

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 '6' BASE MOUNTED CABINET.

NORTHBOUND MD 3 AND RIEDEL ROAD

2 THE EXISTING FULL-TRAFFIC-ACTUATED, EIGHT-PHASE CONTROLLER WILL BE USED. INSTALL VIDEO DETECTION INTERFACE EQUIPMENT AND A 2-WIRE CENTRAL CONTROL UNIT HOUSED IN THE NEMA '6' 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
LS	MAINTENANCE OF TRAFFIC
11 CY	TEST PIT EXCAVATION
80 LF	REMOVAL OF EXISTING PERMANENT PAVEMENT LINE MARKINGS - ANY WIDTH
670 LF	12 IN. HEAT APPLIED WHITE THERMOPLASTIC PAVEMENT MARKINGS
220 LF	24 IN. WHITE HEAT APPLIED WHITE THERMOPLASTIC PAVEMENT MARKINGS
2 EA	2-WIRE CENTRAL CONTROL UNIT
36 EA	12 INCH LED SIGNAL HEAD SECTION
12 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
22 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
7 EA	ELECTRICAL HANDHOLE
4 EA	ADJUST EXISTING HANDHOLE TO GRADE
10 LF	2 IN. SCHEDULE 80 RIGID PVC ELECTRICAL CONDUIT - TRENCHED
150 LF	3 IN. SCHEDULE 80 RIGID PVC ELECTRICAL CONDUIT - TRENCHED
110 LF	3 IN. SCHEDULE 80 RIGID PVC ELECTRICAL CONDUIT - SLOTTED
1040 LF	4 IN. SCHEDULE 80 RIGID PVC ELECTRICAL CONDUIT - TRENCHED
465 LF	4 IN. SCHEDULE 80 RIGID PVC ELECTRICAL CONDUIT- BORED
LS	REMOVE AND DISPOSE MATERIAL AND EQUIPMENT
5 EA	VIDEO DETECTION CAMERA AND CABLE
2	VIDEO DETECTION CAMERA FOR EXISTING CAMERA
45 SF	DETECTABLE WARNING SURFACE
2050 LF	12-PAIR COMMUNICATION CABLE
225 LF	ELECTRICAL CABLE 1 - CONDUCTOR (NO. 4 A.W.G.)
1235 LF	ELECTRICAL CABLE 2 - CONDUCTOR (NO. 14 A.W.G.)
965 LF	ELECTRICAL CABLE 5 - CONDUCTOR (NO. 14 A.W.G.)
3000 LF	ELECTRICAL CABLE 7 - CONDUCTOR (NO. 14 A.W.G.)
4035 LF	ELECTRICAL CABLE 2 - CONDUCTOR (NO. 12 A.W.G.)
1740 LF	STRANDED BARE COPPER GROUND WIRE (NO. 6 A.W.G.)
14 EA	34 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	R10-11B (30" X 30") SIGN - MAST ARM MOUNT
2 EA	RELOCATE EXISTING SIGNAL HEAD
1 EA	CONTROLLER AND CABINET - BASE MOUNT
2 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
270 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
3	2 IN. SCHEDULE 80 RIGID PVC ELECTRICAL CONDUIT - BORED

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		

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

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

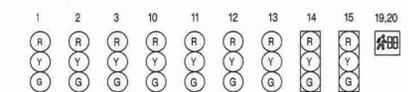
MR. ED RODENHIZER
CHIEF - SIGNAL OPERATIONS SECTION
(410) 787-7652

MR. ROBERT SNYDER
ASSISTANT DIVISION CHIEF -
TRAFFIC OPERATIONS
(410) 787-7631

MS. DARLENE EIDE
SUPPLY OFFICE
SIGNAL SHOP WAREHOUSE
(410) 787-7668

PHASE CHART

SOUTHBOUND MD 3 AND WAUGH CHAPEL ROAD



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	FLWK
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.



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	FLWK
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

RED LINE REVISION NO. 1
November 12, 2010
Revised quantities due to revised side street geometrics and controller location.
TEDD Approval: _____

RED LINE REVISION NO. 2
January 6, 2011
Replace existing video detection camera with new video detection camera
TEDD Approval: _____

RED LINE REVISION NO. 3
March 24, 2011
Install separate conduit for telephone service
TEDD Approval: _____

TRAFFIC CONCEPTS, INC.

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

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	11-1-09	CONTRACT NO.	BW996M82
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.	NA	TOD NO.			
DRAWING NO.	TS-1515 O GI	SHEET NO.	2	OF	3