# PROJECT DESCRIPTION

I. GENERAL

This project involves the installation of a new traffic control signal at the intersection of MD 214 (Central Avenue) and Jennings Mill Drive/Devonwood Drive in Prince George's County, Maryland. MD 214 is considered to run in an east/west direction. This intersection will be interconnected by others at a later date.

II. INTERSECTION OPERATION

The intersection is to operate in a NEMA six (6) phase, full-traffic-actuated mode. There will be an exclusive/permissive left turn phase for both the east and westbound movements of MD 214. The MD 214 through movements will operate concurrently. The Jennings Mill Drive/Devonwood Drive through movements will operate concurrently.

An eight phase, full-traffic-actuated, solid state digital controller with, four 4-channel rack mounted time delay output loop detector amplifiers housed in a base mounted system cabinet are to be installed at this location. The interconnect will be installed by others at a latter date.

# EQUIPMENT LIST

A. Equipment to be furnished by MD-SHA and installed by the Contractor.

| Item No. | Quantity | Units | Description |
|---|---|---|---|
| 9002 | 3 | EA | Detector amplifier 4 channel rack mount |
| 9081 | 1 | EA | Cabinet system size 6 |
| 9086 | 1 | EA | Controller 'ASC IIS'. |
| 9089 | 260 | SF | Flat sheet aluminum sign - yellow,orange, or silver.<br>(2 each - 36 in. x 42 in. R 10-12)<br>(4 each - 48 in. x 48 in. W-3-3)<br>(1 each - 30 in. x 36 in. R 3-5(R))<br>(2 each - 48 in. x 75 in. Route Marker Assembly Shield.)<br>(2 each - 30 in. x 51 in. Route Marker Assembly Shield.)<br>(4 each 36 in. x 96 in. D 1-1(12) Mod.) |
| 9090 | 16 | SF | Flat sheet aluminun - blue or green.<br>(2 each - 16 in. x Var. D -30)(Dual Faced)) |
| 9103 | 6 | EA | Sign hardware - span wire hanger. |

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

| Item No. | Quantity | Units | Description |
|---|---|---|---|
| 1001 | 3 | EA. | Maintenance of traffic per assignment. |
| 2001 | 5 | CY | Test pit excavation. |
| 5004 | 120 | LF. | 24 in white HAPPTPM. |
| 5005 | 2 | EA | Heat applied permanent preformed thermoplastic pavement marking letter. |
| 5006 | 4 | EA. | Heat applied permanent preformed thermoplastic pavement marking arrow . |
| 8001 | 20 | CY | Concrete for signal foundations. |
| 8005 | 4 | EA | 12 in. 0+0 guage 32 ft. steel strain pole. |
| 8009 | 625 | LF | Steel span wire 3/8in. diameter. |
| 8010 | 625 | LF | Steel tether wire 1/4in. diameter. |
| 8017 | 4 | EA | Microloop probe set with 1000 ft. lead-in. |
| 8020 | 1 | EA | Install controller and cabinet - base mount. |
| 8021 | 590 | LF | Sawcut for signal loop detector. |
| 8022 | 20 | LF | 1 in. electrical conduit - galvanized steel sleeve. |
| 8023 | 65 | LF | 1 in. liquid tight flexible non-metalic conduit - sleeve. |
| 8024 | 715 | LF | 2 in. (Schedule 80) PVC electrical conduit- trenched. |
| 8027 | 70 | LF | 3 in. (Schedule 80) PVC electrical conduit- trenched. |
| 8030 | 250 | LF | 4 in. (Schedule 80) PVC electrical conduit- trenched. |
| 9032 | 135 | LF | 4 in. (Schedule 80) PVC electrical conduit - bored |
| 8033 | 8 | EA | Electrical handhole. |
| 8034 | 5 | EA | Ground rod (3/4 in. x 10 ft. length). |
| 8040 | 2195 | LF | Loop detector wire encased in flexible tubing (No. 14 AWG). |
| 8041 | 530 | LF | Electrical cable - 2-conductor (aluminum shielded). |
| 8044 | 570 | LF | Electrical cable - 5-conductor (No. 14 AWG). |
| 8045 | 1170 | LF | Electrical cable - 7-conductor (No. 14 AWG). |
| 8046 | 390 | LF | Electrical cable - 2 conductor (No. 12 AWG) Type in. TC in. |
| 8048 | 95 | LF | Stranded bare copper ground wire (No. 6 AWG). |
| 8049 | 15 | LF | Electrical cable - 1-conductor (No. 4 AWG) - THHN/THWN. |
| 8051 | 164 | LF | Wood sign supports 4 in. x 6 in. |
| 8052 | 257 | SF | Install ground mounted sign. |
| 8053 | 26.5 | SF | Install overhead sign. |
| 8055 | 4 | EA | 250 HPS luminaire with photo cell. |
| 8056 | 4 | EA | 15 ft. lighting bracket arm for traffic signal structure. |
| 8057 | 4 | EA | Remove/dispose of existing foundation 12 in. below grade. |
| 8060 | 1 | EA | Removal/dispose of existing material/equipment per assignment. |
| 8066 | 1 | EA | Control and distribution epuipment (120/240, 1 phase, 3 wire). |
| 8084 | 35 | EA | 12 in.black faced vehicular traffic signal head section. |
| 8085 | 12 | EA | 8 in. black faced vehicular traffic signal head section. |
| Neg. | 130 | LF | 10 in. wide solid white HAPPTPM pavement marking. |

C. Material to be removed and returned to MD-SHA.
All removed materials are to become the property of the contractor.

# CONTACT LIST

The contact persons for District #3 are as follows:

Mr. Charles Watkins
District Engineer
301-513-7311

Mr. Majib Shakib
Assistant District Engineer - Traffic
301-513-7358

Mr. Augie Rebish
Assistant District Engineer - Utility
301-513-7486

Mr. Randy Brown
Assistant District Engineer - Maintenance
301-513-7304

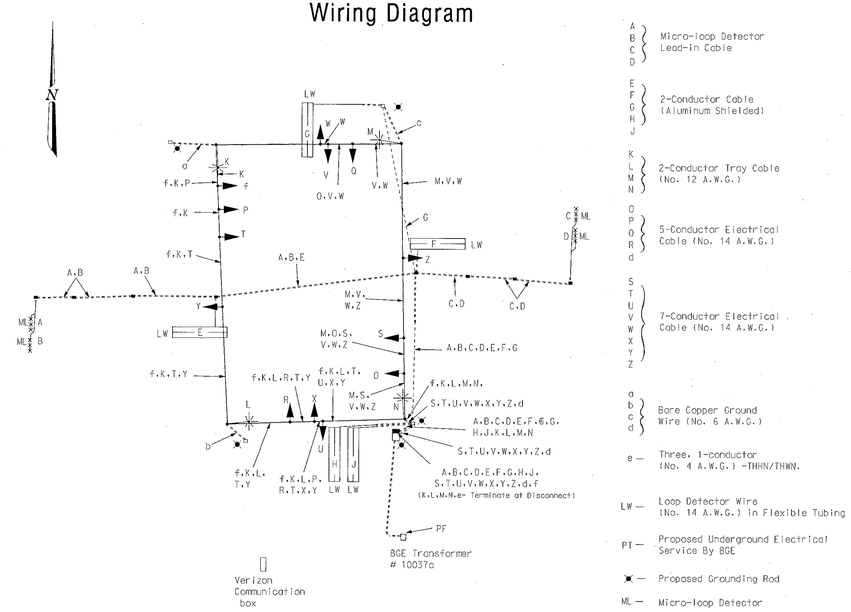
Mr. Richard L. Daff
Chief, Traffic Operations Division
410-787-7630

The Power Company Representative is:
BGE
Ms. Deborah Hartman
Industrial/Commerical Services
New Business Construction
7317 Parkway Drive South
Hanover, Maryland 21076
410-859-9068

# Phase Chart

| | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Phase 1 & 5 | R G | R G | R | R G | R G | R | R | R | R | R | R | R | R | |
| 1 & 5 Change to Phase 1 & 6 or Phase 2 & 5 or Phase 2 & 6 | | | | | | | | | | | | | | |
| Phase 1 & 6 | G G | G G | G | R | R | R | R | R | R | R | R | R | R | |
| 1 Change | G Y | G Y | G | R | R | R | R | R | R | R | R | R | R | |
| Phase 2 & 5 | R | R | R | G G | G G | G | G | R | R | R | R | R | R | |
| 5 Change | R | R | R | Y Y | Y Y | G | G | R | R | R | R | R | R | |
| Phase 2 & 6 | G | G | G | G | G | G | G | R | R | R | R | R | R | |
| 2 & 6 Change | Y | Y | Y | Y | Y | Y | Y | R | R | R | R | R | R | |
| Phase 4 & 8 | R | R | R | R | R | R | R | G | G | G | G | G | G | |
| 4 & 8 Change | R | R | R | R | R | R | R | Y | Y | Y | Y | Y | Y | |
| Flashing Operation | FL/Y | FL/Y | FL/Y | FL/Y | FL/Y | FL/Y | FL/Y | FL/R | FL/R | FL/R | FL/R | FL/R | FL/R | |

# Wiring Diagram




The Traffic Group
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MARYLAND DOT - STATE HIGHWAY ADMINISTRATION
Office of Traffic & Safety
TRAFFIC ENGINEERING DESIGN DIVISION
(General Information Plan)
MD 214 (Central Avenue) at
Jennings Mill Drive/Devonwood Drive

| | | | | | |
|---|---|---|---|---|---|
| DRAWN BY: | Frank Hoeckel | F.A.P. NO. | N/A | TS NO. 4068 | SHEET NO. |
| CHECKED BY: | John Dirndorfer | S.H.A. NO. | XX1005385 | | |
| SCALE: | N/A | COUNTY: | Prince George's | T.I.M.S. NO. E-384 | 2 OF 2 |
| DATE: | February 21, 2001 | LOG MILE: | (6042)409.48 | | |

$FILE$ $DATE$