

PROJECT DESCRIPTION

THIS PROJECT INVOLVES THE MODIFICATION OF THE EXISTING TRAFFIC CONTROL SIGNAL AT THE INTERSECTION OF US 40 AND ST. JOHNS LANE IN HOWARD COUNTY. THE WORK IS NECESSITATED BY THE INSTALLATION OF A MEDIAN AND WIDENING ON THE EAST SIDE OF WESTBOUND US 40. US 40 IS ASSUMED TO RUN IN AN EAST-WEST DIRECTION.

INTERSECTION OPERATION

THE INTERSECTION CURRENTLY OPERATES IN A NEMA SIX-PHASE, FULL-TRAFFIC-ACTUATED MODE WITH EXCLUSIVE LEFT TURN PHASES FOR US 40 AND SIDE STREET SPLIT PHASING. THIS OPERATION WILL NOT CHANGE.

CONTROLLER REQUIREMENTS

A NEW EIGHT-PHASE, FULLY-ACTUATED CONTROLLER WITH FOUR (4) FOUR CHANNEL, TIME-DELAY-OUTPUT LOOP DETECTOR AMPLIFIERS AND VIDEO INTERFACE EQUIPMENT HOUSED IN A NEMA "6" BASE MOUNTED CABINET WILL BE INSTALLED AT THE INTERSECTION.

EQUIPMENT LIST "A"

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

ITEM NO.	QUANTITY	DESCRIPTION
NONE		

EQUIPMENT LIST "B"

B. EQUIPMENT TO BE FURNISHED AND/OR INSTALLED BY CONTRACTOR. ALL EQUIPMENT SHALL HAVE CATALOG CUTS SUBMITTED TO THE OFFICE OF TRAFFIC AND SAFETY FOR APPROVAL PRIOR TO INSTALLATION.

QUANTITY	DESCRIPTION
LS	MAINTENANCE OF TRAFFIC
2 CY	TEST PIT EXCAVATION
6 EA	FURNISH AND INSTALL HEAT APPLIED THERMOPLASTIC PAVEMENT MARKING ARROW
85 LF	FURNISH AND INSTALL 24 IN. WHITE HEAT APPLIED THERMOPLASTIC PAVEMENT MARKING
1 EA	FURNISH AND INSTALL 500 FT. VIDEO DETECTION CABLE
3 EA	FURNISH AND INSTALL NON-INVASIVE MICRO-LOOP PROBE SET WITH 500 FT. LEAD-IN
LS	REMOVE AND DISPOSE OF EXISTING EQUIPMENT
1 EA	FURNISH AND INSTALL VIDEO INTERFACE EQUIPMENT
420 LF	FURNISH AND INSTALL 4 IN. SCHEDULE 80 RIGID ELECTRICAL PVC CONDUIT - BORED
280 LF	FURNISH AND INSTALL 4 IN. SCHEDULE 80 RIGID ELECTRICAL PVC CONDUIT - TRENCHED
2 CY	FURNISH AND INSTALL CONCRETE FOR SIGNAL FOUNDATION
50 LF	FURNISH AND INSTALL NO. 6 AWG STRANDED BARE COPPER WIRE
1 EA	FURNISH AND INSTALL METERED SERVICE PEDESTAL
60 LF	FURNISH AND INSTALL ELECTRICAL CABLE 1-CONDUCTOR (NO. 4 A.W.G.)
5 EA	FURNISH AND INSTALL ELECTRICAL HANDHOLE
2000 LF	FURNISH AND INSTALL 12-PAIR COMMUNICATION CABLE - UNDERGROUND
4 EA	FURNISH AND INSTALL GROUND ROD 3/4 IN. DIAMETER X 10 FT. LENGTH
75 LF	FURNISH AND INSTALL ELECTRICAL CABLE 5-CONDUCTOR (NO. 14 A.W.G.)
2100 LF	FURNISH AND INSTALL ELECTRICAL CABLE 7-CONDUCTOR (NO. 14 A.W.G.)
400 LF	FURNISH AND INSTALL ELECTRICAL CABLE 2-CONDUCTOR (NO. 12 A.W.G.) - TRAY CABLE
1 EA	FURNISH AND INSTALL BASE MOUNTED CABINET AND CONTROLLER
4 EA	FURNISH AND INSTALL 4-CHANNEL, TIME-DELAY-OUTPUT, LOOP DETECTOR AMPLIFIER
2000 LF	DISCONNECT, RE-ROUTE AND CONNECT CABLE
50 LF	FURNISH AND INSTALL 2 IN. SCHEDULE 80 RIGID ELECTRICAL PVC CONDUIT - TRENCHED

EQUIPMENT LIST "C"

C. EXISTING EQUIPMENT TO BE REMOVED BY THE CONTRACTOR AND DELIVERED TO THE STATE HIGHWAY ADMINISTRATION, 7491 CONNELLEY DRIVE, HANOVER, MARYLAND 21076. THE CONTRACTOR SHALL NOTIFY THE SHA AT (410) 787-7652 AT LEAST THREE DAYS IN ADVANCE OF DELIVERY.

ITEM NO.	QUANTITY	DESCRIPTION
NONE		

NOTE:

SHA FORCES SHALL REMOVE THE CONTROLLER AND ALL ASSOCIATED EQUIPMENT FROM THE CONTROLLER CABINET. THE CABINET AND ALL OTHER MATERIALS TO BE REMOVED SHALL BECOME THE PROPERTY OF THE CONTRACTOR.

CONTACT PERSONS FOR DISTRICT 7 ARE AS FOLLOWS:

MR. JOHN CONCANNON ASSISTANT DISTRICT ENGINEER - TRAFFIC (301) 624-8141
 MR. RAY JOHNSON ASSISTANT DISTRICT ENGINEER - MAINTENANCE (301) 624-8106

ANDREA ABEND ASSISTANT DISTRICT ENGINEER - UTILITIES (301) 624-8110

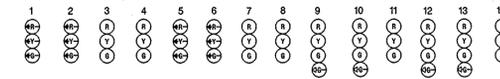
CONTACTS FOR OFFICE OF TRAFFIC AND SAFETY

MR. RICHARD DAFF, SR. CHIEF, TRAFFIC OPERATIONS (410) 787-7630
 MR. EUGENE BAILEY TEAM LEADER SIGN OPERATIONS (410) 787-7676

MR. ROBERT SNYDER ASSISTANT DIVISION CHIEF, TRAFFIC OPERATIONS (410) 787-7631
 MIKE STOCKER SUPPLY OFFICE SIGNAL SHOP WAREHOUSE (410) 787-7668

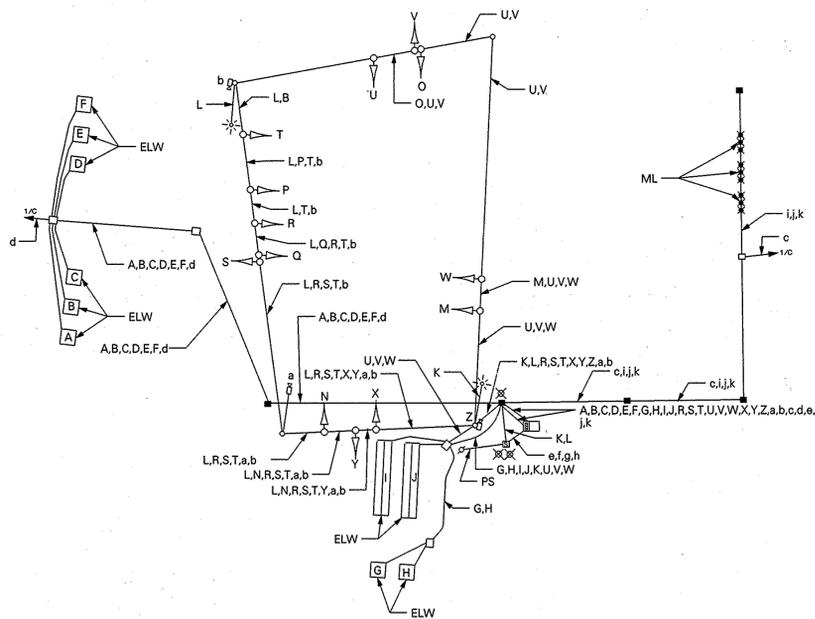
MR. ED RODENHIZER TEAM LEADER SIGNAL OPERATIONS (410) 787-7662

PHASING CHART



PHASE	1	2	3	4	5	6	7	8	9	10	11	12	13	14
PHASE 1 & 5	+G-	+G-	R	R	+G-	+G-	R	R	R	R	R	R	R	R
1 & 5 CHANGE	THE CONTROLLER MAY SKIP TO PHASES 1 & 6, 2 & 5, OR 2 & 6													
PHASE 1 & 6	+G-	+G-	G	G	+R-	+R-	R	R	R	R	R	R	R	R
1 & 6 CHANGE	+Y-	+Y-	G	G	+R-	+R-	R	R	R	R	R	R	R	R
PHASE 2 & 5	+R-	+R-	R	R	+G-	+G-	G	G	R	R	R	R	R	R
2 & 5 CHANGE	+R-	+R-	R	R	+Y-	+Y-	G	G	R	R	R	R	R	R
PHASE 2 & 6	+R-	+R-	G	G	+R-	+R-	G	G	R	R	R	R	R	R
2 & 6 CHANGE	+R-	+R-	Y	Y	+R-	+R-	Y	Y	R	R	R	R	R	R
PHASE 3	+R-	+R-	R	R	+R-	+R-	R	R	+G-G	+G-G	G	R	R	R
3 CHANGE	+R-	+R-	R	R	+R-	+R-	R	R	Y	Y	Y	R	R	R
PHASE 4	+R-	+R-	R	R	+R-	+R-	R	R	R	R	R	+G-G	+G-G	G
4 CHANGE	+R-	+R-	R	R	+R-	+R-	R	R	R	R	R	Y	Y	Y
FLASHING OPERATION	FLR	FLR	FLY	FLY	FLR	FLR	FLY	FLY	FLR	FLR	FLR	FLR	FLR	FLR

WIRING DIAGRAM



WIRING KEY

- A-J EXISTING 2-CONDUCTOR ELECTRICAL CABLE (NO. 14 A.W.G.) ALUMINUM SHIELDED
- K-L 2-CONDUCTOR ELECTRICAL CABLE (NO. 12 A.W.G.)
- M-Q EXISTING 5-CONDUCTOR ELECTRICAL CABLE (NO. 14 A.W.G.)
- R-Y 7-CONDUCTOR ELECTRICAL CABLE (NO. 14 A.W.G.)
- Z-a EXISTING VIDEO DETECTION CABLE
- b VIDEO DETECTION CABLE
- c EXISTING 12-PAIR VOICE GRADE INTERCONNECT CABLE
- d 12-PAIR VOICE GRADE INTERCONNECT CABLE
- e STRANDED BARE COPPER GROUND WIRE (NO. 6 A.W.G.)
- f-h 1-CONDUCTOR ELECTRICAL CABLE (NO. 4 A.W.G.)
- i-k MICROLOOP PROBE LEAD-IN
- ELW EXISTING LOOP WIRE (NO. 14 A.W.G.)
- PS PROPOSED ELECTRIC SERVICE GROUND ROD
- ML MICROLOOP PROBE

DRILL HOLES

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TRAFFIC CONCEPTS, INC.
 325 Gambrills Road
 Suite E
 Gambrills, MD 21054
 (410) 923-7101
 FAX (410) 923-6473
 EMAIL TRAFFIC.CONCEPTS@COMCAST.NET

SHA STATE OF MARYLAND
 DEPARTMENT OF TRANSPORTATION
 STATE HIGHWAY ADMINISTRATION
 OFFICE OF TRAFFIC & SAFETY
 TRAFFIC ENGINEERING DESIGN DIVISION
GENERAL INFORMATION PLAN
 US 40 AND ST. JOHNS LANE

SCALE NONE DATE 6-23-06 CONTRACT NO. BW 998M82

DESIGNED BY T. ZAYDEL COUNTY HOWARD
 DRAWN BY T. ZAYDEL LOGMILE 13004018.00
 CHECKED BY K. SCHMID T.I.M.S. NO. H 665
 F.A.P. NO. NA TOD NO.

DRAWING NO. TS-181H GI SHEET NO. 2 OF 2