables and re–run in new conduit.

Q. Use existing conduit.

R. Use existing handhole.

S. Cap and abandon existing conduit.

T. Remove existing steel pole and all attached equipment.

U. Remove existing handhole.

V. Remove existing foundation to 1 ft. below grade.

W. Remove existing electrical service.

X. Install 24 in. preformed white pavement marking for stop line.

Y. Proposed overhead electrical service by PEPCO.

EQUIPMENT LIST "A"

Equipment to be supplied by the SHA.

Quantity	Unit	Description
1	EA	Base mounted cabinet for an eight phase, full–traffic–actuated, solid state digital controller (to be used in a NEMA five phase semi–traffic–actuated mode).
5	EA	Two–channel delay output loop detector amplifier
1	EA	8 in., one–way, three section (R,Y,G) adjustable traffic signal head – span wire mount.
6	EA	12 in., one–way, three section (RA,YA,GA) adjustable traffic signal head – span wire mount.
6	EA	12 in., one–way, three section (R,Y,G) adjustable traffic signal head – span wire mount.
5	EA	30 in. x 36 in. R3–5(L) sign – span wire mount.
1	EA	30 in. x 36 in. R3–6(L) sign – span wire mount.
2	EA	16 in. x Var. D3–2 dual faced sign "Auth Rd –> " / " <– Auth Rd" – span wire mount.

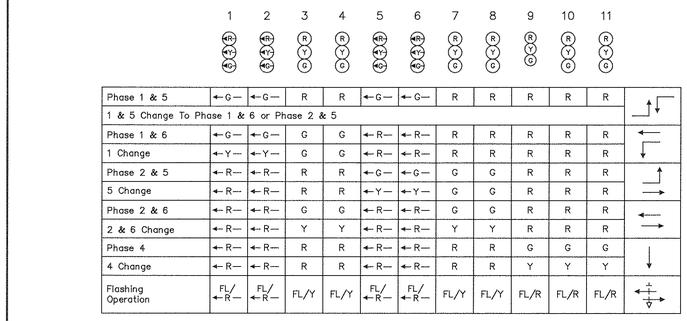
EQUIPMENT LIST "B"

Equipment to be furnished and/or installed by the Contractor.

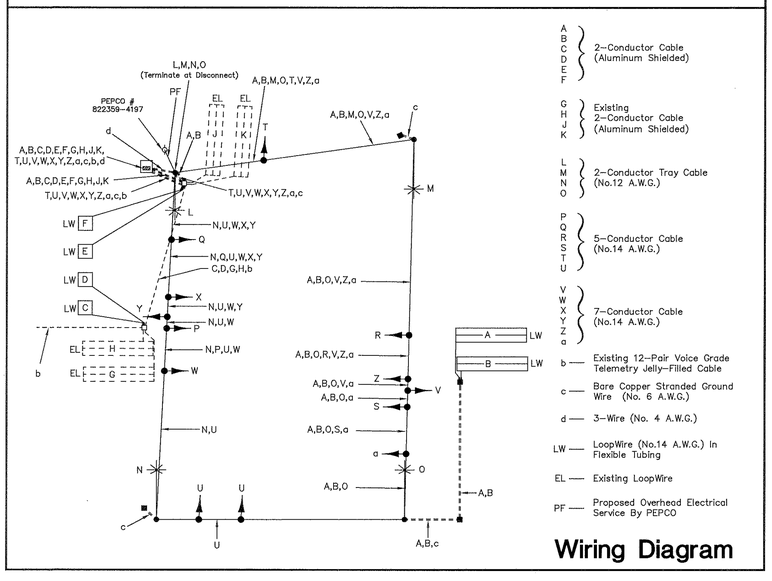
Quantity	Unit	Description
5	CY	Test pit excavation.
70	LF	24 in. preformed white pavement marking for stop line.
10280	LBS	2–Ply Steel strain pole.
4	EA	Handhole.
475	LF	Sawcut for signal loop detector.
890	LF	Loop detector wire (No. 14 A.W.G.) encased in flexible tubing.
1150	LF	2–conductor (aluminum shielded) electrical cable (No. 14 A.W.G.).
750	LF	2–conductor electrical tray cable (No. 12 A.W.G.).
475	LF	5–conductor electrical cable (No. 14 A.W.G.).
1275	LF	7–conductor electrical cable (No. 14 A.W.G.).
50	LF	3–wire electrical cable (No. 4 A.W.G.).
100	LF	Bare copper ground wire (No. 6 A.W.G.).
600	LF	3/8 in. steel span wire.
35	LF	1 in. liquid tight flexible non–metallic conduit for loop detector sleeve.
50	LF	2 in. polyvinyl chloride (Schedule 40) electrical conduit – trenched.
10	LF	2 in. polyvinyl chloride (Schedule 80) electrical conduit – trenched.
60	LF	2 in. polyvinyl chloride (Schedule 80) electrical conduit – slotted.
10	LF	3 in. polyvinyl chloride (Schedule 40) electrical conduit – trenched.
30	LF	4 in. polyvinyl chloride (Schedule 40) electrical conduit – trenched.
14	CY	Concrete foundation for signal equipment.
5	EA	Ground rod – 3/4 in. diameter x 10 ft. length.
1	EA	Control and distribution equipment (120/240 V, one phase, three wire system).
3	EA	20 ft. luminaire arm with 250W HPSV luminaire.
1	EA	15 ft. luminaire arm with 250W HPSV luminaire.
13	EA	Install traffic signal head – span wire mount.
75	SF	Install sheet aluminum signing – overhead mount.
1	EA	Install base mounted cabinet.
LS	LS	Removal of existing traffic signal equipment.

SPECIAL NOTES

The northbound left turn phase is not to become operational until the final phase of construction is completed.



Phase Chart



Wiring Diagram

Traffic Control Signal

Revision 'C'

A/E GROUP, INC.
CONSULTING ENGINEERS • PLANNERS
11409 CRONHILL DRIVE
OWINGS MILLS, MD. 21117
(410) 363–1908
A/E JOB NO: 95–280

REVISIONS	APPROVALS
© July 14,1995 Reconstruct for New Geometrics. S.H.A. No.: P 391–504–370	CHIEF, SIGNAL DESIGN SECTION
	ASST. DISTRICT ENGINEER, TRAFFIC
	CHIEF, TRAFFIC ENGINEERING DESIGN DIVISION
	DIRECTOR, OFFICE OF TRAFFIC & SAFETY

ORIGINAL ON FILE

MDOT – STATE HIGHWAY ADMINISTRATION
Office of Traffic & Safety
TRAFFIC ENGINEERING DESIGN DIVISION LOG MILE # 16000512.17

DRAWN BY: T. Mank
DES. BY: ---
CHK. BY: W.F. Fitch

MD 5 at Auth Rd / I-95 S. On-Ramp

COUNTY: PRINCE GEORGE'S

DATE: May 20, 1972 F.A.P. NO. N/A
SCALE: 1" = 20' S.H.A. NO. BW–563–802–312

TS/STD. NO. **594-C GI**

SHEET NO. ____ OF ____