PROPOSED LED SIGNALS

1,2,4,5 — 12"
3,9,12 — 12"
6 — 12"
7,8,10,11 — 12"
13,14,15, 16,17,18 — 16" LED COUNTDOWN PEDESTRIAN SIGNAL

PROPOSED SIGNS

19,24 — R3-6 (30"x36")
35 — SHIELD ASSEMBLY (30"x51")
36 — SHIELD ASSEMBLY (48"x75")
37 — SHIELD ASSEMBLY (30"x51")
38 — SHIELD ASSEMBLY (48"x75")

PROPOSED VIDEO DETECTION

a,b,c,d

EXISTING SIGNS TO REMAIN

20,22 27 28

EXISTING SIGNS TO BE RELOCATED

21 — Arlington Rd ⇦ ⇦ 6900 Blk. 6800 Blk. ⇨
23 — Arlington Rd ⇦ ⇦ 6800 Blk. 6900 Blk. ⇨
25 — Bradley Blvd ⇦ ⇦ 4900 Blk. 5000 Blk. ⇨
26 — Bradley Blvd ⇦ ⇦ 5000 Blk. 4900 Blk. ⇨

NEMA PHASING

Ø1 Ø2 Ø3 Ø4 Ø4 ALT
Ø5 Ø6
FLASHING OPERATION

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

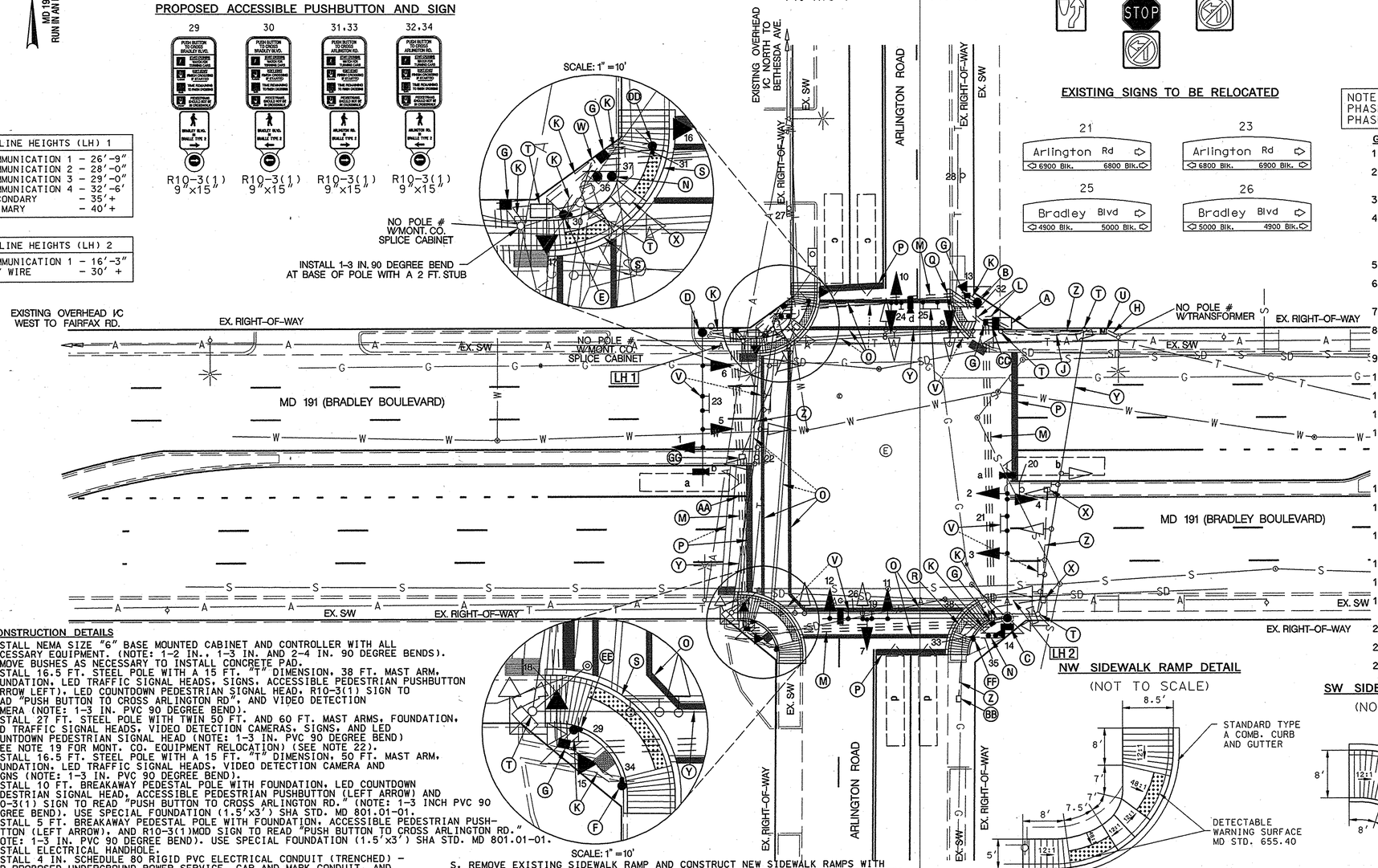
N — MD 191 IS ASSUMED TO RUN IN AN EAST-WEST DIRECTION

PROPOSED ACCESSIBLE PUSHBUTTON AND SIGN

29 — R10-3(1) 9"x15"
30 — R10-3(1) 9"x15"
31,33 — R10-3(1) 9"x15"
32,34 — R10-3(1) 9"x15"

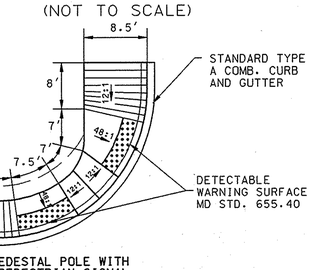
LINE HEIGHTS (LH) 1	
COMMUNICATION 1	26'-9"
COMMUNICATION 2	28'-0"
COMMUNICATION 3	29'-0"
COMMUNICATION 4	32'-6'
SECONDARY	35'+
PRIMARY	40'+

LINE HEIGHTS (LH) 2	
COMMUNICATION 1	16'-3"
GUY WIRE	30' +



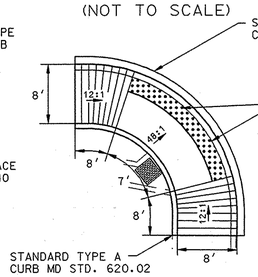
NW SIDEWALK RAMP DETAIL

(NOT TO SCALE)



SW SIDEWALK RAMP DETAIL

(NOT TO SCALE)



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 PRIOR TO THE INSTALLATION OF PROPOSED SIGNAL EQUIPMENT. IF ANY UTILITY CONFLICTS ARISE THE CONTRACTOR SHALL CONTACT THE PROJECT ENGINEER.
3. WITHIN 36 IN. OF UNDERGROUND UTILITY LOCATIONS, THE CONTRACTOR SHALL BE REQUIRED TO EXCAVATE FOR FOUNDATION AND CONDUIT BY HAND.
4. 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.
5. THE CONTRACTOR SHALL INTEGRATE PROPOSED/EXISTING CONCRETE FOUNDATIONS WITH NEW CURB/SIDEWALK RAMP WHERE NECESSARY.
6. THE CONTRACTOR SHALL BE RESPONSIBLE FOR TERMINATING ALL SIGNAL CABLES, EXCLUDING INTERCONNECT, TO THE APPROPRIATE TERMINALS AND SHALL PROPERLY LABEL EACH CABLE.
7. THE CONTRACTOR SHALL REMOVE AND DISPOSE OF ALL ABANDONED ELECTRICAL CABLES.
8. ALL CONTROLLER CABINET WIRING SHALL BE PERFORMED BY THE MONTGOMERY COUNTY TECHNICAL CENTER. THE CONTRACTOR SHALL CONTACT MR. KEITH LORD AT 301-279-1291 AND MR. KAMAL HAMUD AT 240-777-8761, 72 HOURS IN ADVANCE OF ALL WORK.
9. THE CONTRACTOR SHALL VERIFY THE PROPOSED POLE LOCATION(S) PRIOR TO INSTALLATION.
10. SEE GENERAL INFORMATION SHEET FOR APS, ASSOCIATED SIGNAL HEADS AND PUSHBUTTONS, SIGNAL POLES, CABINET AND PAVEMENT MARKING LAYOUTS.
11. THE CONTRACTOR SHALL CENTER THE PROPOSED CROSSWALKS ON NEWLY CONSTRUCTED RAMPS.
12. ALL PAVEMENT MARKINGS SHALL BE INSTALLED IN ACCORDANCE WITH MDSHA STANDARDS.
13. 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 THE CONFLICT HAS BEEN RESOLVED. IF NEEDED, A DESIGN WAIVER SHALL BE OBTAINED, APPROVED BY THE DIRECTOR, OFFICE OF TRAFFIC AND SAFETY.
14. 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.
15. 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%.
16. 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.
17. THE CONTRACTOR SHALL REMOVE AND REPLACE CONCRETE SIDEWALK AT THE NEAREST JOINT.
18. THE CONTRACTOR SHALL ENSURE THE TRAFFIC SIGNAL REMAINS OPERATIONAL UNTIL RECONSTRUCTED TRAFFIC SIGNAL IS OPERATIONAL.
19. THE CONTRACTOR SHALL NOTIFY MR. MICHAEL KINNEY AT 240-777-8760 TWO WEEKS PRIOR TO CONSTRUCTION FOR THE RELOCATION AND WIRING OF THE MONTGOMERY COUNTY CAMERA AND CABINET.
20. PUSHBUTTON ARROWS ARE TO BE PARALLEL TO THE CROSSWALK FOR WHICH THEY ARE INTENDED.
21. THE 10 FT. SEPARATION BETWEEN PUSHBUTTONS IS TO BE MEASURED FROM FACE OF PUSHBUTTON TO FACE OF PUSHBUTTON, NOT CENTER OF POLE TO CENTER OF POLE.
22. THE CONTRACTOR SHALL USE CAUTION WHEN INSTALLING THE MAST ARM IN THE SE CORNER ABOVE THE EXISTING OVERHEAD (16'-3") VERIZON COMMUNICATION CABLE.

CONSTRUCTION DETAILS

A. INSTALL NEMA SIZE "6" BASE MOUNTED CABINET AND CONTROLLER WITH ALL NECESSARY EQUIPMENT. (NOTE: 1-2 IN., 1-3 IN. AND 2-4 IN. 90 DEGREE BENDS). REMOVE BUSHES AS NECESSARY TO INSTALL CONCRETE PAD.
B. INSTALL 16.5 FT. STEEL POLE WITH A 15 FT. "T" DIMENSION, 38 FT. MAST ARM, FOUNDATION, LED TRAFFIC SIGNAL HEADS, SIGNS, ACCESSIBLE PEDESTRIAN PUSHBUTTON (ARROW LEFT), LED COUNTDOWN PEDESTRIAN SIGNAL HEAD, R10-3(1) SIGN TO READ "PUSH BUTTON TO CROSS ARLINGTON RD", AND VIDEO DETECTION CAMERA (NOTE: 1-3 IN. PVC 90 DEGREE BEND).
C. INSTALL 27 FT. STEEL POLE WITH TWIN 50 FT. AND 60 FT. MAST ARMS, FOUNDATION, LED TRAFFIC SIGNAL HEADS, VIDEO DETECTION CAMERAS, SIGNS, AND LED COUNTDOWN PEDESTRIAN SIGNAL HEAD (NOTE: 1-3 IN. PVC 90 DEGREE BEND) (SEE NOTE 19 FOR MONT. CO. EQUIPMENT RELOCATION) (SEE NOTE 22).
D. INSTALL 16.5 FT. STEEL POLE WITH A 15 FT. "T" DIMENSION, 50 FT. MAST ARM, FOUNDATION, LED TRAFFIC SIGNAL HEADS, VIDEO DETECTION CAMERA AND SIGNS (NOTE: 1-3 IN. PVC 90 DEGREE BEND).
E. INSTALL 10 FT. BREAKAWAY PEDESTAL POLE WITH FOUNDATION, LED COUNTDOWN PEDESTRIAN SIGNAL HEAD, ACCESSIBLE PEDESTRIAN PUSHBUTTON (LEFT ARROW) AND R10-3(1) SIGN TO READ "PUSH BUTTON TO CROSS ARLINGTON RD." (NOTE: 1-3 INCH PVC 90 DEGREE BEND). USE SPECIAL FOUNDATION (1.5'x3') SHA STD. MD 801.01-01.
F. INSTALL 5 FT. BREAKAWAY PEDESTAL POLE WITH FOUNDATION, ACCESSIBLE PEDESTRIAN PUSHBUTTON (LEFT ARROW), AND R10-3(1)MOD SIGN TO READ "PUSH BUTTON TO CROSS ARLINGTON RD." (NOTE: 1-3 IN. PVC 90 DEGREE BEND). USE SPECIAL FOUNDATION (1.5'x3') SHA STD. MD 801.01-01.
G. INSTALL ELECTRICAL HANDHOLE.
H. INSTALL 4 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.
J. INSTALL 2 IN. SCHEDULE 80 RIGID PVC ELECTRICAL CONDUIT (TRENCHED).
K. INSTALL 3 IN. SCHEDULE 80 RIGID PVC ELECTRICAL CONDUIT (TRENCHED)
L. INSTALL 4 IN. SCHEDULE 80 RIGID PVC ELECTRICAL CONDUIT (TRENCHED).
M. INSTALL TWO (2) 4 IN. SCHEDULE 80 RIGID PVC ELECTRICAL CONDUITS (SLOTTED).
N. INSTALL GROUND MOUNTED SIGN ON TWO 4 IN. X 6 IN. WOOD POSTS.
O. REMOVE EXISTING PAVEMENT MARKINGS AND INSTALL 12 IN. WHITE HEAT APPLIED PERMANENT PREFORMED THERMOPLASTIC PAVEMENT MARKINGS FOR CROSSWALK.
P. REMOVE EXISTING PAVEMENT MARKINGS AND INSTALL 24 IN. WHITE HEAT APPLIED PERMANENT PREFORMED THERMOPLASTIC PAVEMENT MARKINGS FOR STOPLINE.
Q. REMOVE EXISTING SIDEWALK RAMP AND CONSTRUCT SHA STD. MD 655.11 SIDEWALK RAMP WITH DETECTABLE WARNING SURFACE SHA STD MD 655.40.
R. REMOVE EXISTING SIDEWALK RAMP AND CONSTRUCT SHA STD. MD 655.12 SIDEWALK RAMP WITH DETECTABLE WARNING SURFACE SHA STD MD 655.40.
S. REMOVE EXISTING SIDEWALK RAMP AND CONSTRUCT NEW SIDEWALK RAMPS WITH DETECTABLE WARNING SURFACE SHA STD. MD 655.40 (SEE DETAILS THIS SHEET).
T. REMOVE AND DISPOSE OF EXISTING TRAFFIC SIGNAL EQUIPMENT. REMOVE FOUNDATION 12 IN. BELOW GRADE. CAP AND ABANDON EXISTING CONDUIT (SEE NOTE 19 FOR MONT. CO. EQUIPMENT RELOCATION).
U. INSTALL METERED SERVICE PEDESTAL.
V. RELOCATE EXISTING STREET NAME SIGN AS SHOWN.
W. INSTALL TEMPORARY BACK GUY TO EXISTING STRAIN POLE.
X. REMOVE EXISTING HANDHOLE. CAP AND ABANDON EXISTING CONDUIT(S).
Y. REMOVE EXISTING SPAN WIRE AND ASSOCIATED EQUIPMENT.
Z. CAB AND ABANDON EXISTING CONDUIT.
AA. INSTALL 5 IN. WHITE HEAT APPLIED PERMANENT PAVEMENT MARKING LINE.
BB. ABANDON EXISTING HANDHOLE.
CC. INSTALL 1-3 IN. & 1-4 IN. SCHEDULE 80 RIGID PVC ELECTRICAL CONDUIT - TRENCHED.
DD. INSTALL 10 FT. BREAKAWAY PEDESTAL POLE WITH FOUNDATION, LED COUNTDOWN PEDESTRIAN SIGNAL HEAD(S), ACCESSIBLE PEDESTRIAN PUSHBUTTON (RIGHT ARROW) AND R10-3(1) SIGN TO READ "PUSH BUTTON TO CROSS ARLINGTON RD." (NOTE: 1-3 INCH PVC 90 DEGREE BEND). USE SPECIAL FOUNDATION (1.5'x3') SHA STD. MD 801.01-01.
EE. INSTALL 10 FT. BREAKAWAY PEDESTAL POLE WITH FOUNDATION, LED COUNTDOWN PEDESTRIAN SIGNAL HEAD, ACCESSIBLE PEDESTRIAN PUSHBUTTON (RIGHT ARROW) AND R10-3(1) SIGN TO READ "PUSH BUTTON TO CROSS BRADELY BLVD." (NOTE: 1-3 INCH PVC 90 DEGREE BEND). USE SPECIAL FOUNDATION (1.5'x3') SHA STD. MD 801.01-01.
FF. INSTALL 5 FT. BREAKAWAY PEDESTAL POLE WITH FOUNDATION, ACCESSIBLE PEDESTRIAN PUSHBUTTON (RIGHT ARROW), AND R10-3(1)MOD SIGN TO READ "PUSH BUTTON TO CROSS ARLINGTON RD." (NOTE: 1-3 IN. PVC 90 DEGREE BEND). USE SPECIAL FOUNDATION (1.5'x3') SHA STD. MD 801.01-01.
GG. USE EXISTING HANDHOLE.

STV Incorporated
engineers /architects /planners /construction managers
7125 Ambassador Road Baltimore, MD 21244-2722 (410) 944-9112

BY: guillamc

UTILITY LEGEND

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

GEOMETRIC LEGEND

— — — EXISTING
——— PROPOSED

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

REVISIONS

(B) RECONSTRUCT SIGNAL ADD SIDE ST. SPLIT PHASING 6/2008 SHA NO. XX4445185
STV Mcd 1/8/08 KD Mcd 12/12/08
A REPLACE LOOP DETECTORS WITH VIDEO CAMERAS 1/2006 SHA NO. M07175185
JA JAH BRK

PLOTTED: Wednesday, June 11, 2008 AT 02:45 PM
FILE: I:\PROJECTS\0312513\0312513_0076\Drawings\TRA\pSG-P001_MD191.dgn

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

MD 191 (BRADLEY BOULEVARD)
AT ARLINGTON ROAD

TOD No. XX444-02
SHA No. MO526A52/B52

SIGNALIZATION PLAN SHEET

SCALE 1" = 20' ADVERTISED DATE 11/29/72 CONTRACT NO.

DESIGNED BY MONTGOMERY CO. COUNTY MONTGOMERY
DRAWN BY MONTGOMERY CO. LOGMILE 15019105.97
CHECKED BY MONTGOMERY CO. TIMS NO. 1618
F.A.P. NO. TOD NO.

TS NO. 4385B | DRAWING SG-01 OF 02 | SHEET NO. 1 OF 2