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 the existing intersection traffic control signal in conjunction with intersection geometric improvements at the intersection of MD 176 (Dorsey Road) at Connelley Drive / proposed Aircraft Rescue & Fire Fighting Road (A.R.F.F. Road). Modifications to this traffic signal shall accomidate the addition of a north leg to the intersection and provide emergency vehicle pre-emption. MD 176 is assumed to run in an east - west direction.

II. Intersection Operation

This intersection shall operate in a NEMA (Fully Actuated) six (6) phase operation with the eastbound and westbound MD 176 left turns operating in an exclusive/permitted phase. Connelley Drive / A.R.F.F. Road shall operate concurrently. Emergency vehicle pre-emption shall be provided for the southbound approach of the intersection.

III. Special Notes

1. The contact persons for District # 5 are as follows:

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

   Mr. Lawrence Elliott
   Asst. District Engineer - Traffic
   Phone # (410) 841-5450

   Mr. Raymond Hutzler
   Asst. District Engineer
   Maint.
   Phone # (410) 841-5450

   Mr. John Mays
   Asst. District Engineer
   Utility
   Phone # (410) 841-5450

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

2. The contractor shall use the following standard plates for maintenance of traffic: 105.00, 105.01, 105.02, 105.03, 105.101, 105.103, 105.105, 105.107, 105.109, 105.201, 105.203, 105.205, 105.207, 105.209, 105.211.

3. All pavement markings with exception of stop lines shall be installed by MMA's contractors.

EQUIPMENT LIST

A. Equipment to be supplied by the Administration.

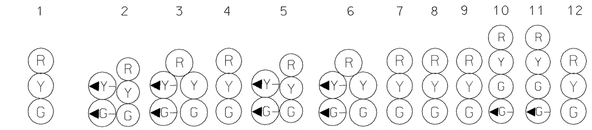
ITEM NO.	QUANTITY	UNITS	SPECIFICATION SECTION	DESCRIPTION
9001	4	EA	814	12 in. 1 way 3 section (R,Y,G) signal head mast arm mount.
9002	2	EA	814	12 in. 1 way 5 section (R,Y,G,YA,GA) signal head-mast arm mount.
9003	1	EA	814	12 in. 1 way 3 section (R,Y,G,) signal head-pole mount.
9004	1	EA	814	Combination 8 in./12 in. 1 way 5 section (8 in. R,Y,G / 12 in. YA,GA) signal head-mast arm.
9005	2	EA	814	12 in., 1 way, 4 section (R,Y,G,GA) signal head- mast arm mount
9006	2	EA	xxx	Two-channel loop detector amplifier (delayed output)
9007	2	EA	815.01 815.02	Microloop probe with 500 ft. lead-in cable
9008	72	SF	813	Sheet aluminum signs consisting of:
	2	EA	xxx	R10-12, (36 in. x 42 in.) "Left Turn Yield on Green", mast arm mount.
	1	EA	xxx	R3-5 (30" X 36") Mast arm mount
	1	EA	xxx	R3-6 (30" X 36") Mast arm mount
	1	EA	xxx	Guide shield assembly (48 in. x 75 in.) pole mount
	1	EA	xxx	Guide shield assembly (30 in. x 51 in.) pole mount

EQUIPMENT LIST

B. Equipment to be Furnish and/or Installed by the Contractor

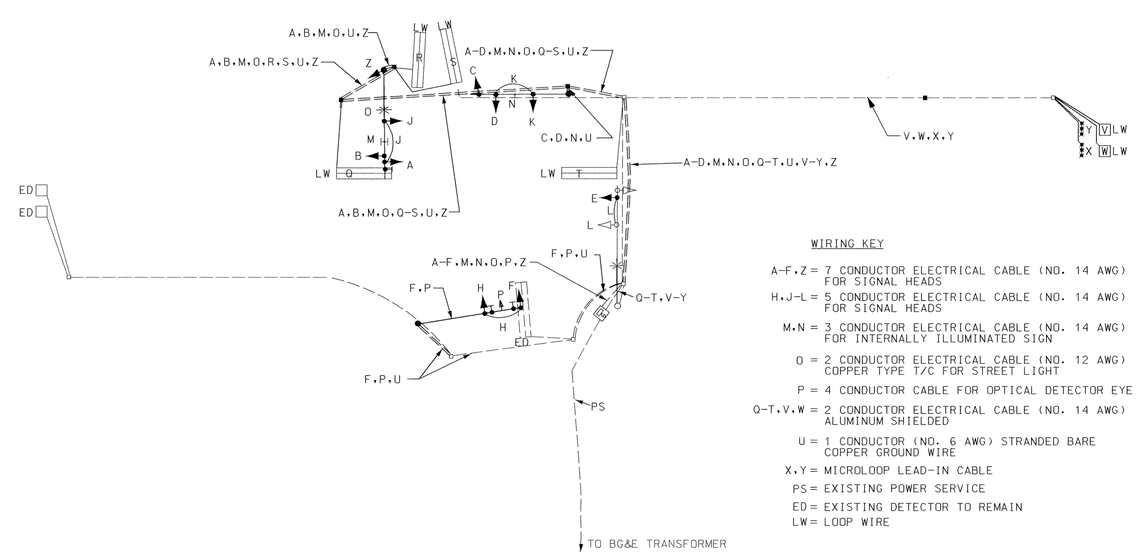
ITEM NO.	QUANTITY	UNITS	SPECIFICATION SECTION	DESCRIPTION
1001	1	EA	104	Maintenance of Traffic per assignment
2001	3	CY	205	Test pit excavation
2002	3	CY	201	Class 1 excavation
5005	100	LF	555	24 in. white permanent preformed pavement marking tape
8001	12	CY	801	Concrete for signal foundation
8011	10	EA	814	Install signal head (ANY TYPE)
8014	1	EA	---	Install opticom detector eye
8015	2	EA	815.01 815.02	Install microloop probe set
8022	700	LF	815	Sawcut for signal (LOOP DETECTOR)
8024	50	LF	805	1 in. liquid tight flexible non metallic conduit sleeve
8028	130	LF	805	3 in. electrical conduit-P.V.C. schedule 40 -buried (trenched)
8032	110	LF	805	4 in. electrical conduit-P.V.C.schedule 80 -encased (slotted in roadway)
8033	130	LF	805	4 in. electrical conduit-P.V.C. schedule 80-bored
8035	3	EA	811	Handhole
8037	3	EA	804	Ground rod(3/4 in x 10 ft)
8040	276	LF	810	4-conductor opticom detector cable
8043	2223	LF	810	Loop wire in flexible tubing-No. 14 AWG-THWN
8044	1190	LF	810	Electrical cable-2-conductor, No. 14 AWG-(Aluminum Shielded)
8045	700	LF	810	Electrical cable-3-conductor No. 14 AWG-IMSA 19-1
8047	100	LF	810	Electrical cable-5-conductor No. 14 AWG-IMSA 19-1
8048	1870	LF	810	Electrical cable-7-conductor No. 14 AWG-IMSA 19-1
8049	380	LF	810	Electrical cable-2-conductor No. 12 AWG-copper Type TC
8052	500	LF	810	Electrical cable-1-conductor No. 6 AWG-stranded bare copper ground wire
8056	36	SF	813	Install ground mounted sign
8057	36	SF	813	Install overhead mounted sign
8059	1	EA	806	250 watt HPS luminaire with photocell
8060	1	EA	808	Lighting bracket arm for traffic signal structures
8061	1	EA	SP	Remove and dispose of existing foundation 12 in. below grade
8064	1	EA	SP	Remove and dispose of existing material and equipment per assignment
8067	1	EA	SP	Use existing plan disk and as-built traffic control device
8098	1	EA	SP	Mast arm pole and 50 ft mast arm
8099	2	EA	SP	Mast arm pole and 60 ft mast arm

PHASING SEQUENCE CHART



	1	2	3	4	5	6	7	8	9	10	11	12
PHASES 1 & 5	R	◄G/R	◄G/R	R	◄G/R	◄G/R	R	R	R	R	R	R
PHASES 1 & 5 CHANGE	PHASES 1 & 5 CHANGE TO 1 & 6, 2 & 5 OR 2 & 6											
PHASES 1 & 6	G	◄G/G	◄G/G	G	R	R	R	R	R	R	R	R
PHASES 1 & 6 CHANGE	G	◄Y/G	◄Y/G	G	R	R	R	R	R	R	R	R
PHASES 2 & 5	R	R	R	R	◄G/G	◄G/G	G	R	R	R	R	R
PHASES 2 & 5 CHANGE	R	R	R	R	◄Y/G	◄Y/G	G	R	R	R	R	R
PHASES 2 & 6	G	G	G	G	G	G	G	R	R	R	R	R
PHASES 2 & 6 CHANGE	Y	Y	Y	Y	Y	Y	Y	R	R	R	R	R
PHASES 4 & 8	R	R	R	R	R	R	R	G	G	G	G	G
PHASES 4 & 8 CHANGE	R	R	R	R	R	R	R	Y	Y	Y	Y	Y
PRE-EMPT 1	R	R	R	R	R	R	R	R	R	◄G/G	◄G/G	G
PRE-EMPT CLEAR	R	R	R	R	R	R	R	R	R	Y	Y	Y
FLASHING OPERATION	FL/Y	FL/Y	FL/Y	FL/Y	FL/Y	FL/Y	FL/Y	FL/R	FL/R	FL/R	FL/R	FL/R

WIRING DIAGRAM



WIRING KEY

A-F,Z = 7 CONDUCTOR ELECTRICAL CABLE (NO. 14 AWG) FOR SIGNAL HEADS
H,J-L = 5 CONDUCTOR ELECTRICAL CABLE (NO. 14 AWG) FOR SIGNAL HEADS
M,N = 3 CONDUCTOR ELECTRICAL CABLE (NO. 14 AWG) FOR INTERNALLY ILLUMINATED SIGN
O = 2 CONDUCTOR ELECTRICAL CABLE (NO. 12 AWG) COPPER TYPE T/C FOR STREET LIGHT
P = 4 CONDUCTOR CABLE FOR OPTICAL DETECTOR EYE
Q-T,V,W = 2 CONDUCTOR ELECTRICAL CABLE (NO. 14 AWG) ALUMINUM SHIELDED
U = 1 CONDUCTOR (NO. 6 AWG) STRANDED BARE COPPER GROUND WIRE
X,Y = MICROLOOP LEAD-IN CABLE
PS = EXISTING POWER SERVICE
ED = EXISTING DETECTOR TO REMAIN
LW = LOOP WIRE

REVISIONS	APPROVALS
	ASST. DIV. CHIEF, TRAFFIC ENGINEERING DESIGN DIVISION
	ASST. DISTRICT ENGINEER, TRAFFIC
	CHIEF, TRAFFIC ENGINEERING DESIGN DIVISION
	DIRECTOR, OFFICE OF TRAFFIC & SAFTEY

DCL
CONSULTING ENGINEERS
COLUMBIA, MARYLAND

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

ORIGINAL DRAWN BY: ROB CICCHINI
DES. BY: DALE PETERS
CHK. BY:

MD 176 (DORSEY ROAD) & CONNELLEY DRIVE/A.R.F.F. RD
GENERAL INFORMATION SHEET 1 OF 1

LOG MILE No. 02017604.15 COUNTY: ANNE ARUNDEL

DATE: 11/96 F.A.P. NO.
SCALE: S.H.A. NO. AW126U7551

TS/FILE NO. 2506 -GI

SHEET NO. 2 OF 3