

PROJECT DESCRIPTION

I. GENERAL

This portion of the project involves the modification of the existing traffic signal at the intersection of MD 129 and MD 133 in Baltimore County Maryland. MD 129 runs in a North-South direction.

II. INTERSECTION OPERATION

The proposed traffic signal will operate in a NEMA five (5) phase, fully traffic actuated mode with northbound and southbound approaches operating separately in a split phase mode. The eastbound and westbound approaches will operate concurrently with an westbound E/P left turn phase.

The existing eight phase fully traffic actuated controller will remain. New wiring will be brought into the cabinet.

III. SPECIAL NOTES

- It is the responsibility of the contractor to confirm geometrics prior to placing signal equipment.
- The signal shop will be notified to perform internal wiring of the cabinet at MD 129 @ MD 133. All cable shall be identified and brought into the controller by the contractor. The contractor shall notify Mr. Edward Rodenhizer, SHA Signal Shop at (410) 787-7650 seventy-two (72) hours in advance of this work.
- The Maryland State Highway Administration District #4 will be given at least seven (7) days notice to perform striping through the intersection area. Contact Mr. Randall Scott at (410) 321-2781 to initiate this operation.
- MOT Plates for this project will be as follows: 104.00 to 104.00-12, 104.01-01, 104.02-01, 104.03-01, 104.75
- Upon completion of this project the contractor shall notify Mr. Robert Snyder of SHA at 410-787-7635 to arrange for the phone line installation. The contractor is to provide Mr. Snyder with the nearest street address, zip code, and phone.

EQUIPMENT LIST

A. EQUIPMENT TO BE SUPPLIED BY SHA AND INSTALLED BY THE CONTRACTOR:

| CATEGORY CODE NO. | SPEC. # | QUANTITY | DESCRIPTION |
|-------------------|----------------------------|---|----------------------|
| 900000 | 813 | 183 S.F. | SHEET ALUMINUM SIGNS |
| - 1 EA | R10-12 SIGN | 36"X42" | |
| - 2 EA | R3-5L SIGN | 30"X36" | |
| - 4 EA | D3-2 SIGN | 96"X16" (DUEL FACED) | |
| - 1 EA | ASSOCIATED SHIELD ASSEMBLY | "SOUTH, MD 129, RIGHT ARROW" (30" X 51") - POLE MOUNT | |
| - 1 EA | ASSOCIATED SHIELD ASSEMBLY | "NORTH, MD 129, LEFT ARROW" (48" X 75") - POLE MOUNT | |
| - 1 EA | ASSOCIATED SHIELD ASSEMBLY | "SOUTH, MD 129, RIGHT ARROW" (30" X 51") - GROUND MOUNT | |
| - 1 EA | ASSOCIATED SHIELD ASSEMBLY | "NORTH, MD 129, LEFT ARROW" (48" X 75") - GROUND MOUNT | |

NOTE: ALL EQUIPMENT AND MATERIAL NOT LISTED ABOVE WILL BECOME THE PROPERTY OF THE CONTRACTOR.

THE FOLLOWING CONTACT PERSONS FOR DISTRICT # 4 ARE AS FOLLOWS:

Mr. David Malkowski
District Engineer
Phone: (410) 787-7630

Mr. Joseph McMahon
Acting Engineer-Utility
Phone: (410) 321-2841

Mr. Randall Scott
Assistant District Engineer-Traffic
Phone: (410) 321-2781

Mr. Dave Ramsey
Asst. District Engineer - Maintenance
Phone: (410) 321-2761

Mr. Richard L. Daff
Chief Traffic Operations Division
Phone: (410) 787-630

The Power Company Representative is:

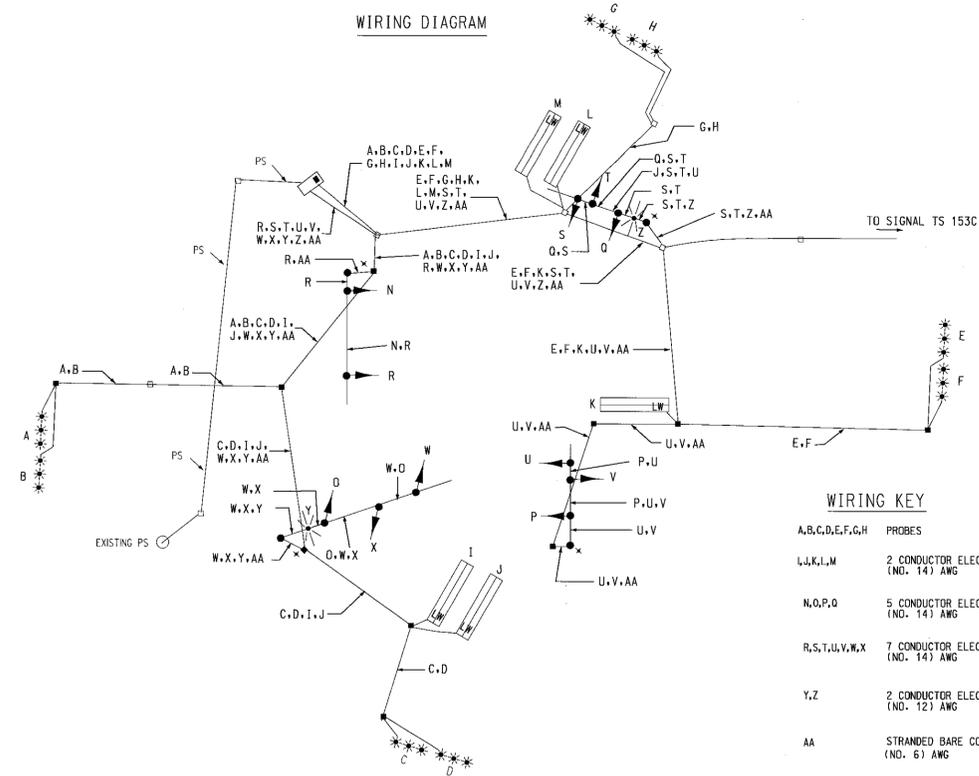
BALTIMORE GAS LAND ELECTRIC COMPANY

7313 PARKWAY DRIVE SOUTH
BALTIMORE MARYLAND, 21076
(410) 859-9030

B. EQUIPMENT TO BE FURNISHED AND INSTALLED BY THE CONTRACTOR:

| CATEGORY CODE | SPEC. # | QUANTITY | DESCRIPTION |
|---------------|---------|------------|--|
| 203030 | 205 | 4 CY | TEST PIT EXCAVATION |
| 585624 | SP-555 | 140 LF | FURNISH AND INSTALL 24 IN. WHITE HEAT APPLIED PERMANENT PREFORMED THERMOPLASTIC PAVEMENT MARKING (STOP LINE) |
| 801004 | 801 | 12.51 CY | FURNISH AND INSTALL CONCRETE FOR SIGNAL FOUNDATION |
| 800000 | 810 | 8 EA | INSTALL MICROLOOP PROBE SET - 500 FT LEAD IN |
| 862102 | 815 | 600 LF | FURNISH AND INSTALL SAWCUT (FOR SIGNAL LOOP DETECTORS) |
| 805160 | 805 | 65 LF | FURNISH AND INSTALL 1" LIQUID TIGHT FLEXIBLE NON-METALLIC CONDUIT (DETECTOR WIRE SLEEVE) |
| 870160 | 805 | 350 LF | FURNISH AND INSTALL 2 IN. DIA. PVC ELECTRICAL CONDUIT SCHEDULE 80 - TRENCHED |
| 870162 | 805 | 150 LF | FURNISH AND INSTALL 2 IN. DIA. PVC ELECTRICAL CONDUIT SCHEDULE 80 - SLOTTED |
| 870163 | 805 | 100 LF | FURNISH AND INSTALL 3 IN. DIA. PVC ELECTRICAL CONDUIT SCHEDULE 80 - TRENCHED |
| 870165 | 805 | 100 LF | FURNISH AND INSTALL 3 IN. DIA. PVC ELECTRICAL CONDUIT SCHEDULE 80 - SLOTTED |
| 870166 | 805 | 100 LF | FURNISH AND INSTALL 4 IN. DIA. PVC ELECTRICAL CONDUIT SCHEDULE 80 - TRENCHED |
| 870168 | 805 | 215 LF | FURNISH AND INSTALL 4 IN. DIA. PVC ELECTRICAL CONDUIT SCHEDULE 80 - SLOTTED |
| 811001 | 811 | 10 EA | FURNISH AND INSTALL ELECTRICAL HANDHOLE |
| 837001 | 804 | 4 EA | FURNISH AND INSTALL GROUND ROD - 3/4 IN. DIA. X 10 FT. LENGTH |
| 866104 | 808 | 2 EA. | FURNISH AND INSTALL 20 FOOT LIGHTING ARM ON SIGNAL STRUCTURE |
| 831010 | 806 | 2 EA. | FURNISH AND INSTALL 250 WATT HIGH PRESSURE SODIUM LAMP AND LUMINAIRE |
| 861116 | 810 | 400 LF | FURNISH AND INSTALL ELECTRICAL CABLE 2 - CONDUCTOR NO.12 AWG <i>Type 7/C</i> |
| 861104 | 810 | 750 LF | FURNISH AND INSTALL ELECTRICAL CABLE 2 - CONDUCTOR (ALUMINUM SHIELDED) |
| 862101 | 810 | 2100 LF | FURNISH AND INSTALL LOOP WIRE ENCASED IN FLEXABLE TUBING NO.14 AWG |
| 861107 | 810 | 100 LF | FURNISH AND INSTALL ELECTRICAL CABLE 5 - CONDUCTOR NO.14 AWG |
| 861108 | 810 | 1700 LF | FURNISH AND INSTALL ELECTRICAL CABLE 7 - CONDUCTOR NO.14 AWG |
| 802501 | 810 | 600 LF | FURNISH AND INSTALL #6 AWG STRANDED BARE COPPER WIRE |
| 813015 | 813 | 111.75 SF | INSTALL OVERHEAD MOUNTED SIGNS |
| 813014 | 813 | 71.25 S.F. | INSTALL GROUND MOUNT SIGN |
| 801106 | 812 | 68 L.F. | FURNISH AND INSTALL WOOD SIGN SUPPORT 4" X 6" |
| 860272 | 814 | 38 EA. | FURNISH AND INSTALL 12 IN. VEHICULAR TRAFFIC SIGNAL HEAD SECTION (BLACK FACED) |
| 860270 | 814 | 3 EA. | FURNISH AND INSTALL 8 IN. VEHICULAR TRAFFIC SIGNAL HEAD SECTION (BLACK FACED) |
| 800000 | 818 | 2 EA | FURNISH AND INSTALL 12 IN. X 27 FT. MAST ARM POLE WITH A 50 FOOT MAST ARM |
| 800000 | 818 | 2 EA | FURNISH AND INSTALL 12 IN. X 27 FT. MAST ARM POLE WITH A 38 FOOT MAST ARM |
| 800000 | | 1 LS | REMOVE AND DISPOSE OF EXISTING SIGNAL EQUIPMENT. |

WIRING DIAGRAM



WIRING KEY

| | |
|-----------------|---|
| A,B,C,D,E,F,G,H | PROBES |
| I,J,K,L,M | 2 CONDUCTOR ELECTRICAL CABLE (NO. 14) AWG |
| N,O,P,Q | 5 CONDUCTOR ELECTRICAL CABLE (NO. 14) AWG |
| R,S,T,U,V,W,X | 7 CONDUCTOR ELECTRICAL CABLE (NO. 14) AWG |
| Y,Z | 2 CONDUCTOR ELECTRICAL CABLE (NO. 12) AWG |
| AA | STRANDED BARE COPPER WIRE (NO. 6) AWG |
| LW | LOOP WIRES |
| X | GROUND RODS |
| PS | POWER SOURCE |

PHASE CHART

| | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 | |
|--------------------|------|------|------|------|------|------|------|------|------|------|------|---|
| PHASE 2 & 5 | R | R | -G-G | G | R | R | R | R | R | R | R | ← |
| PHASE 2 & 5 CHANGE | R | R | Y-Y | Y | G | R | R | R | R | R | R | ↑ |
| PHASE 2 & 6 | G | G | G | G | G | R | R | R | R | R | R | ← |
| PHASE 2 & 6 CHANGE | Y | Y | Y | Y | Y | R | R | R | R | R | R | → |
| PHASE 3 | R | R | R | R | R | R | R | R | G-G | G-G | G | ↑ |
| PHASE 3 CHANGE | R | R | R | R | R | R | R | R | Y | Y | Y | ↑ |
| PHASE 4 | R | R | R | R | R | G-G | G-G | G | R | R | R | ↑ |
| PHASE 4 CHANGE | R | R | R | R | R | Y | Y | Y | R | R | R | ↑ |
| FLASHING OPERATION | FL/Y | FL/Y | FL/Y | FL/Y | FL/Y | FL/R | FL/R | FL/R | FL/R | FL/R | FL/R | ↑ |



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|---|--|---|--|--|--|---|--|---|--|--|--|
| <p>VISIONS</p> <p>D. 2058 LEONARD SHERMAN 688 TO SIGNAL 1096 CHANGES PROPOSED</p> <p>C. MURPHY 207</p> <p>D. 21985 TRAFFIC SIGNAL 129 AND 133 FROM EXCLUSIVE TO E/P-ARB 10/21/1983</p> <p>B. 4-19-1983 INSTALL 129 AND 129 NEAR SIDE SIGNAL HEAD</p> <p>A. 10-9-74 AS 1081 10 2852 485</p> <p>B.T. D.A.Z.</p> | | <p>APPROVALS</p> <p>11:AM LEONARD SHERMAN ENGINEERING DESIGN DIVISION</p> <p>ASST. CHIEF TRAFFIC ENGINEERING DESIGN DIVISION</p> <p>CHIEF TRAFFIC ENGINEERING DESIGN DIVISION</p> <p>DIRECTOR, TRAFFIC & SAFETY</p> | | <p>MARYLAND DOT - STATE HIGHWAY ADMINISTRATION</p> <p>Office of Traffic & Safety</p> <p>TRAFFIC ENGINEERING DESIGN DIVISION</p> <p>MD 129 (PARK HEIGHTS AVE.) AND MD 133 (OLD COURT RD)</p> <p>GENERAL INFORMATION</p> | | <p>DRAWN BY: L. HANDY</p> <p>CHECKED BY: STEVE RENZI</p> <p>SCALE: N.T.S.</p> <p>DATE: 12-22-72</p> | | <p>F.A.P. NO.</p> <p>S.H.A. NO.</p> <p>COUNTY: BALTIMORE</p> <p>LOC MILE: 03012900.67</p> | | <p>TS. NO. TS-147D</p> <p>T.I.M.S. NO.</p> <p>SHEET NO. 13 OF 22</p> | |
|---|--|---|--|--|--|---|--|---|--|--|--|