PROJECT DESCRIPTION

GENERAL

THIS PROJECT INVOLVES THE INSTALLATION OF A NEW TRAFFIC CONTROL SIGNAL AT THE INTERSECTION OF 7TH STREET AND THE US 15 NORTHBOUND OFF-RAMP/PARK EXIT IN FREDERICK COUNTY, MARYLAND. 7TH STREET IS ASSUMED TO RUN IN AN EAST-WEST DIRECTION.

INTERSECTION OPERATION

THE INTERSECTION WILL OPERATE IN A NEMA FOUR-PHASE, FULL-TRAFFIC-ACTUATED MODE WITH THE 7TH STREET APPROACHES OPERATING CONCURRENTLY AND THE US 15 NORTHBOUND OFF RAMP/PARK EXIT APPROACHES OPERATING IN A SPLIT PHASE MODE.

CONTROLLER REQUIREMENTS

INSTALL A FULL-TRAFFIC-ACTUATED, EIGHT-PHASE CONTROLLER WITH SYSTEM PACKAGE AND FOUR (4), FOUR-CHANNEL, TIME-DELAY-OUTPUT LOOP DETECTOR AMPLIFIERS HOUSED IN A NEMA SIZE "6" BASE MOUNTED CABINET.

SPECIAL NOTES

UPON COMPLETION OF THIS PROJECT, THE CONTRACTOR SHALL NOTIFY MR.ROBERT SNYDER OF SHA AT 410-787-7635 TO ARRANGE FOR THE PHONE LINE INSTALLATION. THE CONTRACTOR IS TO PROVIDE MR. SNYDER WITH THE NEAREST STREET ADDRESS, ZIP CODE, AND PHONE NUMBER.

MAINTENANCE OF TRAFFIC

THE FOLLOWING TRAFFIC CONTROL STANDARDS SHALL BE REFERENCED FOR THE PROJECT.

STANDARD NO. MD-104.00 - 104.00-30

STANDARD NO. MD-104.31-01 (FLAGGING OPERATION)

STANDARD NO. MD-104.33-01 (SHOULDER WORK)

STANDARD NO. MD-104.35 (LANE SHIFT)

STANDARD NO. MD-104.32-01 (INTERSECTION FLAGGING OPERATION)

PROJECT CONTACTS

THE CONTACT PERSONS FOR SHA ARE AS FOLLOWS:

MR. ROBERT FISHER
DISTRICT ENGINEER
PHONE: (301) 624-8140

MR. JOHN CONCANNON
ASSISTANT DISTRICT ENGINEER - TRAFFIC
PHONE: (301) 624-8141

MR. LEON KERNS
ACTING ASSISTANT DISTRICT ENGINEER - MAINTENANCE
PHONE: (410) 624-8140

MR. JOHN WRIGHT
ACTING DISTRICT UTILITIES ENGINEER
PHONE: (310) 729-8436

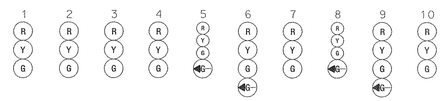
MR. RICHARD L. DAFF, SR.
CHIEF, TRAFFIC OPERATIONS DIVISION
PHONE: (410) 787-7630

EQUIPMENT LIST "A"

A. EQUIPMENT TO BE SUPPLIED BY THE SHA

ITEM NO.	QUANTITY	DESCRIPTION
9002	4 EACH	FOUR-CHANNEL, TIME-DELAY-OUTPUT, LOOP DETECTOR AMPLIFIER
9081	1 EACH	EIGHT-PHASE, FULL-TRAFFIC-ACTUATED CONTROLLER WITH SYSTEM PACKAGE HOUSED IN A NEMA SIZE "6" BASE MOUNTED CABINET
9089	94 S.F.	SHEET ALUMINUM SIGNS TO CONSIST OF :
		- 3 EACH W3-3 SIGN (36 IN. X 36 IN.) WITH "NEW" PANEL (30 IN. X30 IN.) AND FLAGS - GROUND MOUNT
		- 3 EACH R3-5L (30 IN. X 36 IN.) - MAST ARM MOUNT
		- 2 EACH D3-(1) (DUAL FACED) (VARIABLE X 16") - MAST ARM MOUNT.

PHASE CHART



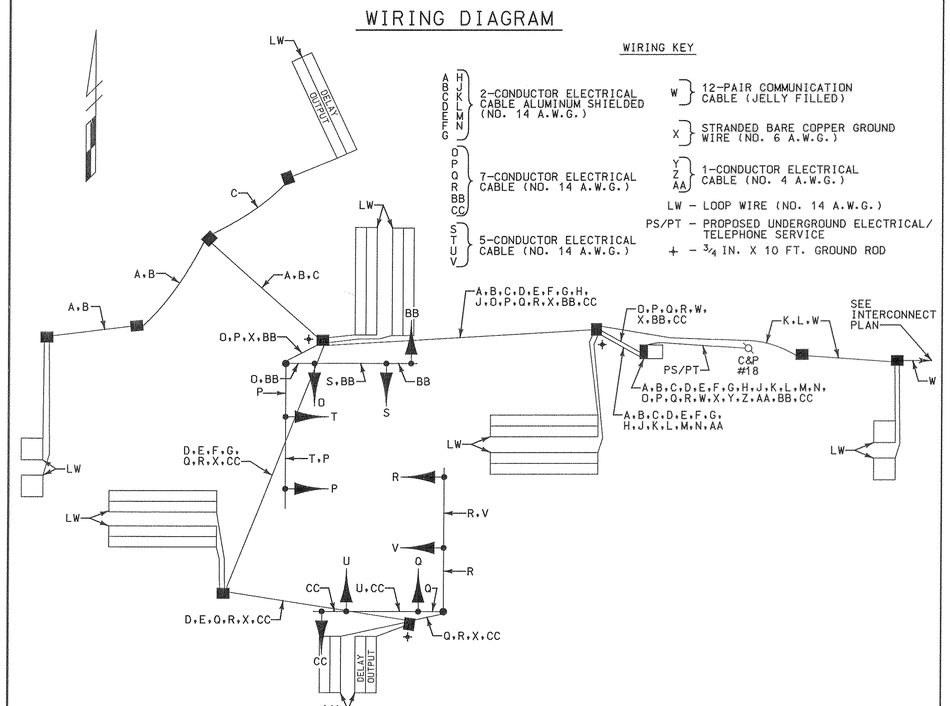
	1	2	3	4	5	6	7	8	9	10
PHASE 2 + 6	G	G	G	G	R	R	R	R	R	R
2 + 6 CHANGE	Y	Y	Y	Y	R	R	R	R	R	R
PHASE 3	R	R	R	R	G ← G	G ← G	G	R	R	R
3 CHANGE	R	R	R	R	Y	Y	Y	R	R	R
PHASE 4	R	R	R	R	R	R	R	G ← G	G ← G	G
4 CHANGE	R	R	R	R	R	R	R	R	R	Y
FLASHING OPERATION	FL/Y	FL/Y	FL/Y	FL/Y	FL/R	FL/R	FL/R	FL/R	FL/R	FL/R

EQUIPMENT LIST "B"

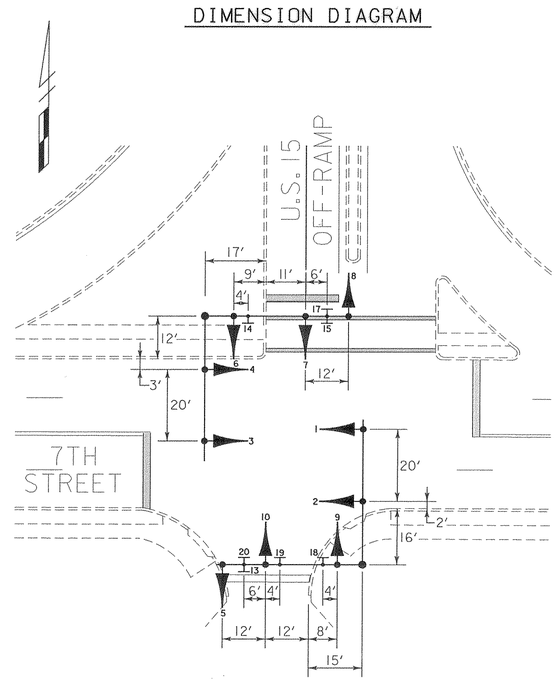
B. EQUIPMENT TO BE FURNISHED AND/OR INSTALLED BY THE CONTRACTOR

ITEM NO.	QUANTITY	DESCRIPTION
1001	1 EACH	MAINTENANCE OF TRAFFIC PER ASSIGNMENT
2001	3 C.Y.	TEST PIT EXCAVATION
2004	20 C.Y.	CLASS 2 EXCAVATION
5002	150 L.F.	5 IN. WHITE HEAT APPLIED PERMANENT PREFORMED THERMOPLASTIC PAVEMENT MARKINGS
5003	460 L.F.	12 INCH WHITE HEAT APPLIED PERMANENT PREFORMED THERMOPLASTIC PAVEMENT MARKINGS
5004	70 L.F.	24 INCH WHITE HEAT APPLIED PERMANENT PREFORMED THERMOPLATIC PAVEMENT MARKINGS
5007	60 L.F.	REMOVE EXISTING PAVEMENT MARKINGS - ANY WIDTH
6001	750 S.F.	4 INCH CONCRETE SIDEWALK
6009	100 L.F.	FURNISH AND INSTALL DEPRESSED CURB AND GUTTER
8001	10 C.Y.	FURNISH AND INSTALL CONCRETE FOR SIGNAL FOUNDATION
8006	1 EACH	CUT, CLEAN, GALVANIZE AND CAP TRAFFIC SIGNAL STRUCTURE
8020	1 EACH	INSTALL CONTROLLER AND CABINET - BASE MOUNT
8021	1200 L.F.	FURNISH AND INSTALL SAW CUT FOR SIGNAL (LOOP DETECTOR)
8022	50 L.F.	FURNISH AND INSTALL 1 IN. ELECTRICAL CONDUIT - GALVANIZED SLEEVED
8023	50 L.F.	FURNISH AND INSTALL 1 IN. LIQUID-TIGHT FLEXIBLE NON-METALLIC CONDUIT FOR DETECTOR SLEEVE
8024	660 L.F.	FURNISH AND INSTALL 2 IN. SCHEDULE 80 RIGID PVC CONDUIT - TRENCHED
8026	10 L.F.	FURNISH AND INSTALL 2 IN. SCHEDULE 80 RIGID PVC CONDUIT - BORED
8027	370 L.F.	FURNISH AND INSTALL 3 IN. SCHEDULE 80 RIGID PVC CONDUIT - TRENCHED
8029	110 L.F.	FURNISH AND INSTALL 3 IN. SCHEDULE 80 RIGID PVC CONDUIT - BORED
8030	270 L.F.	FURNISH AND INSTALL 4 INCH SCHEDULE 80 RIGID PVC CONDUIT - TRENCHED
8031	80 L.F.	FURNISH AND INSTALL 4 IN. SCHEDULE 80 RIGID PVC CONDUIT - SLOTTED
8032	200 L.F.	FURNISH AND INSTALL 4 IN. SCHEDULE 80 RIGID PVC CONDUIT - BORED
8033	11 EACH	FURNISH AND INSTALL ELECTRICAL HANDHOLE
8034	3 EACH	FURNISH AND INSTALL GROUND ROD - 3/4 IN. DIAMTER X 10 FT. LENGTH
8039	700 L.F.	FURNISH AND INSTALL 12 PAIR COMMUNICATION CABLE, JELLY-FILLED (UNDERGROUND)
8040	4500 L.F.	FURNISH AND INSTALL LOOP WIRE ENCASED IN FLEXIBLE TUBING (NO. 14 A.W.G.)
8041	2875 L.F.	FURNISH AND INSTALL ELECTRICAL CABLE - 2 CONDUCTOR (ALUMINUM SHIELDED)
8044	100 L.F.	FURNISH AND INSTALL ELECTRICAL CABLE - 5 CONDUCTOR (NO. 14 A.W.G.)
8045	1700 L.F.	FURNISH AND INSTALL ELECTRICAL CABLE - 7 CONDUCTOR (NO. 14 A.W.G.)
8048	350 L.F.	FURNISH AND INSTALL NO. 6 A.W.G. STRANDED BARE COPPER GROUND WIRE
8049	45 L.F.	FURNISH AND INSTALL ELECTRICAL CABLE 1-CONDUCTOR NO. 4 AWG-THHN/THWN
8050	60 L.F.	FURNISH AND INSTALL WOOD SIGN SUPPORTS 4 IN. X 6 IN.
8052	48 S.F.	INSTALL GROUND MOUNTED SIGN
8053	46 S.F.	INSTALL OVERHEAD SIGN
8060	1 EA	REMOVE AND DISPOSE OF EXISTING MATERIAL AND EQUIPMENT PER ASSIGNMENT
8066	1 EA	FURNISH AND INSTALL CONTROL AND DISTRIBUTION EQUIPMENT (120/240 V, 1 PHASE 3 WIRE SYSTEM)
8084	28 EA	FURNISH AND INSTALL 12 IN. VEHICULAR TRAFFIC SIGNAL HEAD SECTION PAINTED BLACK
8085	6 EACH	FURNISH AND INSTALL 8 IN. VEHICULAR TRAFFIC SIGNAL HEAD SECTION PAINTED BLACK
NEG.	LUMP SUM	SELECTIVE TREE TRIMMING
NEG.	2 EACH	FURNISH AND INSTALL 30 FT. GALVANIZED STEEL SQUARE POLE WITH TWIN 40 FT./40 FT. SQUARE MAST ARMS PAINTED WITH VALMONT SPECIFICATION F-283-E BRONZE TONE NO. 347599 OR APPROVED EQUAL.
NEG.	4 S.F.	RELOCATE EXISTING GROUND MOUNTED SIGN AND SUPPORT

WIRING DIAGRAM

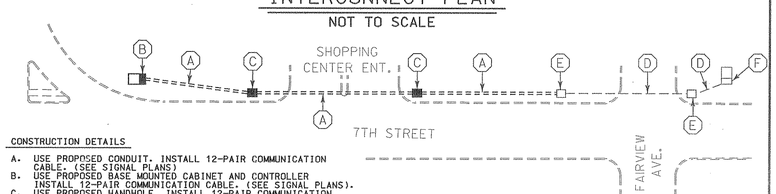


DIMENSION DIAGRAM



INTERCONNECT PLAN

NOT TO SCALE



CONSTRUCTION DETAILS

A. USE PROPOSED CONDUIT. INSTALL 12-PAIR COMMUNICATION CABLE. (SEE SIGNAL PLANS)
B. USE PROPOSED BASE MOUNTED CABINET AND CONTROLLER INSTALL 12-PAIR COMMUNICATION CABLE. (SEE SIGNAL PLANS).
C. USE PROPOSED HANDHOLE. INSTALL 12-PAIR COMMUNICATION CABLE. (SEE SIGNAL PLANS)
D. USE EXISTING CONDUIT. INSTALL 12-PAIR COMMUNICATION CABLE.
E. USE EXISTING HANDHOLE. INSTALL 12-PAIR COMMUNICATION CABLE.
F. USE EXISTING BASE MOUNTED CABINET AND CONTROLLER. INSTALL 12-PAIR COMMUNICATION CABLE.

WR&A
Whitman, Requardt and Associates, LLP
2315 Saint Paul Street
Baltimore, Maryland 21218
(410) 235-3450

MARYLAND DOT - STATE HIGHWAY ADMINISTRATION
Office of Traffic & Safety
TRAFFIC ENGINEERING DESIGN DIVISION
GENERAL INFORMATION SHEET
7TH STREET AND US 15 NORTHBOUND OFF RAMP/PARK EXIT

DRAWN BY: S.BLOSS	F.A.P. NO.		TS NO.	SHEET NO.
CHECKED BY: N.LEARY	S.H.A. NO.	FB360A561B56		
SCALE: NONE	COUNTY:	FREDERICK	T.I.M.S. NO. D 533	2 OF 2
DATE: 7/14/00	LOG MILE:			

N:\9601IA\d533gd02.dgn