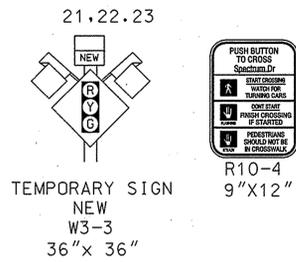
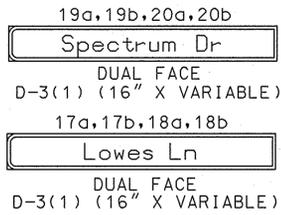
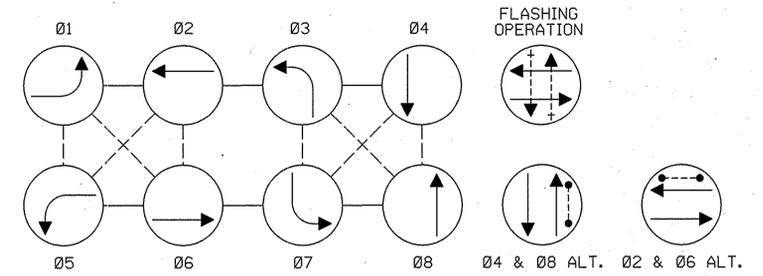


**PROPOSED SIGNS**



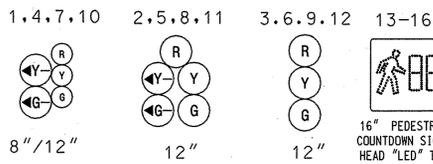
**NEMA PHASING**



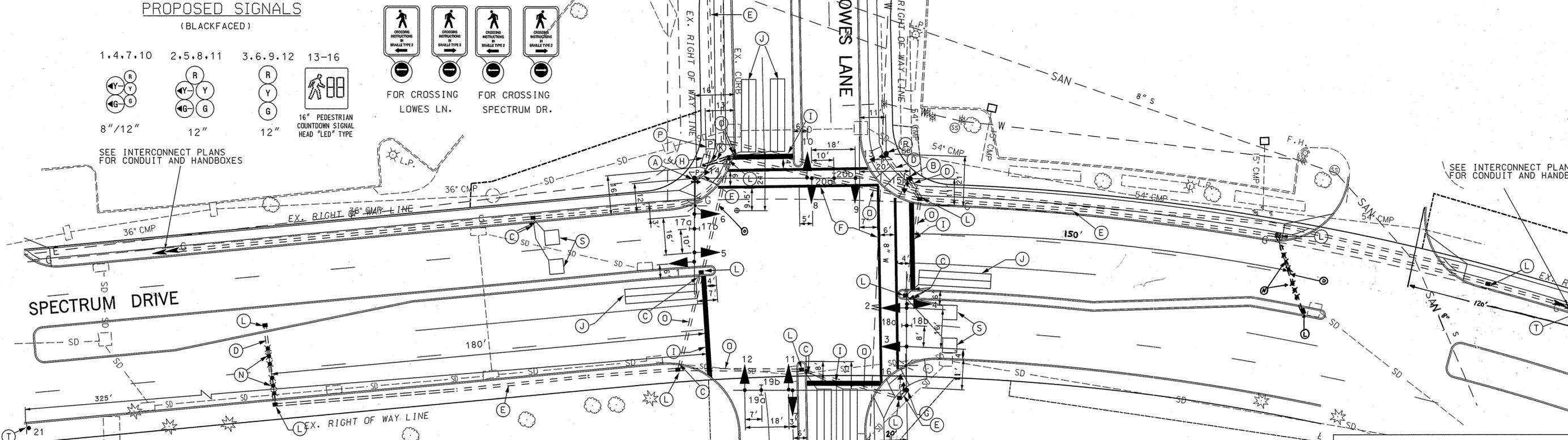
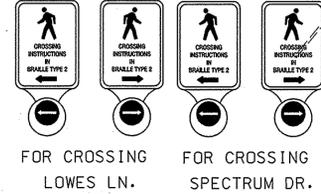
NOTE: PHASES ASSOCIATED BY A DASHED LINE WILL OPERATE CONCURRENTLY. PHASES ASSOCIATED BY A SOLID LINE WILL NOT OPERATE CONCURRENTLY.

SPECTRUM DRIVE IS ASSUMED TO RUN IN A EAST/WEST DIRECTION AT LOWES LANE

**PROPOSED SIGNALS (BLACKFACED)**



**PROPOSED AUDIBLE SIGNS**



**CONSTRUCTION DETAILS**

- A. INSTALL 27' STEEL POLE WITH TWIN 50' & 70' MAST ARMS, TRAFFIC SIGNAL HEADS, COUNTDOWN PEDESTRIAN SIGNAL HEAD, AUDIBLE TACTILE PEDESTRIAN PUSHBUTTON STATION (SIGN TO READ "PUSHBUTTON TO CROSS LOWES LN."), SIGNS, 10 FT. LIGHTING ARM, AND 250 WATT HPS LAMP AND LUMINAIRE AS SHOWN (NOTE: 1-3 IN. PVC SCHEDULE 80 CONDUIT BEND). USE 5 CY OF CONCRETE FOR FOUNDATION)
- B. INSTALL 10 FT. BREAKAWAY PEDESTAL POLE WITH COUNTDOWN PEDESTRIAN SIGNAL HEAD AND AUDIBLE TACTILE PEDESTRIAN PUSHBUTTON STATION (SIGN TO READ "PUSHBUTTON TO CROSS LOWES LN.") (NOTE: 1-3 IN. PVC SCHEDULE 80 CONDUIT BEND).
- C. INSTALL 1" LIQUID-TIGHT, FLEXIBLE NON-METALLIC ELECTRICAL CONDUIT FOR A DETECTOR WIRE SLEEVE
- D. INSTALL 3" PVC SCHEDULE 80 CONDUIT - BORED.
- E. INSTALL 3" PVC SCHEDULE 80 CONDUIT - TRENCHED.
- F. INSTALL 12" WHITE PREFORMED THERMOPLASTIC PAVEMENT MARKING FOR CROSSWALK.
- G. INSTALL 27' STEEL POLE WITH TWIN 50' & 70' MAST ARMS, TRAFFIC SIGNAL HEADS, COUNTDOWN PEDESTRIAN SIGNAL HEAD, AUDIBLE TACTILE PEDESTRIAN PUSHBUTTON STATION (SIGN TO READ "PUSHBUTTON TO CROSS SPECTRUM DR."), SIGNS, 10 FT. LIGHTING ARM, AND 250 WATT HPS LAMP AND LUMINAIRE AS SHOWN (NOTE: 1-3 IN. PVC SCHEDULE 80 CONDUIT BEND). USE 5 CY OF CONCRETE FOR FOUNDATION)
- H. INSTALL A BASE MOUNTED CABINET WITH ALL THE NECESSARY EQUIPMENT FOR AN UNDERGROUND POWER FEED AND A PHONE DROP UNDERGROUND. (NOTE: 2-4", 1-3" AND 1-2" PVC SCHEDULE 80 CONDUIT BEND USE 1 CY OF CONCRETE OF CABINET FOUNDATION).
- I. INSTALL 24" WHITE PREFORMED THERMOPLASTIC PAVEMENT MARKING FOR STOPLINE.
- J. INSTALL 6' x 30' LOOP DETECTOR WIRE ENCASED IN FLEXIBLE TUBING QUADRUPOLE TYPE 3-6-3 TURNS.
- K. INSTALL 4" PVC SCHEDULE 80 CONDUIT - TRENCHED.
- L. INSTALL HANDBOX.
- M. INSTALL 2" PVC SCHEDULE 80 CONDUIT - TRENCHED.
- N. INSTALL NON-INVASIVE PROBES
- O. INSTALL 4" PVC SCHEDULE 80 CONDUIT - BORED.
- P. INSTALL ELECTRICAL METERED SERVICE PEDESTAL EQUIPMENT - UNDERGROUND.
- R. INSTALL 10' PEDESTAL POLE WITH PEDESTRIAN SIGNAL HEADS. (NOTE: 1-3" PVC SCHEDULE 80 CONDUIT BEND)
- S. INSTALL 6' x 6' LOOP DETECTOR WIRE ENCASED IN FLEXIBLE TUBING QUADRUPOLE TYPE, 4 TURNS.
- T. INSTALL GROUND MOUNTED SIGN.

**GENERAL NOTES:**

1. PAVEMENT MARKINGS DETAILED ARE PROPOSED AND TO BE INSTALLED BY THE SIGNAL CONTRACTOR.
2. LOOP DETECTORS AND CONDUITS ARE TO BE INSTALLED PRIOR TO INSTALLATION OF THE FINAL ASPHALT SURFACE COURSE.
3. DETECTION SHALL BE ONE (1) FOOT BEHIND THE STOP LINE.
4. ALL PROPOSED TRAFFIC SIGNAL EQUIPMENT SHALL BE INSTALLED TO FINAL GRADE.
5. 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 AT 410-787-7635 AT 72 HOURS PRIOR TO ANY CONSTRUCTION SO THAT THE CONFLICT MAY BE RESOLVED.
6. STOP SIGNS SHALL BE REMOVED WHEN THE TRAFFIC SIGNAL HAS BEEN TURNED ON.

| FREDERICK COUNTY DIVISION OF PUBLIC WORKS  |                          |                      |                      |
|--|--------------------------|----------------------|----------------------|
| APPROVED:  | PUBLIC WORKS DIRECTOR    |                      |                      |
| APPROVED:  | DEVELOPMENT REVIEW CHIEF |                      |                      |
| APPROVED:  | STORMWATER MANAGEMENT    |                      |                      |
| APPROVAL IS VALID FOR TWO (2) [ ONE YEAR IF THE COUNTY WATER AND SEWER IS INVOLVED ] YEARS AFTER LAST DATE SHOWN ABOVE. THE PROJECT MUST BE UNDER CONSTRUCTION BEFORE SAID DATE TO BE CONSIDERED ACTIVE. OTHERWISE, RESUBMITTAL OF PLANS MUST BE MADE TO DEVELOPMENT REVIEW FOR REAPPROVAL. REVIEW FEES NECESSARY FOR REAPPROVAL SHALL ACCOMPANY RESUBMITTAL. FEES CANNOT BE WAIVED. |                          |                      |                      |
| REV #  | DATE                     | REVISION DESCRIPTION | CONSULTANT DEV. RE # |
|  |                          |                      |                      |
|  |                          |                      |                      |
|  |                          |                      |                      |

| GEOMETRIC LEGEND |                  |
|------------------|------------------|
| -----            | EXISTING         |
| =====            | PROPOSED         |
| UTILITY LEGEND   |                  |
| SD               | STORM DRAIN      |
| G                | GAS MAIN         |
| W                | WATER MAIN       |
| S                | SEWER MAIN       |
| E                | ELECTRIC CABLES  |
| A                | AERIAL CABLES    |
| T                | TELEPHONE CABLES |
| F                | FIBER-OPTIC      |

**BAI** BRUDIS & ASSOCIATES, INC.  
CONSULTING ENGINEERS  
9220 RUNSEY ROAD, SUITE 110  
COLUMBIA, MARYLAND 21045  
(410)-884-3607

**APPROVALS**

*Markus P. ...* 2-1-06  
TEAM LEADER

*Markus P. ...* 2-1-06  
ASST. DIV. CHIEF

*Wanda ...* 2-1-06  
DIVISION CHIEF

*JAR* 3/1  
OFFICE DIRECTOR

FREDERICK COUNTY, MARYLAND  
DIVISION OF PUBLIC WORKS  
DEPARTMENT OF HIGHWAYS AND TRANSPORTATION  
OFFICE OF TRANSPORTATION ENGINEERING  
FREDERICK COUNTY, MARYLAND

**SPECTRUM DRIVE IMPROVEMENTS  
SPECTRUM AND LOWES LANE  
TRAFFIC SIGNAL PLANS**

DATE: 1/23/06 SCALE: 1" =

PROJECT NO: 14-9899-C28385 DWG. 52 OF 62