

PROJECT DESCRIPTION

THIS PROJECT INVOLVES THE MODIFICATION OF THE EXISTING TRAFFIC CONTROL SIGNAL AT THE INTERSECTION OF MD 3 AND WAUGH CHAPEL ROAD /RIEDEL ROAD IN ANNE ARUNDEL COUNTY. THE WORK IS NECESSITATED BY ROAD IMPROVEMENTS TO THE INTERSECTION AND ELIMINATING THE SIDE STREET THROUGH AND LEFT TURN MOVEMENTS. MD 3 IS ASSUMED TO RUN IN A NORTH-SOUTH DIRECTION.

INTERSECTION OPERATION

THE INTERSECTION CURRENTLY OPERATES IN A NEMA SIX-PHASE, FULLY-ACTUATED MODE WITH EXCLUSIVE LEFT TURN PHASES FOR BOTH DIRECTIONS OF MD 3 AND SIDE STREET SPLIT PHASING. THE INTERSECTIONS WILL NOW BE SEPERATED AND WILL BE CONTROLLED AS FOLLOWS:

SOUTHBOUND MD 3 AND WAUGH CHAPEL ROAD

THIS INTERSECTION WILL OPERATE IN A NEMA TWO-PHASE, FULLY-ACTUATED MODE WITH THE SOUTHBOUND MD 3 MOVEMENT AS ONE PHASE AND THE NORTHBOUND MD 3 LEFT TURN MOVEMENT & WAUGH CHAPEL ROAD RIGHT RIGHT TURN MOVEMENT AS THE SECOND PHASE. AN ALTERNATE PEDESTRIAN PHASE TO CROSS THE NORTH LEG OF MD 3 AND AN ALL RED FIREHOUSE PRE-EMPTION PHASE WILL BE PROVIDED.

NORTHBOUND MD 3 AND RIEDEL ROAD

THIS INTERSECTION WILL OPERATE IN A NEMA TWO-PHASE, FULLY-ACTUATED MODE WITH THE NORTHBOUND MD 3 MOVEMENT AS ONE PHASE AND THE SOUTHBOUND MD 3 LEFT TURN MOVEMENT & RIEDEL ROAD RIGHT RIGHT TURN MOVEMENT AS THE SECOND PHASE. AN ALTERNATE PEDESTRIAN PHASE TO CROSS THE SOUTH LEG OF MD 3 AND A FIREHOUSE PRE-EMPTION PHASE WILL BE PROVIDED.

CONTROLLER REQUIREMENTS

SOUTHBOUND MD 3 AND WAUGH CHAPEL ROAD

INSTALL A FULL-TRAFFIC-ACTUATED, EIGHT-PHASE CONTROLLER WITH SYSTEM PACKAGE AND ONE (1), FOUR-CHANNEL, TIME-DELAY-OUTPUT LOOP DETECTOR AMPLIFIER, VIDEO DETECTION INTERFACE EQUIPMENT AND A 2-WIRE CENTRAL CONTROL UNIT HOUSED IN A NEMA '8' BASE MOUNTED CABINET.

NORTHBOUND MD 3 AND RIEDEL ROAD

THE EXISTING EIGHT-PHASE, FULLY-ACTUATED CONTROLLER HOUSED IN A BASE MOUNTED CABINET WILL BE USED. INSTALL A 2-WIRE CENTRAL CONTROL UNIT IN THE EXISTING BASE MOUNTED CABINET.

SPECIAL NOTE

SOUTHBOUND MD 3 AND WAUGH CHAPEL ROAD

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

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
10 CY	MAINTENANCE OF TRAFFIC
80 LF	TEST PIT EXCAVATION
670 LF	REMOVAL OF EXISTING PERMANENT PAVEMENT LINE MARKINGS - ANY WIDTH
220 LF	12 IN. HEAT APPLIED WHITE THERMOPLASTIC PAVEMENT MARKINGS
2 EA	24 IN. WHITE HEAT APPLIED WHITE THERMOPLASTIC PAVEMENT MARKINGS
36 EA	2-WIRE CENTRAL CONTROL UNIT
12 EA	12 INCH LED SIGNAL HEAD SECTION
4 EA	12 INCH OPTICALLY PROGRAMMED SIGNAL HEAD SECTION
4 EA	L.E.D. 16 IN. COUNTDOWN PEDESTRIAN
4 EA	AUDIBLE /TACTILE PEDESTRIAN PUSHBUTTON AND SIGN
21 CY	CONCRETE FOUNDATION FOR SIGNAL
4 EA	10 FT. BREAKAWAY PEDESTAL POLE
2 EA	14 FT. BREAKAWAY PEDESTAL POLE
1 EA	27 FT MAST ARM POLE & 60 FT. MAST ARM
1 EA	27 FT MAST ARM POLE & 60 FT. MAST ARM
1 EA	27 FT MAST ARM POLE & 60 FT. MAST ARM
1 EA	15 FT. LIGHTING ARM WITH 250 WATT HPSV LUMINAIRE
5 EA	ELECTRICAL HANDHOLE
4 EA	ADJUST EXISTING HANDHOLE TO GRADE
90 LF	2 IN. SCHEDULE 80 RIGID PVC ELECTRICAL CONDUIT - TRENCHED
160 LF	3 IN. SCHEDULE 80 RIGID PVC ELECTRICAL CONDUIT - TRENCHED
110 LF	3 IN. SCHEDULE 80 RIGID PVC ELECTRICAL CONDUIT - SLOTTED
940 LF	4 IN. SCHEDULE 80 RIGID PVC ELECTRICAL CONDUIT - TRENCHED
280 LF	4 IN. SCHEDULE 80 RIGID PVC ELECTRICAL CONDUIT - BORED
LS	REMOVE AND DISPOSE MATERIAL AND EQUIPMENT
4 EA	VIDEO DETECTION CAMERA AND CABLE
500 LF	VIDEO DETECTION CABLE FOR EXISTING CAMERA
45 SF	DETECTABLE WARNING SURFACE
2000 LF	12-PAIR COMMUNICATION CABLE
1200 LF	ELECTRICAL CABLE 2 - CONDUCTOR (NO. 14 A.W.G.)
800 LF	ELECTRICAL CABLE 5 - CONDUCTOR (NO. 14 A.W.G.)
3100 LF	ELECTRICAL CABLE 7 - CONDUCTOR (NO. 14 A.W.G.)
4100 LF	ELECTRICAL CABLE 2 - CONDUCTOR (NO. 12 A.W.G.)
1000 LF	STRANDED BARE COPPER GROUND WIRE (NO. 6 A.W.G.)
13 EA	3/4 IN. X 10 FT. GROUND ROD
2 EA	D-3(2) (VAR X 16") SIGN - MAST ARM MOUNT
2 EA	SHIELD ASSEMBLY (36" X 75") - POLE MOUNT
2 EA	R3-1 (30" X 30") SIGN - MAST ARM MOUNT
4 EA	R3-2 (30" X 30") SIGN - MAST ARM MOUNT
2 EA	R10-1(1B) (30" X 30") SIGN - MAST ARM MOUNT
2 EA	RELOCATE EXISTING SIGNAL HEAD
1 EA	CONTROLLER AND CABINET - BASE MOUNT
1 EA	VIDEO INTERFACE EQUIPMENT
1 EA	FOUR-CHANNEL, TIME- DELAY-OUTPUT LOOP DETECTOR AMPLIFIER
1 EA	FIREHOUSE PUSHBUTTON AND WIRE INSTALLATION
1 EA	METERED SERVICE PEDESTAL EMBEDDED
150 LF	DISCONNECT, PULL BACK AND REROUTE CABLE
3 EA	NON-INVASIVE MICRO-LOOP PROBE
2 EA	R10-6 (24" X 36") SIGN - POLE MOUNT
2 EA	R3-4 (30" X 30") SIGN - MAST ARM MOUNT

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		

NONE

ALL SIGNAL EQUIPMENT TO BE REMOVED AND NOT RETURNED TO THE SHA SHALL BECOME THE PROPERTY OF THE CONTRACTOR.

CONTACT PERSONS FOR DISTRICT 5 ARE AS FOLLOWS:

MRS. KIM TRAN ASSISTANT DISTRICT ENGINEER - TRAFFIC (410) 841-1003	MR. JOHN MAYS ASSISTANT DISTRICT ENGINEER - MAINTENANCE (410) 841-1002
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MR. MIKE HUBER
UTILITY ENGINEER
(410) 841-1005

CONTACTS FOR OFFICE OF TRAFFIC AND SAFETY

MR. RICHARD DAFF, SR. CHIEF - TRAFFIC OPERATIONS (410) 787-7630	MR. EUGENE BAILEY CHIEF - SIGN OPERATIONS (410) 787-7676	MR. ED RODENHIZER CHIEF - SIGNAL OPERATIONS SECTION (410) 787-7652
MR. ROBERT SNYDER ASSISTANT DIVISION CHIEF - TRAFFIC OPERATIONS (410) 787-7631	MS. DARLENE EIDE SIGNAL SHOP WAREHOUSE (410) 787-7668	

PHASE CHART

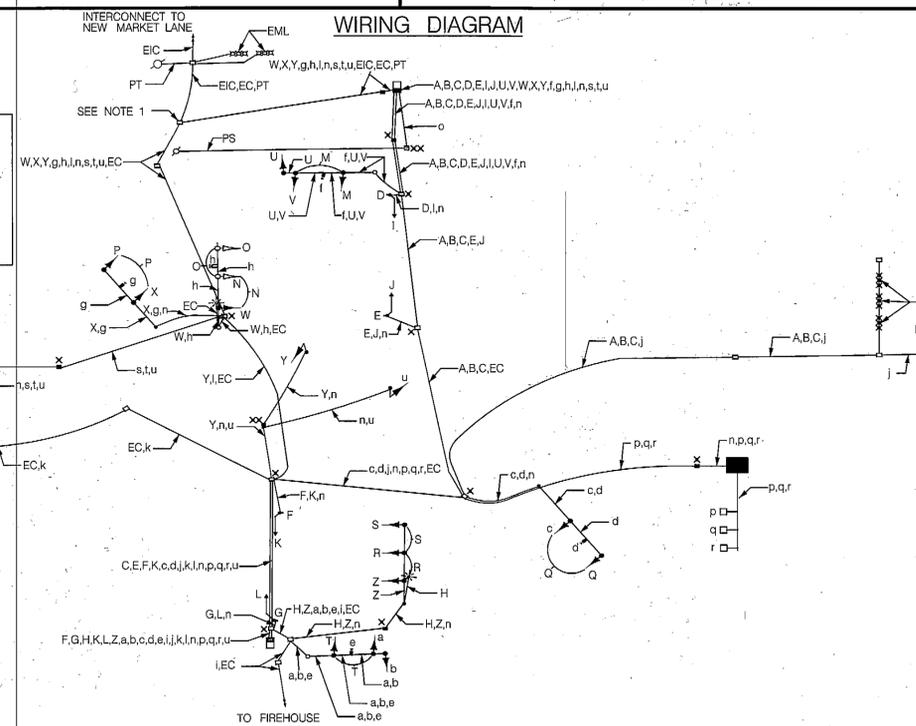
SOUTHBOUND MD 3 AND WAUGH CHAPEL ROAD

	1	2	3	10	11	12	13	14	15	19,20
	R	R	R	R	R	R	R	R	R	R
	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
	G	G	G	G	G	G	G	G	G	G
PHASE 1	G	G	G	R	R	R	G	G	G	DW
1 CHANGE	Y	Y	Y	R	R	R	Y	Y	Y	DW
PHASE 1 ALT.	G	G	G	R	R	R	G	G	G	WK
PED CLEAR	G	G	G	R	R	R	G	G	G	FLWK
1 ALT. CHANGE	Y	Y	Y	R	R	R	Y	Y	Y	DW
PHASE 2	R	R	R	G	G	G	R	R	R	DW
2 CHANGE	R	R	R	Y	Y	Y	R	R	R	DW
PRE-EMPTION	R	R	R	R	R	R	R	R	R	DW
CHANGE	R	R	R	R	R	R	R	R	R	DW
FLASHING OPERATION	FLR	FLR	FLR	FLY	FLY	FLY	FLR	FLR	FLR	DARK

PHASE CHART

NORTHBOUND MD 3 AND RIEDEL RD.

	7	8	9	4	5	6	16	17	18	21,22
	R	R	R	R	R	R	R	R	R	R
	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
	G	G	G	G	G	G	G	G	G	G
PHASE 1	G	G	G	R	R	R	G	G	G	DW
1 CHANGE	Y	Y	Y	R	R	R	Y	Y	Y	DW
PHASE 1 ALT.	G	G	G	R	R	R	G	G	G	WK
PED CLEAR	G	G	G	R	R	R	G	G	G	FLWK
1 ALT. CHANGE	Y	Y	Y	R	R	R	Y	Y	Y	DW
PHASE 2	R	R	R	G	G	G	R	R	R	DW
2 CHANGE	R	R	R	Y	Y	Y	R	R	R	DW
PRE-EMPTION	R	R	R	R	R	R	R	R	R	DW
CHANGE	R	R	R	R	R	R	Y	Y	Y	DW
FLASHING OPERATION	FLR	FLR	FLR	FLY	FLY	FLY	FLR	FLR	FLR	DARK



WIRING KEY

A-C	2-CONDUCTOR ELECTRICAL CABLE
D-G	MICRO-LOOP PROBE LEAD-IN (NO. 14 A.W.G.)
H	2-CONDUCTOR ELECTRICAL CABLE (NO. 12 A.W.G.) TRAY CABLE
I-T	5-CONDUCTOR ELECTRICAL CABLE (NO. 14 A.W.G.)
U-U	7-CONDUCTOR ELECTRICAL CABLE (NO. 14 A.W.G.)
d-h	VIDEO DETECTION CABLE
j-l	12-PAIR VOICE GRADE INTERCONNECT CABLE
n	STRANDED BARE COPPER GROUND WIRE (NO. 6 A.W.G.)
o	1-CONDUCTOR ELECTRICAL CABLE (NO. 4 A.W.G.)
p-u	2-CONDUCTOR ELECTRICAL CABLE (NO. 12 A.W.G.) TRAY CABLE
EIC	EXISTING INTERCONNECT CABLE
ML	EXISTING MICRO-LOOP PROBE
EC	EXISTING CABLE
PS	PROPOSED ELECTRIC SERVICE
PT	PROPOSED TELEPHONE SERVICE
X	GROUND ROD
□	METER SERVICE PEDESTAL

NOTES:

- DISCONNECT EXISTING INTERCONNECT CABLE AND MICRO-LOOP PROBE LEAD-INS FROM THE EXISTING CONTROLLER AT MD 3 AND WAUGH CHAPEL ROAD AND PULL BACK TO THIS POINT, RE-INSTALL THROUGH NEW CONDUIT TO THE NEW BASE MOUNTED CABINET AT THIS INTERSECTION.

* REMOVE ALL UNUSED CABLE

SHA STATE OF MARYLAND
DEPARTMENT OF TRANSPORTATION
STATE HIGHWAY ADMINISTRATION

OFFICE OF TRAFFIC & SAFETY
TRAFFIC ENGINEERING DESIGN DIVISION

MD 3 AND WAUGH CHAPEL RD./RIEDEL RD.

GENERAL INFORMATION PLAN

SCALE NONE DATE 8-1-09 CONTRACT NO. BW998M82

DESIGNED BY T.ZAYDEL COUNTY ANNE ARUNDEL
DRAWN BY J.K. SCHMID LOGMILE 02000303.96
CHECKED BY K. SCHMID T.I.M.S. NO. J-663
F.A.P. NO. N/A TOD NO.

DRAWING NO. TS-1515 O GI SHEET NO. 2 OF 2

TRAFFIC CONCEPTS, INC.

325 Gambrills Road
Suite B
Gambrills, MD 21054
(410) 923-7101
FAX: (410) 923-6473
EMAIL: TRAFFIC@TRAFFIC-CONCEPTS.COM