

PROJECT DESCRIPTION

THIS PROJECT INVOLVES THE CONSTRUCTION OF NEW GEOMETRICS ON THE SOUTHBOUND LEG OF ARUNDEL MILLS CIRCLE AT THE INTERSECTION OF ARUNDEL MILLS BLVD. AND ARUNDEL MILLS CIRCLE IN ANNE ARUNDEL COUNTY. WIDENING WILL ALSO TAKE PLACE ON EASTBOUND ARUNDEL MILLS BLVD. TO PROVIDE FOR A TRIPLE LEFT. ARUNDEL MILLS BLVD. IS ASSUMED TO RUN IN AN EAST-WEST DIRECTION.

INTERSECTION OPERATION

THE INTERSECTION CURRENTLY OPERATES IN A NEMA SIX-PHASE, FULLY-ACTUATED MODE WITH EXCLUSIVE LEFT TURN PHASES FOR EASTBOUND AND WESTBOUND ARUNDEL MILLS BLVD. SIDE STREET PHASING IS SPLIT WITH A NEW OVERLAP PHASE INSTALLED FOR THE SOUTHBOUND ARUNDEL MILLS CIRCLE RIGHT TURN MOVEMENT. ALTERNATE PEDESTRIAN PHASES EXIST FOR THE NORTH AND SOUTH LEG OF ARUNDEL MILLS CIRCLE AND THE EAST LEG OF ARUNDEL MILLS BLVD.

CONTROLLER REQUIREMENTS

THE EXISTING EIGHT-PHASE, FULLY-ACTUATED CONTROLLER HOUSED IN A BASE MOUNTED CABINET WILL BE USED. A NEW VIDEO INTERFACE UNIT WILL BE INSTALLED FOR THE VIDEO DETECTION CAMERAS.

APS NOTES

TO CROSS ARUNDEL MILLS CIRCLE

- A. WHEN PEDESTRIAN LOCATES AND PRESSES PUSHBUTTON FOR AN EXTENDED TIME, THE PUSHBUTTON UNIT WILL BE "WAIT TO CROSS ARUNDEL MILLS CIRCLE AT ARUNDEL MILLS BOULEVARD, WAIT."
- B. WHEN WALK PHASE BEGINS, THE MESSAGE WILL BE A RAPID TICK, WHICH WILL LAST FOR THE DURATION OF THE WALK PHASE

TO CROSS ARUNDEL MILLS BOULEVARD

- A. WHEN PEDESTRIAN LOCATES AND PRESSES PUSHBUTTON FOR AN EXTENDED TIME, THE PUSHBUTTON UNIT WILL BE "WAIT TO CROSS ARUNDEL MILLS BOULEVARD AT ARUNDEL MILLS CIRCLE, WAIT."
- B. WHEN WALK PHASE BEGINS, THE MESSAGE WILL BE A RAPID TICK, WHICH WILL LAST FOR THE DURATION OF THE WALK PHASE

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 |
| 7 CY | TEST PIT EXCAVATION |
| 1590 LF | 4 IN./5 IN. YELLOW HEAT APPLIED THERMOPLASTIC PAVEMENT MARKING |
| 2425 LF | 4 IN./5 IN. WHITE HEAT APPLIED THERMOPLASTIC PAVEMENT MARKING |
| 705 LF | 10 IN. WHITE HEAT APPLIED THERMOPLASTIC PAVEMENT MARKING |
| 685 LF | 12 IN. WHITE HEAT APPLIED THERMOPLASTIC PAVEMENT MARKING |
| 170 LF | 24 IN. WHITE HEAT APPLIED THERMOPLASTIC PAVEMENT MARKING |
| 11 EA | WHITE HEAT APPLIED THERMOPLASTIC PAVEMENT MARKING ARROW |
| 1 EA | WHITE HEAT APPLIED THERMOPLASTIC PAVEMENT MARKING "ONLY" |
| 30 LF | REMOVAL OF EXISTING PAVEMENT MARKING LINE |
| 1 EA | VIDEO INTERFACE EQUIPMENT |
| 30 EA | 12 IN. LED SIGNAL HEAD SECTION |
| 6 EA | 8 IN. LED SIGNAL HEAD SECTION |
| 6 EA | 16 IN. LED COUNTDOWN PEDESTRIAN SIGNAL |
| 6 EA | PEDESTRIAN PUSHBUTTON AND SIGN |
| 1 EA | CONCRETE FOUNDATION FOR SIGNAL |
| 1 EA | BREAKAWAY PEDESTAL POLE |
| 1 EA | 27 FT. MAST ARM POLE & 60 FT. MAST ARM |
| 1 EA | 27 FT. MAST ARM POLE & 70 FT. MAST ARM |
| 3 EA | 15 FT. LIGHTING ARM WITH 250 WATT HPSV LUMINAIRE |
| 1 EA | CUT, CLEAN, GALVANIZE, AND CAP TRAFFIC SIGNAL STRUCTURE |
| 4 EA | ELECTRICAL HANDHOLE |
| 2 EA | NON-INVASIVE MICRO-LOOP PROBE WITH LEAD-IN CABLE |
| 315 LF | 4 IN. SCHEDULE 80 RIGID PVC ELECTRICAL CONDUIT - TRENCHED |
| 75 LF | 4 IN. SCHEDULE 80 RIGID PVC ELECTRICAL CONDUIT - BORED |
| 260 LF | 4 IN. SCHEDULE 80 RIGID PVC ELECTRICAL CONDUIT - SLOTTED |
| 50 LF | 3 IN. SCHEDULE 80 RIGID PVC ELECTRICAL CONDUIT - TRENCHED |
| LS | REMOVE AND DISPOSE OF MATERIAL AND EQUIPMENT |
| 2 EA | VIDEO DETECTION CAMERA AND CABLE |
| 260 LF | DISCONNECT, PULL BACK AND REROUTE EXISTING CABLE |
| 880 LF | ELECTRICAL CABLE 2 - CONDUCTOR (NO. 14 A.W.G.) |
| 1085 LF | ELECTRICAL CABLE 5 - CONDUCTOR (NO. 14 A.W.G.) |
| 2130 LF | ELECTRICAL CABLE 7 - CONDUCTOR (NO. 14 A.W.G.) |
| 705 LF | ELECTRICAL CABLE 2 - CONDUCTOR (NO. 12 A.W.G.) TRAY CABLE |
| 2000 LF | ELECTRICAL CABLE 2 - CONDUCTOR (NO. 14 A.W.G.) ALUMINUM SHIELDED |
| 550 LF | 12 PAIR VOICE GRADE INTERCONNECT CABLE |
| 360 LF | STRANDED BARE COPPER GROUND WIRE (NO. 6 A.W.G.) |
| 1 EA | 3/4 IN. X 10 FT. GROUND ROD |
| 3 EA | D-3(1) (VAR X 16") DUAL FACE SIGN - MAST ARM MOUNT |
| 3 EA | R3-5L (30" X 36") SIGN - MAST ARM MOUNT |
| 3 EA | R3-5R (30" X 36") SIGN - MAST ARM MOUNT |
| 1 EA | R3-6L (30" X 36") SIGN - MAST ARM MOUNT |
| 1 EA | R3-4 (30" X 30") SIGN - MAST ARM MOUNT |
| 1 EA | W11-2 (30" X 30") SIGN - GROUND MOUNT |
| 1 EA | W16-7P(1) (24" X 12") SIGN - GROUND MOUNT |
| 1 EA | R3-8A MOD. (86" X 30") SIGN - GROUND MOUNT |
| 50 LF | 4 IN. X 4 IN. WOOD SUPPORT |

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) 841-1039

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

MR. MIKE STOCKER
SUPPLY OFFICE
SIGNAL SHOP WAREHOUSE
(410) 787-7668

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

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.

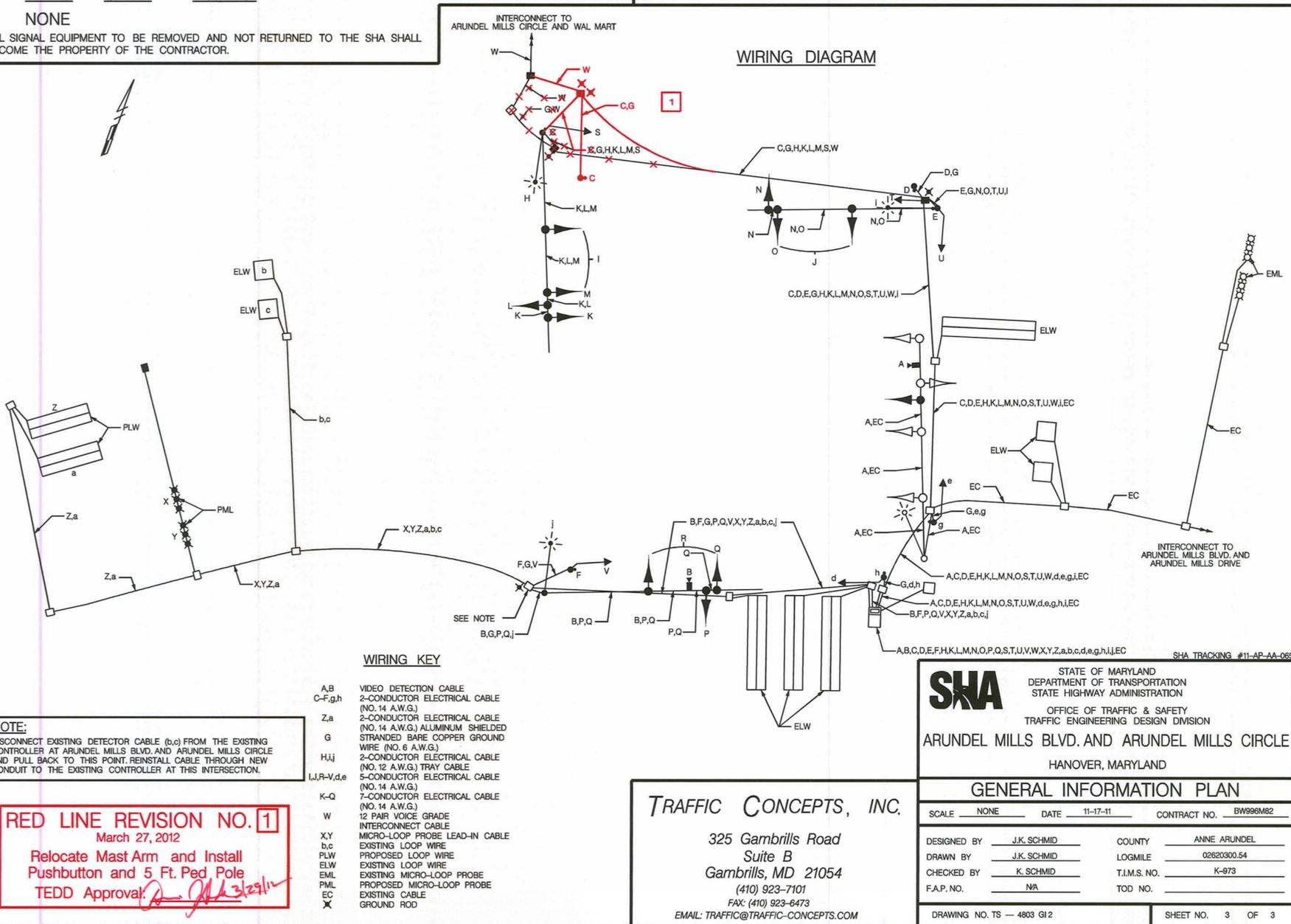
| ITEM NO. | QUANTITY | DESCRIPTION |
|----------|----------|-------------|
| NONE | | |

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

PHASE CHART

| | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 | 12 | 13 | 14 | 15 | 16,17 | 18,19 | 20,21 | |
|-------------------------|-------|-------|-------|-----|-----|-------|-------|-----|-----|-----|-----|-------|-----|-----|-----|-------|-------|-------|-------|
| PHASE 1 & 5 | ←G← | ←G← | ←G← | R | R | ←G← | ←G← | R | R | R | R | ←G← | R | R | R | R | DW | DW | DW |
| 1 & 5 CHANGE | ←G← | ←G← | ←G← | R | R | ←G← | ←G← | R | R | R | R | ←G← | R | R | R | R | DW | DW | DW |
| PHASE 1 & 6 | ←G← | ←G← | ←G← | G | G | ←R← | ←R← | R | R | R | R | ←G← | R | R | R | R | DW | DW | DW |
| 1 & 6 CHANGE | ←Y← | ←Y← | ←Y← | G | G | ←R← | ←R← | R | R | R | R | ←Y← | R | R | R | R | DW | DW | DW |
| PHASE 2 & 5 | ←R← | ←R← | ←R← | R | R | ←G← | ←G← | R | R | R | R | ←R← | R | R | R | R | DW | DW | DW |
| 2 & 5 CHANGE | ←R← | ←R← | ←R← | R | R | ←Y← | ←Y← | G | G | R | R | ←R← | R | R | R | R | DW | DW | DW |
| PHASE 2 & 6 | ←R← | ←R← | ←R← | G | G | ←R← | ←R← | G | G | R | R | ←R← | R | R | R | R | DW | DW | DW |
| 2 & 6 CHANGE | ←R← | ←R← | ←R← | Y | Y | ←R← | ←R← | Y | Y | R | R | ←R← | R | R | R | R | DW | DW | DW |
| PHASE 2 & 6 ALT. | ←R← | ←R← | ←R← | G | G | ←R← | ←R← | G | G | R | R | ←R← | R | R | R | R | DW | WK | WK |
| PHASE 2 & 6 ALT. CHANGE | ←R← | ←R← | ←R← | Y | Y | ←R← | ←R← | Y | Y | R | R | ←R← | R | R | R | R | DW | FL-DW | FL-DW |
| PHASE 3 | ←R← | ←R← | ←R← | R | R | ←R← | ←R← | R | R | R | R | ←R← | R | R | R | R | DW | DW | DW |
| 3 CHANGE | ←R← | ←R← | ←R← | R | R | ←R← | ←R← | R | R | R | R | ←R← | R | R | R | R | DW | DW | DW |
| 3 ALT. | ←R← | ←R← | ←R← | R | R | ←R← | ←R← | R | R | R | R | ←R← | R | R | R | R | DW | WK | DW |
| PHASE 3 ALT. | ←R← | ←R← | ←R← | R | R | ←R← | ←R← | R | R | R | R | ←R← | R | R | R | R | DW | FL-DW | FL-DW |
| 3 CHANGE | ←R← | ←R← | ←R← | R | R | ←R← | ←R← | R | R | R | R | ←R← | R | R | R | R | DW | DW | DW |
| PHASE 4 | ←R← | ←R← | ←R← | R | R | ←R← | ←R← | R | R | R | R | ←R← | R | R | R | R | DW | DW | DW |
| 4 CHANGE | ←R← | ←R← | ←R← | R | R | ←R← | ←R← | R | R | R | R | ←R← | R | R | R | R | DW | DW | DW |
| FLASHING OPERATION | ←FLR← | ←FLR← | ←FLR← | FLY | FLY | ←FLR← | ←FLR← | FLY | FLY | FLR | FLR | ←FLR← | FLR | FLR | FLR | FLR | DARK | DARK | DARK |

WIRING DIAGRAM



STATE OF MARYLAND
DEPARTMENT OF TRANSPORTATION
STATE HIGHWAY ADMINISTRATION
OFFICE OF TRAFFIC & SAFETY
TRAFFIC ENGINEERING DESIGN DIVISION
ARUNDEL MILLS BLVD. AND ARUNDEL MILLS CIRCLE
HANOVER, MARYLAND

GENERAL INFORMATION PLAN

| | | | | | |
|----------------|-------------|--------------|--------------|--------------|----------|
| SCALE | NONE | DATE | 11-17-11 | CONTRACT NO. | BW996M82 |
| DESIGNED BY | J.K. SCHMID | COUNTY | ANNE ARUNDEL | | |
| DRAWN BY | J.K. SCHMID | LOGMILE | 02820300.54 | | |
| CHECKED BY | K. SCHMID | T.I.M.S. NO. | K-873 | | |
| F.A.P. NO. | NA | TOD NO. | | | |
| DRAWING NO. TS | 4903 GI.2 | SHEET NO. | 3 | OF | 3 |

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