PROJECT DESCRIPTION

I. GENERAL

THIS PROJECT INVOLVES THE INSTALLATION OF A NEW TRAFFIC SIGNAL AND ASSOCIATED SIGNING AT THE INTERSECTION OF MD 213 (WASHINGTON AVE.) AND CAMPUS AVENUE, IN KENT COUNTY.

II. INTERSECTION OPERATION

THE SIGNAL SHALL OPERATE IN A NEMA 2-PHASE MODE.

III. CONTROLLER REQUIREMENT

A SEMI-ACTUATED, EIGHT PHASE CONTROLLER WITH TWO (2) FOUR CHANNEL, TIME-DELAY-OUTPUT LOOP DETECTOR AMPLIFIERS AND ASSOCIATED HARNESSES HOUSED IN A NEMA SIZE "6" BASE MOUNTED SYSTEM CABINET SHALL BE INSTALLED.

MAINTENANCE OF TRAFFIC

THE CONTRACTOR SHALL BE RESPONSIBLE FOR THE MAINTENANCE OF TRAFFIC DURING SIGNAL INSTALLATION, IN ACCORDANCE WITH THE SHA BOOK OF STANDARDS: HIGHWAY AND INCIDENTAL STRUCTURES.

PROJECT CONTACTS

THE CONTACTS FOR THIS PROJECT ARE AS FOLLOW:

DISTRICT 2	THE OFFICE OF TRAFFIC
MR. ROBERT KIEL ASST. DIST. ENGR., TRAFFIC 410-810-3240	MR. RICHARD DAFF CHIEF, TRAFFIC ENGINEER 410-787-7630
MR. TERRY WRIGHT ASST. DIST. ENGR., MAINTENANCE 410-810-3250	MR. ED RODENHIZER TEAM LEADER, SIGNAL OPERATIONS 410-787-7652
MR. BARRY CLOTHIER UTILITIES ENGR. 410-810-3275	MR. EUGENE BAILEY TEAM LEADER, SIGN OPERATIONS 410-787-7676
MR. JEFF AMORIELLO ASST. DIST. ENGR., CONSTRUCTION 410-810-3270	MS. DARLENE EIDE SUPPLY OFFICER, SIGNAL WAREHOUSE 410-787-7666

EQUIPMENT LIST A

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

CATEGORY CODE NUMBERS	QUANTITY	DESCRIPTION
9093	1 EACH	EIGHT-PHASE FULLY-ACTUATED, SOLID STATE DIGITAL CONTROLLER. HOUSED IN A NEMA SIZE "6" BASE MOUNTED SYSTEMCABINET WITH METER AND DISCONNECT SWITCH.
		SHEET ALUMINUM SIGNS TO CONSIST OF:
9074	18 SF	- 2-36"X36" W3-3 SIGN W/ "NEW" PANEL AND FLAG ASSEMBLY (GROUND MOUNTED)
	9 SF	- 2-30"X36" R3-5R RIGHT ONLY SIGN MAST ARM MOUNT
9075	24 SF	- 2-72" X 12" D 3-2 DUAL FACED (MAST ARM MOUNTED)

EQUIPMENT LIST B

B. EQUIPMENT TO BE FURNISHED AND INSTALLED BY THE CONTRACTOR

CATEGORY CODE NUMBERS	QUANTITY	DESCRIPTION
1001	1EA	MAINTENANCE OF TRAFFIC
2002	3 CY	TEST PIT EXCAVATION
5001	2 EA	HEAT APPLIED PERMANENT PREFORMED THERMOPLASTIC ARROWS
5005	90 LF	24" WHITE THERMOPLASTIC PAVEMENT MARKING
5006	100 LF	5" WHITE THERMOPLASTIC PAVEMENT MARKING
5007	600 LF	5" YELLOW THERMOPLASTIC PAVEMENT MARKING
5008	200 LF	REMOVE EXISITING PAVEMENT MARKING
6001	150 LF	DEPRESSED CURB AND GUTTER
6004	820 SF	4" CONCRETE SIDEWALK
8010	12 EACH	12" PEDESTRIAN SIGNAL HEAD SECTION POLE MOUNT
8019	24 EACH	8" VEHICULAR TRAFFIC SIGNAL HEAD SECTION
8020	1 EACH	CONTROL & DISTRIBUTION
8023	1 EACH	MAST ARM POLE WITH SINGLE 60 FT. MAST ARM
8029	2 EACH	MICRO PROBE W/ 500' 4-CONDUCTOR LEAD-IN CABLE (NO. 22 AWG)
8030	3 EACH	BREAKAWAY PEDESTAL POLE (14 FOOT)
8032	2 EACH	PUSH BUTTON AND SIGN
8046	4 EACH	PAINT SIGNAL STRUCTURE FEDERAL BROWN, STD. NO. 595a-20040
8051	420 LF	3" PVC SCHEDULE 80 ELECTRICAL CONDUIT (TRENCHED)
8053	65 LF	4" PVC SCHEDULE 80 ELECTRICAL CONDUIT (TRENCHED)
8054	1600 LF	12-PAIR #19 AWG INTERCONNECT CABLE
8103	25 LF	3" DIAMETER PVC SCHEDULE 80 RISERs
8057	7 CY	CONCRETE FOR SIGNAL FOUNDATION
8058	60 LF	4" X 4" WOOD SIGN SUPPORTS
8060	490 LF	STRANDED BARE COPPER GROUND WIRE (NO. 6 AWG)
8064	75 LF	3" PVC SCHEDULE 80 ELECTRICAL CONDUIT (PUSHED / BORED)
8067	190 LF	4" PVC SCHEDULE 80 ELECTRICAL CONDUIT (SLOTTED)
8068	25 LF	1" LIQUID TIGHT FLEXIBLE NON-METALLIC CONDUIT FOR DETECTOR SLEEVE
8072	7 EACH	ELECTRICAL HANDHOLE
8080	5 EACH	3/4" X10' GROUNDING ROD
8081	350 LF	2-CONDUCTOR ELECTRICAL CABLE (ALUMINUM SHIELDED)
8083	380 LF	3-CONDUCTOR ELECTRICAL CABLE (NO. 14 AWG)
8084	90 LF	5-CONDUCTOR ELECTRICAL CABLE (NO. 14 AWG)
8085	700 LF	7-CONDUCTOR ELECTRICAL CABLE (NO. 14 AWG)
8086	400 LF	2-CONDUCTOR ELECTRICAL CABLE (NO. 12 AWG)
8087	1365 LF	1-CONDUCTOR ENCASED IN FLEXIBLE PVC CONDUIT (NO. 14 AWG)
8088	460 LF	SAWCUT FOR LOOP DETECTORS
8091	35 LF	2" PVC SCHEDULE 80 ELECTRICAL CONDUIT (TRENCHED)
8048	1 EA	REMOVE AND DISPOSE OF EXISTING EQUIPMENT

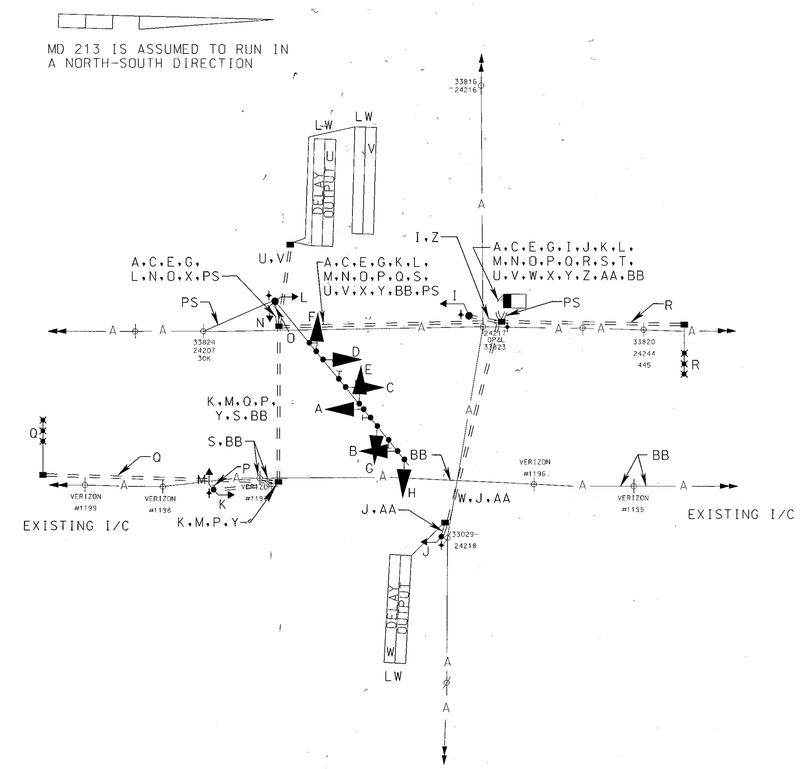
C. EQUIPMENT TO BE REMOVED AND RETURNED TO SHA
NONE
ALL EQUIPMENT TO BE REMOVED SHALL BECOME THE PROPERTY OF THE CONTRACTOR

PHASING SEQUENCE CHART

	1	2	3	4	5	6	7	8	9	10	11	12	13	14
PHASE 2 & 6	G	G	G	G	R	R	R	R	W	W	W	W	DW	DW
PED CLEARANCE	G	G	G	G	R	R	R	R	FL/DW	FL/DW	FL/DW	FL/DW	DW	DW
PHASE 2 & 6 CHANGE	Y	Y	Y	Y	R	R	R	R	DW	DW	DW	DW	DW	DW
PHASE 4 & 8	R	R	R	R	G	G	G	G	DW	DW	DW	DW	W	W
PED CLEARANCE	R	R	R	R	G	G	G	G	DW	DW	DW	DW	FL/DW	FL/DW
PHASE 4 & 8 CHANGE	R	R	R	R	Y	Y	Y	Y	DW	DW	DW	DW	DW	DW
FLASHING OPERATION	FL/Y	FL/Y	FL/Y	FL/Y	FL/R	FL/R	FL/R	FL/R	DK	DK	DK	DK	DK	DK

R = RED
Y = YELLOW
G = GREEN
FL = FLASHING
W = WALK
DW = DON'T WALK
DK = DARK

WIRING DIAGRAM (N.T.S.)



WIRING KEY

A.C.E.G	= 7-CONDUCTOR ELECTRICAL CABLE (NO. 14 AWG)
B.D.F.H	= 5-CONDUCTOR ELECTRICAL CABLE (NO. 14 AWG)
O.P	= 2-CONDUCTOR ELECTRIC CABLE (NO. 12 AWG)
U.V.W	= 2-CONDUCTOR ALUMINUM SHIELDED (NO. 14 AWG)
Q.R	= 4-CONDUCTOR MICROLOOP LEAD-IN CABLE (NO. 22 AWG)
I.J.K.L.M.N	= 3-CONDUCTOR ELECTRICAL CABLE (NO. 14 AWG)
S.BB	= 12 PAIR #19 AWG INTERCONNECT CABLE
LW	= 1-CONDUCTOR IN 1/4" FLEXIBLE PVC CONDUIT (NO. 14 AWG)
PS	= CONNECTION TO POWER SOURCE
⏚	= GROUNDING ROD
T.X.Y.Z.AA	= STRANDED BARE COPPER GROUNDING WIRE (NO. 6 AWG)

REVISIONS	APPROVALS
	TEAM LEADER, TRAFFIC ENGINEERING DESIGN DIVISION
	ASST. CHIEF TRAFFIC ENGINEERING DESIGN DIVISION
	CHIEF, TRAFFIC ENGINEERING DESIGN DIVISION
	DIRECTOR, TRAFFIC & SAFETY

MARYLAND DOT - STATE HIGHWAY ADMINISTRATION
Office of Traffic & Safety
TRAFFIC ENGINEERING DESIGN DIVISION
GENERAL INFORMATION SHEET
MD 213 (WASHINGTON AVE.) AND CAMPUS AVE.

DRAWN BY: K. JIANG	F.A.P. NO.		TS NO. 4245	SHEET NO.
CHECKED BY: S. SCOTT	S.H.A. NO.	XX1065)85	T.I.M.S. NO. F245	2 OF 3
SCALE: N.T.S.	COUNTY:	KENT		
DATE: 07-07-03	LOG MILE:	14021300.74		