MD 147 IS ASSUMED TO RUN IN
A NORTH-SOUTH DIRECTION.

CONSTRUCTION DETAILS

A. INSTALL OVERHEAD VIDEO DETECTION CAMERA ON EXISTING MAST ARM AS SHOWN.

B. REMOVE EXISTING PUSHBUTTON AND PEDESTRIAN EDUCATION SIGN. INSTALL APS STATION AND PEDESTRIAN EDUCATION SIGN (MOD). REMOVE EXISTING PEDESTRIAN SIGNAL HEAD AND INSTALL LED COUNTDOWN PEDESTRIAN SIGNAL HEAD.

C. USE EXISTING CONDUIT

D. USE EXISTING HANDHOLE.

E. DISCONNECT AND ABANDON EXISTING LOOP DETECTOR. REMOVE LOOP DETECTOR CABLES FROM CONDUITS, HANDHOLES, SIGNAL STRUCTURES AND CONTROLLER.

F. REMOVE EXISTING PUSHBUTTON, PEDESTRIAN EDUCATION SIGN, AND PEDESTRIAN SIGNAL HEADS FROM EXISTING SIGNAL POLE.

G. INSTALL MICROLOOP PROBE WITH 500' LEAD-IN TO CABINET.

J. INSTALL 3" PVC SCHEDULE 80 CONDUIT - TRENCHED (TRENCH PRIOR TO FINAL SIDEWALK POUR).

K. INSTALL 3" PVC SCHEDULE 80 CONDUIT - SLOTTED.

L. INSTALL 4" PVC SCHEDULE 80 CONDUIT - SLOTTED.

M. INSTALL HANDHOLE PRIOR TO FINAL SIDEWALK POUR.

N. REMOVE EXISTING HANDHOLE, CAP AND ABANDON EXISTING CONDUIT.

O. REMOVE EXISTING CONDUIT.

P. REMOVE EXISTING PEDESTRIAN SIGNAL AND PUSHBUTTON. INSTALL LED COUNTDOWN PEDESTRIAN SIGNAL.

EXISTING SIGNALS TO REMAIN

1-8

R Y G

EXISTING SIGNS

14

Emerald RD

Emerald RD

D-3(1) (DUAL FACED)
16" X VARIABLE

15

Woodside AVE

Woodside AVE

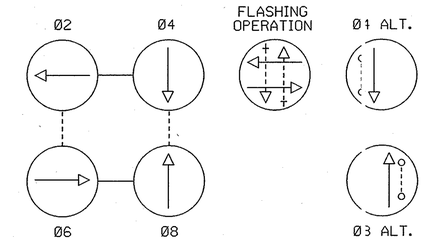
D-3(1) (DUAL FACED)
16" X VARIABLE

16a,16b

Harford RD

D-3(1) (DUAL FACED)
16" X VARIABLE

NEMA PHASING



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

EXISTING EQUIPMENT

A

VIDEO DETECTION CAMERA

VIDEO CAMERA DETECTION ZONE

PROPOSED EQUIPMENT

B

VIDEO DETECTION CAMERA

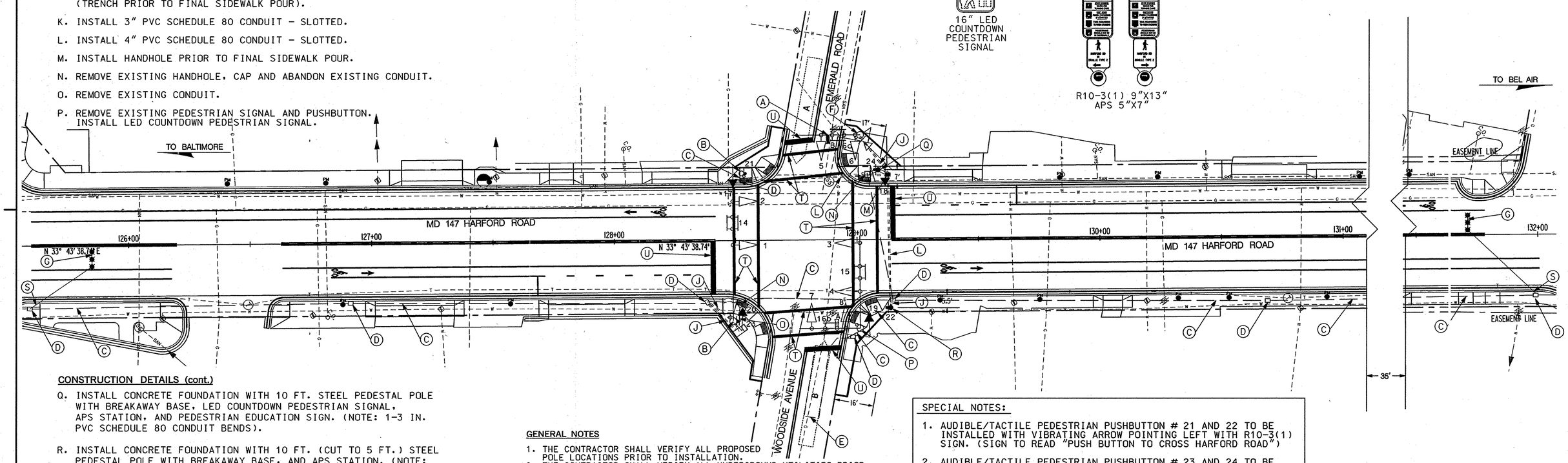
VIDEO CAMERA DETECTION ZONE

17-20

16" LED COUNTDOWN PEDESTRIAN SIGNAL

21,22 23,24

R10-3(1) 9"X13"
APS 5"X7"



CONSTRUCTION DETAILS (cont.)

Q. INSTALL CONCRETE FOUNDATION WITH 10 FT. STEEL PEDESTAL POLE WITH BREAKAWAY BASE, LED COUNTDOWN PEDESTRIAN SIGNAL, APS STATION, AND PEDESTRIAN EDUCATION SIGN. (NOTE: 1-3 IN. PVC SCHEDULE 80 CONDUIT BENDS).

R. INSTALL CONCRETE FOUNDATION WITH 10 FT. (CUT TO 5 FT.) STEEL PEDESTAL POLE WITH BREAKAWAY BASE, AND APS STATION. (NOTE: 1-3 IN. PVC SCHEDULE 80 CONDUIT BENDS).

S. INSTALL 1" LIQUID-TIGHT FLEXIBLE NON-METALLIC ELECTRICAL CONDUIT. (FOR DETECTOR WIRE SLEEVE).

T. 12" HEAT APPLIED WHITE PERMANENT PREFORMED THERMOPLASTIC PAVEMENT MARKINGS.

U. 24" HEAT APPLIED WHITE PERMANENT PREFORMED THERMOPLASTIC PAVEMENT MARKINGS.

GENERAL NOTES

1. THE CONTRACTOR SHALL VERIFY ALL PROPOSED POLE LOCATIONS PRIOR TO INSTALLATION.
2. THE CONTRACTOR SHALL VERIFY ALL UNDERGROUND UTILITIES PRIOR TO INSTALLING PROPOSED SIGNAL EQUIPMENT. IF ANY UTILITIY CONFLICTS SHOULD ARISE THE CONTRACTOR SHALL CONTACT THE PROJECT ENGINEER.
3. 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.
4. VIDEO CAMERA LOCATION / ALIGNING SHALL BE COORDINATED WITH THE SHA ENGINEER.
5. ALL UNUSED SIGNAL CABLES SHALL BE REMOVED AND DISPOSED.
6. THE TACTILE ARROW FOR THE AUDIBLE PEDESTRIAN SIGNAL PUSHBUTTONS SHALL BE LOCATED PARALLEL TO THE CROSSWALK FOR WHICH THEY APPLY.
7. THE CONTRACTOR IS RESPONSIBLE FOR MAINTAINING SIGNAL OPERATION DURING THE COMPLETE CONSTRUCTION PERIOD.
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. THE 10' SEPARATION BETWEEN PUSHBUTTONS IS TO BE MEASURED FROM FACE OF PUSHBUTTON TO FACE OF PUSHBUTTON, NOT CENTER TO CENTER OF POLE.
10. PUSHBUTTON ARROWS ARE TO BE PARALLEL TO THE CROSSING FOR WHICH THEY ARE INTENDED.
11. LOCATION OF ACCESSIBLE PEDESTRIAN SIGNAL PUSHBUTTONS MUST MEET LOCATION REQUIREMENTS OF MUTCD SEC. 4E.09 AND FIG. 4E-2 AND THE 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.

SPECIAL NOTES:

1. AUDIBLE/TACTILE PEDESTRIAN PUSHBUTTON # 21 AND 22 TO BE INSTALLED WITH VIBRATING ARROW POINTING LEFT WITH R10-3(1) SIGN. (SIGN TO READ "PUSH BUTTON TO CROSS HARFORD ROAD")

2. AUDIBLE/TACTILE PEDESTRIAN PUSHBUTTON # 23 AND 24 TO BE INSTALLED WITH VIBRATING ARROW POINTING RIGHT WITH R10-3(1) SIGN. (SIGN TO READ "PUSH BUTTON TO CROSS HARFORD ROAD")

UTILITY LEGEND

—SD—SD—	STORM DRAIN
—G—G—	GAS MAIN
—W—W—	WATER MAIN
—S—S—	SEWER MAIN
—E—E—	ELECTRIC CABLES
—A—A—	AERIAL CABLES
—T—T—	TELEPHONE CABLES
—F—F—	FIBER-OPTIC

T3 design

T3 DESIGN, P.C.
3927 OLD LEE HWY
SUITE 101-C
FAIRFAX, VA 22030
PHONE: 703-359-5861
www.t3design.us

BY: sbloss

APPROVALS

TEAM LEADER

ASST. DIV. CHIEF

DIVISION CHIEF

OFFICE DIRECTOR

ORIGINAL ON FILE

REVISIONS

SHA NO. BA6835184 ADDENDUM NUMBER 5
12/12/06

JRL	AJM	PAT	
SHA #: BA445A52/B52/M52			
DD	DGZ	BK	DA

PLOTTED: 08-06-2008
FILE: n:\31555-160\cadd\t3_modification\pSG-P005_mt147.dgn

SHA

STATE OF MARYLAND
DEPARTMENT OF TRANSPORTATION
STATE HIGHWAY ADMINISTRATION

OFFICE OF TRAFFIC & SAFETY
TRAFFIC ENGINEERING DESIGN DIVISION

MD 147 HARFORD ROAD AND

EMERALD ROAD /WOODSIDE AVENUE

TRAFFIC SIGNAL PLAN

SCALE 1" = 20' DATE 6/26/03 CONTRACT NO. AT3575185

DESIGNED BY
DRAWN BY M.A. MEARS
CHECKED BY R. MILSTEAD
F.A.P. NO.

COUNTY BALTIMORE
LOGMILE 03014700.59
T.I.M.S. NO. F490
TOD NO.

DRAWING NO. SG - 2.5 OF 2.12

SHEET NO. 239 OF 291