PROJECT DESCRIPTION

I. GENERAL

This project involves the modification of an existing traffic control signal at the intersection of MD 26 and MD 32 in Carroll County, Maryland.
MD 26 is considered to run in an east/west direction.

A channelized island is being constructed for the right turn lane on southbound MD 32. Countdown pedestrian heads, and Audible pedestrian pushbuttons is being installed across the north legs of the intersection.

II. INTERSECTION OPERATION

The intersection shall be modified to operate in a NEMA six (6) phase, full-traffic-actuated mode. There is an exclusive left turn phase for both the east and westbound movement of MD 26. The MD 26 through movements will operate concurrently with new countdown pedestrian movement and actuated audible pedestrian movement across the north legs of the intersection. The MD 32 movements will operate in a side street split phase mode.

Note: Location of Accessible Pedestrian Signal pushbuttons must meet location requirement of MUTCD Sec. 4E.09 and Fig. 4E.2: and the NCHRP publication, "Accessible Pedestrian Signals: Guide to Best Practice". If not met, the Contractor is to stop work on the pushbutton location until a Design Waiver is obtain, approved by the Director, Office of Traffic and Safety.

EQUIPMENT LIST

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

None.

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.
3	EA	818	10 ft. steel pedestal pole with break away transformer base
1	EA	814	16 in.,one-way, one section L.E.D. (Countdown indications) adjustable pedestrian signal head with pole mounting hardware and cut-away visors.
3	EA	814	16 in.,one-way, one section L.E.D. (Countdown indications) adjustable pedestrian signal head with post top mounting hardware and cut-away visors.
1	EA	813	18 in. x 18 in. OM1-1 sign for ground mounting.
1	EA	813	36 in. x 36 in. R1-2 "YIELD" sign for ground mounting.
2	EA	813	36 in. x 36 in. W11A-2 sign for ground mounting.
2	EA	813	21 in. x 15 in. M6-2 sign (Fluorescent Yellow) for ground mounting.
2	EA	813	21 in. x 15 in. M6-2R sign for Shield Assembly mounting.
4	EA	813	9 in. x 12 in. R10-4(1) MOD. sign for pole/pedestal mounting.
1	EA	817	Central Control Unit for audible pedestrian pushbutton.
4	EA	817	Audible pedestrian pushbutton assembly with pushbutton sign.
2	CY	205	Test pit excavation.
10	EA	811	Handhole.
90	LF	815	Sawcut for signal loop detector.
320	LF	810	Loop detector wire (No. 14 A.W.G.) encased in flexible tubing.
580	LF	810	2-conductor electrical cable (No. 14 A.W.G.).
620	LF	810	5-conductor electrical cable (No. 14 A.W.G.).
50	LF	804	Bare copper stranded ground wire (No. 6 A.W.G.).
10	LF	805	1 in. liquid tight flexible non-metallic conduit for loop detector sleeve.
350	LF	805	3 in. polyvinyl chloride [Schedule 80] electrical conduit - trenched.
205	LF	805	3 in. polyvinyl chloride [Schedule 80] electrical conduit - bored.
10	LF	805	4 in. polyvinyl chloride [Schedule 80] electrical conduit - trenched.
85	LF	805	4 in. polyvinyl chloride [Schedule 80] electrical conduit - bored.
2.2	CY	801	Concrete foundation for traffic signal equipment.
2	EA	804	Ground rod -3/4in. diameter x 10 ft. length.
2	EA	810	Loop detector splice.
310	LF	549	12 in. wide HAPPTPM - white for cross walk.
40	LF	----	24 in. wide Detectable Warning Surface pavement marking
50	LF	812	4 in. x 6 in. wood sign support.
50	LF	602	Combination Concrete Curb and Gutter.
310	SF	603	4 in. concrete sidewalk.
40	SF	----	Excavation for sidewalk.
1	EA	----	Relocate existing sign and post.
Lump Sum	LS	----	Pull back and reroute existing signal cables (Approximately 4,100 ft.).
Lump Sum	LS	----	Remove and dispose of existing signal equipment.
Lump Sum	LS	----	As-built for S.H.A. [on CADD].

CONTACT LIST

The contact persons for District #7 are as follows:

Mr. John Concannon
Assistant District Engineer - Traffic
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Ms. Andrea Abend
Assistant District Engineer - Utility
301-624-8115

Mr. Raymond Johnson
Assistant District Engineer - Maintenance
301-624-8105

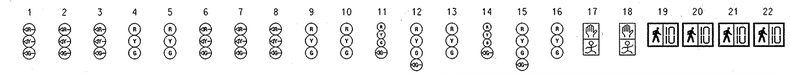
Mr. Richard L. Daff
Chief, Traffic Operations Division
410-787-7630

Mr. Ed Rodenhizer
Supervisor, Signal Shop
410-787-7650

C. Equipment to be return to SHA. All other materials to be removed by the contractor shall become the property of the contractor.

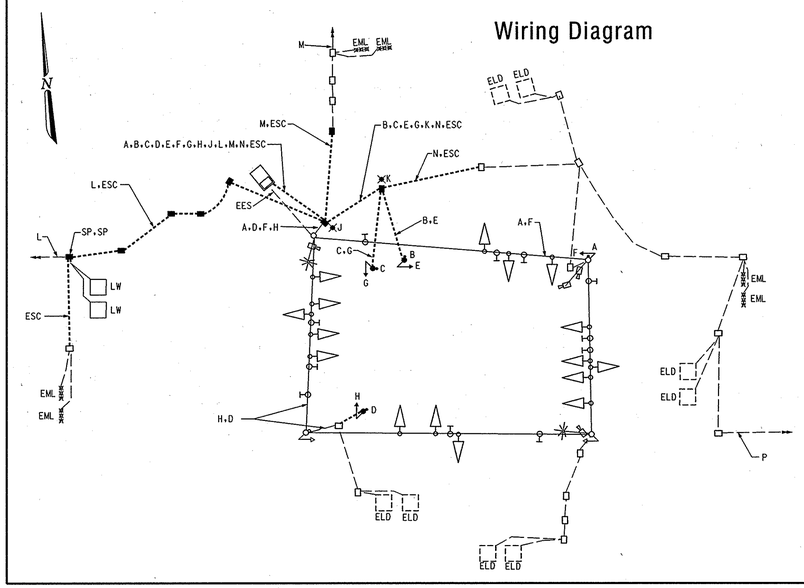
None

Phase Chart



	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22
Phase 1 & 5	G	G	G	R	R	G	G	G	R	R	R	R	R	R	R	R	DW	DW	DW	DW	DW	DW
1 & 5 Change to Phase 1 & 6 or Phase 2 & 5 or Phase 2 & 6																						
Phase 1 & 6	G	G	G	G	G	R	R	R	R	R	R	R	R	R	R	R	DW	DW	DW	DW	DW	DW
1 Change	Y	Y	Y	G	G	R	R	R	R	R	R	R	R	R	R	R	DW	DW	DW	DW	DW	DW
Phase 2 & 5	R	R	R	R	R	G	G	G	G	G	R	R	R	R	R	R	DW	DW	DW	DW	DW	DW
5 Change	R	R	R	R	R	Y	Y	Y	G	G	R	R	R	R	R	R	DW	DW	DW	DW	DW	DW
Phase 2 & 6	R	R	R	G	G	R	R	R	G	G	R	R	R	R	R	R	WK	WK	WK	WK	DW	DW
Ped Clearance	R	R	R	G	G	R	R	R	G	G	R	R	R	R	R	R	FL/DW	FL/DW	FL/DW	FL/DW	DW	DW
2 & 6 Change	R	R	R	Y	Y	R	R	R	Y	Y	R	R	R	R	R	R	DW	DW	DW	DW	DW	DW
Phase 3	R	R	R	R	R	R	R	R	R	R	R	R	R	G G	G G	G	DW	DW	DW	DW	DW	DW
3 Change	R	R	R	R	R	R	R	R	R	R	R	R	R	Y	Y	Y	DW	DW	DW	DW	DW	DW
Alt Phase 3	R	R	R	R	R	R	R	R	R	R	R	R	R	G G	G G	G	DW	DW	DW	DW	WK	WK
Ped Clearance	R	R	R	R	R	R	R	R	R	R	R	R	R	G G	G G	G	DW	DW	DW	DW	FL/DW	FL/DW
Alt 3 Change	R	R	R	R	R	R	R	R	R	R	R	R	R	Y	Y	Y	DW	DW	DW	DW	DW	DW
Phase 4	R	R	R	R	R	R	R	R	R	R	G G	G G	G	R	R	R	DW	DW	DW	DW	DW	DW
4 Change	R	R	R	R	R	R	R	R	R	R	Y	Y	Y	R	R	R	DW	DW	DW	DW	DW	DW
Flashing Operation	FL/ R	FL/ R	FL/ R	FL/Y	FL/Y	FL/ R	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, B, C, D — 2-Conductor Electrical Cable (No. 14 A.W.G.)
E, F, G, H — 5-Conductor Electrical Cable (No. 14 A.W.G.)
J, K — Bare Copper Ground Wire (No. 6 A.W.G.)
L, M, N — Existing Interconnect Cable
LW — Loop Detector Wire (No. 14 A.W.G.) in Flexible Tubing
ELD — Existing Loop Detector
EML — Existing Micro-loop Detector
ESC — Existing Rerouted Signal Cables
EES — Existing Electrical Service
SP — Splice Loop Wire To Existing Aluminum Shielded Cable
✖ — Proposed Grounding Rod

Revision 'F'

The Traffic Group
The Traffic Group, Inc.
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MARYLAND DOT - STATE HIGHWAY ADMINISTRATION
Office of Traffic & Safety
TRAFFIC ENGINEERING DESIGN DIVISION
(General Information Plan)
MD 26 (Liberty Rd.) at MD 32 (Sykesville Rd.)

DRAWN BY:	B. Kilian	F.A.P. NO.	N/A	TS NO. 1503-GI	SHEET NO.
CHECKED BY:	J. Dirndorfer	S.H.A. NO.	BW996M82		
SCALE:	N/A	COUNTY:	Carroll	T.I.M.S. NO. H 944	3 OF 3
DATE:	Oct. 26, 2006	LOG MILE:	06002610.06		

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