PROJECT DESCRIPTION

I. GENERAL

This project involves the reconstruction of an existing Traffic Control Signal at the intersection of Forest Drive and MD 393 (Old Solomon's Island Rd.) in Anne Arundel County. This traffic control signal shall be included with the MD 2/ MD 187/ MD 450 system. A video detection camera system shall provide the detection for the north leg of MD 393. For the remaining legs the existing detection shall be maintained. Street lighting shall be provided on the southwest quadrant.

Forest Drive is assumed to run in an east-west direction.

II. INTERSECTION OPERATION

1. The intersection shall continue to operate in a NEMA (5) five-phase, semi-traffic-actuated mode, with Exclusive/ Permissive left turn for the west leg Forest Drive. Forest Drive approaches shall run concurrently. MD 393 (Old Solomon's Island Rd.) approaches shall also run concurrently. The existing detection shall be maintained.

2. Eight-phase, full-traffic actuated, solid state digital controller with one (1) four- channel rack mounted loop detector amplifiers, rack power supply, video detection interface and all necessary equipment housed in a NEMA size '6' base-mounted cabinet shall be installed at the intersection.

EQUIPMENT LIST (INTERSECTION BREAKDOWN)

A. EQUIPMENT TO BE FURNISHED BY M.S.H.A.

ITEM NO.	QUANTITY	UNIT	DESCRIPTION
9000	1	EA	An eight-phase, solid state full-traffic actuated digital controller with one (1) four-channel rack mounted loop detector amplifiers, rack power supply and all the necessary equipment housed in a NEMA size '6' base mounted cabinet.
9000	1	EA	ASCIIS controller
9089	91	SF	Flat Sheet aluminum sign (white).
			1 each R10-12 "LEFT TURN,YIELD,TO GREEN BALL" sign (36" x 42").
			1 each Guide Shield Assembly, pole mounted signs (48" x 75") M3-3 "SOUTH" (30" x 15"), M1-5 "MARYLAND 393" (48" x 36"), M6-1 "LEFT ARROW" (30" x 24").
			1 each Guide Shield Assembly, pole mounted signs (48" x 75") M3-1 "NORTH" (30" x 15"), M1-5 "MARYLAND 393" (48" x 36"), M6-1 "LEFT ARROW" (30" x 24").
			1 each Guide Shield Assemby, pole mounted signs (30" x 51") M3-1 "NORTH" (24" x 12"), M1-5 "MARYLAND 393" (30" x 24"), M6-1 "RIGHT ARROW" (21" x 15").
			1 each Guide Shield Assembly, pole mounted signs (30" x 51") M3-3 "SOUTH" (24" x 12"), M1-6 "MARYLAND 393 (30" x 24"), M6-1 "RIGHT ARROW" (21" x 15").
9090	40	SF	Flat Sheet aluminum sign (blue or green).
			2 each D3-2 "Forest DR" dual faced sign(variable x 16").
			2 each D3-2 "Old Solomon's Is. RD"dual faced sign (variable x 16").

The following contact persons for District # 5 are as follows:

Mr. Paul D. Armstrong
District Engineer
Phone: (410) 841-1001

Mr. Larry Elliott
Assistant District Engineer - Traffic
Phone: (410) 841-1003

Mr.Charles George
Assistant District Engineer - Maintenance
Phone: (410) 841-1002

Mr. John Mays
Assistant District Engineer - Utility
Phone: (410) 841-1005

Mr. Richard L. Daff, Sr.
Chief, Traffic Operations Division
Phone: (410) 787-7630

The power company representatives is:
Baltimore Gas and Electric
Mike Malizewski
7317 Parkway Drive
Hanover, Maryland 21076
410-859-9043

EQUIPMENT LIST (INTERSECTION BREAKDOWN) (con't)

B. EQUIPMENT TO BE FURNISHED AND/OR INSTALLED BY THE CONTRACTOR.

ITEM NO.	QUANTITY	UNIT	DESCRIPTION.
1001	1	EA	Maintanance of traffic.
2004	3	CY	Test pit excavation.
5005	140	LF	24" white heat applied thermoplastic pavement marking.
5008	140	LF	Remove existing pavement line markings.
8004	6	EA	Cut, clean and cap traffic signal structure.
8005	1	EA	Deliver existing controller, cabinet and galvanized structure.
8010	16	EA	12" traffic signal head section.
8012	1	EA	15' bracket arm for signal structure.
8013	1	EA	250 Watt HPS luminaire with photocell.
8014	1	EA	3" weatherhead.
8018	12	EA	8" traffic signal head section.
8020	1	EA	27' steel pole (cut to 21') with 38' mast arm (cut to 34').
8021	1	EA	27' steel pole (cut to 21') with 50' mast arm (cut to 40').
8021	1	EA	27' steel pole with 50' mast arm (cut to 45').
8021	1	EA	27' steel pole with 50' mast arm (cut 40').
8037	1	EA	Remove and dispose material and equipment.
8038	5	EA	Remove and dispose foundation 12" below grade.
8039	5	EA	Remove existing controller, cabinet and gal. structure.
8042	35	LF	2" PVC schedule 80 electrical conduit- trenched
8044	150	LF	3" PVC schedule 80 electrical conduit- trenched.
8045	30	LF	3" schedule 80 PVC riser.
8046	30	LF	4" PVC schedule 80 electrical conduit- trenched.
8048	220	LF	2-conductor electrical cable (No. 12 TC).
8049	14	CY	Concrete for signal foundation.
8052	370	LF	No 6 AWG stranded bare copper ground wire.
8056	255	LF	4" PVC schedule 80 electrical conduit- bored.
8061	30	LF	1-conductor electrical cable (No. 4-AWG-THHN/THWN).
8063	5	EA	Electrical handhole.
8066	131	SF	Install overhead sign.
8071	5	EA	Ground rod ¾" dia x 10' length.
8072	1	EA	Control and distribution equipment (120/240 V, 1 phase/3 wire).
8073	750	LF	2-conductor electrical cable (aluminum shielded).
8076	105	LF	5-conductor electrical cable (No. 14 AWG).
8077	1100	LF	7-conductor electrical cable (No. 14 AWG).
8084	1	EA	Install controller and cabinet- base mounted.
8092-A	1	EA	Fiber optic I/O Panel.
8094-A	1	EA	Fiber optic Transceiver Modem.
8095-A	1	EA	Fiber optic Telemetry Modules.
8097-A	1	EA	Telemetry Interface Cable.
8098-A	1	EA	Fiber optic Modem Cable.
8099-A	1	EA	Fiber optic Telemetry Cable.
NEG	1	EA	Video detection camera.
NEG	1	EA	Video detection interface equipment.
NEG	1	EA	250' pre-manufactured Video detection cable.

C. EQUIPMENT TO BE REMOVED BY THE CONTRACTOR AND RETURNED TO THE OFFICE OF TRAFFIC, HANOVER.

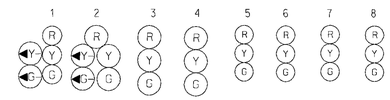
1 EA Controller and base mounted cabinet.

ALL REMOVED SIGNAL MATERIALS ARE TO BECOME THE PROPERTY OF THE CONTRACTOR.

NOTE:

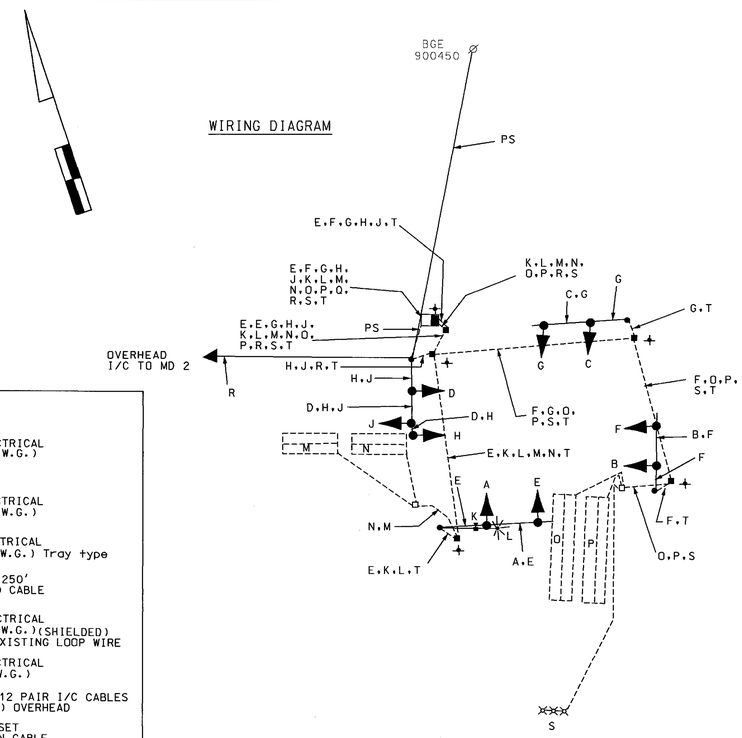
1. The 12- pair and fiber optic intersection quanities shall be addressed on MD 2 and Forest Drive equipment breakdown.
2. All above quantites are included in the quantities on the System GI Sheet No.: 15 of 15.

PHASE CHART



	1	2	3	4	5	6	7	8
PHASE 1 & 6	G C	G C	R	R	R	R	R	R
1 CHANGE	C Y	G Y	R	R	R	R	R	R
PHASE 2 & 6	G	G	G	G	R	R	R	R
2 & 6 CHANGE	Y	Y	Y	Y	R	R	R	R
PHASE 4 & 8	R	R	R	R	G	G	G	G
4 & 8 CHANGE	R	R	R	R	Y	Y	Y	Y
FLASHING OPERATION	FL/Y	FL/Y	FL/Y	FL/Y	FL/R	FL/R	FL/R	FL/R

WIRING DIAGRAM



WIRING KEY

A, B, C, D } 5-CONDUCTOR ELECTRICAL CABLE (NO. 14 A.W.G.)

E, F, G, H, J } 7-CONDUCTOR ELECTRICAL CABLE (NO. 14 A.W.G.)

K – 2-CONDUCTOR ELECTRICAL CABLE (NO. 12 A.W.G.) Tray type

L – VIDEO DETECTION 250' PRE-MANUFACTURED CABLE

M, N, O, P } 2-CONDUCTOR ELECTRICAL CABLE (NO. 14 A.W.G.)(SHIELDED) TO BE WIRED TO EXISTING LOOP WIRE

Q – 1-CONDUCTOR ELECTRICAL CABLE (NO. 4 A.W.G.)

R – FIBER OPTIC AND 12 PAIR I/C CABLES (SELF-SUPPORTING) OVERHEAD

S – MICROLOOP PROBE SET WITH 500' LEAD-IN CABLE TO BE PULLED BACK AND RE-WIRED

T – STRANDED BARE COPPER GROUND WIRE (NO. 6 A.W.G.)

LW–LOOP WIRE (NO. 14 A.W.G.)

PS – PROPOSED OVERHEAD SERVICE TO BE INSTALLED BY BG&E

+ – GROUND ROD

REVISION 'E'

STREET TRAFFIC STUDIES, LTD.
400 Crain Hwy.N.W.
Glen Burnie,MD 21061
Ph (410) 590-5500
Fax (410) 590-6637

3925gGI.DGN TASK-5

MARYLAND DOT - STATE HIGHWAY ADMINISTRATION
Office of Traffic & Safety
TRAFFIC ENGINEERING DESIGN DIVISION
FOREST DRIVE AND MD 393
(OLD SOLOMON'S ISLAND ROAD)
GENERAL INFORMATION

DRAWN BY: EMM	F.A.P. NO.	AH685A561056	TS NO. 4098E GI	SHEET NO.
CHECKED BY: RRZ	S.H.A. NO.			
SCALE: NONE	COUNTY: ANNE ARUNDEL		T.I.M.S. NO. D 828	2 OF 15
DATE: 7/13/01	LOG MILE: 02039300.26			

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