PROJECT DESCRIPTION

I. GENERAL

This portion of the project involves the reconstruction of the existing traffic signal and street lighting at the intersection of MD 235 and Pegg Road in St Mary's County Maryland. MD 235 runs in a North-South direction.

II. INTERSECTION OPERATION

The proposed traffic signal will operate in a NEMA six (6) phase, fully traffic actuated mode with exclusive left turn phasing provided for the northbound and southbound approaches. The eastbound and westbound approaches will operate as a split phase with a right turn overlap from the westbound approach (Gate 1).

III. SPECIAL NOTES

1. It is the responsibility of the contractor to confirm geometrics prior to placing signal equipment.
2. The signal shop will be notified to perform internal wiring of the cabinet at MD 235 @ Pegg Road. All cable shall be identified and brought into the controller by the contractor. The contractor shall notify Mr. Edward Rodenhizer, SHA Signal Shop at (410) 787-7650 seventy-two (72) hours in advance of this work.
3. The Maryland State Highway Administration District #5 will be given at least seven (7) days notice to perform striping through the intersection area. Contact Mr. Larry Elliott at (301) 841 - 5450 to initiate this operation.
4. MOT Plates for this project will be as follows: 104.00 to 104.00-12, 104.01-01, 104.02-01, 104.03-01, 104.75

CONSTRUCTION DETAILS

(A) Install 12" x 27' galvanized steel pole with a 70 foot single mast arm, signal heads, signs, pedestrian signal head, push button with sign and 15 foot street lighting arm with 250 watt luminaire (Note: one two inch PVC bend.)

(B) Install 12" x 27' galvanized steel pole with a 40 foot single mast arm, signal heads, signs, pedestrian signal heads and push buttons with signs (Note: one two inch PVC bend.)

(C) Install 6' x 30' loop detector encased in 1/4" flexible tubing quadrupole type (3-6-3).

(D) Install micro loop probe set 500' lead in as shown..

(E) Install handhole.

(F) Install 1" liquid tight flexable non-metallic conduit and fitting (detector wire sleeve).

(G) Install 2" polyvinyl chloride electrical conduit (sch. 80) trenched.

(H) Install 2" polyvinyl chloride electrical conduit (sch. 80) bored.

(J) Install 3" polyvinyl chloride electrical conduit (sch. 80) trenched.

(K) Install 3" polyvinyl chloride electrical conduit (sch. 80) Slotted

(L) Install 24" preformed pavement marking tape for stop line.

(M) Not used.

(N) Not used.

(O) Remove and return traffic signal pole, mast arm, pedestrian signal and signs.

(P) Remove handhole.

(Q) Remove existing conduit.

(R) Use existing conduit.

(S) Use existing handhole.

(T) Use existing controller.

(U) Rewire existing loops as shown.

(V) Remove existing camera from signal pole and reset on proposed mast arm as shown.

(W) Maintain existing underground power feed.

(X) Install 6' x 6' loop detector encased in 1/4" flexible tubing (4 turns).

(Y) Remove existing camera from existing SHA light structure and reset on proposed lighting arm as shown.

LEGEND OF UTILITIES

—— A —— A ——	AERIAL
—— G —— G ——	GAS MAIN
—— W —— W ——	WATER MAIN
—— S —— S ——	SEWER MAIN
—— E —— E ——	ELECTRIC CABLES
—— T —— T ——	TELEPHONE CABLES
—— C —— C ——	CABLE TELEVISION

EQUIPMENT LIST

A. EQUIPMENT TO BE SUPPLIED BY SHA AND INSTALLED BY THE CONTRACTOR:

QUANTITY	DESCRIPTION
80 S.F.	R10-11b 24"X24" (NO TURN ON RED) SIGN MAST ARM MOUNTED
	R3-5a 30"X36" (THRU ARROW) SIGN MAST ARM MOUNTED
	R5-5L 30"X36" (LEFT TURN ONLY) SIGN MAST ARM MOUNTED
	R3-5B 36"X60" (DOUBLE LEFT TURN ONLY) SIGN MAST ARM MOUNTED
	ASSOCIATED SHIELD ASSEMBLY (NORTH) MD 235 RIGHT ARROW) WITH POLE MOUNTED HARDWARE
	ASSOCIATED SHIELD ASSEMBLY (SOUTH MD 235 RIGHT ARROW) WITH POLE MOUNTED HARDWARE
	ASSOCIATED SHIELD ASSEMBLY (NORTH MD 235 LEFT ARROW) WITH POLE MOUNTED HARDWARE
	ASSOCIATED SHIELD ASSEMBLY (SOUTH MD 235 LEFT ARROW) WITH POLE MOUNTED HARDWARE
3 EA	12" I - WAY 3-SECTION (R,Y,G) SIGNAL HEAD - MAST ARM MOUNTED
2 EA	12" I - WAY 4-SECTION (R,Y,G-~~G~~) - MAST ARM MOUNTED
2 EA	12" I - WAY 3-SECTION (~~R, Y, G~~) - MAST ARM MOUNTED
2 EA	12" I - WAY 3-SECTION (~~R, Y, G~~) - MAST ARM MOUNTED
I EA	12" I-WAY 2-SECTION PEDESTRIAN SIGNAL HEAD - POLE MOUNTED
I EA	12" 2-WAY 2-SECTION PEDESTRIAN SIGNAL HEAD - POLE MOUNTED
2 EA	PUSH BUTTON AND SIGN

B. EQUIPMENT TO BE FURNISHED AND INSTALLED BY THE CONTRACTOR:

QUANTITY	DESCRIPTION
LS	MAINTENANCE OF TRAFFIC
60 LF	FURNISH AND INSTALL 24" WHITE PAV'T MARKING TAPE
225 LF	FURNISH AND INSTALL 12" WHITE PAV'T MARKING TAPE
6 CY	FURNISH AND INSTALL CONCRETE FOR SIGNAL FOUNDATION
9 EA	INSTALL SIGNAL HEADS MAST ARM MOUNTED
I EA	FURNISH AND INSTALL OPTICOM EYE
2 EA	INSTALL MICROLOOP PROBE SET 500' LEAD IN
2 EA	INSTALL PUSH BUTTON AND SIGN
550 LF	FURNISH AND INSTALL SAWCUT
55 LF	FURNISH AND INSTALL 1" LIQUID TIGHT FLEXIBLE NON- METALLIC CONDUIT (DETECTOR WIRE SLEEVE)
320 LF	FURNISH AND INSTALL 2" PVC CONDUIT SCHEDULE 80 TRENCHED
35 LF	FURNISH AND INSTALL 2" PVC CONDUIT SCHEDULE 80 BORED
215 LF	FURNISH AND INSTALL 3" PVC CONDUIT SCHEDULE 80 TRENCHED
285 LF	FURNISH AND INSTALL 3" PVC CONDUIT SCHEDULE 80 SLOTTED
6 EA	FURNISH AND INSTALL HANDHOLE
250 LF	FURNISH AND INSTALL 4 CONDUCTOR OPTICOM DETECTOR CABLE
2 EA	FURNISH AND INSTALL GROUND ROD
2900 LF	FURNISH AND INSTALL LOOP WIRE
3500 LF	FURNISH AND INSTALL 2 CONDUCTOR ALUMINUM SHIELDED ELECTRICAL CABLE
200 LF	FURNISH AND INSTALL 2 CONDUCTOR #14 AWG ELECTRICAL CABLE
600 LF	FURNISH AND INSTALL 3 CONDUCTOR #14 AWG ELECTRICAL CABLE
100 LF	FURNISH AND INSTALL 5 CONDUCTOR #14 AWG ELECTRICAL CABLE
550 LF	FURNISH AND INSTALL 7 CONDUCTOR #14 AWG ELECTRICAL CABLE
400 LF	FURNISH AND INSTALL 2 CONDUCTOR #12 AWG TRAY CABLE
250 LF	FURNISH AND INSTALL #6 AWG STRANDED BARE COPPER WIRE
80 SF	INSTALL OVERHEAD MOUNTED SIGNS
I EA	FURNISH AND INSTALL 250 WATT LUMINAIRE WITH PHOTOCELL
I EA	FURNISH AND INSTALL 15' LIGHTING BRACKET ARM FOR SIGNAL STRUCTURE
I EA	FURNISH AND INSTALL MAST ARM POLE AND SINGLE 40' MAST ARM
I EA	FURNISH AND INSTALL MAST ARM POLE AND SINGLE 70' MAST ARM
LS	REMOVE AND SALVAGE EXISTING MATERIAL AND EQUIPMENT
LS	REMOVE AND DISPOSE OF EXISITNG MATERIAL AND EQUIPMENT
LS	DELIVERY OF SALVAGED MATERIALS
2 EA	REMOVE AND RESET EXISITNG CAMERA
1 EA	INSTALL 12" 1-WAY PED SIGNAL POLE MOUNTED
1 EA	INSTALL 12" 2-WAY PED SIGNAL POLE MOUNTED

C. EXISTING EQUIPMENT TO BE REMOVED BY THE CONTRACTOR AND DELIVERED TO 7491 CONNELLEY DRIVE, HANOVER, MARYLAND 21076. THE SHOP SHALL BE NOTIFIED AT LEAST SEVENTY-TWO (72) HOURS IN ADVANCE OF REMOVAL, CONTACT MR. DAVID SCHWARTZ AT (301) 787-7658.

QUANTITY	DESCRIPTION
2 EA	MAST ARM POLES REMOVE AND DELIVER TRAFFIC SIGNAL

NOTE: ALL EQUIPMENT AND MATERIAL NOT LISTED ABOVE WILL BECOME THE PROPERTY OF THE CONTRACTOR.

THE FOLLOWING CONTACT PERSONS FOR DISTRICT # 5 ARE AS FOLLOWS:

Mr. Larry Elliott
Assistant District Engineer-Traffic
Phone: (410) 841-5450

Mr. John Mays
Acting Engineer-Utility
Phone: (410) 841-5450

Mr. Paul Armstrong
District Engineer
Phone: (410) 841-5450

Mr. Charles George
Asst. District Engineer - Maintenance
Phone: (410) 841-5450

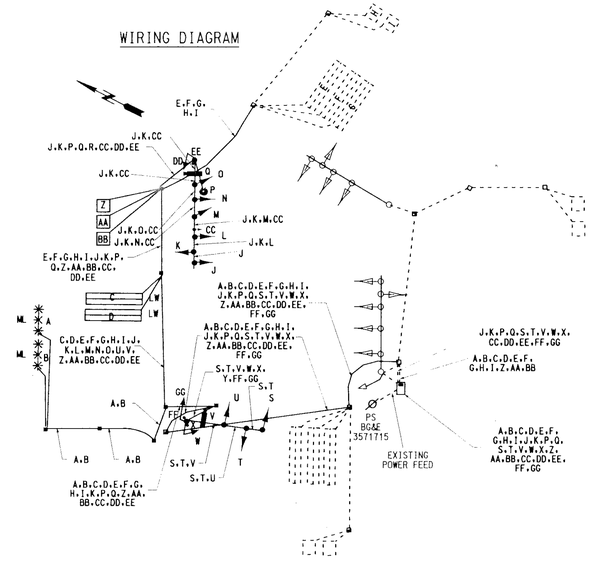
Mr. Richard L. Daff Sr.
Chief Traffic Operations Division
Phone: (410) 787-7630

The Power Company Representative is:

SOUTHERN MARYLAND ELECTRIC COMPANY

P.O. BOX 12B
LEONARDTOWN MARYLAND, 20650
(301) 475-5631

WIRING DIAGRAM



WIRING KEY

A,B	MICRO PROBE CABLE
C,D,E,F,G, H,I,Z,AA,BB	2 CONDUCTOR ELECTRICAL CABLE ALUMINUM SHIELDED (NO. 14) AWG
P	2 CONDUCTOR ELECTRICAL CABLE (NO. 12) AWG TRAY FOR ALL LUMINAIRES
X.EE.FF	2 CONDUCTOR ELECTRICAL CABLE (NO. 14) AWG
Q.V.W.DD. FF.GG	3 CONDUCTOR ELECTRICAL CABLE (NO. 14) AWG
CC	4 CONDUCTOR OPTICOM DETECTOR CABLE
L.M.N.O.U	5 CONDUCTOR ELECTRICAL CABLE (NO. 14) AWG
J.K.S.T	7 CONDUCTOR ELECTRICAL CABLE (NO. 14) AWG
R.Y	STRAND BARE COPPER WIRE (NO. 6) AWG
ML	PROBES
PS	POWER SOURCE
LW	LOOP WIRE

NOTE: PHASE CHART TO REMAIN AS EXISTING

SS-28

REVISIONS	APPROVALS	REVISIONS
	CHIEF, DESIGN SECTION	
	ASST. DISTRICT ENGINEER, TRAFFIC	
	CHIEF, TRAFFIC ENGINEERING DESIGN DIVISION	
	DIRECTOR, TRAFFIC & SAFETY	

JOHNSON, MIRMIRAN & THOMPSON
Engineering A Brighter Future

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

MD 235 & PEGG ROAD
GENERAL INFORMATION

LOG MILE: 18023512.92

DRAWN BY:	T.SPECA	F.A.P. NO.		TS NO.	
CHK. BY:	T.SPECA	S.H.A. NO.	SM7685270	SHEET NO.	
SCALE:	1" = 20'	COUNTY	ST. MARY'S	3287 D	172 OF 241
DATE:	1/20/97				

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DATE: 8-Jul-98 12:55