## PROJECT DESCRIPTION

I. GENERAL

This portion of the project involves the modification of the existing traffic control signal at the intersection of US 40 and Eastern Blvd. in Washington County, Maryland. US 40 is considered to run in an east/west direction.

II. INTERSECTION OPERATION

The intersection operates in NEMA six (6) phase, full-traffic-actuated mode. There is an exclusive left turn phase for both the east and westbound movements of US 40. The US 40 through movements operate concurrently with a concurrent pedestrian phase across the south leg of the intersection. The Eastern Blvd. movements operate as a side street split operation.

The intersection is being modified to accommodate a new double left turn movement for eastbound US 40 and an exclusive right turn lane for southbound Eastern Blvd.

The existing cabinet/controler will be utilized. One additional 4-channel rack mounted time delay output loop detector amplifer is to be installed.

## EQUIPMENT LIST

A. Approved S.H.A. equipment to be purchased by the Developer and installed by the Contractor. All equipment in this list shall have catalog cuts submitted for approval prior to installation.

| Quantity | Units | Specification Section | Description |
|---|---|---|---|
| 1 | EA | 818 | 27 ft. steel twin mast arm pole with 50 ft. and 70 ft. mast arms [Note: four 2 in. x 90 in. anchor bolts]. |
| 1 | EA | --- | 4-channel rack mounted loop detector amplifier. |
| 1 | EA | 816 | 12 in., one-way, three section (RA,YA,GA) adjustable traffic signal head with pole mounting hardware and tunnel visors. |
| 2 | EA | 816 | 12 in., one-way, three section (RA,YA,GA) adjustable traffic signal head with mast arm mounting hardware and tunnel visors. |
| 1 | EA | 816 | 8 in., one-way, three section (R,Y,G) adjustable traffic signal head with mast arm mounting hardware and tunnel visors. |
| 1 | EA | 816 | 12 in., one-way, three section (R,Y,G) adjustable traffic signal head with mast arm mounting hardware and tunnel visors. |
| 4 | EA | 813 | 30 in. x 36 in R 3-5(L) sign with mast arm mounting hardware. |
| 1 | EA | 813 | 30 in. x 36 in. R 3-5(R) sign with mast arm mounting hardware. |

B. Equipment to be furnished and installed by the Contractor.
*All equipment in this list shall have catalog cuts submitted for approval prior to installation.*

| Quantity | Units | Specification Section | Description |
|---|---|---|---|
| Lump Sum | LS | 108 | Mobilization. |
| Lump Sum | LS | 104 | Maintenance of traffic. |
| 1 | CY | 205 | Test pit excavation. |
| 4 | EA | 811 | Handhole. |
| 1075 | LF | 815 | Sawcut for signal loop detector. |
| 3600 | LF | 810 | Loop detector wire (No. 14 A.W.G.) encased in flexible tubing. |
| 4200 | LF | 810 | 2-conductor (aluminum shielded) electrical cable (No. 14 A.W.G.). |
| 325 | LF | 810 | 4-conductor Opticom cable. |
| 1300 | LF | 810 | 5-conductor electrical cable (No. 14 A.W.G.). |
| 200 | LF | 804 | Bare copper stranded ground wire (No. 6 A.W.G.). |
| 80 | LF | 805 | 1 in. liquid tight flexible non-metalic conduit for loop detector sleeve. |
| 375 | LF | 805 | 2 in. polyvinyl chloride [Schedule 80] electrical conduit - trenched. |
| 40 | LF | 805 | 2 in. polyvinyl chloride [Schedule 80] electrical conduit - slotted in roadway. |
| 10 | LF | 805 | 3 in. polyvinyl chloride [Schedule 80] electrical conduit - trenched. |
| 10 | LF | 805 | 4 in. polyvinyl chloride [Schedule 80] electrical conduit - trenched. |
| 4.65 | CY | 801 | Concrete foundation for traffic signal equipment. |
| 1 | EA | 804 | Ground rod - 3/4in. diameter x 10 ft. length. |
| 120 | EA | 550 | 24 in. wide HAPPTPM - white for stop line. |
| Lump Sum | LS | --- | Removal/Relocation of existing traffic signal equipment. |
| 1 | EA | --- | As-built for S.H.A [on CADD]. |

## CONTACT LIST

The contact persons for District #6 are as follows:

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Mr. Richard L. Daff
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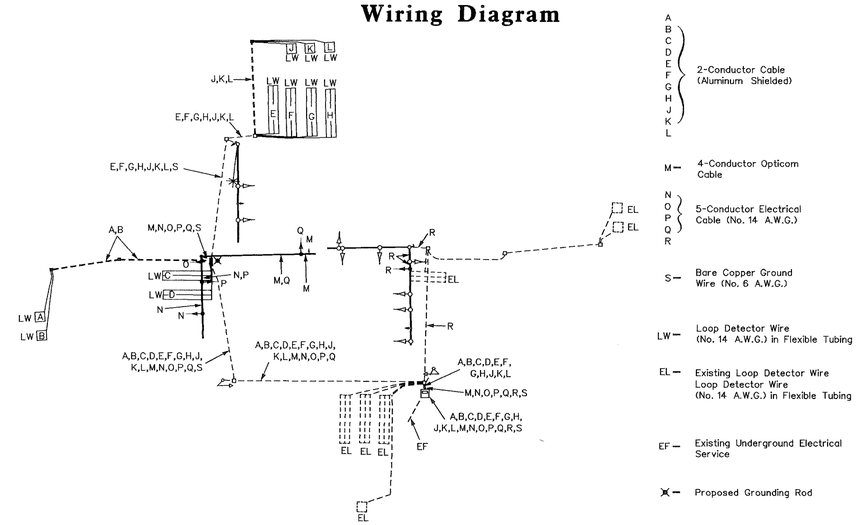
## Phase Chart

| | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 | 12 | 13 | 14 | 15-16 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | RA YA GA | R Y G | RA YA GA | RA YA GA | R Y G | R Y G | RA YA GA | RA YA GA | R Y G | R Y G | R Y G WG | R Y G | R Y G WG | R Y G | WA WB |
| Phase 1 & 5 | G | R | G | G | R | R | G | G | R | R | R | R | R | R | DW |
| 1 & 5 Change to Phase 1 & 6 or Phase 2 & 5 or Phase 2 & 6 | | | | | | | | | | | | | | | |
| Phase 1 & 6 | G | G | G | G | G | G | R | R | R | R | R | R | R | R | DW |
| 1 Change | Y | G | Y | Y | G | G | R | R | R | R | R | R | R | R | DW |
| Phase 2 & 5 | R | R | R | R | R | R | G | G | G | G | R | R | R | R | DW |
| 5 Change | R | R | R | R | R | R | Y | Y | G | G | R | R | R | R | DW |
| Phase 2 & 6 | R | G | R | R | G | G | R | R | G | G | R | R | R | R | WK |
| Ped Clearance | R | G | R | R | G | G | R | R | G | G | R | R | R | R | FL/DW |
| 2 & 6 Change | R | Y | R | R | Y | Y | R | R | Y | Y | R | R | R | R | DW |
| Phase 3 | R | R | R | R | R | R | R | R | R | R | G G | G | R | R | DW |
| 3 Change | R | R | R | R | R | R | R | R | R | R | Y | Y | R | R | DW |
| Phase 4 | R | R | R | R | R | R | R | R | R | R | R | R | G G | G | DW |
| 4 Change | R | R | R | R | R | R | R | R | R | R | R | R | Y | Y | DW |
| Flashing Operation | FL/R | FL/Y | FL/R | FL/R | FL/Y | FL/Y | FL/R | FL/R | FL/Y | FL/Y | FL/R | FL/R | FL/R | FL/R | DARK |

## Wiring Diagram





The Traffic Group

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MDOT - STATE HIGHWAY ADMINISTRATION
*Office of Traffic & Safety*
TRAFFIC ENGINEERING DESIGN DIVISION
(General Information)

# *US 40 at Eastern Blvd.*

DATE: July 20, 1999 — LOG MILE • 21004037.77

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|---|---|---|---|---|---|
| DRAWN BY: J. Dirndorfer | F.A.P. NO. | N/A | PLAN SHEET NO.: | SHEET NO. |
| CHK. BY: | S.H.A. NO. | BW996M82 | 2438D-GI | 2 of 2 |
| SCALE: N/A | COUNTY: | WASHINGTON | | |

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