

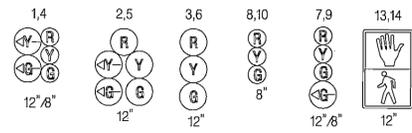
CONSTRUCTION DETAILS:

- (A) INSTALL 10' BREAKAWAY PEDESTAL POLE WITH BREAKAWAY COUPLING AND MODIFIED PEDESTRIAN FOUNDATION (MD STD 801.0) WITH 16" LED COUNTDOWN PEDESTRIAN SIGNAL HEAD, NEW AUDIBLE TACTILE PUSHBUTTON SYSTEM WITH VIBRATING ARROW, AND R10-3(1) SIGN TO READ "PUSH BUTTON TO CROSS EASTERN AVE". (NOTE: ONE 3" SCHEDULE 80 PVC 90 DEGREE ELBOW IN BASE)
- (B) INSTALL 4" SCHEDULE 80 PVC ELECTRICAL CONDUIT (TRENCHED).
- (C) INSTALL 3" SCHEDULE 80 PVC ELECTRICAL CONDUIT (TRENCHED).
- (D) INSTALL 4" SCHEDULE 80 PVC ELECTRICAL CONDUIT (SLOTTED).
- (E) EXTEND NEW CONDUIT INTO EXISTING HANDHOLE AND INSTALL COLLAR AROUND HANDHOLE.
- (F) VIDEO DETECTION ZONE.
- (G) INSTALL VIDEO DETECTION CAMERA.
- (H) REMOVE EXISTING PEDESTRIAN POLE, FOUNDATION AND ALL ASSOCIATED EQUIPMENT 12" BELOW GRADE AND BACKFILL.
- (I) REMOVE EXISTING PEDESTRIAN SIGNAL, PUSHBUTTON AND SIGN FROM EXISTING SIGNAL POLE.
- (J) ADJUST AND INSTALL COLLAR AROUND EXISTING HANDHOLE.
- (K) CAP AND ABANDON EXISTING CONDUIT/HANDHOLE.
- (L) DISCONNECT AND ABANDON EXISTING LOOP DETECTOR.
- (M) INSTALL 10' WIDE CROSSWALK WITH 12" PERMANENT PREFORMED THERMOPLASTIC PAVEMENT MARKINGS.
- (N) INSTALL 24" PERMANENT PREFORMED THERMOPLASTIC PAVEMENT MARKINGS FOR STOP LINE.
- (O) EXISTING PAVEMENT MARKINGS TO BE REMOVED DURING GRINDING OPERATION.
- (P) REPLACE EXISTING SIGNALS WITH NEW 12" BLACK FACED LED SIGNAL HEADS. EXTEND NEW WIRING THROUGH NEW CONDUIT TO EXISTING CONTROLLER CABINET.
- (Q) INSTALL 3" SCHEDULE 80 PVC ELECTRICAL CONDUIT (BORED).

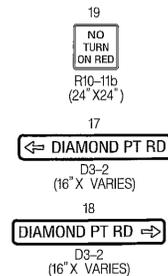
- (R) INSTALL HANDHOLE WITH LONG DIMENSION PERPENDICULAR TO THE ROADWAY TO FACILITATE THE INSTALLATION OF NON-INVASIVE LOOP DETECTORS.
- (S) INSTALL NON-INVASIVE MICRO-LOOP DETECTORS.
- (T) USE EXISTING CONDUIT.
- (U) USE EXISTING HANDHOLE.
- (V) EXISTING HANDHOLE TO BE REMOVED DURING EXCAVATION OF MEDIAN.
- (W) INSTALL 14" BREAKAWAY PEDESTAL POLE WITH T-BASE WITH 12" BLACK FACED LED SIGNAL HEAD. (NOTE: ONE 3" SCHEDULE 80 PVC 90 DEGREE ELBOW IN BASE)
- (X) INSTALL 14" BREAKAWAY PEDESTAL POLE WITH T-BASE WITH 12" BLACK FACED LED SIGNAL HEAD, 16" LED COUNTDOWN PEDESTRIAN SIGNAL HEAD, NEW AUDIBLE TACTILE PUSHBUTTON SYSTEM WITH VIBRATING ARROW, AND R10-3(1) SIGN TO READ "PUSH BUTTON TO CROSS EASTERN AVE". (NOTE: ONE 3" SCHEDULE 80 PVC 90 DEGREE ELBOW IN BASE)
- (Y) REPLACE EXISTING 4 CONDUCTOR RED GROUND WIRE WITH 6 CONDUCTOR BARE COPPER GROUND WIRE FROM CABINET TO SERVICE SOURCE.
- (Z) INSTALL GROUND ROD IN EXISTING HANDHOLE.
- (AA) INSTALL NEW HANDHOLE.
- (BB) INTERCEPT EXISTING CONDUIT. PULL BACK WIRING AND RE-ROUTE INTO NEW CONDUIT.
- (CC) SEE ROADWAY PLAN SHEET PS01 FOR SIDEWALK AND RAMP CONSTRUCTION RAMPS SHALL BE INSTALLED ACCORDING TO SHA STD. NO. MD 655.12 WITH BRICK PAVED DETECTABLE WARNING SURFACES.
- (DD) INSTALL OVERHEAD SIGN.
- (EE) INSTALL 3" CONDUIT BEND INTO EXISTING FOUNDATION AND CONNECT TO NEW CONDUIT.
- (FF) INSTALL SCHEDULE 80 PVC ELECTRICAL CONDUIT (TRENCHED). CONTRACTOR SHALL MATCH DIAMETER OF EXISTING LOOP DETECTOR LEAD-IN CONDUIT.

MD 150 IS ASSUMED TO RUN IN AN EAST-WEST DIRECTION.

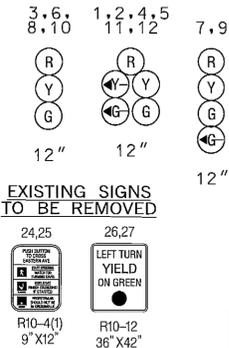
EXISTING SIGNALS TO BE REMOVED



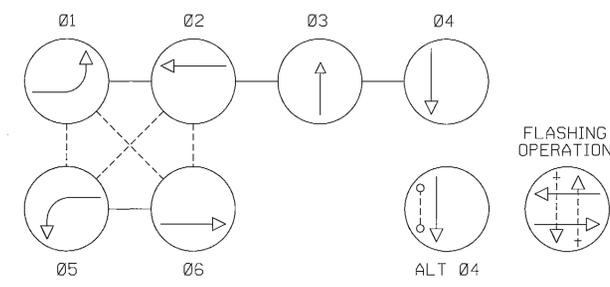
EXISTING SIGNALS TO REMAIN



PROPOSED SIGNALS

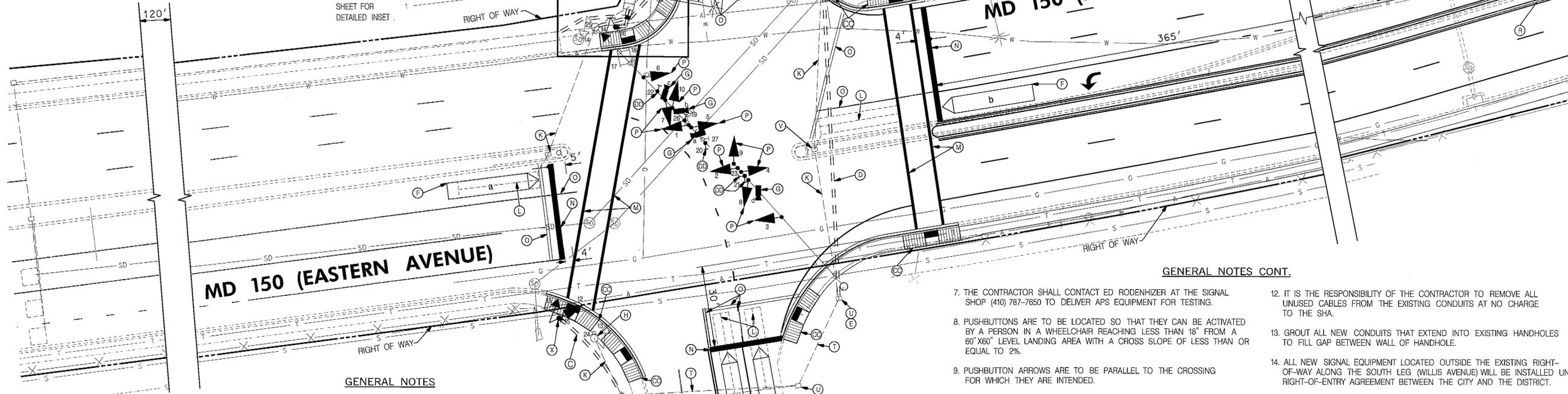
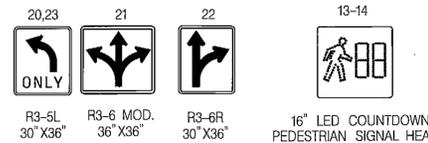


NEMA PHASING



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

PROPOSED SIGNS



GENERAL NOTES

1. THE CONTRACTOR SHALL VERIFY ALL PROPOSED POLE LOCATIONS PRIOR TO INSTALLATION.
2. ALL PAVEMENT MARKINGS SHALL BE INSTALLED IN ACCORDANCE WITH MSHA STANDARDS.
3. ALL EXISTING TRAFFIC SIGNAL EQUIPMENT REMOVED SHALL BECOME THE PROPERTY OF THE SIGNAL CONTRACTOR UPON COMPLETION OF THE NEW SIGNAL.
4. THE CONTRACTOR SHALL BE RESPONSIBLE FOR TERMINATING ALL SIGNAL CABLE TO THE APPROPRIATE TERMINALS AND PROPERLY LABEL EACH CABLE.
5. THE CONTRACTOR SHALL VERIFY ALL UNDERGROUND UTILITIES PRIOR TO INSTALLING PROPOSED SIGNAL EQUIPMENT. IF ANY UTILITY CONFLICTS SHOULD ARISE THE CONTRACTOR SHALL CONTACT THE PROJECT ENGINEER.
6. ALL TRAFFIC SIGNAL FOUNDATIONS SHALL BE INSTALLED AT THE FINAL SIDEWALK OR CURB GRADE FOR CLOSED SECTIONS, HIGHEST ROADWAY PROFILE GRADE FOR OPEN SECTIONS, TO MEET CLEARANCES AS SPECIFIED IN MD 816.03, MD 818.01, MD 818.02, MD 818.04. THE CONTRACTOR SHALL VERIFY ULTIMATE GRADES PRIOR TO THE INSTALLATION OF ALL SIGNAL EQUIPMENT.

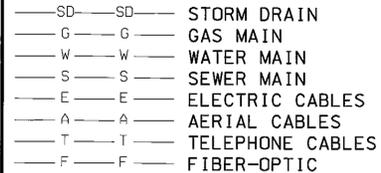
GENERAL NOTES CONT.

7. THE CONTRACTOR SHALL CONTACT ED RODENHIZER AT THE SIGNAL SHOP (410) 787-7850 TO DELIVER APS EQUIPMENT FOR TESTING.
8. PUSHBUTTONS ARE TO BE LOCATED SO THAT THEY CAN BE ACTIVATED BY A PERSON IN A WHEELCHAIR REACHING LESS THAN 18" FROM A 60" X 60" LEVEL LANDING AREA WITH A CROSS SLOPE OF LESS THAN OR EQUAL TO 2%.
9. PUSHBUTTON ARROWS ARE TO BE PARALLEL TO THE CROSSING FOR WHICH THEY ARE INTENDED.
10. LOCATION OF THE ACCESSIBLE PEDESTRIAN SIGNAL PUSHBUTTONS MUST MEET LOCATION REQUIREMENTS OF MUTCD SEC. 4E.09 AND FIG. 4E.2 AND NCHRP PUBLICATION, "ACCESSIBLE PEDESTRIAN SIGNALS: GUIDE TO BEST PRACTICE". IF NOT MET, THE CONTRACTOR IS TO STOP WORK ON PUSHBUTTON LOCATIONS UNTIL A DESIGN WAIVER IS OBTAINED, APPROVED BY THE DIRECTOR, OFFICE OF TRAFFIC AND SAFETY.
11. THE 10 FT. SEPARATION BETWEEN PUSHBUTTONS IS TO BE MEASURED FROM FACE OF PUSHBUTTON TO FACE OF PUSHBUTTON, NOT CENTER TO CENTER OF THE POLE.
12. IT IS THE RESPONSIBILITY OF THE CONTRACTOR TO REMOVE ALL UNUSED CABLES FROM THE EXISTING CONDUITS AT NO CHARGE TO THE SHA.
13. GROUT ALL NEW CONDUITS THAT EXTEND INTO EXISTING HANDHOLES TO FILL GAP BETWEEN WALL OF HANDHOLE.
14. ALL NEW SIGNAL EQUIPMENT LOCATED OUTSIDE THE EXISTING RIGHT-OF-WAY ALONG THE SOUTH LEG (WILLIS AVENUE) WILL BE INSTALLED UNDER RIGHT-OF-ENTRY AGREEMENT BETWEEN THE CITY AND THE DISTRICT.
15. SHA SIGNAL SHOP SHALL BE RESPONSIBLE FOR INSTALLING THE VIDEO INTERFACE EQUIPMENT. THE CONTRACTOR SHALL NOTIFY ED RODENHIZER FOR THIS INSTALLATION.

GEOMETRIC LEGEND



UTILITY LEGEND



REVISION F CONSULTANT

WALLACE MONTGOMERY & ASSOCIATES, LLP

CIVIL AND STRUCTURAL ENGINEERS

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APPROVALS

TEAM LEADER

ASST. DIV. CHIEF

DIVISION CHIEF

OFFICE DIRECTOR

REVISIONS

SHA NO. BA6645176
INSTALL APSCPS & VIDEO DETECTION, REPLACE SIGNALS 01-2009

MJA 1/24/09

RECONSTRUCTION, PHASE CHANGE ADD PEDESTRIAN MOVEMENT 05-1997

RELOC LOOP DETECTOR ON DIAMOND POINT RD CONT. NO. 3-2-647 12-16-91

MAR DJD DAZ ETP TH

STATE OF MARYLAND
DEPARTMENT OF TRANSPORTATION
STATE HIGHWAY ADMINISTRATION

OFFICE OF TRAFFIC & SAFETY
TRAFFIC ENGINEERING DESIGN DIVISION

MD 150 (EASTERN AVENUE) AND DIAMOND POINT ROAD/WILLIS AVENUE
ESSEX, MD

TRAFFIC SIGNAL PLAN

SCALE 1" = 20' DATE 10-5-73 CONTRACT NO.

DESIGNED BY J. GORDON COUNTY BALTIMORE

DRAWN BY J. GORDON LOGMILE 03015002.09

CHECKED BY T.I.M.S. NO. 1439

F.A.P. NO. TOD NO.

DRAWING NO. TS-1083F SG-01 OF 02 SHEET NO. 19 OF 23