## PROJECT DESCRIPTION

I. GENERAL

THIS PROJECT INVOLVES THE MODIFICATION OF THE EXISTING TRAFFIC CONTROL SIGNAL AT THE INTERSECTION OF MD 404 (SHORE HWY.) AND LEGION RD IN CAROLINE COUNTY. THE MODIFICATION WILL ADD A PEDESTRIAN CROSSING ACROSS THE WEST LEG OF MD 404. MD 404 IS ASSUMED TO RUN IN AN EAST-WEST DIRECTION.

II. INTERSECTION OPERATION

THE INTERSECTION OPERATES IN A NEMA 8 PHASE, FULLY-ACTUATED MODE. THERE IS AN EXCLUSIVE LEFT TURN PHASES FOR BOTH EAST & WESTBOUND MOVEMENTS OF MD 404. THE MD 404 THROUGH MOVEMENTS WILL OPERATE CONCURRENTLY WITH AN ACTUATED AUDIBLE PEDESTRIAN MOVEMENT ACROSS THE SOUTH LEG OF THE INTERSECTION. AN EXCLUSIVE/PERMISSIVE LEFT TURN PHASE FOR BOTH THE NORTH & SOUTHBOUND MOVEMENTS OF LEGION ROAD WILL REMAIN. THE LEGION ROAD THROUGH MOVEMENTS WILL OPERATE CONCURRENTLY AND AN ACTUATED PEDESTRIAN MOVEMENT WITH AUDIBLE SIGNAL ACROSS THE WEST LEG OF MD 404 WILL BE ADDED. AN EXISTING NEMA FULL-TRAFFIC-ACTUATED, EIGHT (8) PHASE CONTROLLER IN A NEMA SIZE "S" BASE MOUNTED CABINET SHALL BE UTILIZED AT THIS LOCATION.

III. SPECIAL NOTES

APS WILL FUNCTION AS FOLLOWS:
TO CROSS MD 404 (SHORE HIGHWAY)

1. WHEN A PEDESTRIAN LOCATES AND PRESSES THE PUSHBUTTON FOR AN EXTENDED TIME, THE PUSHBUTTON UNIT WILL ANNOUNCE THE FOLLOWING MESSAGE: "WAIT TO CROSS SHORE AT LEGION, WAIT."
2. WHEN THE WALK PHASE BEGINS, THE PUSHBUTTON UNIT WILL PROVIDE A RAPID TICK WHICH WILL LAST FOR THE DURATION OF THE WALK PHASE.

## CONTACTS

DISTRICT (DISTRICT 2)

MR. TERRY WRIGHT
DISTRICT ENGINEER
410-810-3210

MR. JEFFERY WENTZ
ASSISTANT DISTRICT ENGINEER - TRAFFIC
410-810-3240

MR. BARRY CLOTHIER
DISTRICT UTILITY ENGINEER
410-810-3275

MR. WM NORRIS EMBERT
ASSISTANT DISTRICT ENGINEER - CONSTRUCTION
410-810-3270

MR. MIKE LEWIS
ASSISTANT DISTRICT ENGINEER - MAINTENANCE
410-810-3250

OFFICE OF TRAFFIC AND SAFETY

VACANT
CHIEF, TRAFFIC OPERATIONS
410-787-7630

MR. ROBERT SNYDER
ASSISTANT DIVISION CHIEF, TRAFFIC OPERATIONS
410-787-7630

MR. EDWARD RODENHIZER
CHIEF, SIGNAL OPERATIONS SECTION
410-787-7650

MR. EUGENE BAILEY
CHIEF, SIGN OPERATIONS SECTION
410-787-7670

MR. MICHAEL STOCKER
SUPPLY OFFICER IV (SIGNAL SHOP WAREHOUSE)
410-787-7696

## EQUIPMENT LIST

A. EQUIPMENT TO BE FURNISHED BY STATE HIGHWAY ADIMISTRATION

| ITEM NO. | QUANTITY | | DESCRIPTION |
|---|---|---|---|
| 9570 | 17 | SF | SHEET ALUMINUM GROUND MOUNTED SIGN<br>1 EA W11-2 "ADVANCE PEDESTRIAN CROSSING" SIGN (30"X30") AND W16-7p "DIAGONAL ARROW RIGHT" SIGN (24"X12")<br>1 EA W11-2 "ADVANCE PEDESTRIAN CROSSING" SIGN (30"X30") AND W16-7p "DIAGONAL ARROW LEFT" SIGN (24"X12") |

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

| ITEM NO. | QUANTITY | | DESCRIPTION |
|---|---|---|---|
| 1001 | 1 | EA | MAINTENANCE OF TRAFFIC |
| 2002 | 1 | CY | TEST PIT EXCAVATION |
| 5003 | 40 | LF | REMOVAL OF EXISTING PERMANENT PAVEMENT LINE MARKINGS |
| 5004 | 470 | LF | 12" WHITE PREFORMED THERMOPLASTIC MARKINGS |
| 6001 | 35 | LF | STANDARD TYPE A COMBINATION CURB AND GUTTER 12" GUTTER PAN 8" DEPTH |
| 6002 | 120 | SF | 5" CONCRETE SIDEWALK |
| 6003 | 10 | SF | DETECTABLE WARNING SURFACE FOR CURB RAMPS |
| 8008 | 2 | EA | AUDIBLE/TACTILE PEDESTRIAN PUSHBUTTON STATION & SIGNS |
| 8009 | 1 | EA | BREAKAWAY PEDESTAL POLE (ANY SIZE) |
| 8015 | 2 | EA | LED 16" COUNTDOWN PEDESTRIAN SIGNAL HEADS |
| 8038 | 10 | LF | SCHEDULE 80 RIGID PVC CONDUIT UP TO 4" - TRENCHED |
| 8039 | 35 | LF | WOOD SIGN SUPPORTS UP TO 4 X 6 |
| 8040 | 17 | SF | INSTALL GROUND MOUNTED SIGN (INCLUDING ALL HARDWARE) |
| 8042 | 40 | LF | NO. 6 AWG STRANDED BARE COPPER GROUND WIRE |
| 8053 | 590 | LF | ELECTRICAL CABLE - 2 CONDUCTOR (NO. 14 AWG) |
| 8055 | 600 | LF | ELECTRICAL CABLE - 5 CONDUCTOR (NO. 14 AWG) |

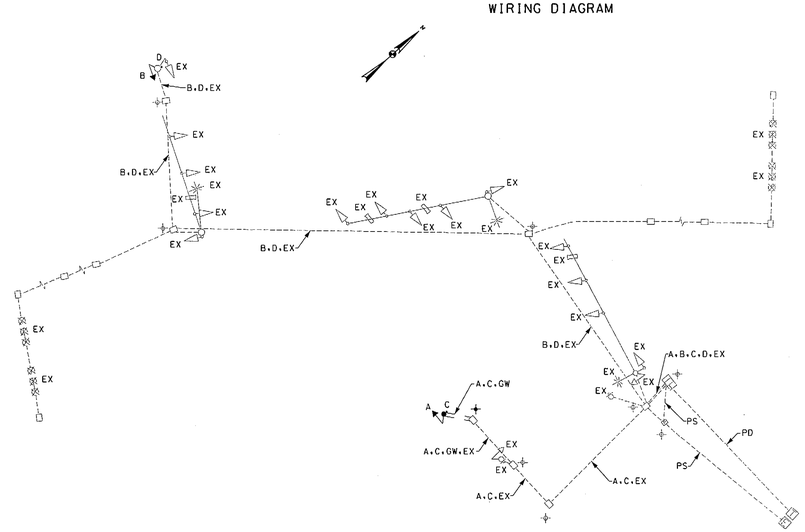
C. IF THE CABINET IS TO BE REMOVED SHA FORCES SHALL REMOVE THE CONTROLLER AND ALL AUXILIARY EQUIPMENT FROM THE CONTROLLER CABINET. THE CABINET AND ALL OTHER MATERIALS TO BE REMOVED BY THE CONTRACTOR SHALL BECOME THE PROPERTY OF THE SIGNAL CONTRACTOR UPON COMPLETION OF THE [NEW SIGNAL / SIGNAL MODIFICATIONS].

## PHASE CHART

| | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 | 12 | 13 | 14 | 23 | 24 | 30 | 31 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| PHASE 1 AND 5 | ←G— | ←G | R | R | ←G— | ←G— | R | R | R | R | R | R | R | R | DW | DW | DW | DW |
| 1 AND 5 CHANGE TO 1 AND 6, 2 AND 5, OR 2 AND 6 | | | | | | | | | | | | | | | | | | |
| PHASE 1 AND 6 | ←G— | ←G— | G | G | ←R— | ←R— | R | R | R | R | R | R | R | R | DW | DW | DW | DW |
| 1 CHANGE | ←Y— | ←Y— | G | G | ←R | ←R— | R | R | R | R | R | R | R | R | DW | DW | DW | DW |
| PHASE 2 AND 5 | ←R | ←R— | R | R | ←G— | ←G— | G | G | R | R | R | R | R | R | DW | DW | DW | DW |
| 5 CHANGE | ←R— | ←R— | R | R | ←Y— | ←Y— | G | G | R | R | R | R | R | R | DW | DW | DW | DW |
| PHASE 2 AND 6 | ←R— | ←R— | G | G | ←R— | ←R— | G | G | R | R | R | R | R | R | WK | WK | DW | DW |
| PED CLEARANCE | ←R— | ←R— | G | G | ←R— | ←R— | G | G | R | R | R | R | R | R | FL/DW | FL/DW | DW | DW |
| 2 AND 6 CHANGE | ←R— | ←R— | Y | Y | ←R— | ←R— | Y | Y | R | R | R | R | R | R | DW | DW | DW | DW |
| PHASE 3 AND 7 | ←R— | ←R— | R | R | ←R— | ←R— | R | R | ←G/R | R | ←G/R | ←G/R | R | ←G/R | DW | DW | DW | DW |
| 3 AND 7 CHANGE TO 3 AND 8, 4 AND 7, OR 4 AND 8 | | | | | | | | | | | | | | | | | | |
| PHASE 3 AND 8 | ←R— | ←R | R | R | ←R— | ←R— | R | R | ←G/G | G | ←G/G | R | R | R | DW | DW | DW | DW |
| 3 CHANGE | ←R— | ←R— | R | R | ←R— | ←R— | R | R | ←Y/G | G | ←Y/G | R | R | R | DW | DW | DW | DW |
| PHASE 4 AND 7 | ←R— | ←R— | R | R | ←R— | ←R— | R | R | R | R | R | ←G/G | G | ←G/G | DW | DW | DW | DW |
| 7 CHANGE | ←R— | ←R— | R | R | ←R— | ←R | R | R | R | R | R | ←Y/G | G | ←Y/G | DW | DW | DW | DW |
| PHASE 4 AND 8 | ←R— | ←R— | R | R | ←R— | ←R— | R | R | G | G | G | G | G | G | DW | DW | DW | DW |
| 4 AND 8 CHANGE | ←R— | ←R— | R | R | ←R— | ←R | R | R | Y | Y | Y | Y | Y | Y | DW | DW | DW | DW |
| PHASE 4 AND 8 ALT | ←R— | ←R— | R | R | ←R | ←R— | R | R | G | G | G | G | G | G | DW | DW | WK | WK |
| PED CLEARANCE | ←R— | ←R— | R | R | ←R— | ←R— | R | R | G | G | G | G | G | G | DW | DW | FL/DW | FL/DW |
| 4 AND 8 ALT CHANGE | ←R— | ←R— | R | R | ←R | ←R— | R | R | Y | Y | Y | Y | Y | Y | DW | DW | DW | DW |
| 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 | FL/R | FL/R | DARK | DARK | DARK | DARK |

TOD NO: XX661-33
SHA NO: CO287B56
MD 404 @ Legion Road

## WIRING DIAGRAM




WIRING KEY

A,B - 5-CONDUCTOR ELECTRICAL CABLE (NO. 14 A.W.G.)

C,D. - 2-CONDUCTOR ELECTRICAL CABLE (NO. 14 A.W.G.)

⏚ - PROPOSED 3/4 IN. X 10 FT. GROUND ROD

GW - NO.6 A.W.G STRANDED BARE COPPER GROUND WIRE

EX - EXISTING SIGNAL CABLE

PS - EXISTING POWER SERVICE

PD - EXISTING PHONE DROP

SHA
STATE OF MARYLAND
DEPARTMENT OF TRANSPORTATION
STATE HIGHWAY ADMINISTRATION
OFFICE OF TRAFFIC & SAFETY
TRAFFIC ENGINEERING DESIGN DIVISION

MD 404 (SHORE HIGHWAY) @ LEGION ROAD

DENTON, MD

# GENERAL INFORMATION SHEET

SCALE N.T.S. DATE 10-15-12 CONTRACT NO. XX6815185

DESIGNED BY MAW
DRAWN BY MAW
CHECKED BY KMP
F.A.P. NO. SEE TITLE SHEET
COUNTY CAROLINE
LOGMILE 05040409.30
TIMS NO. L776
TOD NO.

TS NO.2400D-GI | DRAWING SG-02 OF 02 | SHEET NO. 2 OF 2


PARSONS BRINCKERHOFF
100 S. Charles Street
Tower 1, 10th Floor
Baltimore, MD 21201
(Ph) 410-787-5050
(Fax) 410-727-4628
http://www.pbworld.com


PLOTTED: Tuesday, October 16, 2012 AT 07:42 AM
FILE: T:\1731244-TrafficDesignServices\TRF\113\plans\pSG-N01_MD 404.dgn

BY: WWagner