PROJECT DESCRIPTION

GENERAL

THIS PROJECT INVOLVES THE RECONSTRUCTION OF THE EXISTING TRAFFIC CONTROL SIGNAL AT THE INTERSECTION OF US 13B AND MD 513 (CEDAR LN) WITH MAST ARMS IN WICOMICO COUNTY.

INTERSECTION OPERATION

1. NORMAL OPERATION

   THE INTERSECTION WILL OPERATE IN A NEMA SIX PHASE, FULL-TRAFFIC ACTUATED MODE, WITH THE US 13B APPROACHES RUNNING CONCURRENTLY AND THE MD 513. APPROACHES OPERATING AS SPLIT PHASES.

   NORTH AND SOUTHBOUND US 13B WILL HAVE EXCLUSIVE/PERMISSIVE LEFT TURN PHASES.

   AN ALTERNATE PEDESTRAIN PHASE WILL BE PROVIDED ACROSS THE NORTH LEG OF US 13B.

SPECIAL NOTES

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

PROJECT CONTACTS

THE CONTACT PERSONS FOR DISTRICT #1 ARE AS FOLLOWS:

MR. DONNIE LEE DREWER
DISTRICT ENGINEER
PHONE: 410-543-6720

MR. BRUCE W. POOLE
ASSISTANCE DISTRICT ENGINEER-UTILITY
PHONE: 410-543-6715

MR. GENE COLFIELL
ASSISTANCE DISTRICT ENGINEER-TRAFFIC
PHONE: 410-543-6715

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

MR. JAMES R. WRIGHT
ASSISTANCE DISTRICT ENGINEER-MAINTENANCE
PHONE: 410-543-6715

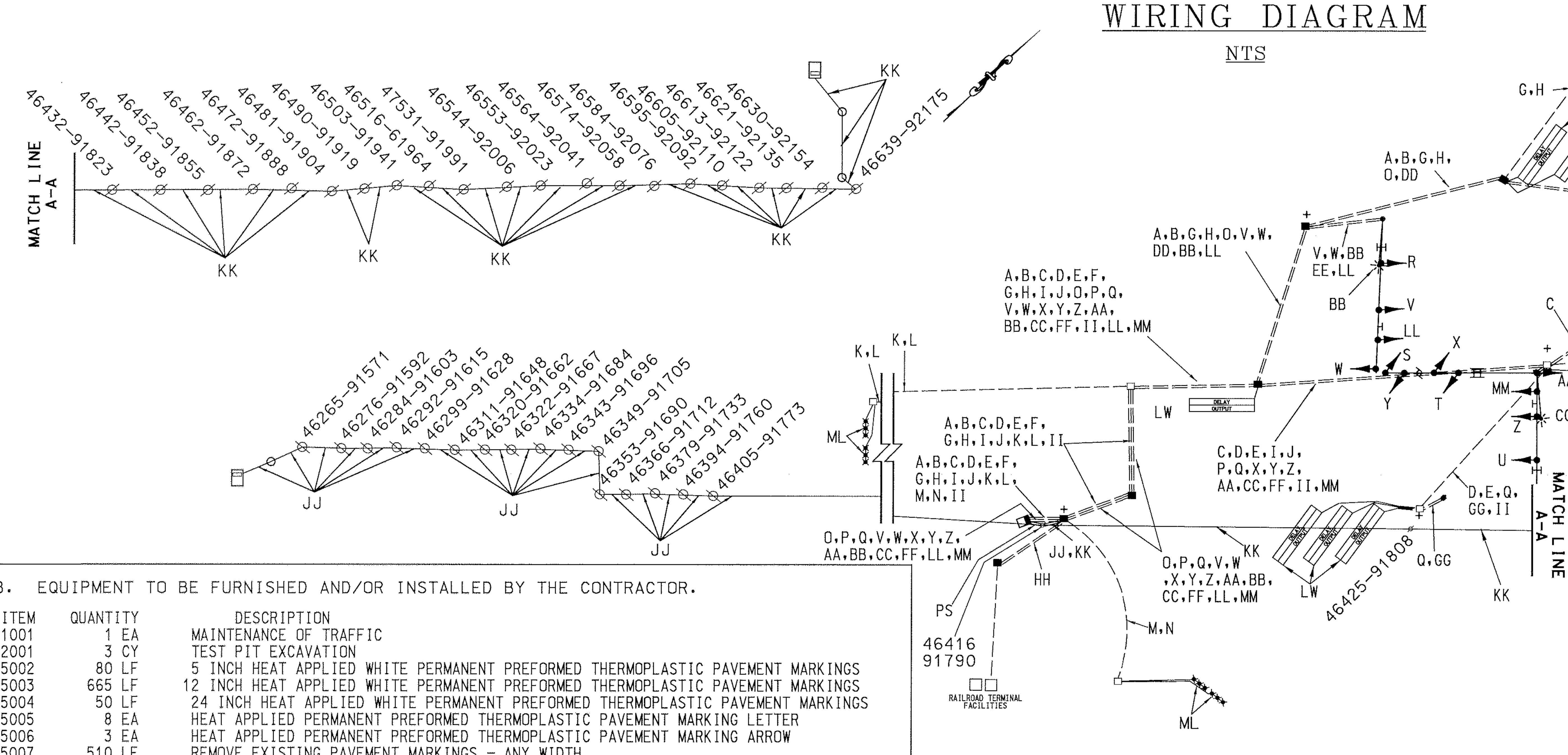
EQUIPMENT LIST

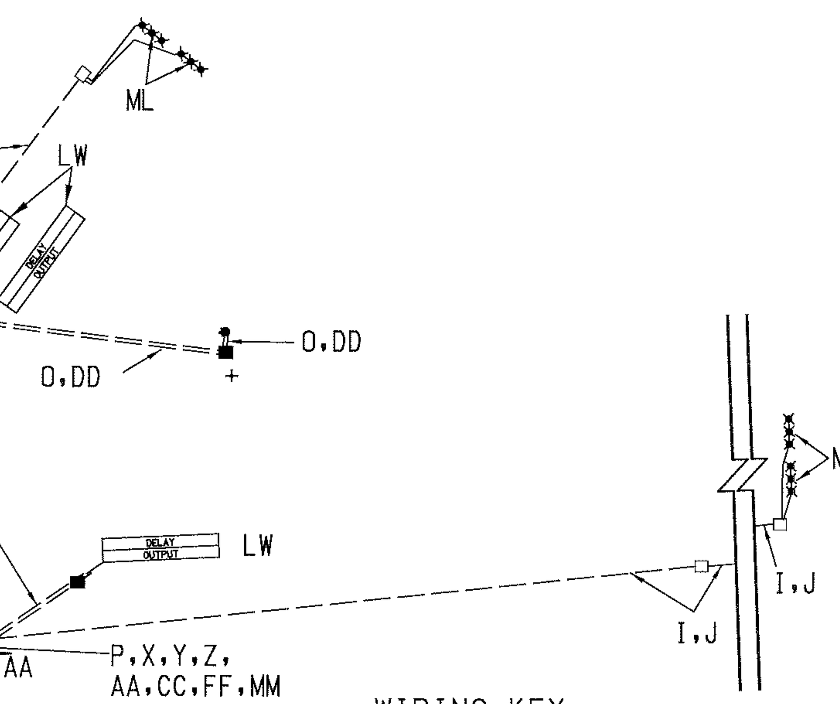
A. EQUIPMENT TO BE SUPPLIED BY THE SHA.

ITEM	QUANTITY	DESCRIPTION
9002	4 EA	(CONT/CAB/ADD) DETECTOR AMPLIFIER 4-CH RACK MT
9003	1 EA	(CONT/CAB/ADD) DETECTOR PANEL
9004	1 EA	(CONT/CAB/ADD) DETECTOR RACK POWER SUPPLY
9086	1 EA	CABINET W/TELEMETRY (SYSTEM CAB), SIZE 6
9087	1 EA	CONTROLLER ASC II W/ TELEMETRY
9089	30 SF	R3-5 (LEFT TURN ONLY) (30"X36") 4 EACH MAST ARM MOUNTED
9090	43 SF	D-3(1) (Cedar LN) (VAR.X16") 4 EACH MAST ARM MOUNTED
9090	24 SF	M95-1 INTERSECTION DUAL DIRECTIONAL (NORTH, US 13B, NORTH) (36" X 96") 1 EACH GROUND MOUNTED
9090	24 SF	M95-1 INTERSECTION DUAL DIRECTIONAL (SOUTH, US 13B, NORTH) (36" X 96") 1 EACH GROUND MOUNTED
9090	28 SF	D-3(3) (Cedar Lane, ←St. Lukes Rd, NEXT SIGNAL) (42" X 96") 1 EACH GROUND MOUNTED
9090	28 SF	D-3(3) (Cedar Ln, St. Lukes Rd →, NEXT SIGNAL) (42" X 96") 1 EACH GROUND MOUNTED
9096	3 EA	PUSHBUTTON AND SIGN (R10-4, PUSH BUTTON TO CROSS FRUITLAND BLVD.)

BAI BRUDIS & ASSOCIATES, INC.
CONSULTING ENGINEERS

9220 RUMSEY ROAD; SUITE 210
COLUMBIA, MARYLAND 21045
(410)-884-3607





WIRING DIAGRAM

NTS

WIRING KEY

A,B,C,D, E,F,II	– 2 CONDUCTOR ELECTRICAL CABLE (#14 AWG) ALUMINUM SHIELDED
G,H,I,J, K,L,M,N	– MICRO-LOOP PROBE LEAD-IN
O,P,Q,HH	– 2 CONDUCTOR ELECTRICAL CABLE (#14 AWG)
R,S,T,U LL,MM	– 5 CONDUCTOR ELECTRICAL CABLE (#14 AWG)
V,W,X,Y, Z,AA	– 7 CONDUCTOR ELECTRICAL CABLE (#14 AWG)
BB,CC	– 2 CONDUCTOR ELECTRICAL CABLE (#12 AWG)
DD,EE,FF, GG	– STRANDED BARE COPPER GROUND WIRE (#6 AWG)
JJ,KK	12 PAIR COMMUNICATIONS CABLE OVERHEAD SELF-SUPPORTING
LW	– LOOP WIRE (#14 AWG)
ML	– MICRO-LOOP PROBE SET
PS	– PROPOSED UNDERGROUND POWER SOURCE
+	– $3/4$" x 10' GROUND ROD

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

ITEM	QUANTITY	DESCRIPTION
1001	1 EA	MAINTENANCE OF TRAFFIC
2001	3 CY	TEST PIT EXCAVATION
5002	80 LF	5 INCH HEAT APPLIED WHITE PERMANENT PREFORMED THERMOPLASTIC PAVEMENT MARKINGS
5003	665 LF	12 INCH HEAT APPLIED WHITE PERMANENT PREFORMED THERMOPLASTIC PAVEMENT MARKINGS
5004	50 LF	24 INCH HEAT APPLIED WHITE PERMANENT PREFORMED THERMOPLASTIC PAVEMENT MARKINGS
5005	8 EA	HEAT APPLIED PERMANENT PREFORMED THERMOPLASTIC PAVEMENT MARKING LETTER
5006	3 EA	HEAT APPLIED PERMANENT PREFORMED THERMOPLASTIC PAVEMENT MARKING ARROW
5007	510 LF	REMOVE EXISTING PAVEMENT MARKINGS - ANY WIDTH
5008	12 EA	REMOVE EXISTING PAVEMENT MARKINGS LETTER OR ARROW
6001	140 SF	4 INCH CONCRETE SIDEWALK
6009	20 LF	FURNISH AND INSTALL DEPRESSED CURB AND GUTTER
8001	11 CY	FURNISH AND INSTALL CONCRETE FOR SIGNAL FOUNDATION
8003	2 EA	FURNISH AND INSTALL BREAKAWAY PEDESTAL POLE (ANY SIZE)
8016	6 EA	FURNISH AND INSTALL MICROLOOP PROBE SET WITH 500 FT LEAD-IN
8017	2 EA	FURNISH AND INSTALL MICROLOOP PROBE SET WITH 1000 FT LEAD-IN
8018	3 EA	INSTALL PUSHBUTTON AND SIGN
8020	1 EA	INSTALL CONTROLLER AND CABINET - BASE MOUNT
8021	890 LF	FURNISH AND INSTALL SAWCUT FOR SIGNAL (LOOP DETECTOR)
8022	30 LF	FURNISH AND INSTALL 1 INCH ELECTRICAL CONDUIT - GALVANIZED SLEEVE
8023	60 LF	FURNISH AND INSTALL 1 INCH LIQUID TIGHT FLEXIBLE NON METALLIC CONDUIT FOR DETECTOR SLEEVE
8024	80 LF	FURNISH AND INSTALL 2 INCH SCH 80 RIGID PVC CONDUIT - TRENCHED
8027	125 LF	FURNISH AND INSTALL 3 INCH SCH 80 RIGID PVC CONDUIT - TRENCHED
8030	95 LF	FURNISH AND INSTALL 4 INCH SCH 80 RIGID PVC CONDUIT - TRENCHED
8032	490 LF	FURNISH AND INSTALL 4 INCH SCH 80 RIGID PVC CONDUIT - BORED
8033	8 EA	FURNISH AND INSTALL ELECTRICAL HANDHOLE
8034	5 EA	FURNISH AND INSTALL GROUND ROD $-3/4$ INCH DIAMETER X 10 FOOT LENGTH
8038	8,065 LF	FURNISH AND INSTALL 12-PAIR COMMUNICATION CABLE, SELF SUPPORTING (OVERHEAD)
8040	3,265 LF	FURNISH AND INSTALL LOOP WIRE ENCASED IN FLEXIBLE TUBING (NO 14 AWG)
8041	2,540 LF	FURNISH AND INSTALL ELECTRICAL CABLE - 2 CONDUCTOR (ALUMINUM SHIELDED)
8042	1,276 LF	FURNISH AND INSTALL ELECTRICAL CABLE - 2 CONDUCTOR (NO 14 AWG)
8044	885 LF	FURNISH AND INSTALL ELECTRICAL CABLE - 5 CONDUCTOR (NO 14 AWG)
8045	2,505 LF	FURNISH AND INSTALL ELECTRICAL CABLE - 7 CONDUCTOR (NO 14 AWG)
8046	710 LF	FURNISH AND INSTALL ELECTRICAL CABLE - 2 CONDUCTOR (NO 12 AWG) TYPE "TC"
8048	775 LF	FURNISH AND INSTALL NO 6 AWG STRANDED BARE COPPER GROUND WIRE
8053	127 SF	INSTALL OVERHEAD SIGN
8055	2 EA	FURNISH AND INSTALL 250 WATT HPS LUMINAIRE WITH PHOTOCELL
8056	2 EA	FURNISH AND INSTALL LIGHTING BRACKET ARM FOR TRAFFIC SIGNAL STRUCTURE
8057	6 EA	REMOVE AND DISPOSE OF EXISTING FOUNDATION 12 INCHES BELOW GRADE
8058	1 EA	REMOVAL OF EXISTING CONTROLLER, CABINET AND GALVANIZED SIGNAL STRUCTURE
8059	1 EA	DELIVERY OF REMOVED CONTROLLER, CABINET AND GALVANIZED SIGNAL STRUCTURE
8060	1 EA	REMOVE AND DISPOSE OF EXISTING MATERIAL AND EQUIPMENT PER ASSIGNMENT
8066	1 EA	FURNISH AND INSTALL CONTROL AND DISTRIBUTION EQUIPMENT (120/240V 1PHASE 3 WIRE SYSTEM)
8068	68 LF	FURNISH AND INSTALL WOOD SIGN SUPPORT 6 INCH X 6 INCH
8079	1 EA	FURNISH AND INSTALL MAST ARM POLE AND 70 FOOT MAST ARM
8082	1 EA	FURNISH AND INSTALL MAST ARM POLE AND TWIN (50 FT / 70 FT) OR 70 FT / 50 FT) MAST ARMS
8084	38 EA	FURNISH AND INSTALL 12 INCH VEHICULAR TRAFFIC SIGNAL HEAD SECTION (ALUMINUM BLACK FACED)

C. EXISTING EQUIPMENT TO BE REMOVED BY THE CONTRACTOR AND DELIVERED TO THE STATE HIGHWAY ADMINISTRATION. 7941 CONNELLEY DRIVE, HANOVER, MARYLAND 21076.

QUANTITY	DESCRIPTION
4	12" X 30' STEEL STRAIN POLE
1	CONTROLLER AND CABINET

NOTES:
1. ALL EQUIPMENT TO BE REMOVED AND NOT LISTED ABOVE SHALL BECOME THE PROPERTY OF THE CONTRACTOR.
2. THE CONTRACTOR SHALL NOTIFY THE SHA AT (410) 787-7652 AT LEAST THREE DAYS IN ADVANCE OF DELIVERY.

PHASING SEQUENCE CHART

	1	2	3	4	5	6	7	8	9	10	11	12
Phase 1 & 5	←G	←G	R	R	←G	←G	R	R	R	R	R	R
1 & 5 Change	to 1 & 6 or 2 & 5 or 2 & 6											
Phase 1 & 6	←G	←G	G	G	←R	←R	R	R	R	R	R	R
1 Change	←Y	←Y	G	G	←R	←R	R	R	R	R	R	R
Phase 2 & 5	←R	←R	R	R	←G	←G	G	G	R	R	R	R
5 Change	←R	←R	R	R	←Y	←Y	G	G	R	R	R	R
Phase 2 & 6	←R	←R	G	G	←R	←R	G	G	R	R	R	R
2 & 6 Change	←R	←R	Y	Y	←R	←R	Y	Y	R	R	R	R
Phase 3	←R	←R	R	R	←R	←R	R	R	R	R	←G /G	G
3 Change	←R	←R	R	R	←R	←R	R	R	R	R	Y	Y
Alt Phase 3	←R	←R	R	R	←R	←R	R	R	R	R	←G /G	G
PED Clear	←R	←R	R	R	←R	←R	R	R	R	R	←G /G	G
Alt 3 Change	←R	←R	R	R	←R	←R	R	R	R	R	Y	Y
Phase 4	←R	←R	R	R	←R	←R	R	R	←G /G	G	R	R
4 Change	←R	←R	R	R	←R	←R	R	R	Y	Y	R	R
Flashing Operation	FL/←R	FL/←R	FL/Y	FL/Y	FL/←R	FL/←R	FL/Y	FL/Y	FL/R	FL/R	FL/R	FL/R

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
US 13B & MD 513 (CEDAR LANE)

DRAWN BY:	R. MILSTEAD	F.A.P. NO.		TS NO. TS-1830D	SHEET NO. 2 OF 2
CHECKED BY:	T. BRUDIS	S.H.A. NO.	WO758A52/B52		
SCALE:	NONE	COUNTY:	WICOMICO	T.I.M.S. NO.	
DATE:	10/11/99	LOG MILE:			

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