

PROJECT DESCRIPTION

GENERAL

THIS PORTION OF THE PROJECT INVOLVES THE MODIFICATION OF THE EXISTING TRAFFIC CONTROL SIGNAL DUE TO THE GEOMETRIC IMPROVEMENTS AT THE INTERSECTION OF MD ROUTE 658 AND I-68 OFF RAMP/MD 49 IN ALLEGANY COUNTY. THE SIGNAL MODIFICATION INCLUDES NEW MAST ARMS, SIGNAL HEADS, SIGNS, PAVEMENT MARKINGS AND DETECTORS.

MD 658 RUNS IN A NORTH-SOUTH DIRECTION.

INTERSECTION OPERATION

1. NORMAL OPERATION

THE INTERSECTION WILL OPERATE IN A NEMA FIVE PHASE, FULL TRAFFIC ACTUATED MODE. THE MD 658 APPROACHES WILL OPERATE CONCURRENTLY AND THE MD 49/I-68 OFF RAMP APPROACHES WILL OPERATE CONCURRENTLY.

SOUTHBOUND MD ROUTE 658 WILL HAVE AN EXCLUSIVE/PERMISSIVE LEFT TURN PHASE.

NOTE: SEE INTERCONNECT PLAN SHEET FOR THE INSTALLATION OF INTERCONNECT CABLE.

2. SPECIAL OPERATION

THE INTERSECTION WILL OPERATE AS INDICATED ABOVE UNLESS THE OPTICOM DETECTOR IS ACTUATED ON THE SOUTHBOUND MD ROUTE 658 APPROACH WHICH WILL PRE-EMPTY THE TRAFFIC SIGNAL AND STOP ALL APPROACHES EXCEPT SOUTHBOUND MD ROUTE 658.

PROJECT CONTACTS

THE CONTACT PERSONS FOR DISTRICT #6 ARE AS FOLLOWS:

MR. FRED CROZIER
DISTRICT ENGINEER
PHONE: 301-729-8486

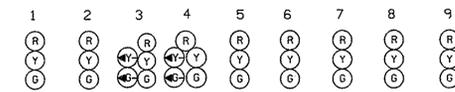
MR. LARRY HUMBERTSON
DISTRICT UTILITY ENGINEER
PHONE: 301-729-8439

MR. GEORGE SMALL
ASSISTANCE DISTRICT ENGINEER-TRAFFIC
PHONE: 301-729-8444

MR. RICHARD L. DAFF, SR.
CHIEF, TRAFFIC OPERATION DIVISION
PHONE: 410-787-7630

MR. GEORGE FRANKENBERRY
ASSISTANT DISTRICT ENGINEER-MAINTENANCE
PHONE: 301-729-8457

PHASE CHART



| | | | | | | | | | | |
|--------------------|------|------|------|------|------|------|------|------|------|---|
| Phase 2 & 5 | R | R | ←G-G | ←G-G | G | R | R | R | R | ← |
| 2 & 5 Change | R | R | ←Y-G | ←Y-G | G | R | R | R | R | ↓ |
| Phase 2 & 6 | G | G | G | G | G | R | R | R | R | ← |
| 2 & 6 Change | Y | Y | Y | Y | Y | R | R | R | R | → |
| Phase 4 | R | R | R | R | R | G | G | G | G | ↑ |
| Phase 4 & 8 | R | R | R | R | R | Y | Y | Y | Y | ↑ |
| 4 Change | R | R | R | R | R | Y | Y | Y | Y | ↑ |
| 4 & 8 Change | R | R | R | R | R | Y | Y | Y | Y | ↑ |
| Flashing Operation | FL/Y | FL/Y | FL/Y | FL/Y | FL/Y | FL/R | FL/R | FL/R | FL/R | ↑ |

FIREHOUSE PRE-EMPTION

| | | | | | | | | | | |
|-----------------------------------|---|---|------|------|---|---|---|---|---|---|
| Firehouse Pre-emption Phase 2 & 5 | R | R | ←G-G | ←G-G | G | R | R | R | R | ↓ |
| Pre-emption Clearance | R | R | ←Y-G | ←Y-G | G | R | R | R | R | ↓ |
| Normal Operation Phase 2 & 6 | G | G | G | G | G | R | R | R | R | ← |

EQUIPMENT LIST

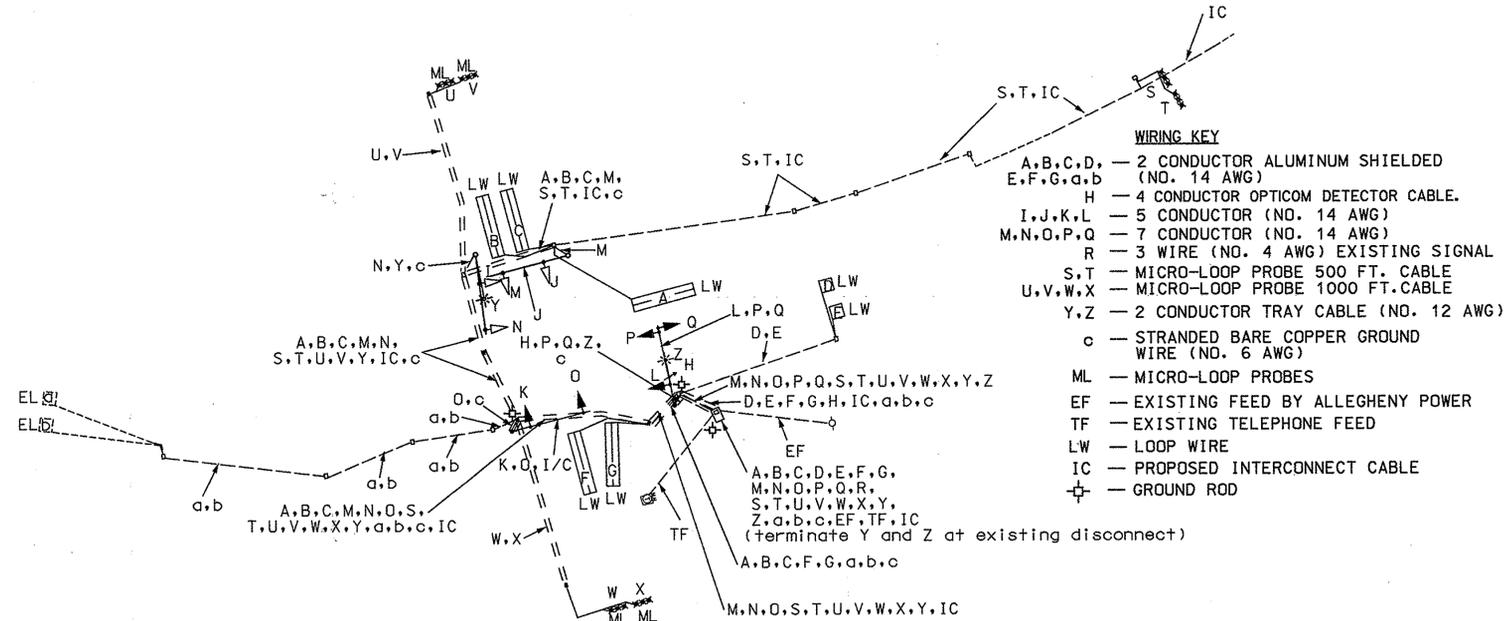
A. EQUIPMENT TO BE SUPPLIED BY THE SHA.

| CAT CODE | ITEM | QUANTITY | DESCRIPTION |
|----------|------|----------|--|
| 900000 | 8 | SF | R3-5R (RIGHT TURN ONLY) (30"X36") 1 EACH MAST ARM MOUNTED |
| 900000 | 16 | SF | R3-5L (LEFT TURN ONLY) (30"X36") 2 EACH MAST ARM MOUNTED |
| 900000 | 14 | SF | D-3(1) (←VOCKE ROAD) (VAR.X16") 1 EACH MAST ARM MOUNTED |
| 900000 | 14 | SF | D-3(1) (←BRADDOCK ROAD) (←BRADDOCK ROAD) (DUAL FACED VAR.X16") 1 EACH MAST ARM MOUNTED |
| 900000 | 18 | SF | R3-8(MOD.) (LEFT, LEFT THRU, RIGHT ONLY) (36" X 72") 1 EACH MAST ARM MOUNTED |
| 900000 | 8 | SF | R3-5(1) (STRAIGHT THRU) (30"X36") 1 EACH MAST ARM MOUNTED |

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

| CAT CODE | ITEM | QUANTITY | DESCRIPTION |
|----------|------|----------|---|
| 203030 | 1 | CY | TEST PIT EXCAVATION |
| 500000 | 135 | LF | 24 INCH HEAT APPLIED WHITE PERMANENT PREFORMED THERMOPLASTIC PAVEMENT MARKINGS |
| 801004 | 9.5 | CY | FURNISH AND INSTALL CONCRETE FOR SIGNAL FOUNDATION |
| 800000 | 1 | EA | FURNISH AND INSTALL 3M OPTICOM #721 DETECTOR EYE |
| 800000 | 4 | EA | FURNISH AND INSTALL MICROLOOP PROBE SET WITH 500 FT LEAD-IN |
| 800000 | 2 | EA | FURNISH AND INSTALL MICROLOOP PROBE SET WITH 1000 FT LEAD-IN |
| 862102 | 685 | LF | FURNISH AND INSTALL SAWCUT FOR SIGNAL (LOOP DETECTOR) |
| 805160 | 65 | LF | FURNISH AND INSTALL 1 INCH LIQUID TIGHT FLEXIBLE NON METALLIC CONDUIT FOR DETECTOR SLEEVE |
| 800000 | 265 | LF | FURNISH AND INSTALL 2 INCH SCH 80 RIGID PVC CONDUIT - TRENCHED |
| 800000 | 35 | LF | FURNISH AND INSTALL 3 INCH SCH 80 RIGID PVC CONDUIT - TRENCHED |
| 800000 | 45 | LF | FURNISH AND INSTALL 4 INCH SCH 80 RIGID PVC CONDUIT - TRENCHED |
| 805155 | 180 | LF | FURNISH AND INSTALL 4 INCH SCH 80 RIGID PVC CONDUIT - SLOTTED |
| 811001 | 5 | EA | FURNISH AND INSTALL ELECTRICAL HANDHOLE |
| 837001 | 3 | EA | FURNISH AND INSTALL GROUND ROD 1/2 INCH DIAMETER X 10 FOOT LENGTH |
| 860288 | 90 | LF | FURNISH AND INSTALL 4 CONDUCTOR OPTICOM DETECTOR CABLE |
| 862101 | 3275 | LF | FURNISH AND INSTALL LOOP WIRE ENCASED IN FLEXIBLE TUBING (NO 14 AWG) |
| 861104 | 1025 | LF | FURNISH AND INSTALL ELECTRICAL CABLE - 2 CONDUCTOR (ALUMINUM SHIELDED) |
| 861107 | 100 | LF | FURNISH AND INSTALL ELECTRICAL CABLE - 5 CONDUCTOR (NO 14 AWG) |
| 861108 | 980 | LF | FURNISH AND INSTALL ELECTRICAL CABLE - 7 CONDUCTOR (NO 14 AWG) |
| 861116 | 300 | LF | FURNISH AND INSTALL ELECTRICAL CABLE - 2 CONDUCTOR (NO 12 AWG) TYPE "TC" |
| 813015 | 68 | SF | INSTALL OVERHEAD SIGN |
| 800000 | 1 | EA | INSTALL CONDUIT BEND IN EXISTING BASE |
| 818030 | 3 | EA | FURNISH AND INSTALL MAST ARM POLE AND 38 FOOT MAST ARM |
| 860270 | 3 | EA | FURNISH AND INSTALL 8 INCH VEHICULAR TRAFFIC SIGNAL HEAD SECTION |
| 860272 | 26 | EA | FURNISH AND INSTALL 12 INCH VEHICULAR TRAFFIC SIGNAL HEAD SECTION |
| 800000 | 1 | EA | FURNISH AND INSTALL 20 FT. LIGHTING BRACKET ARM FOR TRAFFIC SIGNAL STRUCTURE |
| 831010 | 1 | EA | FURNISH AND INSTALL 250 WATT HPS LUMINAIRE WITH PHOTOCCELL |
| 860292 | 2 | EA | CUT, CLEAN, GALVANIZED AND CAP TRAFFIC SIGNAL STRUCTURE |
| 800000 | 2 | EA | REMOVE AND DISPOSE OF EXISTING FOUNDATION 12 INCHES BELOW GRADE |
| 873001 | 1 | LS | REMOVE AND DISPOSE OF EXISTING MATERIAL AND EQUIPMENT |
| 802501 | 210 | LF | FURNISH AND INSTALL NO 6 AWG STRANDED BARE COPPER GROUND WIRE |

NOTE: EXISTING EQUIPMENT TO BE REMOVED BY THE CONTRACTOR AND BECOME THE PROPERTY OF THE OF THE CONTRACTOR.



WIRING KEY

- A, B, C, D, — 2 CONDUCTOR ALUMINUM SHIELDED (NO. 14 AWG)
- E, F, G, a, b — 4 CONDUCTOR OPTICOM DETECTOR CABLE.
- H — 4 CONDUCTOR OPTICOM DETECTOR CABLE.
- I, J, K, L — 5 CONDUCTOR (NO. 14 AWG)
- M, N, O, P, Q — 7 CONDUCTOR (NO. 14 AWG)
- R — 3 WIRE (NO. 4 AWG) EXISTING SIGNAL
- S, T — MICRO-LOOP PROBE 500 FT. CABLE
- U, V, W, X — MICRO-LOOP PROBE 1000 FT. CABLE
- Y, Z — 2 CONDUCTOR TRAY CABLE (NO. 12 AWG)
- o — STRANDED BARE COPPER GROUND WIRE (NO. 6 AWG)
- ML — MICRO-LOOP PROBES
- EF — EXISTING FEED BY ALLEGHENY POWER
- TF — EXISTING TELEPHONE FEED
- LW — LOOP WIRE
- IC — PROPOSED INTERCONNECT CABLE
- ⊕ — GROUND ROD

BAI BRUDIS & ASSOCIATES, INC.
CONSULTING ENGINEERS
9220 RUMSEY ROAD, SUITE 210
COLUMBIA, MARYLAND 21045
(410)-884-3607

| REVISIONS | APPROVALS |
|---|---|
| <p>① GEOMETRIC IMPROVEMENTS FOR A RIGHT TURN LANE ON MD 49.</p> <p>03/2001 SHA No. AL841576</p> <p>RJM</p> | <p>TEAM LEADER, TRAFFIC ENGINEERING DESIGN DIVISION</p> |
| <p>② AND EMERGENCY SERVICES SIGNAL PRE-EMPTION OPTICOM FOR SOUTHBOUND MD 658</p> <p>08/2000 SHA No. XX1005785</p> <p>MK</p> | <p>ASST. CHIEF, TRAFFIC ENGINEERING DESIGN DIVISION</p> |
| <p>③ REDLINE REVISION</p> <p>06/93</p> <p>WM CRS DD DAZ ETP TH</p> | <p>CHIEF, TRAFFIC ENGINEERING DESIGN DIVISION</p> |
| <p>④ REPLACED TER. CABINET, ALL LOOP DETECTORS, HANDBOXES, & CONDUIT</p> <p>03/92</p> <p>WM</p> | <p>DIRECTOR, TRAFFIC & SAFETY</p> |

MARYLAND DOT - STATE HIGHWAY ADMINISTRATION
Office of Traffic & Safety
TRAFFIC ENGINEERING DESIGN DIVISION
MD 658 (VOCKE ROAD) & I-68 OFF RAMP - MD 49 (BRADDOCK ROAD)

DRAWN BY: B.F.
CHECKED BY: R.M.
SCALE: N.T.S.
DATE: MARCH 2001

F.A.P. NO. AL841576
S.H.A. NO. ALLEGANY
COUNTY: ALLEGANY
LOG MILE: 01065800.63

SEE TITLE SHEET
TS-318 G
T.I.M.S. NO. E-098

SHEET NO. 33 OF 56