MD 97 IS ASSUMED TO RUN IN A NORTH-SOUTH DIRECTION

EXISTING SIGNS TO BE REMOVED

22,24 — LEFT TURN YIELD ON GREEN — R-10(12) (30"x36")
31 — R3-4 (30"x30")
33,34 — R4-7 (24"x30")

PROPOSED SIGNS

38, 39, 40, 41 — PUSH BUTTON TO CROSS SPARTAN RD / MORNINGWOOD DR — START CROSSING Watch For Turning Vehicles; DON'T START Finish Crossing If Started; TIME REMAINING To Finish Crossing; PEDESTRIANS SHOULD NOT BE IN CROSSWALK; STREET NAME IN BRAILLE TYPE 2 — R10-3(1) 9" x 15"

42,44, 43,45 — PUSH BUTTON TO CROSS GEORGIA AVE — START CROSSING Watch For Turning Vehicles; DON'T START Finish Crossing If Started; TIME REMAINING To Finish Crossing; PEDESTRIANS SHOULD NOT BE IN CROSSWALK; STREET NAME IN BRAILLE TYPE 2 — R10-3(1) 9" x 15"

46 — OM1-3 18" x 18" FL/Y

47 — R4-7 (24"x30") ROTATE AT 15°

48 — R3-4 (30"x30")

EXISTING SIGNS

21a Morningwood DR <3400
21b Morningwood DR 3400>
D-3(1) (VAR.x16")

23a Spartan RD <3400
23b Spartan RD 3400>
D-3(1) (VAR.x16")

25,26 — R3-5(L) (30"x36")
27 — R3-6(R) (30"x36")
28 — R3-6(L) (30"x36")

29 — NORTH MARYLAND 97 SOUTH — M1-5(3) (78"x24")
30 — R3-5(R) (30"x36")
32 — JCT MARYLAND 108 — M2-1 (15"x21") M1-5 (30"x24")
33,34 — R4-7 (24"x30")
35 — SOUTH MARYLAND 97 — M1-5(6) (24"x48")
36 — R3-8 (MOD.) (30"x30")
37 — NORTH MARYLAND 97 — M1-5(6) (24"x48") R7-1(1) (12"x18")
49,51 — Georgia Av — D-3(1) (VAR.X8")
52 — Spartan Rd — D-3(1) (VAR.x8")
50 — Morningwood Dr — D-3(1) (VAR.x8")

PROPOSED LED SIGNALS

1,2 4,5 — 12"
3,6 9,12 — 12"
7,8 10,11 — 12"

PROPOSED SIGNALS

13-20 — 16" LED COUNTDOWN PEDESTRIAN SIGNAL

EXISTING SIGNALS TO BE MODIFIED

1A,2A 4A,5A — 12"
3A,6A 9A,12A — 12"
7A,8A 10A,11A — 12"

EXISTING SIGNALS TO BE REMOVED

13A-20A — 12"

EXISTING VIDEO DETECTION CAMERA TO BE REMOVED

a,b

PROPOSED VIDEO DETECTION

c,d,e,f — VIDEO DETECTION ZONE

NEMA PHASING

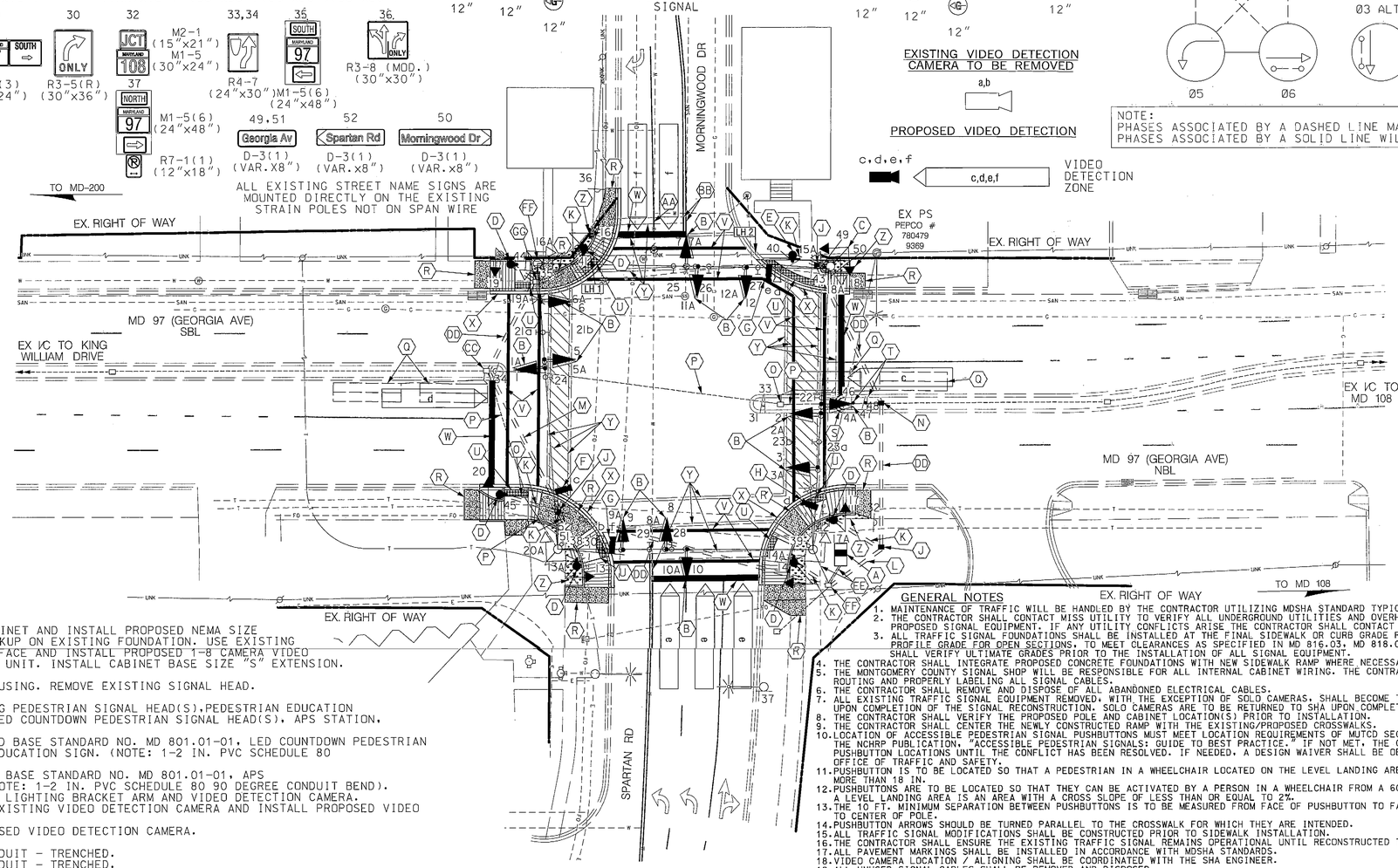
Ø1 Ø2 Ø3 Ø4 Ø5 Ø6 Ø3 ALT. Ø4 ALT.

FLASHING OPERATION

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

LINE HEIGHTS (LH) 1	
COMM. CABLES	- 19'-0"
COMM. CABLES	- 19'-5"
COMM. CABLES	- 20'-9.5"
COMM. CABLES	- 22'-3.5"
COMM. CABLES	- 23'-10.5"
SECONDARY	- 27'-0"
PRIMARY	- 30' +

LINE HEIGHTS (LH) 2	
COMM. CABLES	- 16'-8"
COMM. CABLES	- 16'-11"
COMM. CABLES	- 18'-3.5"
COMM. CABLES	- 19'-6"
COMM. CABLES	- 23'-0"
SECONDARY	- 25'-9"
PRIMARY	- 30' +



CONSTRUCTION DETAILS

A. REMOVE EXISTING SIZE "6" BASE MOUNTED CABINET AND INSTALL PROPOSED NEMA SIZE "S" BASE MOUNTED CABINET WITH BATTERY BACKUP ON EXISTING FOUNDATION. USE EXISTING POWER SOURCE. REMOVE EXISTING VIDEO INTERFACE AND INSTALL PROPOSED 1-8 CAMERA VIDEO INTERFACE. INSTALL 2-WIRE CENTRAL CONTROL UNIT. INSTALL CABINET BASE SIZE "S" EXTENSION. INSTALL UPS EQUIPMENT FOR "S" CABINET.
B. USE EXISTING SPAN WIRE AND SIGNAL HEAD HOUSING. REMOVE EXISTING SIGNAL HEAD. INSTALL PROPOSED 12" LED SIGNAL HEAD.
C. USE EXISTING STRAIN POLE. REMOVE EXISTING PEDESTRIAN SIGNAL HEAD(S),PEDESTRIAN EDUCATION SIGN, AND PUSHBUTTON. INSTALL PROPOSED LED COUNTDOWN PEDESTRIAN SIGNAL HEAD(S), APS STATION, AND PEDESTRIAN EDUCATION SIGN.
D. INSTALL 10 FT. PEDESTAL POLE WITH MODIFIED BASE STANDARD NO. MD 801.01-01, LED COUNTDOWN PEDESTRIAN SIGNAL HEAD, APS STATION AND PEDESTRIAN EDUCATION SIGN. (NOTE: 1-2 IN. PVC SCHEDULE 80 CONDUIT BEND).
E. INSTALL 5 FT. PEDESTAL POLE WITH MODIFIED BASE STANDARD NO. MD 801.01-01, APS STATION AND PEDESTRIAN EDUCATION SIGN. (NOTE: 1-2 IN. PVC SCHEDULE 80 90 DEGREE CONDUIT BEND).
F. USE EXISTING STRAIN POLE. INSTALL 20 FT. LIGHTING BRACKET ARM AND VIDEO DETECTION CAMERA.
G. USE EXISTING VIDEO BRACKET ARM. REMOVE EXISTING VIDEO DETECTION CAMERA AND INSTALL PROPOSED VIDEO DETECTION CAMERA.
H. USE EXISTING LUMINAIRE ARM. INSTALL PROPOSED VIDEO DETECTION CAMERA.
J. INSTALL HANDHOLE.
K. INSTALL 2" PVC SCHEDULE 80 ELECTRICAL CONDUIT - TRENCHED.
L. INSTALL 3" PVC SCHEDULE 80 ELECTRICAL CONDUIT - TRENCHED.
M. INSTALL 4" PVC SCHEDULE 80 ELECTRICAL CONDUIT - BORED.
N. INSTALL HANDHOLE. INTERCEPT EXISTING CONDUIT. PULL BACK AND RE-ROUTE EXISTING INTERCONNECT CABLE THROUGH PROPOSED CONDUIT TO PROPOSED CABINET.
O. REMOVE EXISTING HANDHOLE.
P. REMOVE EXISTING CABLE AND CAP AND ABANDON EXISTING CONDUIT.
Q. ABANDON EXISTING LOOP DETECTOR.
R. REMOVE EXISTING SIDEWALK AND CONSTRUCT NEW 5 IN. CONCRETE SIDEWALK.
S. PULL BACK EXISTING MEDIAN NOSE FOR PROPOSED CROSSWALK. PROPOSED MEDIAN NOSE SHALL BE INSTALLED AS PER MD STD. 645.01. BACK FILL AND RE-PAVE VACATED AREA. (SEE DIMENSION DETAIL SHEET)
T. INSTALL PROPOSED GROUND MOUNTED SIGN ON A 4"X4" BREAKAWAY WOOD SUPPORT.
U. REMOVE EXISTING SIDEWALK RAMP AND CONSTRUCT NEW SIDEWALK RAMP PER MD STD. 655.12 WITH DETECTABLE WARNING SURFACE PER MD STD. 655.40. AND TYPE A. BACKER CURB. (SEE DIMENSION DETAIL SHEET) (SEE NOTE 9)
V. INSTALL 12" WHITE HEAT APPLIED PERMANENT PREFORMED THERMOPLASTIC PAVEMENT MARKING LINES.
W. INSTALL 24" WHITE HEAT APPLIED PERMANENT PREFORMED THERMOPLASTIC PAVEMENT MARKING LINES.
X. INSTALL STD. TYPE A CURB AND GUTTER PER MD STD. 620.02.
Y. ERADICATE EXISTING PAVEMENT MARKING LINE.
Z. INSTALL FURNISHED TOPSOIL AT 8 INCH DEPTH AND TURFGRASS SOD.
AA. INSTALL 5" WHITE PREFORMED THERMOPLASTIC PAVEMENT MARKING LINES.
BB. INSTALL 5" YELLOW PREFORMED THERMOPLASTIC PAVEMENT MARKING LINES.
CC. PULL BACK EXISTING INTERCONNECT CABLES FROM KING WILLIAM DR. REROUTE THROUGH PROPOSED CONDUIT SYSTEM TO PROPOSED CABINET.
~~DD. INSTALL 4" PVC SCHEDULE 80 ELECTRICAL CONDUIT - SLOTTED~~

CONSTRUCTION DETAILS CONT'D

EE. USE EXISTING CONDUIT.
FF. USE EXISTING HANDHOLE.
GG. ADJUST HANDHOLE TO GRADE, REPLACE FRAME AND COVER.
FF. USE EXISTING STRAIN POLE. REMOVE EXISTING PEDESTRIAN SIGNAL HEADS AND PUSHBUTTON.

GENERAL NOTES

1. MAINTENANCE OF TRAFFIC WILL BE HANDLED BY THE CONTRACTOR UTILIZING MDSHA STANDARD TYPICALS FOR TRAFFIC CONTROL.
2. THE CONTRACTOR SHALL CONTACT MISS UTILITY TO VERIFY ALL UNDERGROUND UTILITIES AND OVERHEAD PRIOR TO THE INSTALLATION OF PROPOSED SIGNAL EQUIPMENT. IF ANY UTILITY CONFLICTS 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. THE CONTRACTOR SHALL INTEGRATE PROPOSED CONCRETE FOUNDATIONS WITH NEW SIDEWALK RAMP WHERE NECESSARY.
5. THE MONTGOMERY COUNTY SIGNAL SHOP WILL BE RESPONSIBLE FOR ALL INTERNAL CABINET WIRING. THE CONTRACTOR SHALL BE RESPONSIBLE FOR ROUTING AND PROPERLY LABELING ALL SIGNAL CABLES.
6. THE CONTRACTOR SHALL REMOVE AND DISPOSE OF ALL ABANDONED ELECTRICAL CABLES.
7. ALL EXISTING TRAFFIC SIGNAL EQUIPMENT REMOVED, WITH THE EXCEPTION OF SOLO CAMERAS, SHALL BECOME THE PROPERTY OF THE SIGNAL CONTRACTOR UPON COMPLETION OF THE SIGNAL RECONSTRUCTION. SOLO CAMERAS ARE TO BE RETURNED TO SHA UPON COMPLETION OF THE SIGNAL RECONSTRUCTION.
8. THE CONTRACTOR SHALL VERIFY THE PROPOSED POLE AND CABINET LOCATION(S) PRIOR TO INSTALLATION.
9. THE CONTRACTOR SHALL CENTER THE NEWLY CONSTRUCTED RAMP WITH THE EXISTING/PROPOSED CROSSWALKS.
10. LOCATION OF ACCESSIBLE PEDESTRIAN SIGNAL PUSHBUTTONS MUST MEET LOCATION REQUIREMENTS OF MUTCD SEC. 4E.09 AND FIG. 4E.3 AND 4E.4; AND THE NCHRP PUBLICATION, "ACCESSIBLE PEDESTRIAN SIGNALS: GUIDE TO BEST PRACTICE." IF NOT MET, THE CONTRACTOR IS TO STOP WORK ON PUSHBUTTON LOCATIONS UNTIL THE CONFLICT HAS BEEN RESOLVED. IF NEEDED, A DESIGN WAIVER SHALL BE OBTAINED, APPROVED BY THE DIRECTOR, OFFICE OF TRAFFIC AND SAFETY.
11. PUSHBUTTON IS 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.
12. 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%.
13. 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.
14. PUSHBUTTON ARROWS SHOULD BE TURNED PARALLEL TO THE CROSSWALK FOR WHICH THEY ARE INTENDED.
15. ALL TRAFFIC SIGNAL MODIFICATIONS SHALL BE CONSTRUCTED PRIOR TO SIDEWALK INSTALLATION.
16. THE CONTRACTOR SHALL ENSURE THE EXISTING TRAFFIC SIGNAL REMAINS OPERATIONAL UNTIL RECONSTRUCTED TRAFFIC SIGNAL IS OPERATIONAL.
17. ALL PAVEMENT MARKINGS SHALL BE INSTALLED IN ACCORDANCE WITH MDSHA STANDARDS.
18. VIDEO CAMERA LOCATION / ALIGNING SHALL BE COORDINATED WITH THE SHA ENGINEER.
19. ALL UNUSED SIGNAL CABLES SHALL BE REMOVED AND DISPOSED.
20. THE CONTRACTOR SHALL MAINTAIN THE CONTINUOUS OPERATION OF ALL INTERCONNECT, VEHICULAR, PEDESTRIAN DETECTORS, AND LIGHTING DEVICES. IF ANY DEVICE IS DAMAGED BY CONTRACTOR, IT SHALL BE REPAIRED WITHIN 72 HOURS BY THE CONTRACTOR AT NO COST TO SHA AFTER NOTIFICATION BY THE ENGINEER.
21. ALL PAVEMENT MARKINGS SHALL BE INSTALLED PER SHA STANDARDS.
22. THE CONTRACTOR SHALL BE RESPONSIBLE FOR DELIVERING THE SIGNAL VIDEO INTERFACE EQUIPMENT TO THE MONTGOMERY COUNTY SIGNAL SHOP.
23. THE CONTRACTOR SHALL DELIVER APS PUSHBUTTONS AND CENTRAL CONTROL UNIT TO MR. ROBERT RICKETTS AT MONTGOMERY COUNTY TECHNICAL CENTER AT 2383 SEVEN LOCKS ROAD, ROCKVILLE, MD 20854 AT LEAST 3 WEEKS PRIOR TO BEGINNING WORK. CONTRACTOR SHALL HAVE THE APS MESSAGES PROGRAMMED FROM THE FACTORY AND DELIVER THE APS WAV FILES TO MR. ROBERT RICKETS
24. CONTRACTOR SHALL NOTIFY MR. KAMAL HAMUD AND MR. ROBERT RICKETS 72 HOURS IN ADVANCE OF INTENDED WORK.

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

BY: SWILKENING -

GEOMETRIC LEGEND: EXISTING / PROPOSED

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

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

REVISIONS

D	UPGRADE APS/CPS/LED VIDEO DETECTION X7195185	3-19-13	
AJM	SJW	L803	CJN
F	REVISE SPARTAN RD. AND MORNINGWOOD DR. LANE USE	10-22-02	
D	UPGRADE TO BLACKFACE HEADS TMS* E597	6/01	
CJS			

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

MD 97 (GEORGIA AVENUE) AND SPARTAN RD /MORNINGWOOD DR
OLNEY, MD

TRAFFIC SIGNALIZATION PLAN

SCALE 1" = 20' DATE 12/19/02 CONTRACT NO.

DESIGNED BY WTB — COUNTY MONTGOMERY
DRAWN BY WTB — LOGMILE 15009711.70
CHECKED BY CT — TIMS NO. F248
FAP NO. — TOD NO.

TS NO. 2452G | DRAWING SG-01 OF 03 | SHEET NO. 1 OF 3

PLOTTED: THURSDAY, APRIL 11, 2013 AT 03:20 PM
FILE: Y:\12-0294-118 MD 97 SIGNAL MODS\1-MD 97 @ SPARTAN-MORNINGWOOD\PSG_P001_MD97@SPARTAN.DGN