F.H.W.A. REGION NO.	STATE	FED.AID PROJ.NO.	SHEET NO.	TOTAL SHEETS
3	MD	SEE TITLE SHEET	139	156

INTERSECTION OPERATION

MD 26 at Sebastion Boulevard/Waterside Drive

The intersection shall continue operating in a NEMA six-phase, full-actuated mode, with the MD 26 approaches running concurrently. The left turns for MD 26 will be exclusive and will operate concurrently. The Sebastion Blvd/Waterside Drive approaches will run concurrently.

SPECIAL NOTES

1.) All field wiring to the existing controller cabinet shall be terminated to the appropriate controller cabinet connectors by the Contractor and labeled. All other controller cabinet wiring will be preformed by S.H.A. Signal Shop. Contact Mr. Ed Rodenhizer at (410) 787-7650 seventy two (72) hours in advance of intended work.

2.) The Contractor shall be responsible for terminating all signal cables, excluding interconnect, to the appropriate terminals and shall properly label each cable.

3.) The existing signal operation shall be maintained by the Contractor until the modifications are complete and are ready to be put into operation.

4.) Signal heads may require to be covered by the Contractor during construction.

CONSTRUCTION DETAILS

C. Install handhole.

D. Install 1" liquid tight flexible non-metallic conduit sleeve for loop detector lead-in.

E. Install 2" polyvinyl chloride schedule 40 electrical conduit - trenched/buried.

F. Install 3" polyvinyl chloride schedule 80 electrical conduit - bored/under existing pavement.

G. Install 6' x 6' loop detector (3 turns).

H. Install 6' x 30' quadrupole loop detector. (2-4-2 turns)

K. Install 3/8" steel span wire, signal head, signs, and 1/4" tether wire for signs as shown.

N. Install permanent preformed pavement marking arrow and/or word 'ONLY'.

O. Install 8' breakaway pedestal pole with pedestrian pushbutton and sign.

T. Use existing controller cabinet. Disconnect existing loop detector lead-in cable(s) and install proposed loop detector lead-in cable(s).

U. Install pushbutton and sign on existing strain pole.

V. Use existing conduit.

W. Use existing span wire, install, relocate, or remove signal heads and/or signs as shown.

X. Use existing handhole.

Y. Use existing handhole. Disconnect existing loop detector wire(s).

Z. Use existing handhole. Remove existing 2 conductor loop detector wire(s) Install proposed loop detector lead-in cable(s).

AA. Install 12 inch preformed pavement marking tape for crosswalks.

DD. Abandon existing loop detector.

JJ. Install 8' pedestal pole (Note: 1-2 inch 90 degree PVC conduit bend).

UU. Install 3" electrical conduit (schedule 80) - trenched. Install prior to installation of pavement.

YY. Install 24 inch white preformed pavement marking for stop line.

EQUIPMENT LIST

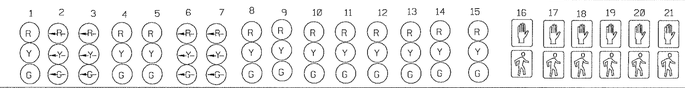
A. Equipment to be furnished by S.H.A.

QUANTITY	UNIT	SPECIFICATION SECTION	DESCRIPTION
3	EA	814	12 inch 1 way 3 section (R,Y,G) polycarbonate signal head having proper span wire mounting bracket and tunnel visors
4	EA	814	12 inch 1 way 3 section (RA,YA,GA) polycarbonate signal head having proper span wire mounting bracket and tunnel visors
1	EA	814	12 inch 1 way 2 section pedestrian signal head- pole mount
1	EA	814	12 inch 1 way 2 section pedestrian signal head- pedestal mount
1	EA	814	12 inch 2 way 2 section pedestrian signal head- pole mount
1	EA	814	12 inch 2 way 2 section pedestrian signal head- pedestal mount
1	EA	817	Pushbutton and sign

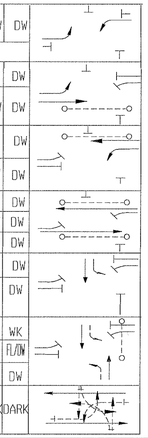
B. Equipment to be furnished and/or installed by contractor

QUANTITY	UNIT	SPECIFICATION SECTION	DESCRIPTION
1	EA	555	Permanent preformed pavement marking arrow
4	EA	555	Permanent preformed pavement marking letter
90	LF	555	24 inch white preformed pavement marking tape
985	LF	555	12 inch white preformed pavement marking tape
1	EA	XXX	As-built signal plan
1.4	CY	801	Concrete for signal foundation
2	EA	804	Ground rod- 3/4 inch diameter x 10 foot length
320	LF	805	3" schedule 80 rigid PVC conduit-bored
35	LF	805	2" schedule 40 rigid PVC conduit-trenched
70	LF	805	1" liquid tight flexible non-metallic conduit for detector sleeve
30	LF	810	Electrical cable- 1 conductor (No. 6 AWG) stranded bare copper ground wire
3735	LF	810	Electrical cable- 2 conductor (aluminum shielded)
615	LF	810	Electrical cable- 2 conductor (No. 14 AWG)
370	LF	810	Electrical cable- 3 conductor (No. 14 AWG)
615	LF	810	Electrical cable- 5 conductor (No. 14 AWG)
1075	LF	810	Loop wire encased in flexible tubing (No. 14 AWG)
5	EA	811	Electrical Handhole
1	LS	813	Remove and salvage existing equipment
7	EA	814	Install signal heads - span mount
2	EA	814	Install 12 in. pedestrian signal head - pole mount
2	EA	814	Install 12 in. pedestrian signal head- pedestal mount
480	LF	815	Sawcut for signal (loop detector)
1	EA	817	Install pushbutton and sign
2	EA	827	8 foot breakgway pedestal pole (Note: install 8- 1" x 40" anchor bolts)
1	EA	814	Relocate existing signal head
26	SF	813	Relocate signs from existing overhead structures

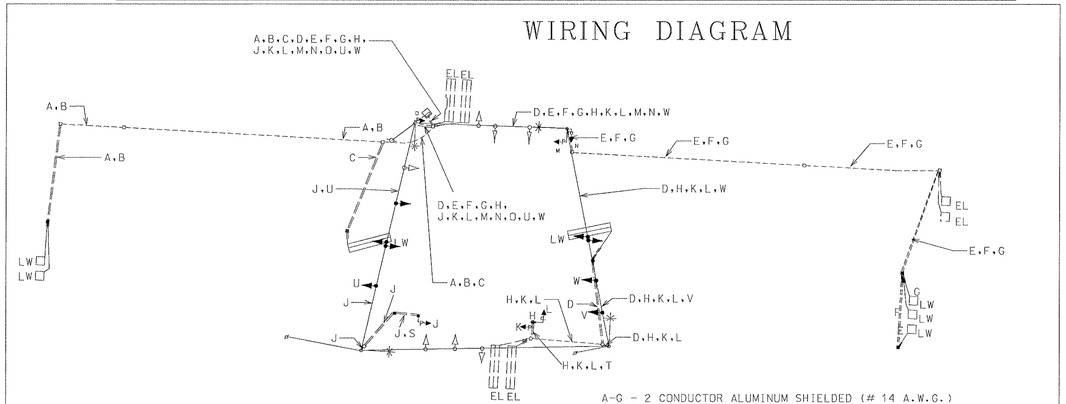
PHASE CHART



	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21
PHASE 1 & 5	R	~~G~~	~~G~~	R	R	~~G~~	~~G~~	R	R	R	R	R	R	R	R	DW	DW	DW	DW	DW	DW
1 & 5 CHANGE	PHASE CHANGE TO 1 & 6, 2 & 5 OR 2 & 6																				
PHASE 1 & 6	G	~~G~~	~~G~~	G	G	~~R~~	~~R~~	R	R	R	R	R	R	R	R	DW	WK	WK	DW	DW	DW
1 CHANGE	G	~~Y~~	~~Y~~	G	G	~~R~~	~~R~~	R	R	R	R	R	R	R	R	DW	WK	WK	DW	DW	DW
PHASE 2 & 5	R	~~R~~	~~R~~	R	R	~~G~~	~~G~~	G	G	R	R	R	R	R	R	WK	DW	DW	WK	DW	DW
5 CHANGE	G	~~R~~	~~R~~	G	G	~~Y~~	~~Y~~	G	G	R	R	R	R	R	R	WK	DW	DW	WK	DW	DW
PHASE 2 & 6	G	~~R~~	~~R~~	G	G	~~R~~	~~R~~	G	G	R	R	R	R	R	R	WK	WK	WK	WK	DW	DW
PED CLEAR	G	~~R~~	~~R~~	G	G	~~R~~	~~R~~	G	G	R	R	R	R	R	R	FL/DW	FL/DW	FL/DW	FL/DW	DW	DW
2 & 6 CHANGE	Y	~~R~~	~~R~~	Y	Y	~~R~~	~~R~~	Y	Y	R	R	R	R	R	R	DW	DW	DW	DW	DW	DW
PHASE 4 & 8	R	~~R~~	~~R~~	R	R	~~R~~	~~R~~	R	R	G	G	G	G	G	G	DW	DW	DW	DW	DW	DW
4 & 8 CHANGE	R	~~R~~	~~R~~	R	R	~~R~~	~~R~~	R	R	Y	Y	Y	Y	Y	Y	DW	DW	DW	DW	DW	DW
ALT PHASE 4&8	R	~~R~~	~~R~~	R	R	~~R~~	~~R~~	R	R	G	G	G	G	G	G	DW	DW	DW	DW	WK	WK
PED CLEAR	R	~~R~~	~~R~~	R	R	~~R~~	~~R~~	R	R	G	G	G	G	G	G	DW	DW	DW	DW	FL/DW	FL/DW
ALT 4&8 CHANGE	R	~~R~~	~~R~~	R	R	~~R~~	~~R~~	R	R	Y	Y	Y	Y	Y	Y	DW	DW	DW	DW	DW	DW
FLASHING OPERATION	FL/Y	FL/~~R~~	FL/~~R~~	FL/Y	FL/Y	FL/~~R~~	FL/~~R~~	FL/Y	FL/Y	FL/R	FL/R	FL/R	FL/R	FL/R	FL/R	DARK	DARK	DARK	DARK	DARK	DARK

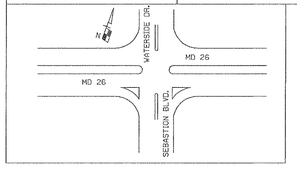


WIRING DIAGRAM



A-G - 2 CONDUCTOR ALUMINUM SHIELDED (# 14 A.W.G.)
H - 2 CONDUCTOR (# 14 A.W.G.)
J-L - 2 CONDUCTOR TRAY CABLE (# 12 A.W.G.)
M-R - 3 CONDUCTOR (# 14 A.W.G.)
S,T - 1 CONDUCTOR (NO. 6 AWG) STRANDED BARE COPPER GROUND WIRE
U-W - 5 CONDUCTOR (# 14 A.W.G.)
LW - LOOP WIRE (# 14 A.W.G.)
EL - EXISTING LOOP

INTERSECTION SKETCH



ULTIMATE TRAFFIC SIGNAL GENERAL INFORMATION

SG - 6

REVISIONS

APPROVALS

CHIEF, SIGNAL DESIGN SECTION

ASST. DISTRICT ENGINEER, TRAFFIC

CHIEF, TRAFFIC ENGINEERING DESIGN DIVISION

DIRECTOR, OFFICE OF TRAFFIC & SAFETY

DGL CONSULTING ENGINEERS COLUMBIA, MARYLAND

MDOT - STATE HIGHWAY ADMINISTRATION
OFFICE OF TRAFFIC & SAFETY
TRAFFIC ENGINEERING DESIGN DIVISION

ORIGINAL DRAWN BY: RJM
DES. BY: RJM
CHK. BY:
DATE: 4/95
SCALE: NTS

F.A.P. NO.
S.H.A. NO. F-174-501-771

MD 26 @ SEBASTIAN BLVD/ WATERSIDE DR

LOG MILE = 10002601.62

COUNTY: FREDERICK

TS/FILE NO. 3446A-GI

SHEET NO. 139 OF 156

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