

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

PROJECT DESCRIPTION

I. GENERAL

This project involves the modification of the existing traffic control signal at the intersection of MD 140 (Baltimore St.) and Chevro Dr./Grand Dr. in Carroll County, Maryland. MD 140 is considered to run in a north/south direction.

II. INTERSECTION OPERATION

The intersection currently operates in a NEMA three (3) phase, full-traffic-actuated mode. The MD 140 (Baltimore St.) through movements operate concurrently. The Grand Dr. through movement operates alone.

The intersection will be modified to operate in a NEMA six (6) phase, full-traffic actuated mode. There will be exclusive/permissive left turns for both the north and southbound movements of MD 140. The MD 140 through movements will operate concurrently. The Chevro Dr./ Grand Dr. through movements will operate concurrently with an actuated pedestrian phase across the south leg of the intersection.

The existing cabinet/controller are to be utilized. An additional 2-channel loop detector amplifier will be installed.

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.

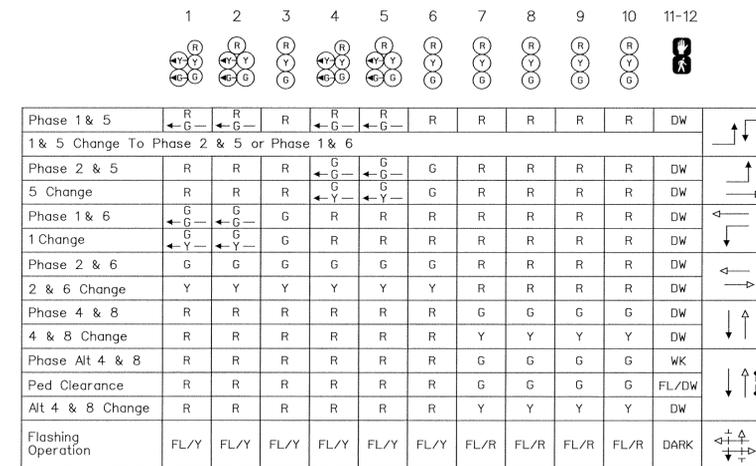
Quantity	Units	Specification Section	Description
Lump Sum	LS	108	Mobilization.
Lump Sum	LS	104	Maintenance of traffic.
2	CY	205	Test pit excavation.
1	EA	811	Handhole.
800	LF	815	Sawcut for signal loop detector.
2950	LF	810	Loop detector wire (No. 14 A.W.G.) encased in flexible tubing.
75	LF	810	2-conductor (aluminum shielded) electrical cable (No. 14 A.W.G.).
375	LF	810	2-conductor electrical cable (No. 4 A.W.G.).
400	LF	810	3-conductor electrical cable (No. 14 A.W.G.).
25	LF	810	5-conductor electrical cable (No. 14 A.W.G.).
950	LF	810	7-conductor electrical cable (No. 14 A.W.G.).
300	LF	804	Bare copper stranded ground wire (No. 6 A.W.G.).
40	LF	805	1 in. liquid tight flexible non-metallic conduit for loop detector sleeves.
30	LF	805	2 in. polyvinyl chloride [Schedule 40] electrical conduit - trenched.
65	LF	805	3 in. polyvinyl chloride [Schedule 80] electrical conduit - slotted in roadway.
3.35	CY	801	Concrete foundation for traffic signal equipment.
2	EA	804	Ground rod - 3/4 in. diameter x 10 ft. length.
3	EA	500	HAPPTPM symbol - white "Left Arrow".
4	EA	500	HAPPTPM symbol - white "Right Arrow".
2	EA	500	HAPPTPM symbol - white "Thru and Left Arrow".
1	EA	500	HAPPTPM symbol - white "Thru and Right Arrow".
12 in. wide HAPPTPM - white for crosswalk.	220	LF	500
12 in. wide HAPPTPM - yellow for hatching.	60	LF	500
24 in. wide HAPPTPM - white for stop line.	125	LF	500
5 in. wide preformed pavement marking - white for lane line.	1300	LF	550
5 in. wide preformed pavement marking - yellow for center line.	2400	LF	550
4 in. x 4 in. wood sign support.	26	LF	812
Remove existing pavement markings by grinding.	450	LF	---
Remove existing signal equipment.	Lump Sum	LS	---
As-built for S.H.A [on CADD].	Lump Sum	LS	---

EQUIPMENT LIST

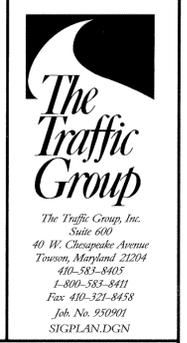
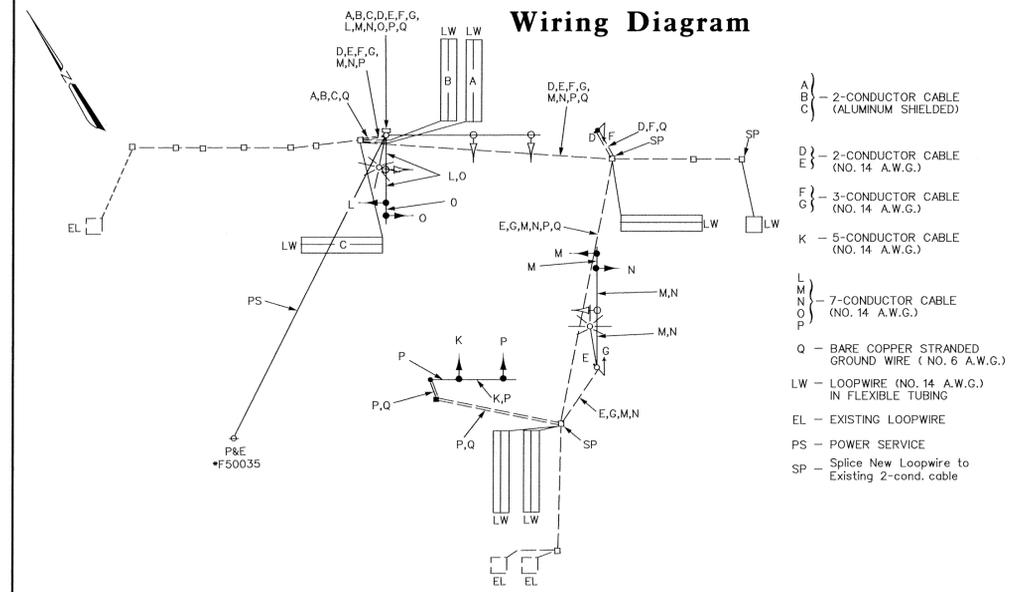
A. Approved S.H.A. equipment to be purchased by the Developer and installed by the Contractor. All equipment in this list shall have catalog cuts submitted for approval prior to installation.

Quantity	Units	Specification Section	Description
1	EA	818	27 ft. mast arm pole with 38 ft. mast arm [Note: four 1-1/2 in. x 60 in. anchor bolts]
1	EA	818	10 ft. steel pedestal pole with break away transformer base [Note: four 1 in. x 40 in. anchor bolts].
1	EA	816	2-channel loop detector amplifier.
2	EA	814	12 in., one-way, three section (R,Y,G) adjustable traffic signalhead with mast arm mounting hardware and tunnel visors.
2	EA	814	12 in., one-way, five section (R,Y,YA,G,GA) adjustable traffic signalhead with mast arm 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 signalhead with mast arm mounting hardware and tunnel visors.
1	EA	814	12 in., one-way, two section (symbolic DW, WK) adjustable pedestrian signalhead with pole mounting hardware and cut-away visors.
1	EA	814	12 in., one-way, two section (symbolic DW, WK) adjustable pedestrian signalhead with post top mounting hardware and cut-away visors.
6.7	SF	813	16 in. x Var. D 3-2 sign with mast arm mounting hardware.
74.7	SF	813	32 in. x Var. D 3-2 sign with mast arm mounting hardware.
15	SF	813	30 in. x 36 in. R 3-5(R) sign with mast arm mounting hardware.
7.5	SF	813	30 in. x 36 in. R 3-5(L) sign with mast arm mounting hardware.
21	SF	813	36 in. x 42 in. R 10-12 sign with mast arm mounting hardware.
12.5	SF	813	30 in. x 30 in. R 3-7(R) sign for ground mounting.
1.5	SF	813	9 in. x 12 in. R 10-3C sign for pole mounting.
2	EA	817	Pedestrian pushbutton assembly with pushbutton sign.
1	EA	816	Load switch.

Phase Chart



Wiring Diagram



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

(General Information)
MD 140 (Baltimore St.) at
Chevro Drive/ Grand Drive

DRAWN BY: A.A./J.E.S. DES. BY: J.A.B. CHK. BY: _____

DATE: September 17, 1997 F.A.P. NO. N/A S.H.A. NO. BW136M83

SCALE: N/A COUNTY: CARROLL LOG MILE: 06014020.36

TS/STD. NO. 3440A-GI SHEET NO. 2 of 3