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

PROJECT DESCRIPTION

I. General

This project involves the modification of an existing Intersection Control Beacon to a fully actuated traffic signal at the intersection of U.S. 301 and Mitchellville Road/Queen Anne Bridge Road in Prince George's County, Maryland. U.S. 301 is assumed to run in a north-south direction.

II. Intersection Operation

This intersection is proposed to operate in a fully actuated mode with southbound and northbound US 301 left turn exclusives and Opticom Fire Pre-emption for southbound US 301.

III. Special Notes

1. The contractor shall confirm the location of all utilities prior to construction.

2. Maintenance of traffic will be handled by the contractor utilizing the following standard plates for traffic control: 105.00, 105.01, 105.02, 105.309, 105.311

3. The following contact persons for District 3 are as follows:

Mr. Paul Armstrong — District Engineer — Phone # (301) 513-7311
Mr. Maj Shakib — Asst. District Engineer - Traffic — Phone # (301) 513-7359

Mr. Carter Wilson — Asst. District Engineer — Phone # (301) 513-7305
Mr. Francis Lauer — Asst. District Engineer - Utilities — Phone # (301) 513-7351

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

Mr. Dennis Rhoten
BG&E
(410)-859-9055

EQUIPMENT LIST

A. Equipment to be supplied by the Administration.

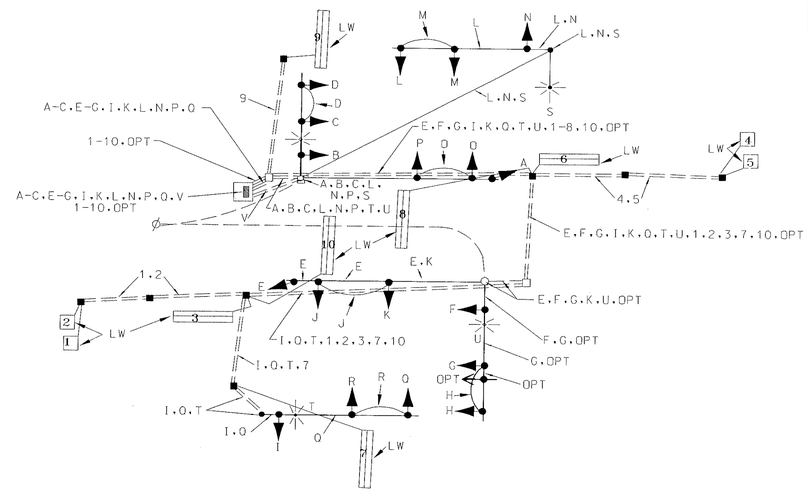
ITEM NO.	QUANTITY	UNIT	SPECIFICATION SECTION	DESCRIPTION
9002	3	EA	806	4 channel detector amplifier - rack mount
9004	1	EA	816	Detector rack power supply
9014	10	EA	814	12" 1-way, 3-section(R,Y,G) signal (Aluminum) Mast arm mount
9014	4	EA	814	12" 1-way, 3-section(RA,YA,GA) signal (Aluminum) Mast arm mount
9017	2	EA	814	3M 12" 1-way, 3-section(R,Y,G) signal (Aluminum) Mast arm mount
9018	2	EA	814	3M 12" 1-way, 5-section signal (Aluminum) Mast arm mount
9086	1	EA	816	Cabinet size 6 - base mount - system
9087	1	EA	816	Controller ASC II w/ Telemetry
9089	85	SF	813	Sheet aluminum signs consisting of:
	2	EA	---	R 10-12 (36 in. x 42 in.) Left turn YIELD on Green - mast arm mount
	4	EA	---	W 3-3 (48 in. x 48 in.) Signal ahead w/ "NEW" and flags - ground mounts

EQUIPMENT LIST

B. Equipment to be supplied and/or installed by the Contractor.

ITEM NO.	QUANTITY	UNIT	SPECIFICATION SECTION	DESCRIPTION
1001	1	EA	104	Maintenance of Traffic
2001	3	CY	205	Test pit excavation
5004	125	LF	555	24" white permanent preformed pavement marking tape
8001	11	CY	801	Concrete for signal foundation
8002	1	EA	801	Grout existing pole base
8008	2	EA	805	3 in. weatherhead
8009	160	LF	819	3/8 inch span wire
8011	18	EA	814	Install signal head
8012	1	EA	816	3M Opticom #521 Detector eye
8013	1	EA	816	3M Opticom #560 Card rack
8014	1	EA	816	3M Opticom #562 Discriminator Module
8020	1	EA	816	Install controller and cabinet - base mount
8021	940	LF	815	Sawcut for loop detectors
8022	100	LF	805	1 in. electrical conduit - galvanized sleeve
8024	870	LF	805	2 in. electrical conduit - schedule 80 P.V.C. - trenched
8030	150	LF	805	4 in. electrical conduit - schedule 80 P.V.C. - trenched
8032	400	LF	805	4 in. electrical conduit - schedule 80 P.V.C. - bored
8033	8	EA	811	Handhole
8034	3	EA	804	Ground rod - 3/4in. x 10 ft.
8037	350	LF	---	Opticom detector cable
8040	3200	LF	810	Loop wire encased in flexible tubing(No.14 AWG)
8041	3500	LF	810	Electrical cable - 2 conductor (Aluminum Shielded)
8044	2700	LF	810	Electrical cable - 5 conductor No. 14 AWG
8045	900	LF	810	Electrical cable - 7 conductor No. 14 AWG
8046	1150	LF	810	Electrical cable - 2 conductor No. 12 AWG - copper Type TC
8049	60	LF	810	Electrical cable - No. 6 stranded bare copper ground wire
8050	100	LF	810	Electrical cable - 1 conductor No. 4 AWG - THHN/THWN
8051	128	LF	812	Wood sign supports 4 in. x 4 in.
8053	64	SF	813	Install ground mounted sign
8054	21	SF	813	Install overhead mounted sign
8056	2	EA	806	250-watt HPS luminaire with photocell
8057	2	EA	808	20 ft lighting bracket arm for traffic signal structure
8061	1	EA	---	Remove & dispose of existing material and and equipment per assignment
8065	1	EA	805	Install conduit bend in existing base
8082	2	EA	818	Mast arm pole and 50 ft. mast arm

WIRING DIAGRAM



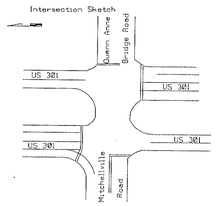
WIRING KEY

A-K.M-P.R = 5 CONDUCTOR ELECTRICAL CABLE (NO. 14 AWG)
L.Q = 7 CONDUCTOR ELECTRICAL CABLE (NO.14 AWG)
S-U = 2 CONDUCTOR ELECTRICAL CABLE(NO. 12 AWG) TRAY CABLE
V = 1 CONDUCTOR ELECTRICAL WIRE (NO. 4 AWG) - THHN/THWN
LW = LOOP WIRE (NO.14 AWG) ENCASED IN FLEXIBLE TUBING
1-10 = 2 CONDUCTOR ELECTRICAL CABLE(NO. 14 AWG) - ALUMINUM SHIELDED
OPT = OPTICOM DETECTOR CABLE

PHASE CHART

	1.2	3.4	5.6	7.8	9-11	12	13	14-16	17	18
PHASE Ø1 & Ø5	◄R-	R	◄G-	G	R	◄G-G	G	R	◄R-R	R
PHASE Ø1 CHANGE	◄R-	R	◄Y-	G	R	◄Y-Y	Y	R	◄R-R	R
PHASE Ø2 & Ø5	◄R-	G	◄R-	G	R	R	R	R	R	R
PHASE Ø5 CHANGE	◄R-	G	◄R-	Y	R	R	R	R	R	R
PHASE Ø2 & Ø6	◄G-	G	◄R-	R	R	R	R	R	◄G-G	G
PHASE Ø2 & Ø6 CHANGE	◄Y-	Y	◄R-	R	R	R	R	R	◄Y-G	G
PHASE Ø4 & Ø8	◄R-	R	◄R-	R	G	G	G	G	G	G
PHASE Ø4 & Ø8 CHANGE	◄R-	R	◄R-	R	Y	Y	Y	Y	Y	Y
FIRE HOUSE PRE-EMPTION	◄R-	R	◄G-	G	R	◄G-G	G	R	◄R-R	R
FIRE HOUSE PRE-EMPTION CHANGE	◄R-	R	◄Y-	G	R	◄Y-Y	Y	R	◄R-R	R
FLASHING OPERATION	FL/◄R-	FL/Y	FL/◄R-	FL/Y	FL/R	FL/R	FL/R	FL/R	FL/R	FL/R

Intersection Sketch



REVISIONS	
2/98	Modify ICB to Full Signal
C. J.	

APPROVALS

ORIGINAL
CHIEF, SIGNAL DESIGN SECTION
ON
ASST. DISTRICT ENGINEER, TRAFFIC
FILE
CHIEF, TRAFFIC ENGINEERING DESIGN DIVISION
DEPUTY CHIEF ENGINEER, OFFICE OF TRAFFIC

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

ORIGINAL DRAWN BY: B.KENT
DES. BY: DALE PETERS
CHK. BY:

US 301 AND MITCHELLVILLE ROAD/
QUEEN ANNE BRIDGE ROAD
GENERAL INFORMATION SHEET
COUNTY: PRINCE GEORGE'S

DATE: 6/1/95
SCALE: NONE
F.A.P. NO. STPG-000S (301) E
S.H.A. NO. AW277A56/656B/m56
TS/FILE NO. 3524-GI A
SHEET NO. 2 OF 2