MD 193 IS ASSUMED TO RUN IN AN EAST-WEST DIRECTION

PROPOSED LED SIGNALS

1,2 5,6 — 12"
3,4,7 8,11,14 — 12"
9,12 — 8"/12"
10,13 — 12"
15,16,17,18 19,20,21,22 — 16" COUNTDOWN

RELOCATED VIDEO DETECTION CAMERA

a,b,c,d

EXISTING VIDEO DETECTION CAMERA TO BE RELOCATED

aa,bb,cc,dd

PROPOSED ACCESSIBLE PUSHBUTTON AND SIGN

R10-3(1) (9"x15") — 26,31
R10-3(1) (9"x15") — 28,32
R10-3(1) (9"x15") — 33,38
R10-3(1) (9"x15") — 35,40

PROPOSED SIGNS

23,27 — Piney Branch Rd. <8800

23a,27a — Piney Branch Rd. 8800>

D-3(1) (DUAL FACED) (VARx16")

34,39 — University Blvd. E. 700>

34a,39a — University Blvd. E. <700

D-3(1) (DUAL FACED) (VARx16")

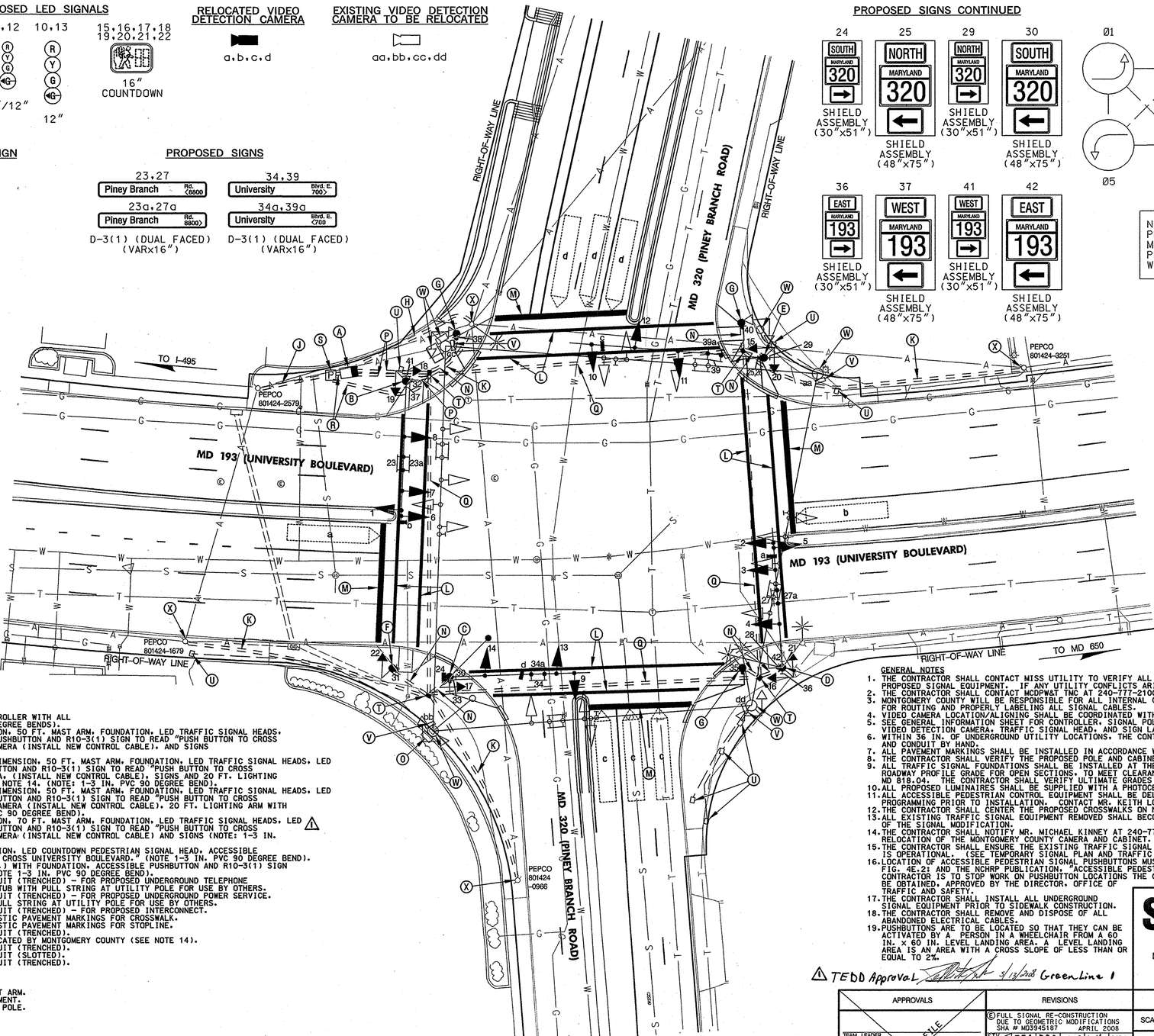
PROPOSED SIGNS CONTINUED

24 — SOUTH MARYLAND 320 — SHIELD ASSEMBLY (30"x51")
25 — NORTH MARYLAND 320 — SHIELD ASSEMBLY (48"x75")
29 — NORTH MARYLAND 320 — SHIELD ASSEMBLY (30"x51")
30 — SOUTH MARYLAND 320 — SHIELD ASSEMBLY (48"x75")
36 — EAST MARYLAND 193 — SHIELD ASSEMBLY (30"x51")
37 — WEST MARYLAND 193 — SHIELD ASSEMBLY (48"x75")
41 — WEST MARYLAND 193 — SHIELD ASSEMBLY (30"x51")
42 — EAST MARYLAND 193 — SHIELD ASSEMBLY (48"x75")

NEMA PHASING

Ø1 Ø2 Ø3 Ø4 Ø5 Ø6 Ø3 ALT. Ø4 ALT. FLASHING OPERATION

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



CONSTRUCTION DETAILS

A. INSTALL NEMA SIZE "6" BASE MOUNTED CABINET AND CONTROLLER WITH ALL NECESSARY EQUIPMENT (NOTE: 2-2 IN. AND 2-4 IN. 90 DEGREE BENDS).
B. INSTALL 27 FT. STEEL POLE WITH A 15 FT. "T" DIMENSION, 50 FT. MAST ARM, FOUNDATION, LED TRAFFIC SIGNAL HEADS, LED COUNTDOWN PEDESTRIAN SIGNAL HEADS, ACCESSIBLE PUSHBUTTON AND R10-3(1) SIGN TO READ "PUSH BUTTON TO CROSS UNIVERSITY BOULEVARD", RELOCATED VIDEO DETECTION CAMERA (INSTALL NEW CONTROL CABLE), AND SIGNS (NOTE: 1-3 IN. PVC 90 DEGREE BEND).
C. INSTALL 27 FT. STEEL POLE WITH A 15 FT. LOWER "T" DIMENSION, 50 FT. MAST ARM, FOUNDATION, LED TRAFFIC SIGNAL HEADS, LED COUNTDOWN PEDESTRIAN SIGNAL HEAD, ACCESSIBLE PUSHBUTTON AND R10-3(1) SIGN TO READ "PUSH BUTTON TO CROSS PINEY BRANCH ROAD", RELOCATED VIDEO DETECTION CAMERA, (INSTALL NEW CONTROL CABLE), SIGNS AND 20 FT. LIGHTING ARM FOR MONTGOMERY COUNTY SURVEILLANCE CAMERA - SEE NOTE 14. (NOTE: 1-3 IN. PVC 90 DEGREE BEND).
D. INSTALL 27 FT. STEEL POLE WITH A 15 FT. LOWER "T" DIMENSION, 50 FT. MAST ARM, FOUNDATION, LED TRAFFIC SIGNAL HEADS, LED COUNTDOWN PEDESTRIAN SIGNAL HEADS, ACCESSIBLE PUSHBUTTON AND R10-3(1) SIGN TO READ "PUSH BUTTON TO CROSS "UNIVERSITY BOULEVARD", RELOCATED VIDEO DETECTION CAMERA (INSTALL NEW CONTROL CABLE), 20 FT. LIGHTING ARM WITH 250 WATT HPS LUMINAIRE AND SIGNS. (NOTE: 1-3 IN. PVC 90 DEGREE BEND).
E. INSTALL 27 FT. STEEL POLE WITH A 15 FT. "T" DIMENSION, 70 FT. MAST ARM, FOUNDATION, LED TRAFFIC SIGNAL HEADS, LED COUNTDOWN PEDESTRIAN SIGNAL HEADS, ACCESSIBLE PUSHBUTTON AND R10-3(1) SIGN TO READ "PUSH BUTTON TO CROSS UNIVERSITY BOULEVARD", RELOCATED VIDEO DETECTION CAMERA (INSTALL NEW CONTROL CABLE) AND SIGNS (NOTE: 1-3 IN. PVC 90 DEGREE BEND). △1
F. INSTALL 10 FT. BREAKAWAY PEDESTAL POLE WITH FOUNDATION, LED COUNTDOWN PEDESTRIAN SIGNAL HEAD, ACCESSIBLE PUSHBUTTON AND R10-3(1) SIGN TO READ "PUSHBUTTON TO CROSS UNIVERSITY BOULEVARD." (NOTE 1-3 IN. PVC 90 DEGREE BEND).
G. INSTALL 10 FT. BREAKAWAY PEDESTAL POLE (CUT TO 5 FT.) WITH FOUNDATION, ACCESSIBLE PUSHBUTTON AND R10-3(1) SIGN TO READ "PUSHBUTTON TO CROSS PINEY BRANCH ROAD." (NOTE 1-3 IN. PVC 90 DEGREE BEND).
H. INSTALL 2 IN. SCHEDULE 80 RIGID PVC ELECTRICAL CONDUIT (TRENCHED) - FOR PROPOSED UNDERGROUND TELEPHONE SERVICE. CAP AND MARK CONDUIT, AND LEAVE A 1 FT. STUB WITH PULL STRING AT UTILITY POLE FOR USE BY OTHERS.
J. INSTALL 3 IN. SCHEDULE 80 RIGID PVC ELECTRICAL CONDUIT (TRENCHED) - FOR PROPOSED UNDERGROUND POWER SERVICE. CAP AND MARK CONDUIT, AND LEAVE A 1 FT. STUB WITH PULL STRING AT UTILITY POLE FOR USE BY OTHERS.
K. INSTALL 3 IN. SCHEDULE 80 RIGID PVC ELECTRICAL CONDUIT (TRENCHED) - FOR PROPOSED INTERCONNECT.
L. INSTALL 12 IN. WHITE LEAD FREE REFLECTIVE THERMOPLASTIC PAVEMENT MARKINGS FOR CROSSWALK.
M. INSTALL 24 IN. WHITE LEAD FREE REFLECTIVE THERMOPLASTIC PAVEMENT MARKINGS FOR STOPLINE.
N. INSTALL 3 IN. SCHEDULE 80 RIGID PVC ELECTRICAL CONDUIT (TRENCHED).
O. EXISTING SURVEILLANCE CAMERA AND CABINET TO BE RELOCATED BY MONTGOMERY COUNTY (SEE NOTE 14).
P. INSTALL 4 IN. SCHEDULE 80 RIGID PVC ELECTRICAL CONDUIT (TRENCHED).
Q. INSTALL 4 IN. SCHEDULE 80 RIGID PVC ELECTRICAL CONDUIT (SLOTTED).
R. INSTALL 2 IN. SCHEDULE 80 RIGID PVC ELECTRICAL CONDUIT (TRENCHED).
S. INSTALL METERED SERVICE PEDESTAL.
T. INSTALL ELECTRICAL HANDHOLE.
U. REMOVE EXISTING ELECTRICAL HANDHOLE.
V. RELOCATE EXISTING VIDEO DETECTION CAMERA TO NEW MAST ARM.
W. REMOVE AND DISPOSE OF EXISTING TRAFFIC SIGNAL EQUIPMENT.
X. INSTALL 3 IN. PVC CONDUIT RISER ON EXISTING UTILITY POLE.

GENERAL NOTES

1. THE CONTRACTOR SHALL CONTACT MISS UTILITY TO VERIFY ALL UNDERGROUND UTILITIES PRIOR TO THE INSTALLATION OF PROPOSED SIGNAL EQUIPMENT. IF ANY UTILITY CONFLICTS ARISE THE CONTRACTOR SHALL CONTACT THE PROJECT ENGINEER.
2. THE CONTRACTOR SHALL CONTACT MCDPWAT TMC AT 240-777-2100, 72 HOURS PRIOR TO MARK UNDERGROUND SIGNAL EQUIPMENT.
3. MONTGOMERY COUNTY WILL BE RESPONSIBLE FOR ALL INTERNAL CABINET WIRING. THE CONTRACTOR SHALL BE RESPONSIBLE FOR ROUTING AND PROPERLY LABELING ALL SIGNAL CABLES.
4. VIDEO CAMERA LOCATION/ALIGNING SHALL BE COORDINATED WITH THE SHA ENGINEER.
5. SEE GENERAL INFORMATION SHEET FOR CONTROLLER, SIGNAL POLE, APS ASSOCIATED SIGNAL HEADS AND PUSHBUTTONS, VIDEO DETECTION CAMERA, TRAFFIC SIGNAL HEAD, AND SIGN LAYOUTS.
6. WITHIN 36 IN. OF UNDERGROUND UTILITY LOCATIONS, THE CONTRACTOR SHALL BE REQUIRED TO EXCAVATE FOR FOUNDATION AND CONDUIT BY HAND.
7. ALL PAVEMENT MARKINGS SHALL BE INSTALLED IN ACCORDANCE WITH MDSHA STANDARDS.
8. THE CONTRACTOR SHALL VERIFY THE PROPOSED POLE AND CABINET LOCATIONS PRIOR TO INSTALLATION.
9. 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.
10. ALL PROPOSED LUMINAIRES SHALL BE SUPPLIED WITH A PHOTOCELL.
11. ALL ACCESSIBLE PEDESTRIAN CONTROL EQUIPMENT SHALL BE DELIVERED TO MONTGOMERY COUNTY FOR TESTING AND PROGRAMMING PRIOR TO INSTALLATION. CONTACT MR. KEITH LORD TO COORDINATE AT 301-279-1291.
12. THE CONTRACTOR SHALL CENTER THE PROPOSED CROSSWALKS ON NEWLY CONSTRUCTED RAMPS.
13. ALL EXISTING TRAFFIC SIGNAL EQUIPMENT REMOVED SHALL BECOME THE PROPERTY OF THE SIGNAL CONTRACTOR UPON COMPLETION OF THE SIGNAL MODIFICATION.
14. THE CONTRACTOR SHALL NOTIFY MR. MICHAEL KINNEY AT 240-777-8760 TWO WEEKS PRIOR TO CONSTRUCTION FOR THE RELOCATION OF THE MONTGOMERY COUNTY CAMERA AND CABINET.
15. THE CONTRACTOR SHALL ENSURE THE EXISTING TRAFFIC SIGNAL REMAINS OPERATIONAL UNTIL RECONSTRUCTED TRAFFIC SIGNAL IS OPERATIONAL. (SEE TEMPORARY SIGNAL PLAN AND TRAFFIC CONTROL PLANS FOR DETAILS ON MAINTENANCE OF TRAFFIC.)
16. 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 THE CONFLICT HAS BEEN RESOLVED. IF NEEDED, A DESIGN WAIVER SHALL BE OBTAINED, APPROVED BY THE DIRECTOR, OFFICE OF TRAFFIC AND SAFETY.
17. THE CONTRACTOR SHALL INSTALL ALL UNDERGROUND SIGNAL EQUIPMENT PRIOR TO SIDEWALK CONSTRUCTION.
18. THE CONTRACTOR SHALL REMOVE AND DISPOSE OF ALL ABANDONED ELECTRICAL CABLES.
19. PUSHBUTTONS ARE TO BE LOCATED SO THAT THEY CAN BE ACTIVATED BY A PERSON IN A WHEELCHAIR FROM A 60 IN. x 60 IN. LEVEL LANDING AREA. A LEVEL LANDING AREA IS AN AREA WITH A CROSS SLOPE OF LESS THAN OR EQUAL TO 2%.

△1 TEDD Approval 3/13/2008 Greenline 1

GENERAL NOTES CONTINUED

20. PUSHBUTTONS ARE TO BE LOCATED SO THAT A PEDESTRIAN IN A WHEELCHAIR LOCATED ON THE LEVEL LANDING AREA DOES NOT HAVE TO REACH MORE THAN 18 IN.
21. THE 10 FT. MINIMUM SEPARATION BETWEEN PUSHBUTTONS IS TO BE MEASURED FROM FACE OF PUSHBUTTON TO FACE OF PUSHBUTTON, NOT CENTER OF POLE TO CENTER OF POLE.
22. PUSHBUTTON ARROWS SHOULD BE TURNED PARALLEL TO THE CROSSWALK FOR WHICH THEY ARE INTENDED.

UTILITY LEGEND

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

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7125 Ambassador Road Baltimore, MD 21244-2722 (410) 944-9112

BY: sharpsb

APPROVALS: TEAM LEADER — ORIGINAL ON FILE; ASST. DIV. CHIEF; DIVISION CHIEF; OFFICE DIRECTOR

REVISIONS
6 FULL SIGNAL RE-CONSTRUCTION DUE TO GEOMETRIC MODIFICATIONS SHA # M03945187 APRIL 2008 — STV SAS FJA DBD MAR WH TH
D TEMPORARY SIGNAL TO SUPPORT MOT DUE TO GEOMETRIC MODIFICATIONS SHA # M03945187 4/2007 — STV SAS
C 2/2005 REPLACE LOOP DETECTION WITH VIDEO CAMERAS — BRD JDH BRK

SHA
STATE OF MARYLAND
DEPARTMENT OF TRANSPORTATION
STATE HIGHWAY ADMINISTRATION
OFFICE OF TRAFFIC & SAFETY
TRAFFIC ENGINEERING DESIGN DIVISION

MD 193 (UNIVERSITY BOULEVARD) AT MD 320 (PINEY BRANCH ROAD)

SIGNALIZATION PLAN SHEET

SCALE 1" = 20' ADVERTISED DATE 100697 CONTRACT NO. MO717545B54

DESIGNED BY W. MALCOLM — COUNTY MONTGOMERY
DRAWN BY — LOGMILE 15019306.15
CHECKED BY — TIMS NO. H325
F.A.P. NO. SEE TITLE SHEET — TOD NO. MO717-09

TS NO. 3661E | DRAWING - OF | SHEET NO. 15 OF 21

PLOTTED: Thursday, May 08, 2008 AT 08:35 AM
FILE: E:\PROJECTS\0312513\0312513_0004\Drawings_TRA\Traffic\Ultimate Signal\pSG-P001_m193.dgn