

DRILL HOLES

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PROJECT DESCRIPTION

I. GENERAL

This project involves the reconstruction of an existing Traffic Control Signal with interconnect, street lighting and a traffic surveillance camera at the intersection of MD 320 (Piney Branch Rd) and MD 787 (Flower Ave) in Montgomery County. A new mast arm traffic signal with interconnect, street lighting, traffic surveillance camera and Countdown pedestrian signals with audible pushbuttons shall be installed at this location. MD 320 (Piney Branch Rd) is assumed to run in an east-west direction.

II. INTERSECTION OPERATION

- 1. The intersection shall continue to operate in a NEMA six-phase, semi-actuated mode, with the MD 320 (Piney Branch Rd) approaches running concurrently. The Exclusive/Permissive left turn phases for both approaches of MD 320 (Piney Branch Rd) shall remain in operation. The pedestrian phases across MD 320 (Piney Branch Rd) shall now be Countdown pedestrian phases with audible pushbutton actuation. The pedestrian phases across MD 787 (Flower Ave) shall now be Countdown pedestrian phases with audible pushbuttons on recall. The MD 787 (Flower Ave) approaches shall also continue to run concurrently.
2. A full-traffic-actuated, eight-phase controller with video interface and all necessary equipment housed in a NEMA size "6" base-mounted cabinet shall be installed at this intersection.
3. Montgomery County signal shop shall install APS control unit into controller cabinet. The Contractor shall deliver the Control Unit and audible pushbuttons to Mr Keith Lord of the Montgomery County Signal Shop for testing and programming.

III. SPECIAL NOTES

- 1. The Contractor shall be responsible for terminating all signal cables, excluding interconnect, to the appropriate terminals and shall properly label each cable.
2. Disconnecting and splicing of interconnect cable shall be performed by Montgomery County Forces. The contractor shall run the interconnect cable into the base of each cabinet and properly tag the cable. All controller cabinet wiring will be performed by Montgomery County Forces. Contact Kamal Hamud at (240) 777-8761 seventy-two hours in advance of intended work.
3. All underground and overhead utilities shown on these plans are schematic only and may not be complete. The Contractor shall be responsible for notifying Miss Utility prior to construction so that all utilities may be located in the field. If the Contractor perceives that a conflict between the utilities and the traffic signal will occur, the Contractor shall notify the Project Engineer immediately so that the conflict may be resolved.
4. Contact Mr. Mike Kinney at (240) 777-8760 seventy-two hours in advance of intended work for wiring relocating of traffic surveillance camera equipment including pole mount camera cabinet.
5. APS will function as follows:
TO CROSS PINEY BRANCH ROAD
a. When pedestrian locates and presses the pushbutton for an extended time, the pushbutton unit will announce the following message "Wait to cross Piney Branch at Flower, crosswalk angles left."
b. When the WALK phase begins, the pushbutton unit will provide a rapid tick which will last for the duration of the WALK phase.
TO CROSS FLOWER AVENUE
a. When pedestrian locates and presses the pushbutton for an extended time, the pushbutton unit will announce the following message "Wait to cross Flower at Piney Branch."
b. When the WALK phase begins, the pushbutton unit will provide a rapid tick which will last for the duration of the WALK phase.

The contacts for Montgomery County and SHA are as follows:

Mr. Bryan Young Assistant District Engineer - Traffic Phone: (301) 513-7318
Mr. Richard L. Daff, Sr. Chief, Traffic Operations Division Phone: (410) 787-7630
Mr. Mike Kinney Mont. County Traffic 240-777-8760
Mr. Vernon Stinnett Assistant District Engineer - Maintenance Phone: (301) 513-7304
Mr. Keith Lord Mont. County Signal Shop (Mont Co.) 301-674-8965
Mr. Augie Rebish District Engineer - Utility Phone: (301) 513-7350
Mr. Sonny Bailey Manager, Sign Shop Operations 410-787-7670
Mr. Kamal Hamud Mont. County TMC Center 240-777-8761

EQUIPMENT LIST

A. EQUIPMENT TO BE SUPPLIED BY S.H.A..

Table with 3 columns: ITEM NO., DESCRIPTION, QUANTITY. Includes items like Controller cabinet, Video detection interface, Sheet aluminum signs, Pedestrian education signs, and Splice cabinet.

EQUIPMENT LIST (cont.)

B. EQUIPMENT TO BE FURNISHED AND INSTALLED BY THE CONTRACTOR

Table with 3 columns: ITEM NO., DESCRIPTION, QUANTITY. Includes items like Maintenance of traffic per assignment, Test Pit Excavation, 12" white heat applied permanent pavement marking, 24" white heat applied permanent pavement marking, Removal of existing permanent pavement line markings, Standard type A combination curb and gutter, 5" concrete sidewalk, Detectable warning surface for curb ramps, 2 wire Central Control unit, Adjust and re-ring existing span wire, Any size lighting arm on signal pole, Audible/tactile pedestrian pushbutton station, Breakaway Pedestal pole, LED 16" countdown pedestrian signal head, Mast arm pole and 50' mast arm, Remove and dispose of material & equipment, Twin mast arm pole, Video detection camera, Cable - 1 conductor, Disconnect, pull back and reroute cable, Schedule 80 rigid PVC conduit, Install overhead or ground mounted sign, No. 6 AWG stranded bare copper ground wire, Weatherhead, Metered service pedestal, Furnish and install electrical hardware, 3 inch diameter PVC conduit, 12" LED signal head section, Cut, clean, galvanize and cap traffic signal structure, Electrical cable, Electrical cable, Electrical cable, Install controller and cabinet pole mount, Install controller and cabinet base mount.

C. EQUIPMENT TO BE REMOVED

Montgomery County Forces shall remove the controller and all auxiliary equipment from the controller cabinet. The cabinet and all other removed signal materials are to become property of the contractor.

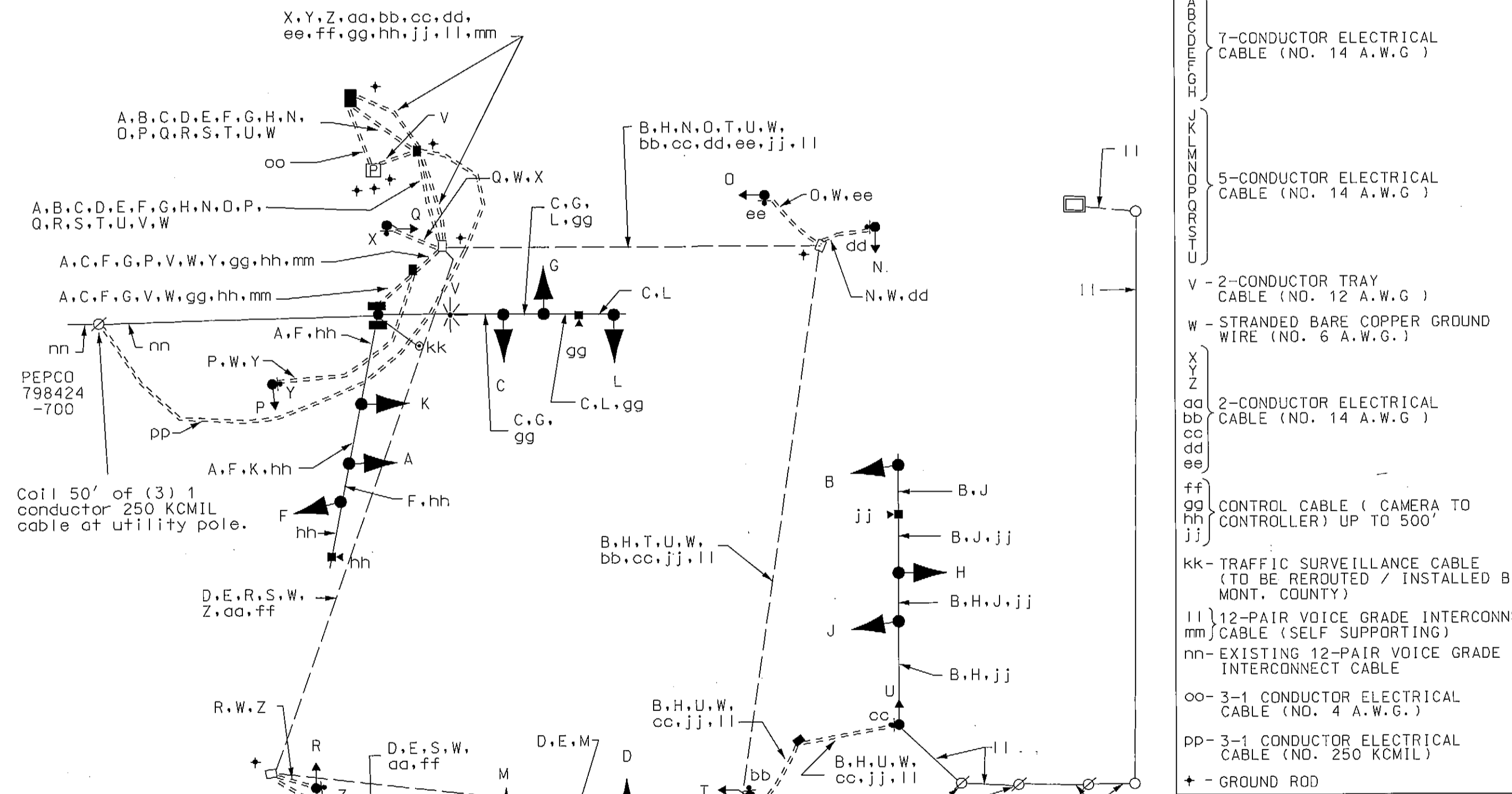
D. EQUIPMENT TO BE SUPPLIED BY MONTGOMERY CABINET

Table with 2 columns: DESCRIPTION, QUANTITY. Includes Splice cabinet, 1 EA.

PHASE CHART

Phase chart table showing traffic phases (1-19) and signal states (R, G, Y, W, DW, WK, FL/DW, DARK) for various phases and changes.

WIRING DIAGRAM



WIRING KEY

- 7-CONDUCTOR ELECTRICAL CABLE (NO. 14 A.W.G.)
5-CONDUCTOR ELECTRICAL CABLE (NO. 14 A.W.G.)
2-CONDUCTOR TRAY CABLE (NO. 12 A.W.G.)
STRANDED BARE COPPER GROUND WIRE (NO. 6 A.W.G.)
2-CONDUCTOR ELECTRICAL CABLE (NO. 14 A.W.G.)
CONTROL CABLE (CAMERA TO CONTROLLER) UP TO 500'
TRAFFIC SURVEILLANCE CABLE (TO BE REROUTED / INSTALLED BY MONT. COUNTY)
12-PAIR VOICE GRADE INTERCONNECT CABLE (SELF SUPPORTING)
EXISTING 12-PAIR VOICE GRADE INTERCONNECT CABLE
3-1 CONDUCTOR ELECTRICAL CABLE (NO. 4 A.W.G.)
3-1 CONDUCTOR ELECTRICAL CABLE (NO. 250 KCMIL)
GROUND ROD

TOD NO: XX445-21
SHA NO: MO206A54/B54
MD 320 @ MD 787



STATE OF MARYLAND DEPARTMENT OF TRANSPORTATION STATE HIGHWAY ADMINISTRATION
MD 320 (PINEY BRANCH RD.) AND MD 787 (FLOWER AVE.)
TAKOMA PARK, MARYLAND

GENERAL INFORMATION SHEET

Table with 2 columns: FIELD, VALUE. Includes SCALE, DATE, CONTRACT NO., DESIGNED BY, COUNTY, DRAWN BY, LOGMILE, CHECKED BY, TMS NO., F.A.P. NO., TOD NO., TS NO., DRAWING NO., SHEET NO.