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

PROJECT DESCRIPTION

I. GENERAL

This portion of the project involves the modification of the existing traffic control signal at the intersection of MD 355 and Redland Road in Montgomery County, Maryland. MD 355 is considered to run in a north/south direction.

II. INTERSECTION OPERATION

The intersection presently operates in NEMA six (6) phase, semi-traffic-actuated mode. The existing phasing will be utilized.

EQUIPMENT LIST

A. Approved S.H.A. equipment to be purchased by the Developer 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
1	EA	816	Standard S.H.A. traffic signal controller, base mounted cabinet, and five 4-channel rack mounted loop detector amplifiers [Note: Controller and cabinet shall be supplied by Econolite and delivered to the S.H.A. signal shop for wiring and testing. Contact Mr. Ed Rodenhizer (410) 787-7650].
4	EA	818	12 in. x 32 ft., 2-ply steel strain pole [Note: four 2-1/4 in. x 96 in. anchor bolts].
3	EA	818	10 ft. steel pedestal pole with break away tranformer base. [Note: four 1 in. x 40 in. anchor bolts].
7	EA	814	12 in., one-way, three section (R,Y,G) adjustable traffic signal head with span wire mounting hardware and tunnel visors.
3	EA	814	12 in., one-way, five section (R,Y,YA,G,GA) adjustable 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 traffic signal head with span wire mounting hardware and tunnel visors.
2	EA	814	12 in., one-way, two section (Symbolic DW, WK) adjustable pedestrian signal head with pole mounting hardware and cut-away visors.
2	EA	814	12 in., one-way, two section (Symbolic DW, WK) adjustable pedestrian signal head with post top mounting hardware and cut-away visors.
1	EA	814	12 in., two-way, two section (Symbolic DW, WK) adjustable pedestrian signal head with post top mounting hardware and cut-away visors.
21	SF	813	36 in. x 42 in. R 10-12 sign with span wire mounting hardware.
7.5	SF	813	30 in. x 36 in. R 3-6(R) sign with span wire mounting hardware.
7.5	SF	813	36 in. x 30 in. R 3-5(R) sign with span wire mounting hardware.
7.5	SF	813	30 in. x 36 in. R 3-5(L) sign with span wire mounting hardware.
7.5	SF	813	30 in. x 36 in. R 3-6 sign with span wire mounting hardware.
15	SF	813	30 in. x 36 in. R 3-2(mod) sign with span wire mounting hardware.
26.7	SF	813	16 in. x Var. D 3-2 (dual faced) sign with span wire mounting hardware.
30	SF	813	18 in. x 60 in. D 3-2/M95-1 (dual faced) sign with span wire mounting hardware.
1.5	SF	813	9 in. x 12 in R 10-3(c) pedestrain pushbutton sign with pole mount hardware.
2	EA	817	Pedestrain pushbutton assembly.
2	EA	806	10 ft. luminaire arm.
2	EA	806	250 W H.P.S. lamp and luminaire.

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.
6	CY	205	Test pit excavation.
4	EA	811	Handhole.
875	LF	815	Sawcut for signal loop detector.
2960	LF	810	Loop detector wire (No. 14 A.W.G.) encased in flexible tubing.
4175	LF	810	2-conductor (aluminum shielded) electrical cable (No. 14 A.W.G.).
495	LF	810	2-conductor electrical tray cable (No. 12 A.W.G.).
455	LF	810	2-conductor electrical cable (No. 14 A.W.G.).
715	LF	810	3-conductor electrical cable (No. 14 A.W.G.).
375	LF	810	5-conductor electrical cable (No. 14 A.W.G.).
1795	LF	810	7-conductor electrical cable (No. 14 A.W.G.).
80	LF	804	Bare copper stranded ground wire (No. 6 A.W.G.).
15	LF	810	3-wire (No. 4 A.W.G.) electrical cable.
15	LF	810	3-wire (No. 8 A.W.G.) electrical cable.
615	LF	819	1/4in. steel tether wire.
615	LF	819	3/8in. steel span wire.
65	LF	805	1 in. liquid tight flexible non-metalic conduit for loop detector sleeve.
70	LF	805	2 in. polyvinyl chloride [Schedule 40] electrical conduit - trenched.
50	LF	805	2 in. polyvinyl chloride [Schedule 80] electrical conduit - slotted in roadway.
140	LF	805	3 in. polyvinyl chloride [Schedule 40] electrical conduit - trenched.
120	LF	805	3 in. polyvinyl chloride [Schedule 80] electrical conduit - pushed.
110	LF	805	4 in. polyvinyl chloride [Schedule 40] electrical conduit - trenched.
1	EA	807	Control and distribution equipment (120/240 V, one phase, three wire system) for a type B-16 underground electrical service.
6	EA	804	Ground rod.
21.95	CY	801	Concrete foundation for traffic signal equipment.
230	LF	553	12 in. wide HAPPTPM pavement marking - white for crosswalk.
55	LF	553	24 in. wide HAPPTPM pavement marking - white for stop line.
6	EA	---	Splice existing loop wire to new aluminum shielded cable.
4	EA	---	Paint new galvanized strain pole - Federal Standard Green Color #14036.
3	EA	---	Paint new galvanized pedestal pole - Federal Standard Green Color #14036.
Lump Sum	LS	---	Removal of existing traffic signal equipment.
Lump Sum	LS	---	As-built for S.H.A. (on CADD)

C. Existing equipment to be removed by the Contractor and delivered to the MDSHA Office of Traffic and Safety, Traffic Operations Division, Traffic Signal Shop, 7491 Connelley Drive, Hanover MD, 21076. A twenty-four (24) hour notice is required prior to delivery. Please contact Mr. Ed Rodenhizer at (410) 787-7650.

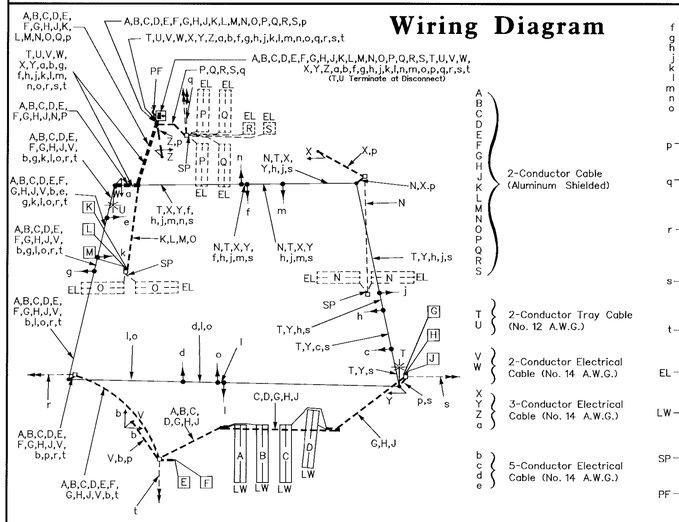
Quantity	Units	Description
1	EA	Base mounted cabinet, controller, and all attached equipment.

Note. All equipment and/or material not listed above shall become the property of the Contractor.

Phase Chart

	1	2	3	4	5	6	7	8	9	10	11	12	13-16	17,18
Phase 1 & 5	R G	R G	R	R G	R G	R	R	R	R G	R	R	R	DW	DW
1 & 5 Change to Phase 1 & 6 or Phase 2 & 5														
Phase 2 & 5	G G	G G	G	R	R	R	R	R	R G	R	R	R	DW	DW
5 Change	G Y	G Y	G	R	R	R	R	R	R Y	R	R	R	DW	DW
Phase 1 & 6	R	R	R	G G	G G	G	R	R	R	R	R	R	DW	DW
1 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



The Traffic Group

The Traffic Group, Inc.
Suite 600
40 W. Chesapeake Avenue
Towson, Maryland 21204
410-583-8405
1-800-583-8411
Fax 410-321-8458
Job. No. 960613
SIGPLAN3.DGN

MDOT – STATE HIGHWAY ADMINISTRATION
Office of Traffic & Safety
TRAFFIC ENGINEERING DESIGN DIVISION

DRAWN BY: J. Dirndorfer
DES. BY: J. Dirndorfer
CHK. BY:

(General Information)
MD 355 at Redland Blvd. / Redland Road
COUNTY: MONTGOMERY
LOG MILE • 15035511.95

DATE: May 23,1997
SCALE: N/A
F.A.P. NO. N/A
S.H.A. NO. BW979M82
TS/STD. NO. 3665A
~~3636A~~-GI
SHEET NO. 2 of 3