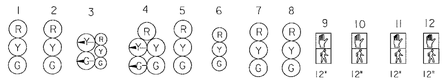
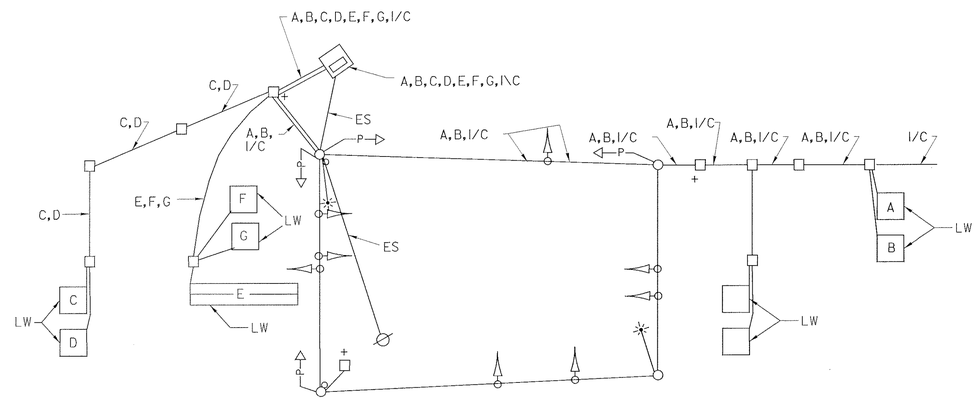
PHASE CHART



	1	2	3	4	5	6	7	8	9	10	11	12
PHASE 1+6	R	R	G	G	R	R	R	R	DW	DW	DW	DW
1+6 CHANGE	R	R	Y	Y	R	R	R	R	DW	DW	DW	DW
PHASE 2 + 6	G	G	G	G	G	R	R	R	WK	WK	DW	DW
PED CLEARANCE	G	G	G	G	G	R	R	R	FL/DW	FL/DW	DW	DW
2 + 6 CHANGE	Y	Y	Y	Y	Y	R	R	R	DW	DW	DW	DW
PHASE 4	R	R	R	R	R	G	G	G	DW	DW	DW	DW
4 CHANGE	R	R	R	R	R	Y	Y	Y	DW	DW	DW	DW
PHASE 4 ALT	R	R	R	R	R	G	G	G	DW	DW	WK	WK
PED CLEARANCE	R	R	R	R	R	G	G	G	DW	DW	FL/DW	FL/DW
4 ALT CHANGE	R	R	R	R	R	Y	Y	Y	DW	DW	DW	DW
FLASHING OPERATION	FL/Y	FL/Y	FL/Y	FL/Y	FL/Y	FL/R	FL/R	FL/R	DARK	DARK	DARK	DARK

WIRING DIAGRAM



WIRING KEY

A,B,C } 2-CONDUCTOR ELECTRICAL CABLE
D,E,F,G } (ALUMINUM SHIELDED)

LW - LOOP WIRE (NO. 14 A.W.G.)
ES - EXISTING SERVICE
+ - 3/4IN. x 10 FT. GROUND ROD
I/C - INTERCONNECT CABLE

CONSTRUCTION DETAILS

A. RELOCATE SIGNAL HEADS AND SIGNS ON SPAN WIRE.
B. CAP AND ABANDON COINDUIT.
C. REMOVE EXISTING HANDHOLE.
D. FURNISH AND INSTALL 12' WHITE REFLECTIVE HEAT APPLIED PREFORMED PAVEMENT MARKING (CROSSWALK).
E. FURNISH AND INSTALL 24' WHITE REFLECTIVE HEAT APPLIED PREFORMED PAVEMENT MARKING (STOP LINE).
F. INSTALL 2" SCHEDULE 80 ELECTRICAL CONDUIT - TRENCHED.
G. FURNISH AND INSTALL HANDHOLE.
H. INSTALL 6' x 6' LOOP DETECTOR, (4 TURNS) ENCASED IN 1/4" FLEXIBLE TUBING.
I. USE EXISTING HANDHOLE.
J. INSTALL 1" FLEXIBLE NON-METALLIC ELECTRICAL CONDUIT (DETECTOR WIRE SLEEVE.)
K. INSTALL 6' X 30' LOOP DETECTOR, ENCASED IN 1/4" FLEXIBLE TUBING (3-6-3 TURNS) QUADRUPOLE TYPE.
L. USE EXISTING CONDUIT.
N. INSTALL OVERHEAD SIGN SPAN MOUNT.
O. ABANDON EXISTING LOOP DETECTOR.
P. INSTALL 1" GALVANIZED STEEL ELECTRICAL CONDUIT (DETECTOR WIRE SLEEVE).
Q. DISCONNECT MICRO - LOOP PROBE SET.
R. UNCOVER SIGNAL HEAD
S. INSTALL 3" SCHEDULE 80 ELECTRICAL CONDUIT- SLOTTED
T. ABANDON LOOP DETECTOR

PROJECT CONTACTS

THE CONTACT PERSONS FOR DISTRICT #3 ARE AS FOLLOWS:

MR. CHARLIE WATKINS
DISTRICT ENGINEER
PHONE: (301) 513-7311

MR. MAJID SHAKIB
ASSISTANT DISTRICT ENGINEER - TRAFFIC
PHONE: (301) 513-7358

MR. JOE GECKLE
UTILITY ENGINEER
PHONE: (301) 513-7350

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

THE POWER COMPANY REPRESENTATIVE IS:
BALTIMORE GAS AND ELECTRIC COMPANY
MR. JOSEPH G. BUNCH
SUPERVISOR
INDUSTRIAL/COMMERCIAL SERVICES
NEW BUSINESS CONSTRUCTION
PHONE: (410) 859-9030

EQUIPMENT LIST "A"

A. EQUIPMENT TO BE SUPPLIED BY THE SHA

SPEC. SECTION	CATEGORY CODE NO.	QUANTITY	DESCRIPTION
813	973023	9 S.F.	SHEET ALUMINUM SIGNS - 1 EACH W9-2(4) SIGN (42"x30") "LANE ENDS MERGE LEFT" SPAN WIRE MOUNT

EQUIPMENT LIST "B"

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

SPEC. SECTION	CATEGORY CODE NO.	QUANTITY	DESCRIPTION
104	120500	L.S.	MAINTENANCE OF TRAFFIC
810	861104	2105 L.F.	FURNISH AND INSTALL ELECTRICAL CABLE 2 CONDUCTORS ALUMINUM SHIELDED
804	837001	1 EACH	FURNISH AND INSTALL GROUND ROD - 3/4 IN. DIAMETER x 10 FT. LENGTH
805	800000	96 L.F.	FURNISH AND INSTALL 3" SCHEDULE 80 RIGID PVC CONDUIT - SLOTTED
805	865160	20 L.F.	FURNISH AND INSTALL 1 IN. LIQUID TIGHT FLEXIBLE NON - METALLIC CONDUIT FOR DETECTOR SLEEVE
810	862101	2225 L.F.	FURNISH AND INSTALL LOOP WIRE ENCASED IN FLEXIBLE TUBING (NO. 14 AWG)
811	811001	4 EACH	FURNISH AND INSTALL ELECTRICAL HANDHOLE
815	862102	561 L.F.	FURNISH AND INSTALL SAW CUT FOR SIGNAL (LOOP DETECTOR)
——	800000	L.S.	REMOVE AND DISPOSE OF EXISTING MATERIAL AND EQUIPMENT
805	800000	360 L.F.	FURNISH AND INSTALL 3" SCHEDULE 80 RIGID PVC CONDUIT - TRENCHED.
——	500000	260 L.F.	FURNISH AND INSTALL 12" WHITE REFLEVTIVE HEAT APPLIED PREFORMED PAVEMENT MARKING (CROSS WALK).
——	500000	75 L.F.	FURNISH AND INSTALL 24" WHITE REFLEVTIVE HEAT APPLIED PREFORMED PAVEMENT MARKING (STOP LINE).
——	800000	9 S.F.	INSTALL OVERHEAD SIGN.
805	805011	20 L.F.	FURNISH AND INSTALL 1 IN. GALVANIZED ELECTRICAL CONDUIT FOR DETECTOR SLEEVE
——	800000	2 EACH	UNCOVER SIGNAL HEAD

PROJECT DESCRIPTION

THIS PROJECT INVOLVES THE MODIFICATION OF THE TRAFFIC SIGNAL AT MD 197 AND SOUTH LAUREL DRIVE IN PRINCE GEORGE'S COUNTY.
MD 197 IS ASSUMED TO RUN IN A NORTH SOUTH DIRECTION.

INTERSECTION OPERATION

1. NORMAL OPERATION

THE INTERSECTION WILL OPERATE IN A NEMA (4) FOUR-PHASE FULL-TRAFFIC-ACTUATED MODE WITH SOUTHBOUND AND NORTHBOUND MD 197 APPROACHES OPERATING CONCURRENTLY. THE SOUTH LAUREL DRIVE APROACHES WILL OPERATE ALONE. EXCLUSIVE/PERMISSIVE LEFT TURN PHASING WILL BE PROVIDED FOR NORTHBOUND MD 197. PEDESTRIAN INDICATIONS WILL RUN CONCURRENTLY WITH MD 197 FOR SOUTH LAUREL DRIVE AND PUSH BUTTON ACTIVATION WILL BE PROVIDED FOR PEDESTRIANS TO CROSS MD 197.

MAINTENANCE OF TRAFFIC

THE TRAFFIC CONTROL NUMBERS SHALL BE REFERENCED FOR THE PROJECT

STANDARD NO. MD-105.00
STANDARD NO. MD-105.01
STANDARD NO. MD-105.02
STANDARD NO. MD-105.101 (FLAGGING OPERATION)
STANDARD NO. MD-105.103 (INTERSECTION FLAGGING OPERATION)
STANDARD NO. MD-105.105 (SHOULDER WORK)
STANDARD NO. MD-105.107 (LANE SHIFT)
STANDARD NO. MD-105.109 (LANE SHIFT)
NOTE: STANDARDS TO BE MODIFIED BY REPLACING W21-5 SIGN WITH A W29-1 SIGN (ROAD WORK AHEAD).

ADDENDUM

FINAL SIGNAL PLAN

SS-9

RUMMEL, KLEPPER & KAHL, LLP
CONSULTING ENGINEERS
81 MOSHER STREET
BALTIMORE, MARYLAND 21217
TEL.: (410) 728-2900 FAX: (410) 383-3270

REVISIONS:
B February, 1999 Reconstruct Due To New Geometrics. SHA No.: N/A

APPROVALS:
CHIEF SIGNAL DESIGN SECTION
ASST. DISTRICT ENGINEER TRAFFIC
CHIEF TRAFFIC ENGINEERING DESIGN DIVISION
DIRECTOR OFFICE OF TRAFFIC & SAFETY
ORIGINAL ON FILE

MDOT - STATE HIGHWAY ADMINISTRATION
Office of Traffic & Safety
TRAFFIC ENGINEERING DESIGN DIVISION LOG MILE # 16019711.61

DRAWN BY: SMH
DES. BY: SMH/DLA
CHK. BY: BJH

MD 197 AT SOUTH LAUREL DRIVE
SIGNAL PLAN
COUNTY: PRINCE GEORGE'S

DATE: FEBRUARY, 1999 F.A.P. NO. SEE TITLE SHEET
SCALE: N/A S.H.A. NO. N/A

TS/STD. NO.: 1728B-GI1
SHEET NO. 125F OF 367

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