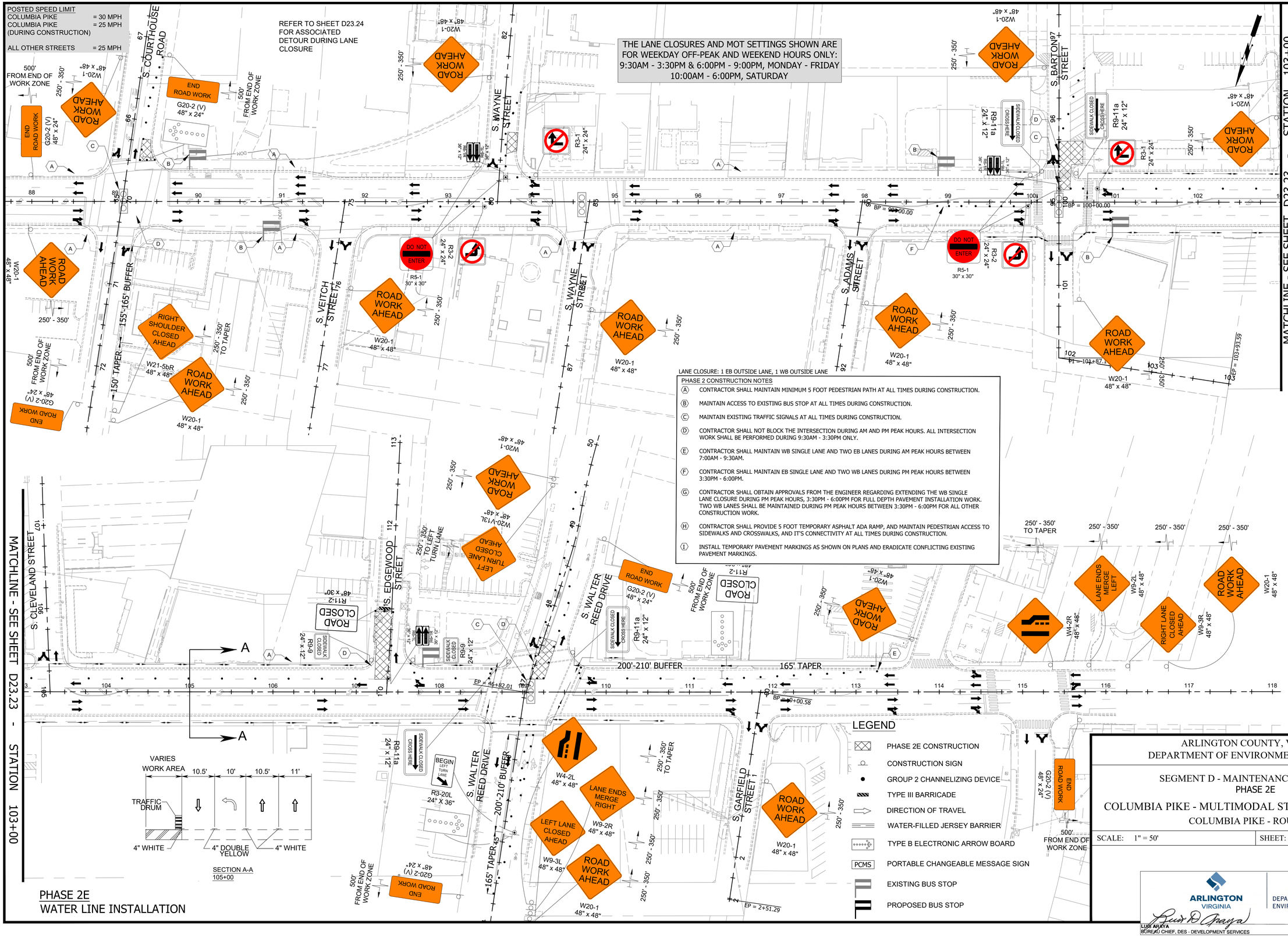
POSTED SPEED LIMIT
COLUMBIA PIKE = 30 MPH
COLUMBIA PIKE = 25 MPH
(DURING CONSTRUCTION)

ALL OTHER STREETS = 25 MPH

REFER TO SHEET D23.24 FOR ASSOCIATED DETOUR DURING LANE CLOSURE

THE LANE CLOSURES AND MOT SETTINGS SHOWN ARE FOR WEEKDAY OFF-PEAK AND WEEKEND HOURS ONLY: 9:30AM - 3:30PM & 6:00PM - 9:00PM, MONDAY - FRIDAY 10:00AM - 6:00PM, SATURDAY



LANE CLOSURE: 1 EB OUTSIDE LANE, 1 WB OUTSIDE LANE

PHASE 2 CONSTRUCTION NOTES

- (A) CONTRACTOR SHALL MAINTAIN MINIMUM 5 FOOT PEDESTRIAN PATH AT ALL TIMES DURING CONSTRUCTION.
- (B) MAINTAIN ACCESS TO EXISTING BUS STOP AT ALL TIMES DURING CONSTRUCTION.
- (C) MAINTAIN EXISTING TRAFFIC SIGNALS AT ALL TIMES DURING CONSTRUCTION.
- (D) CONTRACTOR SHALL NOT BLOCK THE INTERSECTION DURING AM AND PM PEAK HOURS. ALL INTERSECTION WORK SHALL BE PERFORMED DURING 9:30AM - 3:30PM ONLY.
- (E) CONTRACTOR SHALL MAINTAIN WB SINGLE LANE AND TWO EB LANES DURING AM PEAK HOURS BETWEEN 7:00AM - 9:30AM.
- (F) CONTRACTOR SHALL MAINTAIN EB SINGLE LANE AND TWO WB LANES DURING PM PEAK HOURS BETWEEN 3:30PM - 6:00PM.
- (G) CONTRACTOR SHALL OBTAIN APPROVALS FROM THE ENGINEER REGARDING EXTENDING THE WB SINGLE LANE CLOSURE DURING PM PEAK HOURS, 3:30PM - 6:00PM FOR FULL DEPTH PAVEMENT INSTALLATION WORK. TWO WB LANES SHALL BE MAINTAINED DURING PM PEAK HOURS BETWEEN 3:30PM - 6:00PM FOR ALL OTHER CONSTRUCTION WORK.
- (H) CONTRACTOR SHALL PROVIDE 5 FOOT TEMPORARY ASPHALT ADA RAMP, AND MAINTAIN PEDESTRIAN ACCESS TO SIDEWALKS AND CROSSWALKS, AND IT'S CONNECTIVITY AT ALL TIMES DURING CONSTRUCTION.
- (I) INSTALL TEMPORARY PAVEMENT MARKINGS AS SHOWN ON PLANS AND ERADICATE CONFLICTING EXISTING PAVEMENT MARKINGS.

LEGEND

- PHASE 2E CONSTRUCTION
- CONSTRUCTION SIGN
- GROUP 2 CHANNELIZING DEVICE
- TYPE III BARRICADE
- DIRECTION OF TRAVEL
- WATER-FILLED JERSEY BARRIER
- TYPE B ELECTRONIC ARROW BOARD
- PCMS — PORTABLE CHANGEABLE MESSAGE SIGN
- EXISTING BUS STOP
- PROPOSED BUS STOP

PHASE 2E
WATER LINE INSTALLATION

ARLINGTON VIRGINIA
DEPARTMENT OF ENVIRONMENTAL SERVICES
FACILITIES & ENGINEERING DIVISION
ENGINEERING BUREAU
2100 CLARENDON BOULEVARD, SUITE 813
ARLINGTON, VA 22201
PHONE: 703.228.3629
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Fax: 703-642-8106

SEAL
COMMONWEALTH OF VIRGINIA
HARSHIT THAKER
Lic. No. 049174
9-22-2022
PROFESSIONAL ENGINEER

APPROVALS	DATE
QUALITY CONTROL ENGINEER	
CONSTRUCTION MANAGEMENT SUPERVISOR	
WATER, SEWER, STREETS BUREAU CHIEF	
TRANSPORTATION DIRECTOR	
PROJECT MANAGER	

Revisions	Date

Designed: JS
Drawn: TR
Checked: HT/WN
Miss Utility Transmittal #:

Filename: xMOT-SegD-Phase 2.dwg
Path: T:\1890600 - Masters Arlington County On-Call\1890601 - Seg C-Columbia Pike Multimodal Imp\07 Design\DWG\Seg-D
Plotted: September 22, 2022
Plotted by: james.see

ARLINGTON COUNTY, VIRGINIA
DEPARTMENT OF ENVIRONMENTAL SERVICES

SEGMENT D - MAINTENANCE OF TRAFFIC
PHASE 2E

COLUMBIA PIKE - MULTIMODAL STREET IMPROVEMENTS
COLUMBIA PIKE - ROUTE 244

SCALE: 1" = 50' | SHEET: D23.23

ARLINGTON VIRGINIA
DEPARTMENT OF ENVIRONMENTAL SERVICES
LUIS ARAYA
BUREAU CHIEF, DES - DEVELOPMENT SERVICES
3/7/2023
APPROVAL DATE

MOT PHASE 2E DETOUR

LEGEND

- WORK AREA
- CONSTRUCTION SIGN
- TYPE III BARRICADE
- PCMS — PORTABLE CHANGEABLE MESSAGE SIGN
- DETOUR ROUTE FOR PHASE 2E

ARLINGTON VIRGINIA
DEPARTMENT OF ENVIRONMENTAL SERVICES
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SEAL

COMMONWEALTH OF VIRGINIA
HARSHIT THAKER
Lic. No. 0491174
9-22-2022
PROFESSIONAL ENGINEER

APPROVALS	DATE
QUALITY CONTROL ENGINEER	
CONSTRUCTION MANAGEMENT SUPERVISOR	
WATER, SEWER, STREETS BUREAU CHIEF	
TRANSPORTATION DIRECTOR	
PROJECT MANAGER	

Revisions	Date

Designed: JS
Drawn: TR
Checked: HT/WN
Miss Utility Transmittal #:

Filename: MOT-SegD-110010073_DETOUR.dwg
Path: T:\1009400 - Master-Arlington County On-Call\1009461 - Seg C-Columbia Pike Multimodal Imp\07 Design\DWG\Seg D
Plotted: September 22, 2022
Plotted by: james.see

ARLINGTON COUNTY, VIRGINIA
DEPARTMENT OF ENVIRONMENTAL SERVICES

SEGMENT D - MAINTENANCE OF TRAFFIC
PHASE 2E DETOUR

COLUMBIA PIKE - MULTIMODAL STREET IMPROVEMENTS
COLUMBIA PIKE - ROUTE 244

SCALE: NOT TO SCALE | SHEET: D23.24

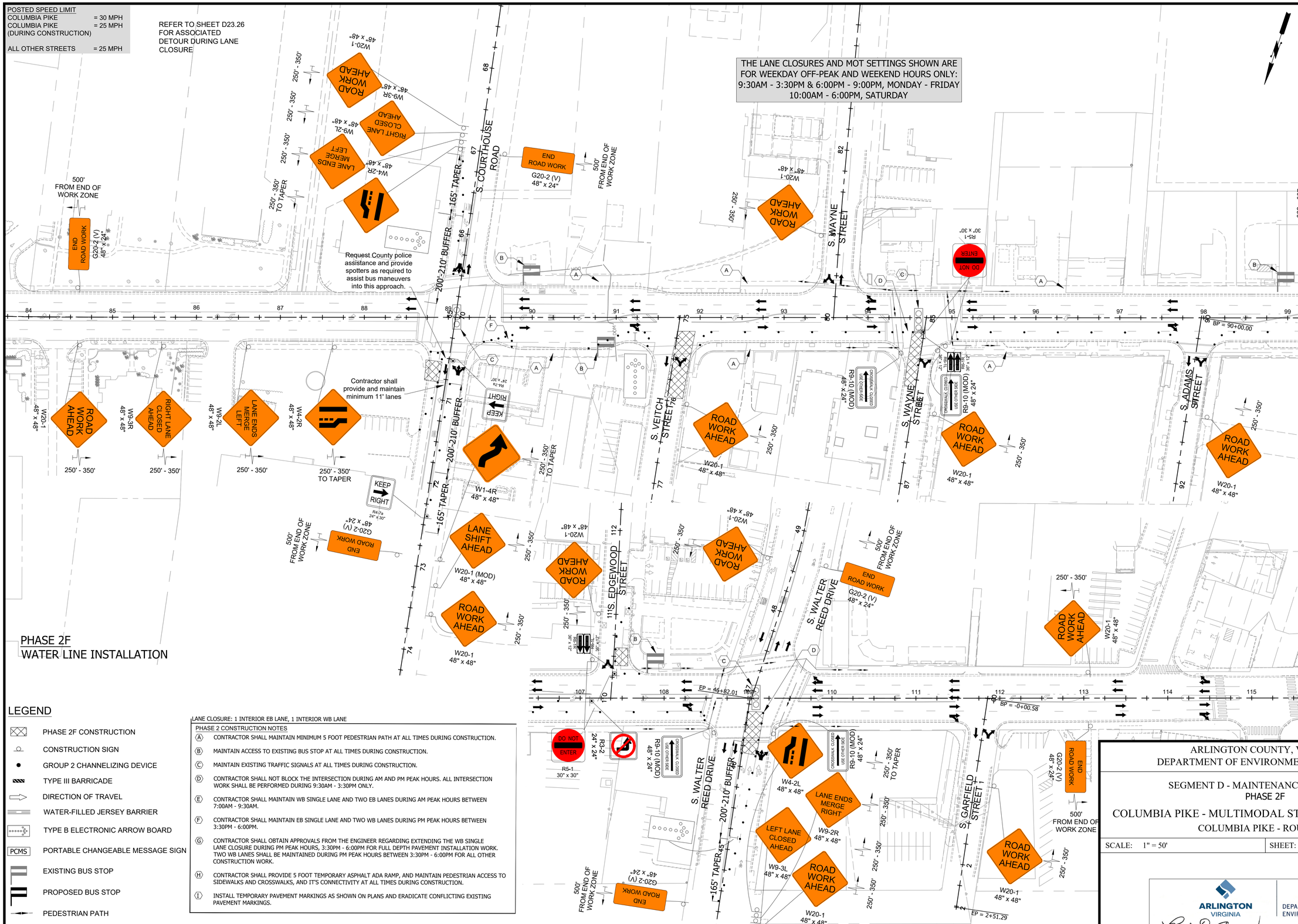
ARLINGTON VIRGINIA
DEPARTMENT OF ENVIRONMENTAL SERVICES
LUIS ARAYA
BUREAU CHIEF, DES - DEVELOPMENT SERVICES
3/7/2023
APPROVAL DATE

POSTED SPEED LIMIT
COLUMBIA PIKE = 30 MPH
COLUMBIA PIKE = 25 MPH
(DURING CONSTRUCTION)

ALL OTHER STREETS = 25 MPH

REFER TO SHEET D23.26 FOR ASSOCIATED DETOUR DURING LANE CLOSURE

THE LANE CLOSURES AND MOT SETTINGS SHOWN ARE FOR WEEKDAY OFF-PEAK AND WEEKEND HOURS ONLY:
9:30AM - 3:30PM & 6:00PM - 9:00PM, MONDAY - FRIDAY
10:00AM - 6:00PM, SATURDAY



PHASE 2F
WATER LINE INSTALLATION

LEGEND

- PHASE 2F CONSTRUCTION
- CONSTRUCTION SIGN
- GROUP 2 CHANNELIZING DEVICE
- TYPE III BARRICADE
- DIRECTION OF TRAVEL
- WATER-FILLED JERSEY BARRIER
- TYPE B ELECTRONIC ARROW BOARD
- PCMS — PORTABLE CHANGEABLE MESSAGE SIGN
- EXISTING BUS STOP
- PROPOSED BUS STOP
- PEDESTRIAN PATH

LANE CLOSURE: 1 INTERIOR EB LANE, 1 INTERIOR WB LANE

PHASE 2 CONSTRUCTION NOTES

(A) CONTRACTOR SHALL MAINTAIN MINIMUM 5 FOOT PEDESTRIAN PATH AT ALL TIMES DURING CONSTRUCTION.

(B) MAINTAIN ACCESS TO EXISTING BUS STOP AT ALL TIMES DURING CONSTRUCTION.

(C) MAINTAIN EXISTING TRAFFIC SIGNALS AT ALL TIMES DURING CONSTRUCTION.

(D) CONTRACTOR SHALL NOT BLOCK THE INTERSECTION DURING AM AND PM PEAK HOURS. ALL INTERSECTION WORK SHALL BE PERFORMED DURING 9:30AM - 3:30PM ONLY.

(E) CONTRACTOR SHALL MAINTAIN WB SINGLE LANE AND TWO EB LANES DURING AM PEAK HOURS BETWEEN 7:00AM - 9:30AM.

(F) CONTRACTOR SHALL MAINTAIN EB SINGLE LANE AND TWO WB LANES DURING PM PEAK HOURS BETWEEN 3:30PM - 6:00PM.

(G) CONTRACTOR SHALL OBTAIN APPROVALS FROM THE ENGINEER REGARDING EXTENDING THE WB SINGLE LANE CLOSURE DURING PM PEAK HOURS, 3:30PM - 6:00PM FOR FULL DEPTH PAVEMENT INSTALLATION WORK. TWO WB LANES SHALL BE MAINTAINED DURING PM PEAK HOURS BETWEEN 3:30PM - 6:00PM FOR ALL OTHER CONSTRUCTION WORK.

(H) CONTRACTOR SHALL PROVIDE 5 FOOT TEMPORARY ASPHALT ADA RAMP, AND MAINTAIN PEDESTRIAN ACCESS TO SIDEWALKS AND CROSSWALKS, AND IT'S CONNECTIVITY AT ALL TIMES DURING CONSTRUCTION.

(I) INSTALL TEMPORARY PAVEMENT MARKINGS AS SHOWN ON PLANS AND ERADICATE CONFLICTING EXISTING PAVEMENT MARKINGS.

ARLINGTON VIRGINIA
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FACILITIES & ENGINEERING DIVISION
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SEAL
COMMONWEALTH OF VIRGINIA
HARSHIT THAKER
Lic. No. 049174
9-22-2022
PROFESSIONAL ENGINEER

APPROVALS	DATE
QUALITY CONTROL ENGINEER	
CONSTRUCTION MANAGEMENT SUPERVISOR	
WATER, SEWER, STREETS BUREAU CHIEF	
TRANSPORTATION DIRECTOR	
PROJECT MANAGER	

Revisions	Date

Designed: JS
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Checked: HT/WN
Miss Utility Transmittal #:

Filename: xMOT-SegD-Phase 2.dwg
Path: T:\1009400 - Master-Arlington County On-Call\1009461 - Seg C-Columbia Pike Multimodal Imp\07 Design\DWG\Seg D
Plotted: September 22, 2022
Plotted by: james.see

ARLINGTON COUNTY, VIRGINIA
DEPARTMENT OF ENVIRONMENTAL SERVICES

SEGMENT D - MAINTENANCE OF TRAFFIC
PHASE 2F

COLUMBIA PIKE - MULTIMODAL STREET IMPROVEMENTS
COLUMBIA PIKE - ROUTE 244

SCALE: 1" = 50' | SHEET: D23.25

ARLINGTON VIRGINIA
DEPARTMENT OF ENVIRONMENTAL SERVICES
LUIS ARAYA
BUREAU CHIEF, DES - DEVELOPMENT SERVICES
3/7/2023
APPROVAL DATE

MOT PHASE 2F DETOUR

LEGEND

- WORK AREA
- CONSTRUCTION SIGN
- TYPE III BARRICADE
- PCMS — PORTABLE CHANGEABLE MESSAGE SIGN
- DETOUR ROUTE FOR PHASE 2F

ARLINGTON VIRGINIA
DEPARTMENT OF ENVIRONMENTAL SERVICES
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SEAL

COMMONWEALTH OF VIRGINIA
HARSHIT THAKER
Lic. No. 0491174
9-22-2022
PROFESSIONAL ENGINEER

APPROVALS	DATE
QUALITY CONTROL ENGINEER	
CONSTRUCTION MANAGEMENT SUPERVISOR	
WATER, SEWER, STREETS BUREAU CHIEF	
TRANSPORTATION DIRECTOR	
PROJECT MANAGER	

Revisions	Date

Designed: JS
Drawn: TR
Checked: HT/WN
Miss Utility Transmittal #:

Filename: MOT-SegD-110010073_DETOUR.dwg
Path: T:\1009400 - Mission Arlington County On-Call\1009402 - Seg C-Columbia Pike Multimodal Imp\07 Design\DWG\Seg-D
Plotted: September 22, 2022
Plotted by: james.see

ARLINGTON COUNTY, VIRGINIA
DEPARTMENT OF ENVIRONMENTAL SERVICES

SEGMENT D - MAINTENANCE OF TRAFFIC
PHASE 2F DETOUR

COLUMBIA PIKE - MULTIMODAL STREET IMPROVEMENTS
COLUMBIA PIKE - ROUTE 244

SCALE: NOT TO SCALE | SHEET: D23.26

ARLINGTON VIRGINIA
DEPARTMENT OF ENVIRONMENTAL SERVICES

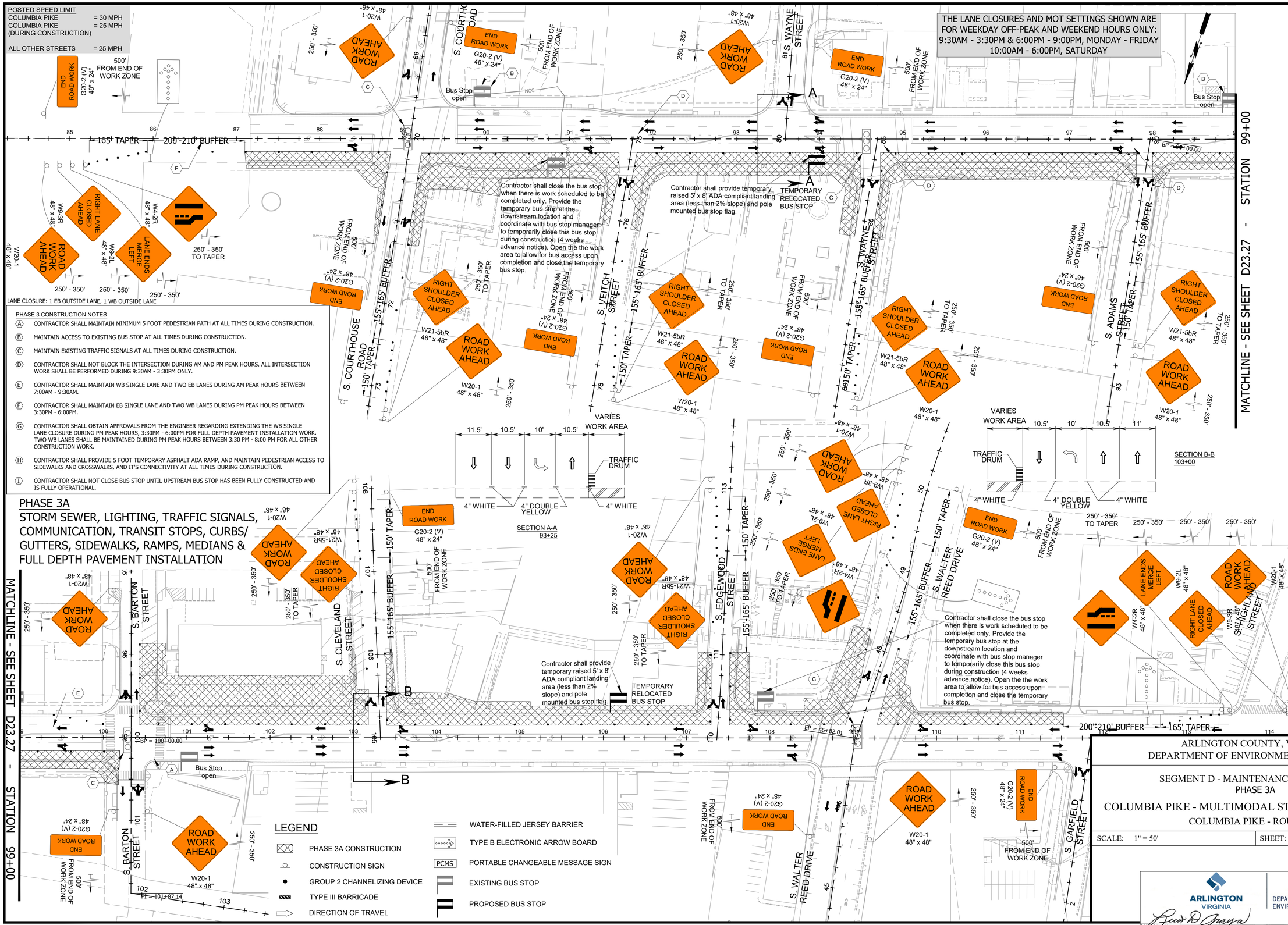
LUIS ARAYA
BUREAU CHIEF, DES - DEVELOPMENT SERVICES

3/7/2023
APPROVAL DATE

POSTED SPEED LIMIT
COLUMBIA PIKE = 30 MPH
COLUMBIA PIKE = 25 MPH
(DURING CONSTRUCTION)

ALL OTHER STREETS = 25 MPH

THE LANE CLOSURES AND MOT SETTINGS SHOWN ARE FOR WEEKDAY OFF-PEAK AND WEEKEND HOURS ONLY:
9:30AM - 3:30PM & 6:00PM - 9:00PM, MONDAY - FRIDAY
10:00AM - 6:00PM, SATURDAY



PHASE 3 CONSTRUCTION NOTES

Ⓐ CONTRACTOR SHALL MAINTAIN MINIMUM 5 FOOT PEDESTRIAN PATH AT ALL TIMES DURING CONSTRUCTION.

Ⓑ MAINTAIN ACCESS TO EXISTING BUS STOP AT ALL TIMES DURING CONSTRUCTION.

Ⓒ MAINTAIN EXISTING TRAFFIC SIGNALS AT ALL TIMES DURING CONSTRUCTION.

Ⓓ CONTRACTOR SHALL NOT BLOCK THE INTERSECTION DURING AM AND PM PEAK HOURS. ALL INTERSECTION WORK SHALL BE PERFORMED DURING 9:30AM - 3:30PM ONLY.

Ⓔ CONTRACTOR SHALL MAINTAIN WB SINGLE LANE AND TWO EB LANES DURING AM PEAK HOURS BETWEEN 7:00AM - 9:30AM.

Ⓕ CONTRACTOR SHALL MAINTAIN EB SINGLE LANE AND TWO WB LANES DURING PM PEAK HOURS BETWEEN 3:30PM - 6:00PM.

Ⓖ CONTRACTOR SHALL OBTAIN APPROVALS FROM THE ENGINEER REGARDING EXTENDING THE WB SINGLE LANE CLOSURE DURING PM PEAK HOURS, 3:30PM - 6:00PM FOR FULL DEPTH PAVEMENT INSTALLATION WORK. TWO WB LANES SHALL BE MAINTAINED DURING PM PEAK HOURS BETWEEN 3:30 PM - 8:00 PM FOR ALL OTHER CONSTRUCTION WORK.

Ⓗ CONTRACTOR SHALL PROVIDE 5 FOOT TEMPORARY ASPHALT ADA RAMP, AND MAINTAIN PEDESTRIAN ACCESS TO SIDEWALKS AND CROSSWALKS, AND IT'S CONNECTIVITY AT ALL TIMES DURING CONSTRUCTION.

Ⓘ CONTRACTOR SHALL NOT CLOSE BUS STOP UNTIL UPSTREAM BUS STOP HAS BEEN FULLY CONSTRUCTED AND IS FULLY OPERATIONAL.

LANE CLOSURE: 1 EB OUTSIDE LANE, 1 WB OUTSIDE LANE

PHASE 3A

STORM SEWER, LIGHTING, TRAFFIC SIGNALS, COMMUNICATION, TRANSIT STOPS, CURBS/ GUTTERS, SIDEWALKS, RAMPS, MEDIANS & FULL DEPTH PAVEMENT INSTALLATION

LEGEND

- PHASE 3A CONSTRUCTION
- CONSTRUCTION SIGN
- GROUP 2 CHANNELIZING DEVICE
- TYPE III BARRICADE
- DIRECTION OF TRAVEL
- WATER-FILLED JERSEY BARRIER
- TYPE B ELECTRONIC ARROW BOARD
- PCMS PORTABLE CHANGEABLE MESSAGE SIGN
- EXISTING BUS STOP
- PROPOSED BUS STOP

ARLINGTON VIRGINIA
DEPARTMENT OF ENVIRONMENTAL SERVICES
FACILITIES & ENGINEERING DIVISION
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2100 CLARENDON BOULEVARD, SUITE 813
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SEAL
COMMONWEALTH OF VIRGINIA
HARSHIT THAKER
Lic. No. 0491174
9-22-2022
PROFESSIONAL ENGINEER

APPROVALS	DATE
QUALITY CONTROL ENGINEER	
CONSTRUCTION MANAGEMENT SUPERVISOR	
WATER, SEWER, STREETS BUREAU CHIEF	
TRANSPORTATION DIRECTOR	
PROJECT MANAGER	

Revisions	Date

Designed: JS
Drawn: TR
Checked: HT/WN
Miss Utility Transmittal #:

Filename: xMOT-SegD-Phase 3.dwg
Path: T:\1009400 - Master Arlington County On-Call\1009401 - Seg C-Columbia Pike Multimodal Imp\07 Design\DWG\Seg-D
Plotted: September 22, 2022
Plotted by: james.see

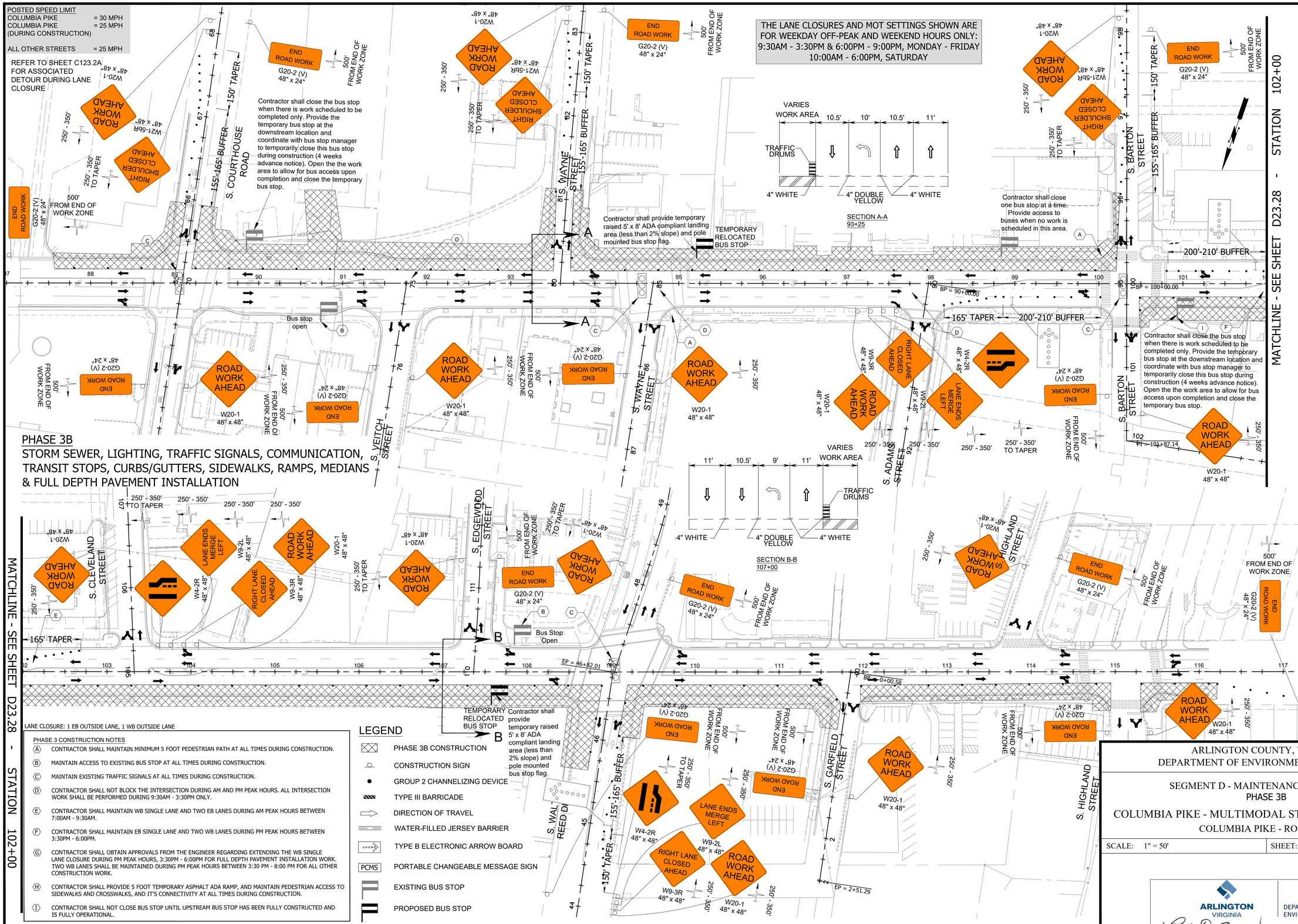
ARLINGTON COUNTY, VIRGINIA
DEPARTMENT OF ENVIRONMENTAL SERVICES

SEGMENT D - MAINTENANCE OF TRAFFIC
PHASE 3A

COLUMBIA PIKE - MULTIMODAL STREET IMPROVEMENTS
COLUMBIA PIKE - ROUTE 244

SCALE: 1" = 50' | SHEET: D23.27

ARLINGTON VIRGINIA
DEPARTMENT OF ENVIRONMENTAL SERVICES
LUIS ARAYA
BUREAU CHIEF, DES - DEVELOPMENT SERVICES
3/7/2023
APPROVAL DATE



LANE CLOSURE: 1 EB OUTSIDE LANE, 1 WB OUTSIDE LANE

PHASE 3 CONSTRUCTION NOTES

- (A) CONTRACTOR SHALL MAINTAIN MINIMUM 5 FOOT PEDESTRIAN PATH AT ALL TIMES DURING CONSTRUCTION.
- (B) MAINTAIN ACCESS TO EXISTING BUS STOP AT ALL TIMES DURING CONSTRUCTION.
- (C) MAINTAIN EXISTING TRAFFIC SIGNALS AT ALL TIMES DURING CONSTRUCTION.
- (D) CONTRACTOR SHALL NOT BLOCK THE INTERSECTION DURING AM AND PM PEAK HOURS. ALL INTERSECTION WORK SHALL BE PERFORMED DURING 9:30AM - 3:30PM ONLY.
- (E) CONTRACTOR SHALL MAINTAIN WB SINGLE LANE AND TWO EB LANES DURING AM PEAK HOURS BETWEEN 7:00AM - 9:30AM.
- (F) CONTRACTOR SHALL MAINTAIN EB SINGLE LANE AND TWO WB LANES DURING PM PEAK HOURS BETWEEN 3:30PM - 6:00PM.
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- (H) CONTRACTOR SHALL PROVIDE 5 FOOT TEMPORARY ASPHALT ADA RAMP, AND MAINTAIN PEDESTRIAN ACCESS TO SIDEWALKS AND CROSSWALKS, AND IT'S CONNECTIVITY AT ALL TIMES DURING CONSTRUCTION.
- (I) CONTRACTOR SHALL NOT CLOSE BUS STOP UNTIL UPSTREAM BUS STOP HAS BEEN FULLY CONSTRUCTED AND IS FULLY OPERATIONAL.

LEGEND

- PHASE 3B CONSTRUCTION
- CONSTRUCTION SIGN
- GROUP 2 CHANNELIZING DEVICE
- TYPE III BARRICADE
- DIRECTION OF TRAVEL
- WATER-FILLED JERSEY BARRIER
- TYPE B ELECTRONIC ARROW BOARD
- PCMS — PORTABLE CHANGEABLE MESSAGE SIGN
- EXISTING BUS STOP
- PROPOSED BUS STOP

ARLINGTON VIRGINIA
DEPARTMENT OF ENVIRONMENTAL SERVICES
FACILITIES & ENGINEERING DIVISION
ENGINEERING BUREAU
2100 CLARENDON BOULEVARD, SUITE 813
ARLINGTON, VA 22201
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SEAL

COMMONWEALTH OF VIRGINIA
HARSHIT THAKER
Lic. No. 0491174
9-22-2022
PROFESSIONAL ENGINEER

APPROVALS	DATE
QUALITY CONTROL ENGINEER	
CONSTRUCTION MANAGEMENT SUPERVISOR	
WATER, SEWER, STREETS BUREAU CHIEF	
TRANSPORTATION DIRECTOR	
PROJECT MANAGER	

Revisions	Date

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Checked: HT/WN
Miss Utility Transmittal #:

Filename: xMOT-SegD-Phase 3.dwg
Path: T:\1009400 - Master-Arlington County On-Call\1009401 - Seg C-Columbia Pike Multimodal Imp\07 Design\DWG\Seg-D\
Plotted: September 22, 2022
Plotted by: james.see

ARLINGTON COUNTY, VIRGINIA
DEPARTMENT OF ENVIRONMENTAL SERVICES

SEGMENT D - MAINTENANCE OF TRAFFIC
PHASE 3B

COLUMBIA PIKE - MULTIMODAL STREET IMPROVEMENTS
COLUMBIA PIKE - ROUTE 244

SCALE: 1" = 50'	SHEET: D23.28

ARLINGTON VIRGINIA
DEPARTMENT OF ENVIRONMENTAL SERVICES
LUIS ARAYA
BUREAU CHIEF, DES - DEVELOPMENT SERVICES
3/7/2023
APPROVAL DATE

POSTED SPEED LIMIT
COLUMBIA PIKE = 30 MPH
COLUMBIA PIKE = 25 MPH
(DURING CONSTRUCTION)

ALL OTHER STREETS = 25 MPH

THE LANE CLOSURES AND MOT SETTINGS SHOWN ARE FOR WEEKDAY OFF-PEAK AND WEEKEND HOURS ONLY:
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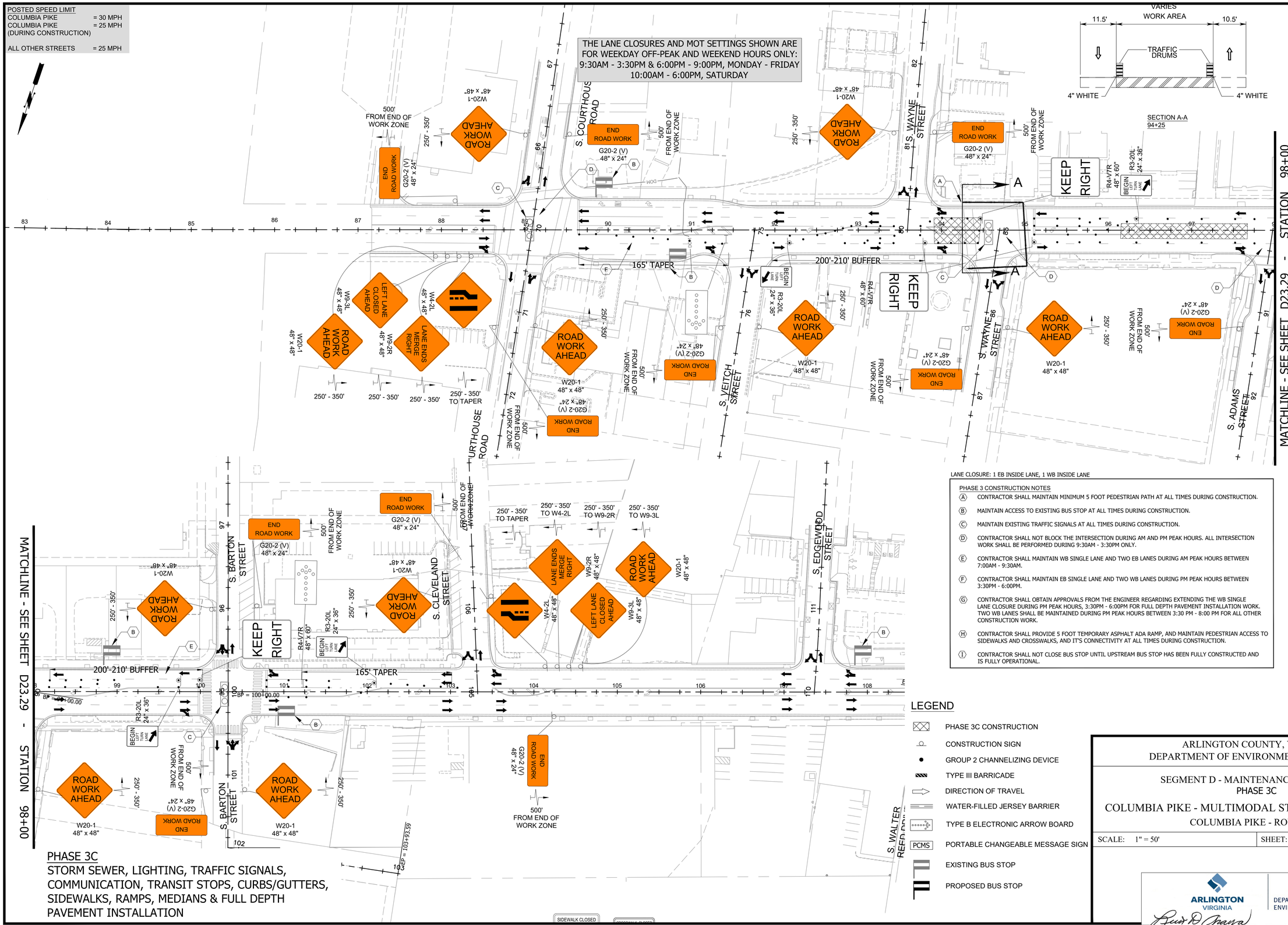

PHASE 3C

STORM SEWER, LIGHTING, TRAFFIC SIGNALS, COMMUNICATION, TRANSIT STOPS, CURBS/GUTTERS, SIDEWALKS, RAMPS, MEDIANS & FULL DEPTH PAVEMENT INSTALLATION

LANE CLOSURE: 1 EB INSIDE LANE, 1 WB INSIDE LANE

PHASE 3 CONSTRUCTION NOTES

- (A) CONTRACTOR SHALL MAINTAIN MINIMUM 5 FOOT PEDESTRIAN PATH AT ALL TIMES DURING CONSTRUCTION.
- (B) MAINTAIN ACCESS TO EXISTING BUS STOP AT ALL TIMES DURING CONSTRUCTION.
- (C) MAINTAIN EXISTING TRAFFIC SIGNALS AT ALL TIMES DURING CONSTRUCTION.
- (D) CONTRACTOR SHALL NOT BLOCK THE INTERSECTION DURING AM AND PM PEAK HOURS. ALL INTERSECTION WORK SHALL BE PERFORMED DURING 9:30AM - 3:30PM ONLY.
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- (H) CONTRACTOR SHALL PROVIDE 5 FOOT TEMPORARY ASPHALT ADA RAMP, AND MAINTAIN PEDESTRIAN ACCESS TO SIDEWALKS AND CROSSWALKS, AND IT'S CONNECTIVITY AT ALL TIMES DURING CONSTRUCTION.
- (I) CONTRACTOR SHALL NOT CLOSE BUS STOP UNTIL UPSTREAM BUS STOP HAS BEEN FULLY CONSTRUCTED AND IS FULLY OPERATIONAL.

LEGEND

- PHASE 3C CONSTRUCTION
- CONSTRUCTION SIGN
- GROUP 2 CHANNELIZING DEVICE
- TYPE III BARRICADE
- DIRECTION OF TRAVEL
- WATER-FILLED JERSEY BARRIER
- TYPE B ELECTRONIC ARROW BOARD
- PCMS — PORTABLE CHANGEABLE MESSAGE SIGN
- EXISTING BUS STOP
- PROPOSED BUS STOP

ARLINGTON VIRGINIA
DEPARTMENT OF ENVIRONMENTAL SERVICES
FACILITIES & ENGINEERING DIVISION
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Lic. No. 049174
9-23-2022
PROFESSIONAL ENGINEER

APPROVALS	DATE
QUALITY CONTROL ENGINEER	
CONSTRUCTION MANAGEMENT SUPERVISOR	
WATER, SEWER, STREETS BUREAU CHIEF	
TRANSPORTATION DIRECTOR	
PROJECT MANAGER	

Revisions	Date

Designed: JS
Drawn: TR
Checked: HT/WN
Miss Utility Transmittal #:

Filename: xMOT-SegD-Phase 3.dwg
Path: T:\1009400 - Master-Arlington County On-Call\1009401 - Seg C-Columbia Pike Multimodal Imp\07 Design\DWG\Seg-D\
Plotted: September 22, 2022
Plotted by: james.see

ARLINGTON COUNTY, VIRGINIA
DEPARTMENT OF ENVIRONMENTAL SERVICES

SEGMENT D - MAINTENANCE OF TRAFFIC
PHASE 3C

COLUMBIA PIKE - MULTIMODAL STREET IMPROVEMENTS
COLUMBIA PIKE - ROUTE 244

SCALE: 1" = 50' | SHEET: D23.29

ARLINGTON VIRGINIA
DEPARTMENT OF ENVIRONMENTAL SERVICES
LUIS ARAYA
BUREAU CHIEF, DES - DEVELOPMENT SERVICES
3/7/2023
APPROVAL DATE

POSTED SPEED LIMIT
COLUMBIA PIKE = 30 MPH
COLUMBIA PIKE = 25 MPH
(DURING CONSTRUCTION)

ALL OTHER STREETS = 25 MPH

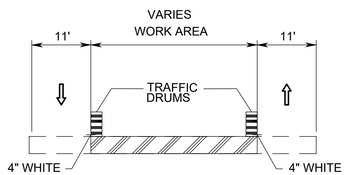
REFER TO SHEET D23.31 FOR ASSOCIATED DETOUR DURING LANE CLOSURE

THE LANE CLOSURES AND MOT SETTINGS SHOWN ARE FOR WEEKDAY OFF-PEAK AND WEEKEND HOURS ONLY: 9:30AM - 3:30PM & 6:00PM - 9:00PM, MONDAY - FRIDAY 10:00AM - 6:00PM, SATURDAY

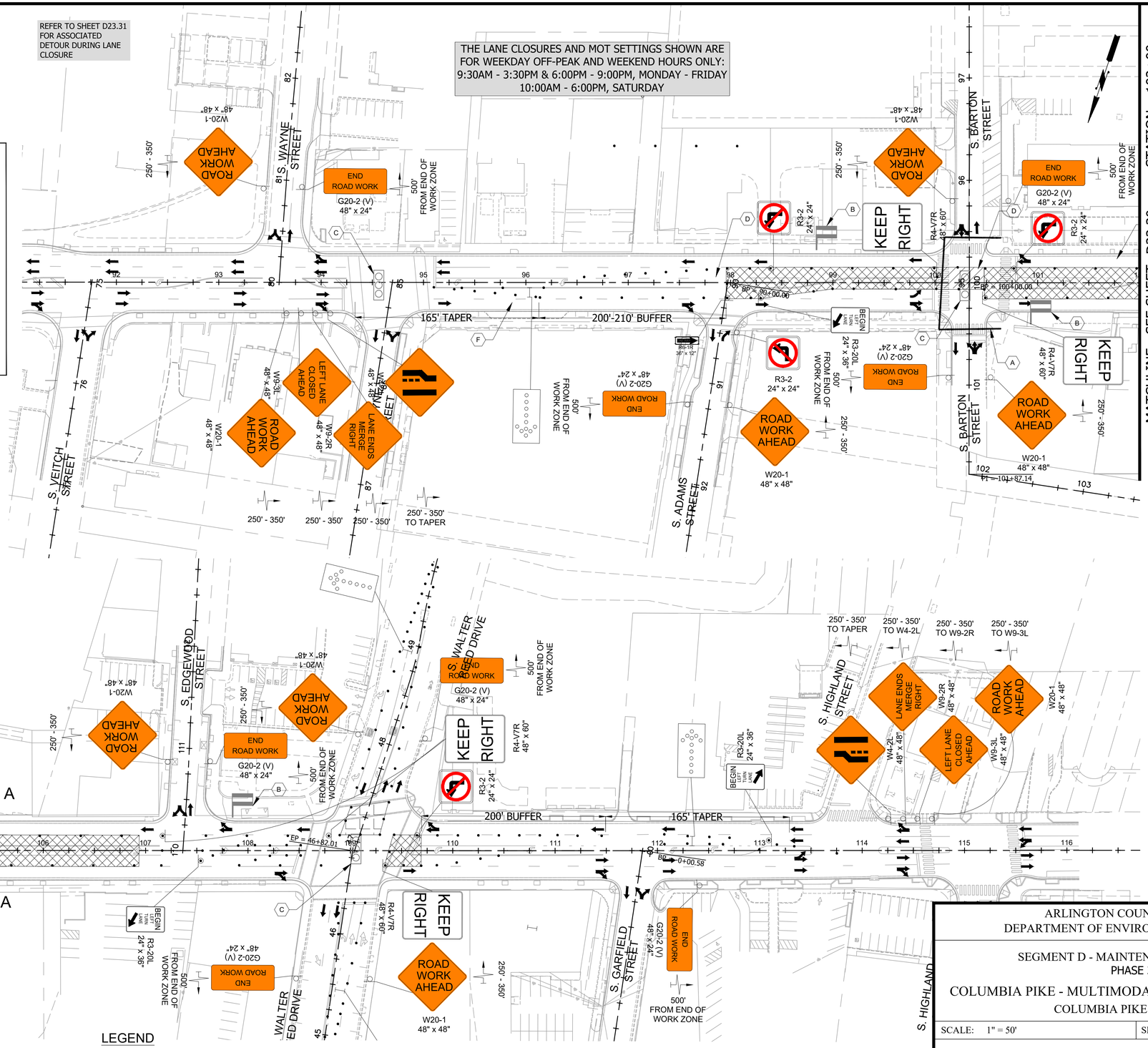
LANE CLOSURE: 1 EB INSIDE LANE, 1 WB INSIDE LANE

PHASE 3 CONSTRUCTION NOTES

- (A) CONTRACTOR SHALL MAINTAIN MINIMUM 5 FOOT PEDESTRIAN PATH AT ALL TIMES DURING CONSTRUCTION.
- (B) MAINTAIN ACCESS TO EXISTING BUS STOP AT ALL TIMES DURING CONSTRUCTION.
- (C) MAINTAIN EXISTING TRAFFIC SIGNALS AT ALL TIMES DURING CONSTRUCTION.
- (D) CONTRACTOR SHALL NOT BLOCK THE INTERSECTION DURING AM AND PM PEAK HOURS. ALL INTERSECTION WORK SHALL BE PERFORMED DURING 9:30AM - 3:30PM ONLY.
- (E) CONTRACTOR SHALL MAINTAIN WB SINGLE LANE AND TWO EB LANES DURING AM PEAK HOURS BETWEEN 7:00AM - 9:30AM.
- (F) CONTRACTOR SHALL MAINTAIN EB SINGLE LANE AND TWO WB LANES DURING PM PEAK HOURS BETWEEN 3:30PM - 6:00PM.
- (G) CONTRACTOR SHALL OBTAIN APPROVALS FROM THE ENGINEER REGARDING EXTENDING THE WB SINGLE LANE CLOSURE DURING PM PEAK HOURS, 3:30PM - 6:00PM FOR FULL DEPTH PAVEMENT INSTALLATION WORK. TWO WB LANES SHALL BE MAINTAINED DURING PM PEAK HOURS BETWEEN 3:30 PM - 8:00 PM FOR ALL OTHER CONSTRUCTION WORK.
- (H) CONTRACTOR SHALL PROVIDE 5 FOOT TEMPORARY ASPHALT ADA RAMP, AND MAINTAIN PEDESTRIAN ACCESS TO SIDEWALKS AND CROSSWALKS, AND IT'S CONNECTIVITY AT ALL TIMES DURING CONSTRUCTION.
- (I) CONTRACTOR SHALL NOT CLOSE BUS STOP UNTIL UPSTREAM BUS STOP HAS BEEN FULLY CONSTRUCTED AND IS FULLY OPERATIONAL.



SECTION A-A
105+00



PHASE 3D
STORM SEWER, LIGHTING, TRAFFIC SIGNALS, COMMUNICATION, TRANSIT STOPS, CURBS/GUTTERS, SIDEWALKS, RAMPS, MEDIANS & FULL DEPTH PAVEMENT INSTALLATION

LEGEND

- PHASE 3D CONSTRUCTION
- CONSTRUCTION SIGN
- GROUP 2 CHANNELIZING DEVICE
- TYPE III BARRICADE
- DIRECTION OF TRAVEL
- WATER-FILLED JERSEY BARRIER
- TYPE B ELECTRONIC ARROW BOARD
- PCMS PORTABLE CHANGEABLE MESSAGE SIGN
- EXISTING BUS STOP
- PROPOSED BUS STOP
- PHASE 3D CONSTRUCTION (FOLLOW PHASE 2D SEQUENCE OF CONSTRUCTION AND DETOUR)
- PHASE 3D CONSTRUCTION (FOLLOW PHASE 2C SEQUENCE OF CONSTRUCTION AND DETOUR)

ARLINGTON VIRGINIA
DEPARTMENT OF ENVIRONMENTAL SERVICES
FACILITIES & ENGINEERING DIVISION
ENGINEERING BUREAU
2100 CLARENDON BOULEVARD, SUITE 813
ARLINGTON, VA 22201
PHONE: 703.228.3629
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Fax: 703-642-8106

SEAL
COMMONWEALTH OF VIRGINIA
HARSHIT THAKER
Lic. No. 049174
9-23-2022
PROFESSIONAL ENGINEER

APPROVALS	DATE
QUALITY CONTROL ENGINEER	
CONSTRUCTION MANAGEMENT SUPERVISOR	
WATER, SEWER, STREETS BUREAU CHIEF	
TRANSPORTATION DIRECTOR	
PROJECT MANAGER	

Revisions	Date

Designed: JS
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Miss Utility Transmittal #:

Filename: xMOT-SegD-Phase 3.dwg
Path: T:\1009480 - Mastec-Arlington County On-Call\1009840 - Seg C-Columbia Pike Multimodal Imp\07 Design\DWG\Seg-D
Plotted: September 22, 2022
Plotted by: james.see

ARLINGTON COUNTY, VIRGINIA
DEPARTMENT OF ENVIRONMENTAL SERVICES

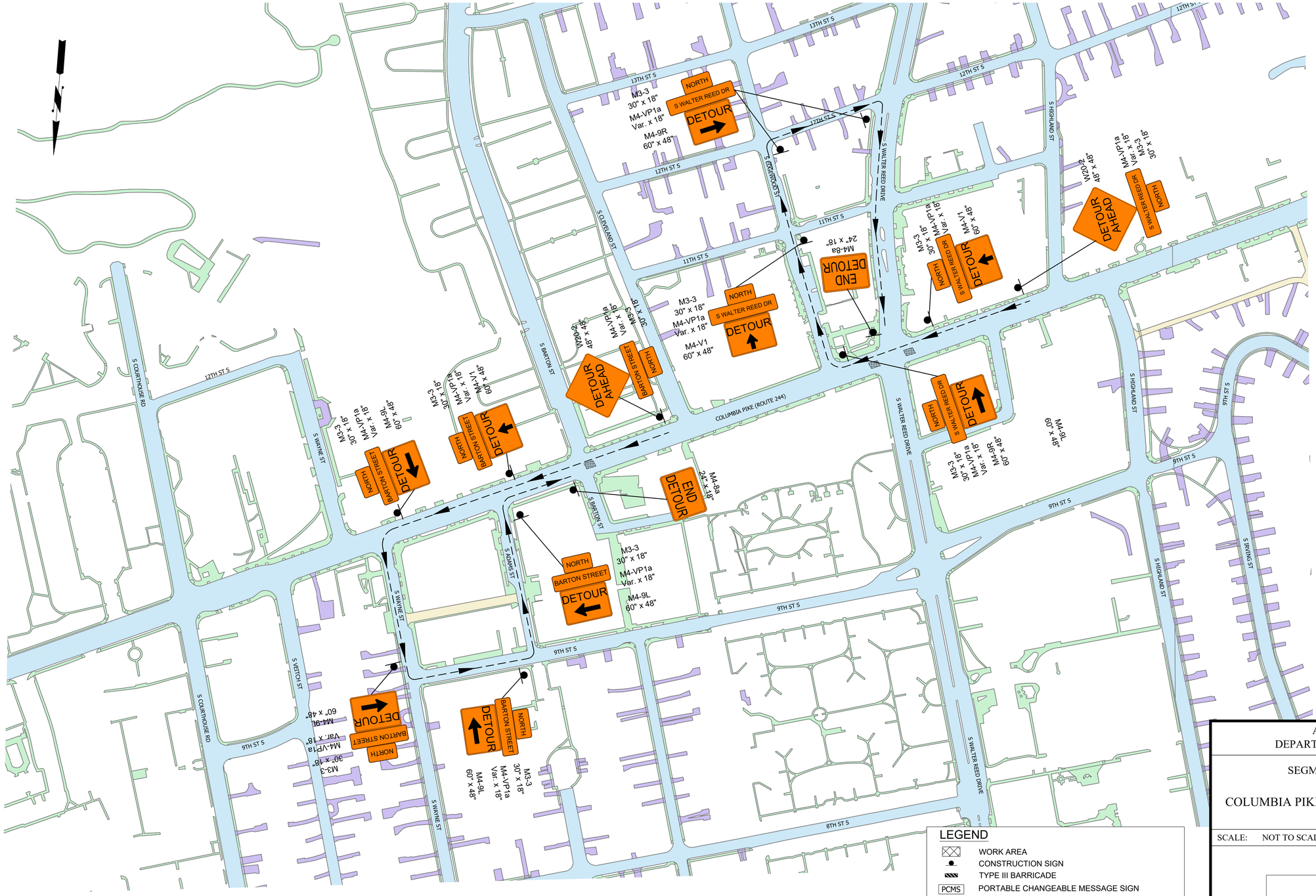
SEGMENT D - MAINTENANCE OF TRAFFIC
PHASE 3D

COLUMBIA PIKE - MULTIMODAL STREET IMPROVEMENTS
COLUMBIA PIKE - ROUTE 244

SCALE: 1" = 50' | SHEET: D23.30

ARLINGTON VIRGINIA
DEPARTMENT OF ENVIRONMENTAL SERVICES
LUIS ARAYA
BUREAU CHIEF, DES - DEVELOPMENT SERVICES
3/7/2023
APPROVAL DATE

MOT PHASE 3D DETOUR



LEGEND

- WORK AREA
- CONSTRUCTION SIGN
- TYPE III BARRICADE
- PCMS — PORTABLE CHANGEABLE MESSAGE SIGN
- DETOUR ROUTE FOR PHASE 3D

ARLINGTON VIRGINIA
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SEAL

COMMONWEALTH OF VIRGINIA
HARSHIT THAKER
Lic. No. 0491174
9-22-2022
PROFESSIONAL ENGINEER

APPROVALS	DATE
QUALITY CONTROL ENGINEER	
CONSTRUCTION MANAGEMENT SUPERVISOR	
WATER, SEWER, STREETS BUREAU CHIEF	
TRANSPORTATION DIRECTOR	
PROJECT MANAGER	

Revisions	Date

Designed: JS
Drawn: TR
Checked: HT/WN
Miss Utility Transmittal #:

Filename: MOT-SegD-110010073_DETOUR.dwg
Path: T:\1009400 - Master-Arlington County On-Call\1009401_7 - Seg C-Columbia Pike Multimodal Imp\07 Design\DWG\Seg-D
Plotted: September 22, 2022
Plotted by: james.see

ARLINGTON COUNTY, VIRGINIA
DEPARTMENT OF ENVIRONMENTAL SERVICES

SEGMENT D - MAINTENANCE OF TRAFFIC
PHASE 3D DETOUR

COLUMBIA PIKE - MULTIMODAL STREET IMPROVEMENTS
COLUMBIA PIKE - ROUTE 244

SCALE: NOT TO SCALE	SHEET: D23.31

ARLINGTON VIRGINIA
DEPARTMENT OF ENVIRONMENTAL SERVICES

LUIS ARAYA
BUREAU CHIEF, DES - DEVELOPMENT SERVICES

3/7/2023
APPROVAL DATE

POSTED SPEED LIMIT
COLUMBIA PIKE = 30 MPH
COLUMBIA PIKE = 25 MPH
(DURING CONSTRUCTION)

ALL OTHER STREETS = 25 MPH

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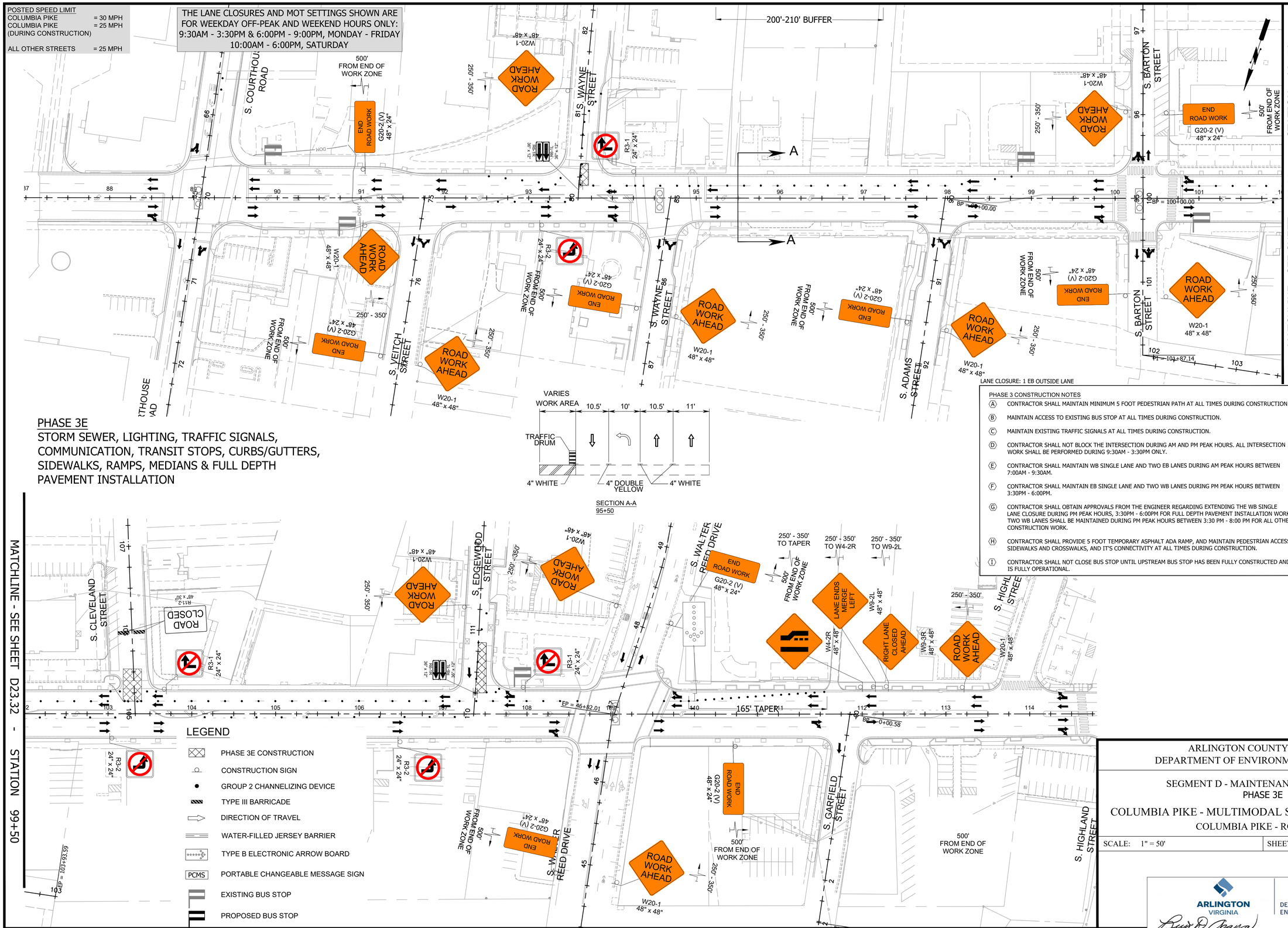

PHASE 3E
STORM SEWER, LIGHTING, TRAFFIC SIGNALS, COMMUNICATION, TRANSIT STOPS, CURBS/GUTTERS, SIDEWALKS, RAMPS, MEDIANS & FULL DEPTH PAVEMENT INSTALLATION

MATCHLINE - SEE SHEET D23.32 - STATION 99+50

MATCHLINE - SEE SHEET D23.32 - STATION 99+50

PHASE 3 CONSTRUCTION NOTES

- (A) CONTRACTOR SHALL MAINTAIN MINIMUM 5 FOOT PEDESTRIAN PATH AT ALL TIMES DURING CONSTRUCTION.
- (B) MAINTAIN ACCESS TO EXISTING BUS STOP AT ALL TIMES DURING CONSTRUCTION.
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- (I) CONTRACTOR SHALL NOT CLOSE BUS STOP UNTIL UPSTREAM BUS STOP HAS BEEN FULLY CONSTRUCTED AND IS FULLY OPERATIONAL.

LEGEND

- PHASE 3E CONSTRUCTION
- CONSTRUCTION SIGN
- GROUP 2 CHANNELIZING DEVICE
- TYPE III BARRICADE
- DIRECTION OF TRAVEL
- WATER-FILLED JERSEY BARRIER
- TYPE B ELECTRONIC ARROW BOARD
- PCMS — PORTABLE CHANGEABLE MESSAGE SIGN
- EXISTING BUS STOP
- PROPOSED BUS STOP

ARLINGTON VIRGINIA
DEPARTMENT OF ENVIRONMENTAL SERVICES
FACILITIES & ENGINEERING DIVISION
ENGINEERING BUREAU
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ARLINGTON, VA 22201
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SEAL
COMMONWEALTH OF VIRGINIA
HARSHIT THAKER
Lic. No. 049174
9-22-2022
PROFESSIONAL ENGINEER

APPROVALS	DATE
QUALITY CONTROL ENGINEER	
CONSTRUCTION MANAGEMENT SUPERVISOR	
WATER, SEWER, STREETS BUREAU CHIEF	
TRANSPORTATION DIRECTOR	
PROJECT MANAGER	

Revisions	Date

Designed: JS
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Path: T:\1890400 - Mastes-Arlington County On-Call\1890401 - Seg C-Columbia Pike Multimodal Imp\07 Design\DWG\Seg-D
Plotted: September 22, 2022
Plotted by: james.see

ARLINGTON COUNTY, VIRGINIA
DEPARTMENT OF ENVIRONMENTAL SERVICES

SEGMENT D - MAINTENANCE OF TRAFFIC
PHASE 3E

COLUMBIA PIKE - MULTIMODAL STREET IMPROVEMENTS
COLUMBIA PIKE - ROUTE 244

SCALE: 1" = 50'	SHEET: D23.32

ARLINGTON VIRGINIA
DEPARTMENT OF ENVIRONMENTAL SERVICES
LUIS ARAYA
BUREAU CHIEF, DES - DEVELOPMENT SERVICES
3/7/2023
APPROVAL DATE

POSTED SPEED LIMIT
COLUMBIA PIKE = 30 MPH
COLUMBIA PIKE = 25 MPH
(DURING CONSTRUCTION)

ALL OTHER STREETS = 25 MPH

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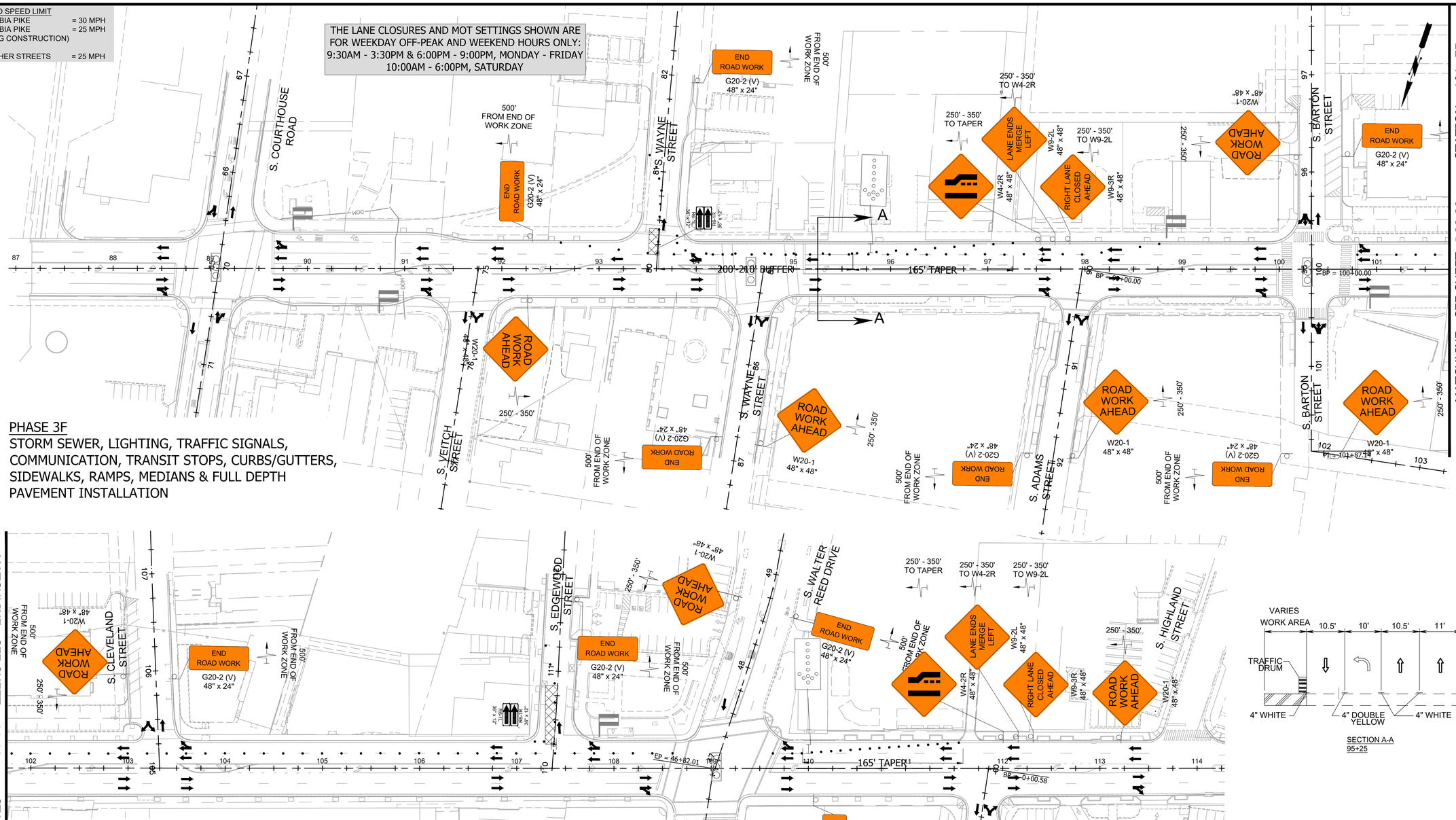

PHASE 3F
STORM SEWER, LIGHTING, TRAFFIC SIGNALS, COMMUNICATION, TRANSIT STOPS, CURBS/GUTTERS, SIDEWALKS, RAMPS, MEDIANS & FULL DEPTH PAVEMENT INSTALLATION

MATCHLINE - SEE SHEET D23.33 - STATION 101+75

MATCHLINE - SEE SHEET D23.33 - STATION 101+75

SECTION A-A
95+25

LANE CLOSURE: 1 EB OUTSIDE LANE

PHASE 3 CONSTRUCTION NOTES

- (A) CONTRACTOR SHALL MAINTAIN MINIMUM 5 FOOT PEDESTRIAN PATH AT ALL TIMES DURING CONSTRUCTION.
- (B) MAINTAIN ACCESS TO EXISTING BUS STOP AT ALL TIMES DURING CONSTRUCTION.
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- (I) CONTRACTOR SHALL NOT CLOSE BUS STOP UNTIL UPSTREAM BUS STOP HAS BEEN FULLY CONSTRUCTED AND IS FULLY OPERATIONAL.

LEGEND

- PHASE 3F CONSTRUCTION
- CONSTRUCTION SIGN
- GROUP 2 CHANNELIZING DEVICE
- TYPE III BARRICADE
- DIRECTION OF TRAVEL
- WATER-FILLED JERSEY BARRIER
- TYPE B ELECTRONIC ARROW BOARD
- PCMS — PORTABLE CHANGEABLE MESSAGE SIGN
- EXISTING BUS STOP
- PROPOSED BUS STOP

ARLINGTON VIRGINIA
DEPARTMENT OF ENVIRONMENTAL SERVICES
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SEAL
COMMONWEALTH OF VIRGINIA
HARSHIT THAKER
Lic. No. 0491174
9-22-2022
PROFESSIONAL ENGINEER

APPROVALS	DATE
QUALITY CONTROL ENGINEER	
CONSTRUCTION MANAGEMENT SUPERVISOR	
WATER, SEWER, STREETS BUREAU CHIEF	
TRANSPORTATION DIRECTOR	
PROJECT MANAGER	

Revisions	Date

Designed: JS
Drawn: TR
Checked: HT/WN
Miss Utility Transmittal #:

Filename: xMOT-SegD-Phase 3.dwg
Path: T:\1809400 - Master Arlington County On-Call\1809461 - Seg C-Columbia Pike Multimodal Imp\07 Design\DWG\Seg-D
Plotted: September 22, 2022
Plotted by: james.see

ARLINGTON COUNTY, VIRGINIA
DEPARTMENT OF ENVIRONMENTAL SERVICES

SEGMENT D - MAINTENANCE OF TRAFFIC
PHASE 3F

COLUMBIA PIKE - MULTIMODAL STREET IMPROVEMENTS
COLUMBIA PIKE - ROUTE 244

SCALE: 1" = 50'	SHEET: D23.33

ARLINGTON VIRGINIA
DEPARTMENT OF ENVIRONMENTAL SERVICES
LUIS ARAYA
BUREAU CHIEF, DES - DEVELOPMENT SERVICES
3/7/2023
APPROVAL DATE

POSTED SPEED LIMIT
COLUMBIA PIKE = 30 MPH
COLUMBIA PIKE = 25 MPH
(DURING CONSTRUCTION)

ALL OTHER STREETS = 25 MPH

THE LANE CLOSURES AND MOT SETTINGS SHOWN ARE FOR WEEKDAY OFF-PEAK AND WEEKEND HOURS ONLY:
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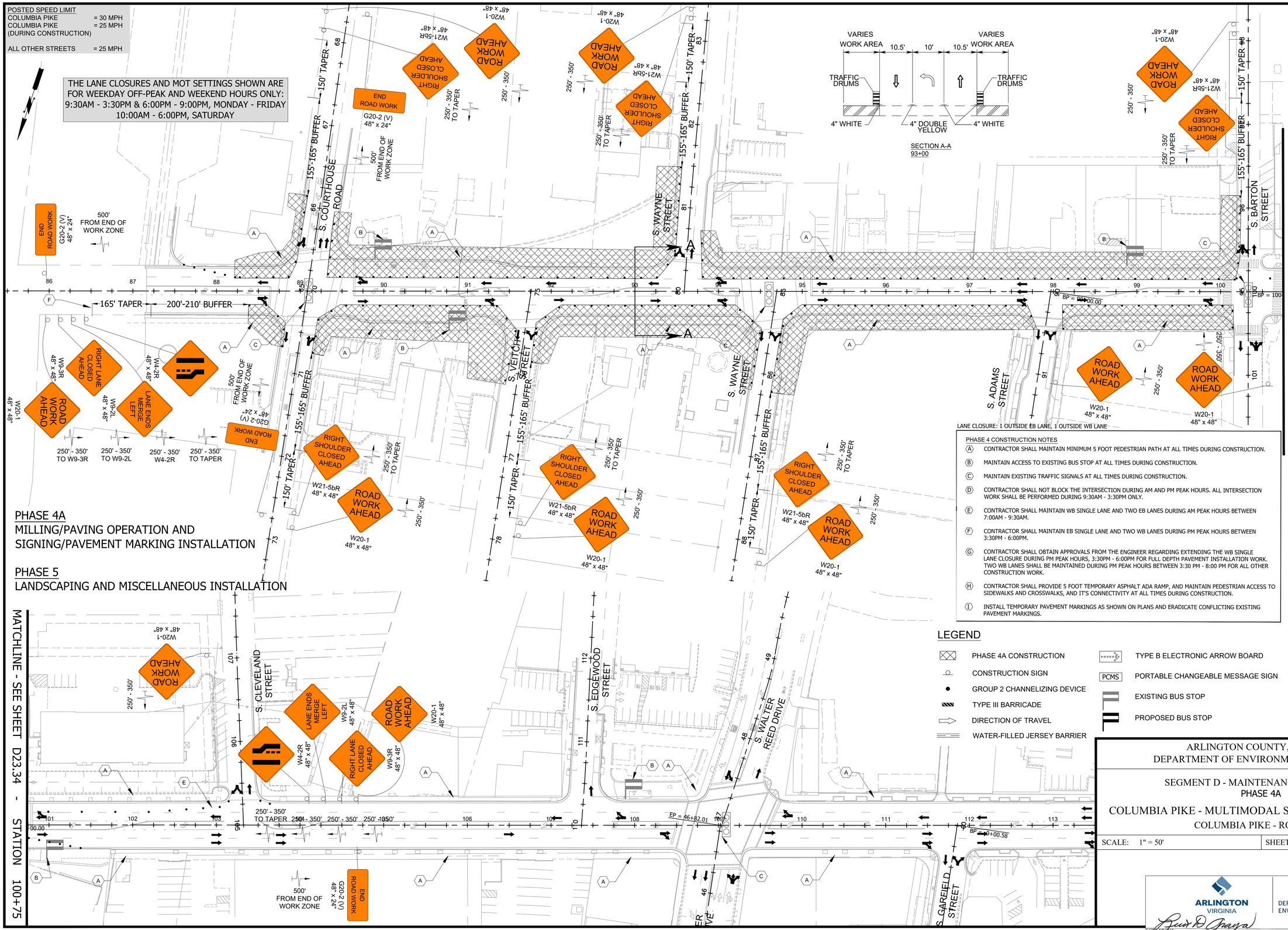

LANE CLOSURE: 1 OUTSIDE EB LANE, 1 OUTSIDE WB LANE

PHASE 4 CONSTRUCTION NOTES

- (A) CONTRACTOR SHALL MAINTAIN MINIMUM 5 FOOT PEDESTRIAN PATH AT ALL TIMES DURING CONSTRUCTION.
- (B) MAINTAIN ACCESS TO EXISTING BUS STOP AT ALL TIMES DURING CONSTRUCTION.
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- (I) INSTALL TEMPORARY PAVEMENT MARKINGS AS SHOWN ON PLANS AND ERADICATE CONFLICTING EXISTING PAVEMENT MARKINGS.

PHASE 4A
MILLING/PAVING OPERATION AND SIGNING/PAVEMENT MARKING INSTALLATION

PHASE 5
LANDSCAPING AND MISCELLANEOUS INSTALLATION

MATCHLINE - SEE SHEET D23.34 - STATION 100+75

MATCHLINE - SEE SHEET D23.34 - STATION 100+75

LEGEND

- PHASE 4A CONSTRUCTION
- CONSTRUCTION SIGN
- GROUP 2 CHANNELIZING DEVICE
- TYPE III BARRICADE
- DIRECTION OF TRAVEL
- WATER-FILLED JERSEY BARRIER
- TYPE B ELECTRONIC ARROW BOARD
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HARSHIT THAKER
Lic. No. 0491174
9-22-2022
PROFESSIONAL ENGINEER

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QUALITY CONTROL ENGINEER	
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WATER, SEWER, STREETS BUREAU CHIEF	
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ARLINGTON COUNTY, VIRGINIA
DEPARTMENT OF ENVIRONMENTAL SERVICES

SEGMENT D - MAINTENANCE OF TRAFFIC
PHASE 4A

COLUMBIA PIKE - MULTIMODAL STREET IMPROVEMENTS
COLUMBIA PIKE - ROUTE 244

SCALE: 1" = 50'	SHEET: D23.34

ARLINGTON VIRGINIA
DEPARTMENT OF ENVIRONMENTAL SERVICES
LUIS ARAYA
BUREAU CHIEF, DES - DEVELOPMENT SERVICES
3/7/2023
APPROVAL DATE

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COLUMBIA PIKE = 25 MPH
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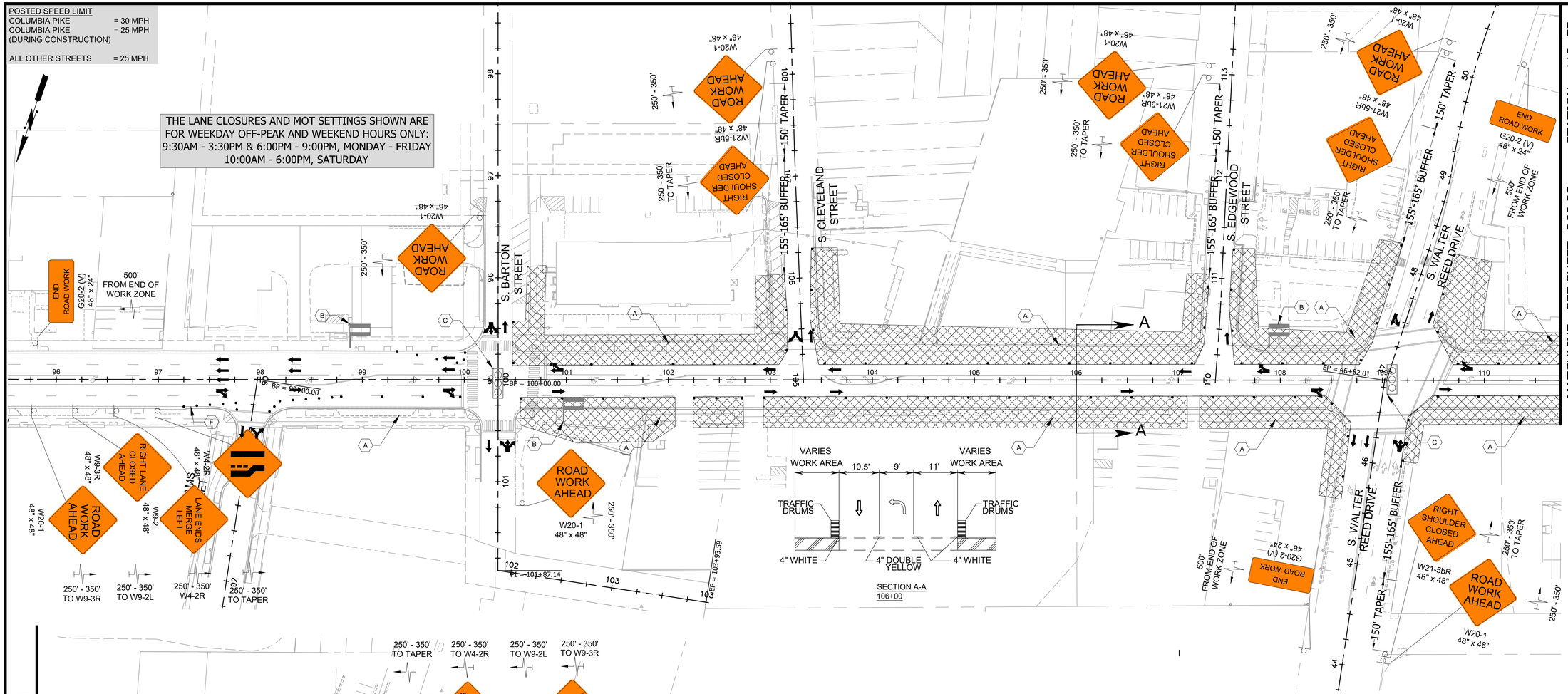

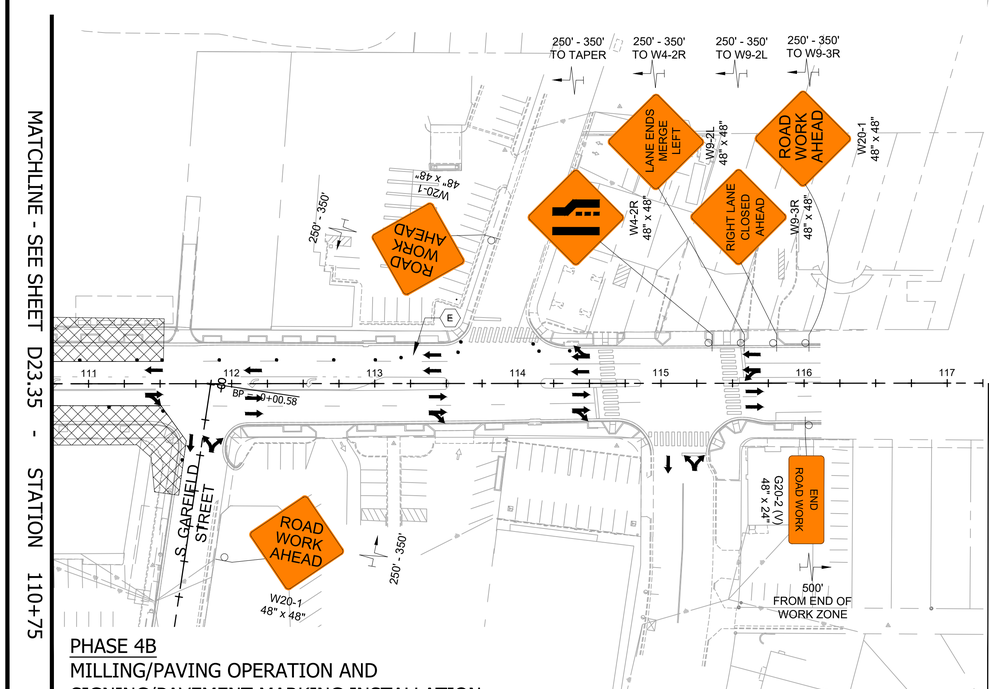

LANE CLOSURE: 1 OUTSIDE EB LANE, 1 OUTSIDE WB LANE

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- (E) CONTRACTOR SHALL MAINTAIN WB SINGLE LANE AND TWO EB LANES DURING AM PEAK HOURS BETWEEN 7:00AM - 9:30AM.
- (F) CONTRACTOR SHALL MAINTAIN EB SINGLE LANE AND TWO WB LANES DURING PM PEAK HOURS BETWEEN 3:30PM - 6:00PM.
- (G) CONTRACTOR SHALL OBTAIN APPROVALS FROM THE ENGINEER REGARDING EXTENDING THE WB SINGLE LANE CLOSURE DURING PM PEAK HOURS, 3:30PM - 6:00PM FOR FULL DEPTH PAVEMENT INSTALLATION WORK. TWO WB LANES SHALL BE MAINTAINED DURING PM PEAK HOURS BETWEEN 3:30 PM - 8:00 PM FOR ALL OTHER CONSTRUCTION WORK.
- (H) CONTRACTOR SHALL PROVIDE 5 FOOT TEMPORARY ASPHALT ADA RAMP, AND MAINTAIN PEDESTRIAN ACCESS TO SIDEWALKS AND CROSSWALKS, AND IT'S CONNECTIVITY AT ALL TIMES DURING CONSTRUCTION.
- (I) INSTALL TEMPORARY PAVEMENT MARKINGS AS SHOWN ON PLANS AND ERADICATE CONFLICTING EXISTING PAVEMENT MARKINGS.

LEGEND

- PHASE 4B CONSTRUCTION
- CONSTRUCTION SIGN
- GROUP 2 CHANNELIZING DEVICE
- TYPE III BARRICADE
- DIRECTION OF TRAVEL
- WATER-FILLED JERSEY BARRIER
- TYPE B ELECTRONIC ARROW BOARD
- PCMS — PORTABLE CHANGEABLE MESSAGE SIGN
- EXISTING BUS STOP
- PROPOSED BUS STOP

PHASE 4B
MILLING/PAVING OPERATION AND
SIGNING/PAVEMENT MARKING INSTALLATION

ARLINGTON VIRGINIA
DEPARTMENT OF ENVIRONMENTAL SERVICES
FACILITIES & ENGINEERING DIVISION
ENGINEERING BUREAU
2100 CLARENDON BOULEVARD, SUITE 813
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Fax: 703-642-8106

SEAL
COMMONWEALTH OF VIRGINIA
HARSHIT THAKER
Lic. No. 0491174
9-22-2022
PROFESSIONAL ENGINEER

APPROVALS	DATE
QUALITY CONTROL ENGINEER	
CONSTRUCTION MANAGEMENT SUPERVISOR	
WATER, SEWER, STREETS BUREAU CHIEF	
TRANSPORTATION DIRECTOR	
PROJECT MANAGER	

Revisions	Date

Designed: JS
Drawn: TR
Checked: HT/WN
Miss Utility Transmittal #:

Filename: xMOT-SegD-Phase 4.dwg
Path: T:\1009400 - Master-Arlington County On-Call\1009461 - Seg C-Columbia Pike Multimodal\Imp\07 Design\DWG\Seg-D
Plotted: September 22, 2022
Plotted by: james.see

ARLINGTON COUNTY, VIRGINIA
DEPARTMENT OF ENVIRONMENTAL SERVICES

SEGMENT D - MAINTENANCE OF TRAFFIC
PHASE 4B

COLUMBIA PIKE - MULTIMODAL STREET IMPROVEMENTS
COLUMBIA PIKE - ROUTE 244

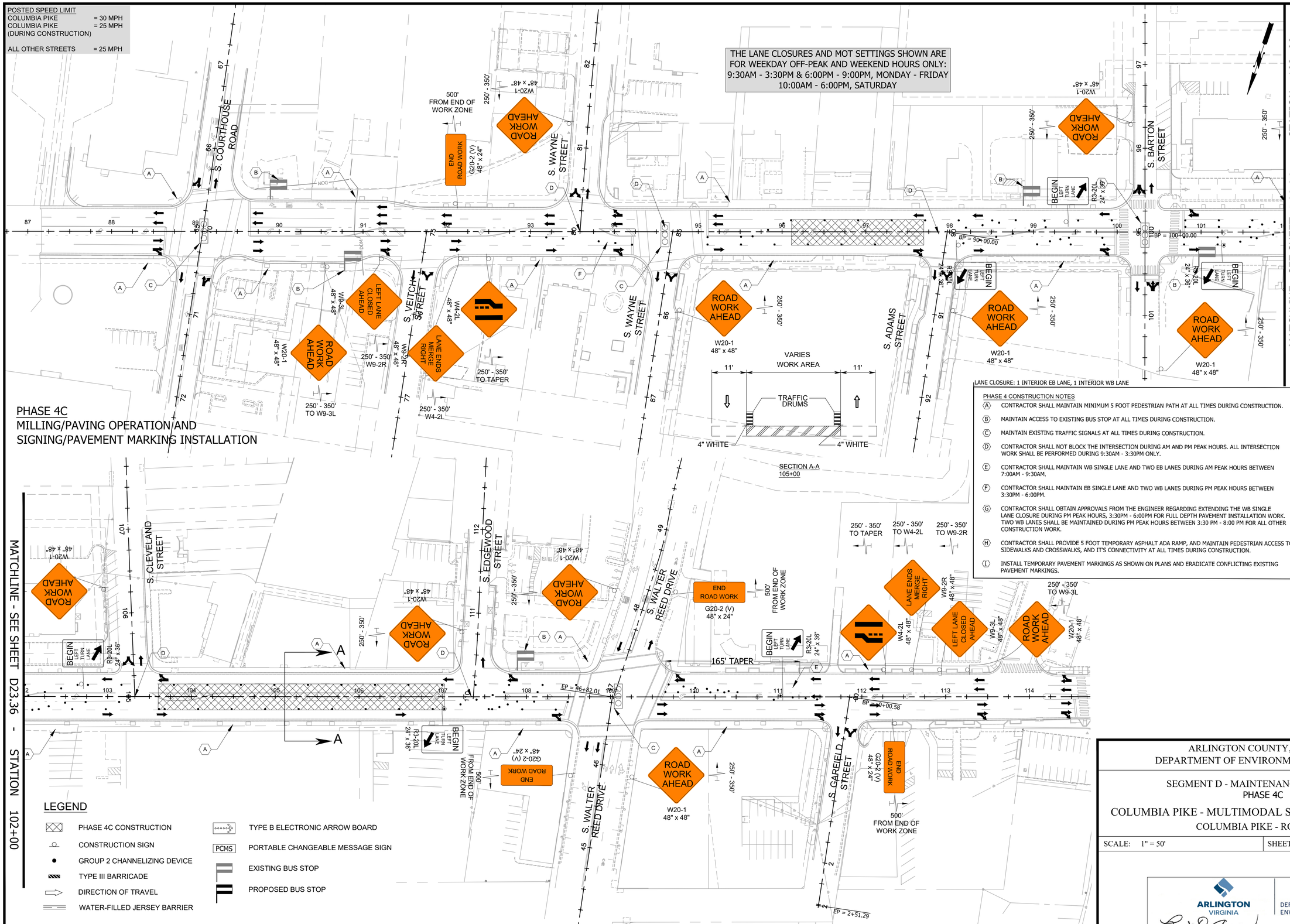
SCALE: 1" = 50' | SHEET: D23.35

ARLINGTON VIRGINIA
DEPARTMENT OF ENVIRONMENTAL SERVICES
LUIS ARAYA
BUREAU CHIEF, DES - DEVELOPMENT SERVICES
3/7/2023
APPROVAL DATE

POSTED SPEED LIMIT
COLUMBIA PIKE = 30 MPH
COLUMBIA PIKE = 25 MPH
(DURING CONSTRUCTION)

ALL OTHER STREETS = 25 MPH

THE LANE CLOSURES AND MOT SETTINGS SHOWN ARE FOR WEEKDAY OFF-PEAK AND WEEKEND HOURS ONLY:
9:30AM - 3:30PM & 6:00PM - 9:00PM, MONDAY - FRIDAY
10:00AM - 6:00PM, SATURDAY



PHASE 4C
MILLING/PAVING OPERATION AND SIGNING/PAVEMENT MARKING INSTALLATION

PHASE 4 CONSTRUCTION NOTES

(A) CONTRACTOR SHALL MAINTAIN MINIMUM 5 FOOT PEDESTRIAN PATH AT ALL TIMES DURING CONSTRUCTION.

(B) MAINTAIN ACCESS TO EXISTING BUS STOP AT ALL TIMES DURING CONSTRUCTION.

(C) MAINTAIN EXISTING TRAFFIC SIGNALS AT ALL TIMES DURING CONSTRUCTION.

(D) CONTRACTOR SHALL NOT BLOCK THE INTERSECTION DURING AM AND PM PEAK HOURS. ALL INTERSECTION WORK SHALL BE PERFORMED DURING 9:30AM - 3:30PM ONLY.

(E) CONTRACTOR SHALL MAINTAIN WB SINGLE LANE AND TWO EB LANES DURING AM PEAK HOURS BETWEEN 7:00AM - 9:30AM.

(F) CONTRACTOR SHALL MAINTAIN EB SINGLE LANE AND TWO WB LANES DURING PM PEAK HOURS BETWEEN 3:30PM - 6:00PM.

(G) CONTRACTOR SHALL OBTAIN APPROVALS FROM THE ENGINEER REGARDING EXTENDING THE WB SINGLE LANE CLOSURE DURING PM PEAK HOURS, 3:30PM - 6:00PM FOR FULL DEPTH PAVEMENT INSTALLATION WORK. TWO WB LANES SHALL BE MAINTAINED DURING PM PEAK HOURS BETWEEN 3:30 PM - 8:00 PM FOR ALL OTHER CONSTRUCTION WORK.

(H) CONTRACTOR SHALL PROVIDE 5 FOOT TEMPORARY ASPHALT ADA RAMP, AND MAINTAIN PEDESTRIAN ACCESS TO SIDEWALKS AND CROSSWALKS, AND IT'S CONNECTIVITY AT ALL TIMES DURING CONSTRUCTION.

(I) INSTALL TEMPORARY PAVEMENT MARKINGS AS SHOWN ON PLANS AND ERADICATE CONFLICTING EXISTING PAVEMENT MARKINGS.

MATCHLINE - SEE SHEET D23.36 - STATION 102+00

MATCHLINE - SEE SHEET D23.36 - STATION 102+00

LEGEND

- PHASE 4C CONSTRUCTION
- CONSTRUCTION SIGN
- GROUP 2 CHANNELIZING DEVICE
- TYPE III BARRICADE
- DIRECTION OF TRAVEL
- WATER-FILLED JERSEY BARRIER
- TYPE B ELECTRONIC ARROW BOARD
- PCMS PORTABLE CHANGEABLE MESSAGE SIGN
- EXISTING BUS STOP
- PROPOSED BUS STOP

ARLINGTON VIRGINIA
DEPARTMENT OF ENVIRONMENTAL SERVICES
FACILITIES & ENGINEERING DIVISION
ENGINEERING BUREAU
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SEAL
COMMONWEALTH OF VIRGINIA
HARSHIT THAKER
Lic. No. 0491174
9-22-2022
PROFESSIONAL ENGINEER

APPROVALS	DATE
QUALITY CONTROL ENGINEER	
CONSTRUCTION MANAGEMENT SUPERVISOR	
WATER, SEWER, STREETS BUREAU CHIEF	
TRANSPORTATION DIRECTOR	
PROJECT MANAGER	

Revisions	Date

Designed: JS
Drawn: TR
Checked: HT/WN
Miss Utility Transmittal #:

Filename: xMOT-SegD-Phase 4.dwg
Path: T:\1909400 - Master Arlington County On-Call\1909461 - Seg C-Columbia Pike Multimodal Imp\07 Design\DWG\Seg-D
Plotted: September 22, 2022
Plotted by: james.see

ARLINGTON COUNTY, VIRGINIA
DEPARTMENT OF ENVIRONMENTAL SERVICES

SEGMENT D - MAINTENANCE OF TRAFFIC
PHASE 4C

COLUMBIA PIKE - MULTIMODAL STREET IMPROVEMENTS
COLUMBIA PIKE - ROUTE 244

SCALE: 1" = 50' | SHEET: D23.36

ARLINGTON VIRGINIA
DEPARTMENT OF ENVIRONMENTAL SERVICES
LUIS ARAYA
BUREAU CHIEF, DES - DEVELOPMENT SERVICES
3/7/2023
APPROVAL DATE

Page 6H-40 September 2019

Typical Traffic Control
Outside Lane Closure Operation on a Four-Lane Roadway
(Figure TTC-16.2)
NOTES

Standard:
1. **On divided highways having a median wider than 8', right and left sign assemblies shall be required.**

Guidance:

2. *Sign spacing should be 1300'-1500' for Limited Access highways. For all other roadways, the sign spacing should be 500'-800' where the posted speed limit is greater than 45 mph, and 350'-500' where the posted speed limit is 45 mph or less.*
3. *When closing a lane, a PCMS should be used in advance of the first warning sign if all of the left side signs cannot be installed.*[2]
4. *Care should be exercised when establishing the limits of the work zone to insure maximum possible sight distance in advance of the transition, based on the posted speed limit and at least equal to or greater than the values in Table 6H-3. For Limited Access highways a minimum of 1000' is desired.*
5. *All vehicles, equipment, workers, and their activities should be restricted to one side of the pavement.*

Standard:

6. **Taper length (L) and channelizing device spacing shall be at the following:**

Speed Limit (mph)	Lane Width 9	10	11	12	Remarks	Speed Limit (mph)	Lane Width 9	10	11	12	Remarks
25	95	105	115	125	$L=S^2W/60$	50	450	500	550	600	L=SW
30	135	150	165	180	$L=S^2W/60$	55	495	550	605	660	L= SW
35	185	205	225	245	$L=S^2W/60$	60	540	600	660	720	L=SW
40	240	270	295	320	$L=S^2W/60$	65	585	650	715	780	L=SW
45	405	450	495	540	L=SW	70	630	700	770	840	L=SW

Taper Length L. Limited Access highways shall use a 1000' merging taper regardless of the posted speed. Shifting Tapers see Table 6H-2.[2] Shoulder Taper = ⅓ L Minimum

7. **Channelizing device spacing shall be at the following:**

Location Spacing	Speed Limit (mph) 0-35	36 +	Location Spacing	Speed Limit (mph) 0-35	36 +	Location Spacing	Speed Limit (mph) 0-35	36 +
Transition	20'	40'	Travelway	40'	80'	* Construction Access	80'	120'

Channelizing Device Spacing. *Construction access spacing may be increased to this distance, but shall not exceed one access per ¼ mile.

8. **An arrow board shall be used when a lane is closed. When more than one lane is closed, a separate arrow board shall be used for each closed lane (see Figure TTC-18).**
9. **The buffer space length shall be shown in Table 6H-3 on Page 6H-5 for the posted speed limit.**
10. **A shadow vehicle with either a Type B or C arrow board operating in the caution mode, or at least one high intensity amber rotating, flashing, or[1] oscillating light shall be parked 80'-120' in advance of the first work crew. When the posted speed limit is 45 mph or greater, a truck-mounted attenuator shall be used.**
11. **Vehicle hazard warning signals shall not be used instead of the vehicle's high-intensity amber rotating, flashing, or[1] oscillating lights but can be used to supplement the amber rotating, flashing, or[1] oscillating lights.**
12. **When a side road intersects the highway within the TTC zone, additional TTC devices shall be placed as needed.**

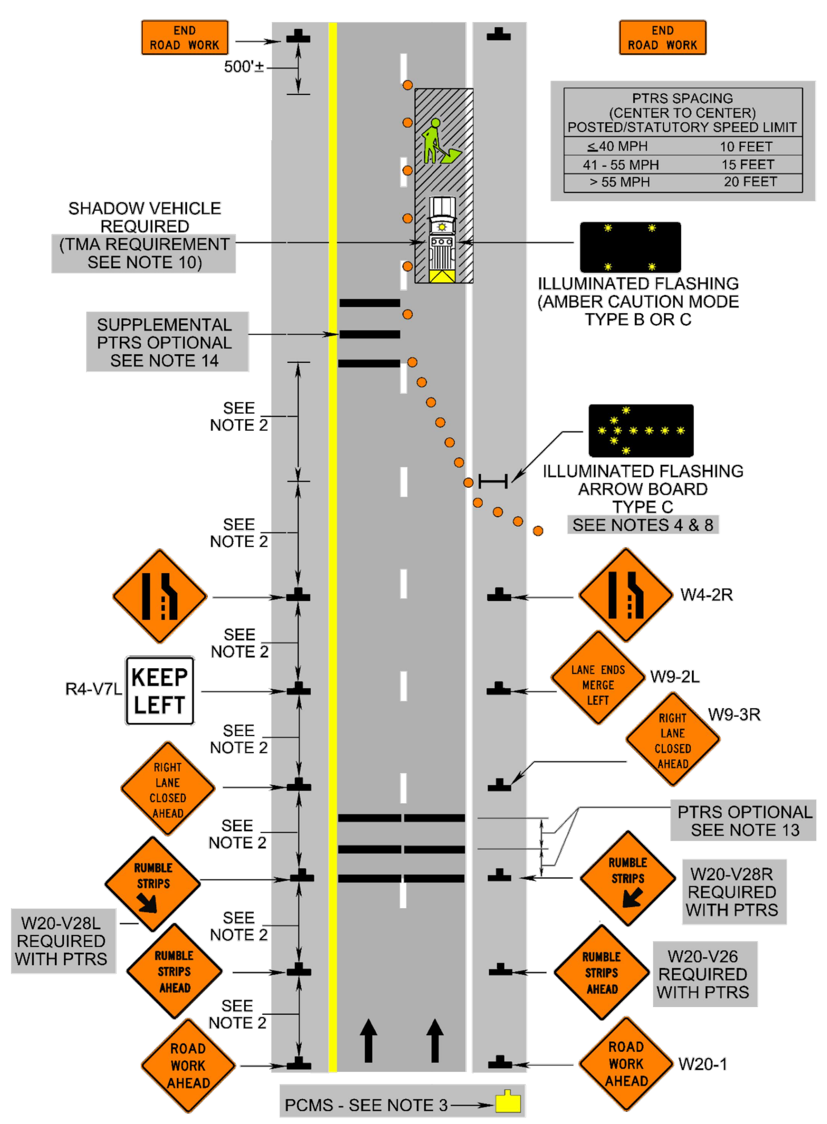
Option:[2]

13. PTRS and their supporting signs may be used, see Sections 6F.99 and 6G.25. Long-term transverse rumble strips may be used in long-term situations, see Section 6F.99 and TTC-20.[2]
14. The supplemental PTRS may be eliminated.[2]

1: Revision 1 – 4/1/2015
2: Revision 2 – 9/1/2019

September 2019 Page 6H-41

Outside Lane Closure Operation on a Four-Lane Roadway
(Figure TTC-16.2)



2: Revision 2 – 9/1/2019

Page 6H-42 September 2019

Typical Traffic Control
Inside Lane Closure Operation on a Four-Lane Roadway
(Figure TTC-17.2)
NOTES

Standard:
1. **On divided highways having a median wider than 8', right and left sign assemblies shall be required.**

Guidance:

2. *Sign spacing should be 1300'-1500' for Limited Access highways. For all other roadways, the sign spacing should be 500'-800' where the posted speed limit is greater than 45 mph, and 350'-500' where the posted speed limit is 45 mph or less.*
3. *When closing a lane, a PCMS should be used in advance of the first warning sign if all of the left side signs cannot be installed.*[2]
4. *Care should be exercised when establishing the limits of the work zone to insure maximum possible sight distance in advance of the transition, based on the posted speed limit and at least equal to or greater than the values in Table 6H-3. For Limited Access highways a minimum of 1000' is desired.*
5. *All vehicles, equipment, workers, and their activities should be restricted to one side of the pavement.*

Standard:

6. **Taper length (L) and channelizing device spacing shall be at the following:**

Speed Limit (mph)	Lane Width 9	10	11	12	Remarks	Speed Limit (mph)	Lane Width 9	10	11	12	Remarks
25	95	105	115	125	$L=S^2W/60$	50	450	500	550	600	L=SW
30	135	150	165	180	$L=S^2W/60$	55	495	550	605	660	L= SW
35	185	205	225	245	$L=S^2W/60$	60	540	600	660	720	L=SW
40	240	270	295	320	$L=S^2W/60$	65	585	650	715	780	L=SW
45	405	450	495	540	L=SW	70	630	700	770	840	L=SW

Taper Length L. Limited Access highways shall use a 1000' merging taper regardless of the posted speed. Shifting Tapers see Table 6H-2.[2] Shoulder Taper = ⅓ L Minimum

7. **Channelizing device spacing shall be at the following:**

Location Spacing	Speed Limit (mph) 0-35	36 +	Location Spacing	Speed Limit (mph) 0-35	36 +	Location Spacing	Speed Limit (mph) 0-35	36 +
Transition	20'	40'	Travelway	40'	80'	*Construction Access	80'	120'

*Construction access spacing may be increased to this distance, but shall not exceed one access per ¼ mile.

8. **An arrow board shall be used when a lane is closed. When more than one lane is closed, a separate arrow board shall be used for each closed lane (see Figure TTC-18).**
9. **The buffer space length shall be shown in Table 6H-3 on Page 6H-5 for the posted speed limit.**
10. **A shadow vehicle with either a Type B or C arrow board operating in the caution mode, or at least one high intensity amber rotating, flashing, or[1] oscillating light shall be parked 80'-120' in advance of the first work crew. When the posted speed limit is 45 mph or greater, a truck-mounted attenuator shall be used.**
11. **Vehicle hazard warning signals shall not be used instead of the vehicle's high-intensity amber rotating, flashing, or[1] oscillating lights but can be used to supplement the amber rotating, flashing, or[1] oscillating lights.**
12. **When a side road intersects the highway within the TTC zone, additional TTC devices shall be placed as needed.**

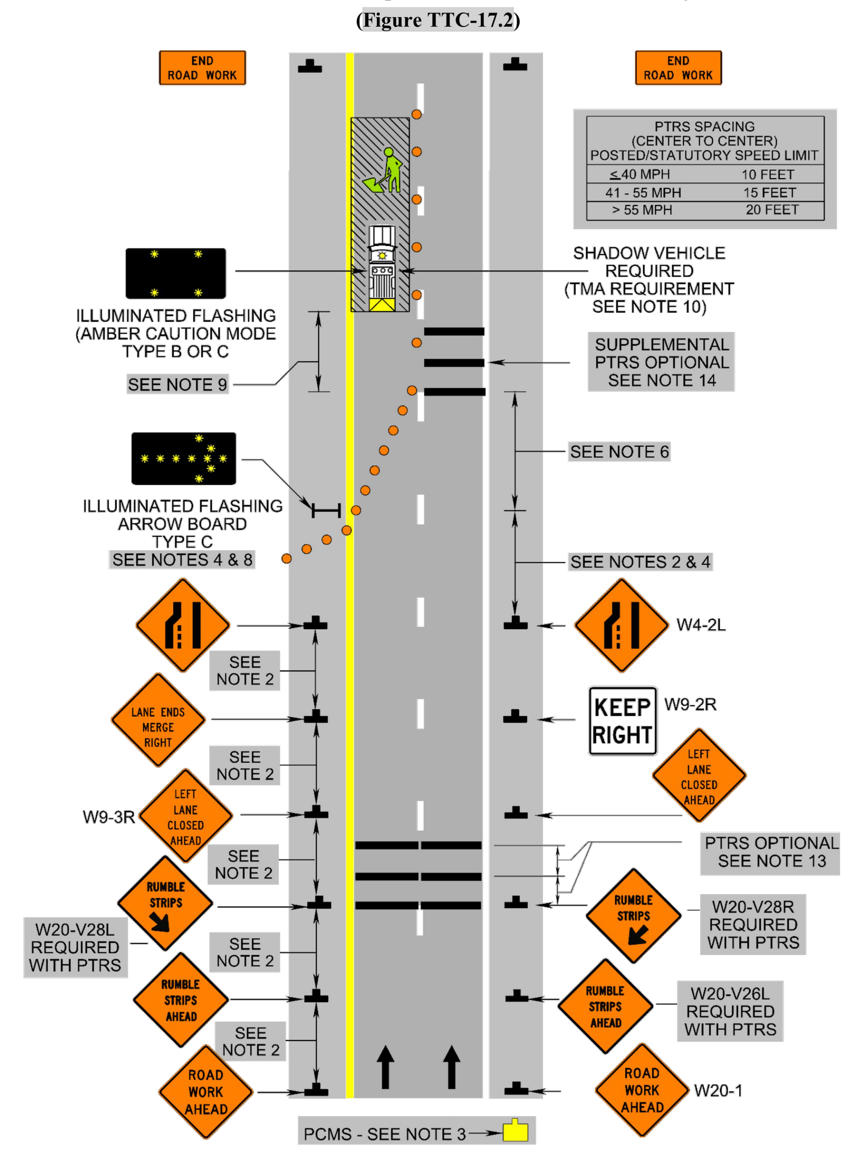
Option:[2]

13. PTRS and their supporting signs may be used, see sections 6F.99 and 6G.25. Long-term transverse rumble strips may be used in long-term situations, see Section 6F.99 and TTC-20.[2]
14. The supplemental PTRS may be eliminated.

1: Revision 1 – 4/1/2015
2: Revision 2 – 9/1/2019

September 2019 Page 6H-43

Inside Lane Closure Operation on a Four-Lane Roadway
(Figure TTC-17.2)



2: Revision 2 – 9/1/2019

Page 6H-44 September 2019

Typical Traffic Control
Multi-Lane Closure Operation
(Figure TTC-18.2)
NOTES

Standard:
1. **On divided highways having a median wider than 8', right and left sign assemblies shall be required.**

Guidance:

2. *Sign spacing should be 1300'-1500' for Limited Access highways. For all other roadways, the sign spacing should be 500'-800' where the posted speed limit is greater than 45 mph, and 350'-500' where the posted speed limit is 45 mph or less.*
3. *When closing a lane, a PCMS should be used in advance of the first warning sign if all of the left side signs cannot be installed.*[2]
4. *Care should be exercised when establishing the limits of the work zone to insure maximum possible sight distance in advance of the transition, based on the posted speed limit and at least equal to or greater than the values in Table 6H-3. For Limited Access highways a minimum of 1000' is desired.*
5. *All vehicles, equipment, workers, and their activities should be restricted to one side of the pavement.*

Standard:

6. **Taper length (L) and channelizing device spacing shall be at the following:**

Speed Limit (mph)	Lane Width 9	10	11	12	Remarks	Speed Limit (mph)	Lane Width 9	10	11	12	Remarks
25	95	105	115	125	$L=S^2W/60$	50	450	500	550	600	L=SW
30	135	150	165	180	$L=S^2W/60$	55	495	550	605	660	L= SW
35	185	205	225	245	$L=S^2W/60$	60	540	600	660	720	L=SW
40	240	270	295	320	$L=S^2W/60$	65	585	650	715	780	L=SW
45	405	450	495	540	L=SW	70	630	700	770	840	L=SW

Taper Length L. Limited Access highways shall use a 1000' merging taper regardless of the posted speed. Shifting taper see Table 6H-2[2] Shoulder Taper = ⅓ L Minimum

7. **Channelizing device spacing shall be at the following:**

Location Spacing	Speed Limit (mph) 0-35	36 +	Location Spacing	Speed Limit (mph) 0-35	36 +	Location Spacing	Speed Limit (mph) 0-35	36 +
Transition	20'	40'	Travelway	40'	80'	*Construction Access	80'	120'

*Construction access spacing may be increased to this distance, but shall not exceed one access per ¼ mile.

8. **An arrow board shall be used when a lane is closed. When more than one lane is closed, a separate arrow board shall be used for each closed lane (see Figure TTC-18).**
9. **The buffer space length shall be shown in Table 6H-3 on Page 6H-5 for the posted speed limit.**
10. **A shadow vehicle with either a Type B or C arrow board operating in the caution mode, or at least one high intensity amber rotating, flashing, or[1] oscillating light shall be parked 80'-120' in advance of the first work crew. When the posted speed limit is 45 mph or greater, a truck-mounted attenuator shall be used.**
11. **Vehicle hazard warning signals shall not be used instead of the vehicle's high-intensity amber rotating, flashing, or[1] oscillating lights but can be used to supplement the amber rotating, flashing, or[1] oscillating lights.**
12. **When a side road intersects the highway within the TTC zone, additional TTC devices shall be placed as needed.**

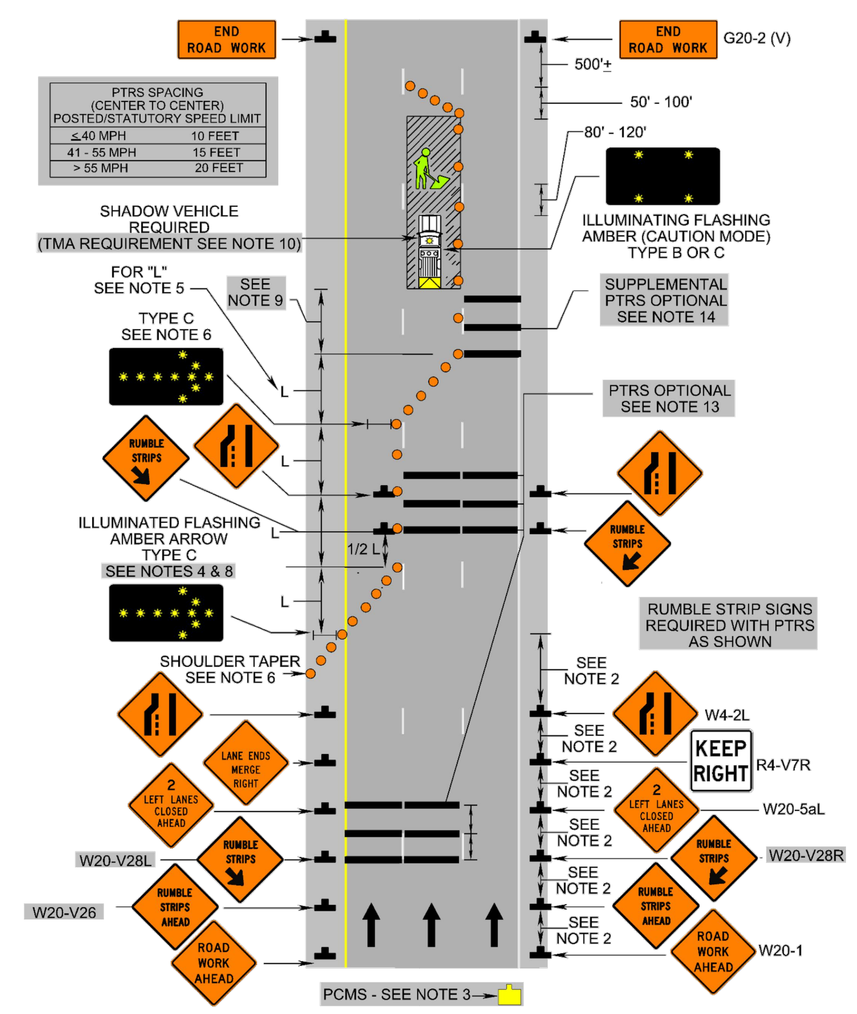
Option:[2]

13. PTRS and their supporting signs may be used, see sections 6F.99 and 6G.25. Long-term transverse rumble strips may be used in long-term situations, see Section 6F.99 and TTC-20.[2]
14. The supplemental PTRS may be eliminated.[2]

1: Revision 1 – 4/1/2015
2: Revision 2 – 9/1/2019

September 2019 Page 6H-45

Multi-Lane Closure Operation
(Figure TTC-18.2)



2: Revision 2 – 9/1/2019

Page 6H-64 September 2019

Typical Traffic Control
Lane Closure Operation in an Intersection
(Figure TTC-28.2)
NOTES

Guidance:

1. *The control of traffic through the intersection in order of preference should be:*
   a. *Obtain the services of law enforcement personnel.*
   b. *Detour the effective routes to other roads and streets as approved and directed by the District*[2] *Traffic Engineer.*
   c. *Place a state certified flagger on each leg of the intersection controlling a single lane of traffic.*

   Appropriate signing as shown should be used for law enforcement and flagging operations. For detour signs see Figure TTC-34.
2. *Sign spacing distance should be 350'-500' where the posted speed limit is 45 mph or less, 500'-800' where the posted speed limit is greater than 45 mph.*
3. *To maintain efficient traffic flow in a flagging operation on a two-lane roadway the maximum time motorist should be stopped at a flagger station is 8 minutes for high volume roadways (average daily traffic of 500 or more vehicles per day) to a maximum of 12 minutes for low volume roadways (less than 500 vehicles per day). For additional information see Section 6E.07.*[2]

Standard:

4. **Channelizing device spacing shall be on 20' centers or less.**
5. **PTRS shall be used as noted in Section 6F.99.**

Guidance:

6. *If room permits, a shadow vehicle with at least one rotating amber light or high intensity amber flashing or oscilllating*[1] *light should be parked 80'-120' in advance of the first work crew.*

Standard:

7. **For emergency situations (any non-planned operation) of 30 minutes or less duration, two rotating amber lights or high intensity amber flashing or oscillating[1] lights mounted on the vehicle and visible for 360° shall be required in addition to the channelizing devices shown around the vehicle. Also, vehicle hazard warning signals shall be used.**

Guidance:

8. *If the work space extends across a crosswalk, the crosswalk should be closed using the information and devices shown in Figure TTC-36.*

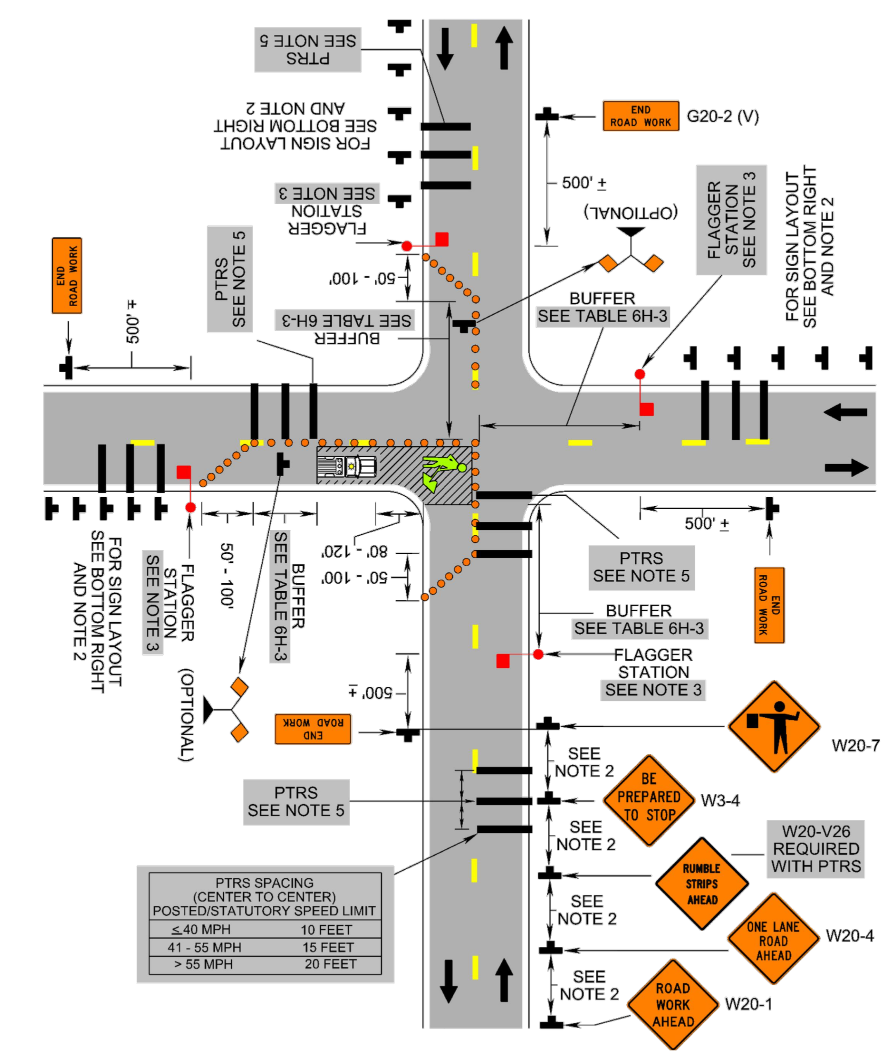
Support:

9. Turns can be prohibited as required by vehicular traffic conditions. Unless the streets are wide, it might be physically impossible to make certain turns, especially for large vehicles.

1: Revision 1 – 4/1/2015
2: Revision 2 – 9/1/2019

September 2019 Page 6H-65

Lane Closure Operation in an Intersection
(Figure TTC-28.2)



2: Revision 2 – 9/1/2019

ARLINGTON VIRGINIA
DEPARTMENT OF ENVIRONMENTAL SERVICES

FACILITIES & ENGINEERING DIVISION
ENGINEERING BUREAU
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SEAL
COMMONWEALTH OF VIRGINIA
HARSHIT THAKER
Lic. No. 049174
9-22-2022
PROFESSIONAL ENGINEER

APPROVALS	DATE
QUALITY CONTROL ENGINEER	
CONSTRUCTION MANAGEMENT SUPERVISOR	
WATER, SEWER, STREETS BUREAU CHIEF	
TRANSPORTATION DIRECTOR	
PROJECT MANAGER	

Revisions	Date

Designed: JS
Drawn: TR
Checked: HT/WN
Miss Utility Transmittal #:

Filename: MOT-SegD-110010073_TMP.dwg
Path: T:\1009400 - Master-Arlington County On-Call\1009461 - Seg C-Columbia Pike Multimodal Imp\07 Design\DWG\Seg-D
Plotted: September 22, 2022
Plotted by: james.see

ARLINGTON COUNTY, VIRGINIA
DEPARTMENT OF ENVIRONMENTAL SERVICES

SEGMENT D - MAINTENANCE OF TRAFFIC
TTC DETAILS - 1

COLUMBIA PIKE - MULTIMODAL STREET IMPROVEMENTS
COLUMBIA PIKE - ROUTE 244

SCALE:	NOT TO SCALE	SHEET:	D23.37

ARLINGTON VIRGINIA | DEPARTMENT OF ENVIRONMENTAL SERVICES
LUIS ARAYA
BUREAU CHIEF, DES - DEVELOPMENT SERVICES
3/7/2023
APPROVAL DATE

Typical Traffic Control
Flagging Operation at a Signalized Intersection
(Figure TTC-30.2)
NOTES

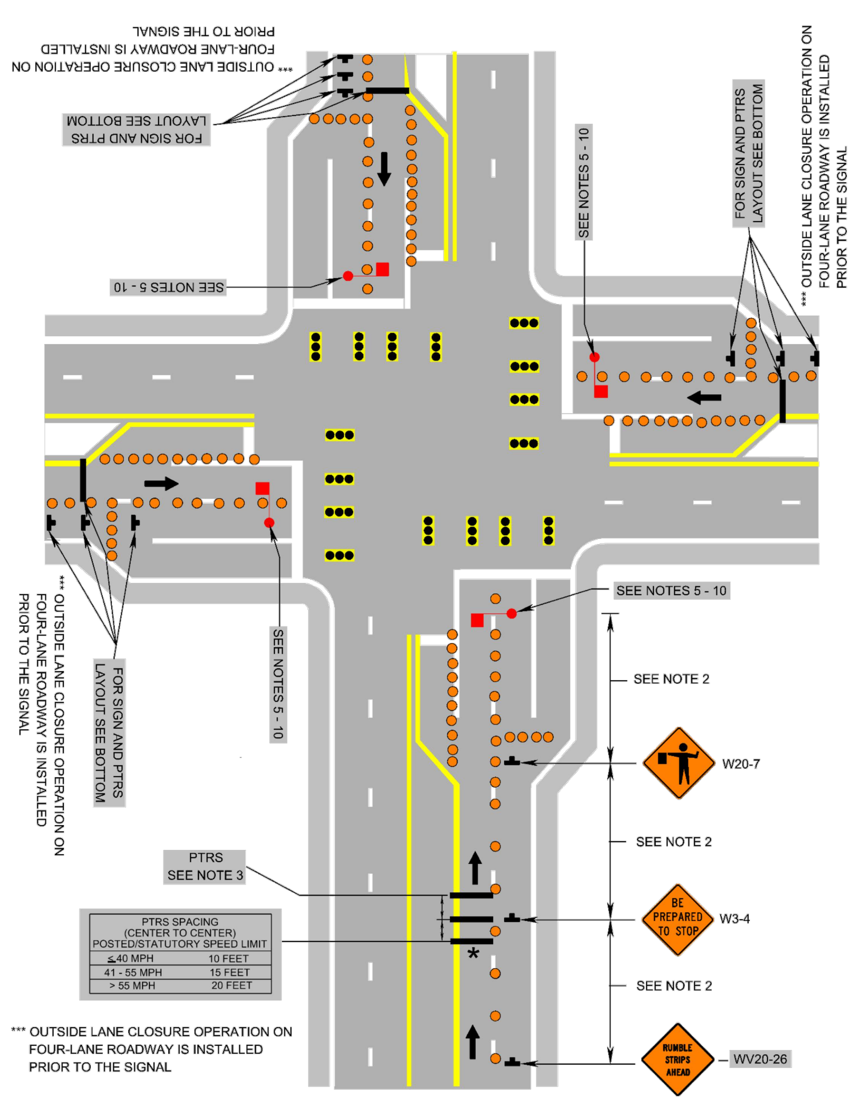
Guidance:
1. *The control of traffic through the intersection in order of preference should be:*
   a. *Obtain the services of law enforcement personnel with the approved signing as shown*[2].
   b. *Divert the effective routes to other roads and streets as approved and directed by the District*[2] *Traffic Engineer.*
   c. *Place a state certified flagger on each leg of the intersection with the approved signing as shown.*
2. *Sign spacing distance should be 350'-500' where the posted speed limit is 45 mph or less, 500'-800' where the posted speed limit is greater than 45 mph. For urban streets sign spacing distance should be 225'-275' where the posted speed limit is 30 to 35 mph, and 100' -200' where the posted speed is 25 mph or less .*
3. *To maintain efficient traffic flow in a flagging operation on a two-lane roadway the maximum time motorist should be stopped at a flagger station is 8 minutes for high volume roadways (average daily traffic of 500 or more vehicles per day) to a maximum of 12 minutes for low volume roadways (less than 500 vehicles per day). For additional information see Section 6E.07.*[2]
4. *When law enforcement officers or flaggers are used to control movement at the signalize intersection, portable temporary rumble strips and signing as shown*[2] *should be used when the expected operation will last longer than 3 hours.*[2]

Standard:
5. **For flagging operations,[1] a stationary lane closure shall be installed in advance of the signalized intersection for all approaches with two or more lanes for through traffic.**
6. **For flagging operations,[1] all turn lanes at the intersection shall be closed.**
7. **Electrical power supply to signals shall be turned off while flaggers are controlling traffic through the intersection.**
8. **To prevent accidental intrusion into the flagger station, cone spacing shall not exceed 10' on centers from the graphic flagger sign to the flagger station. Cones shall be installed in the closed lane, perpendicular to traffic, prior to the flagging station.**
9. **A lead flagger shall be assigned to control all flagger operations. One flagger shall be stationed to control each approach of the intersection. Flaggers shall alternate right-of-way to traffic such that traffic moves through the intersection one approach at a time.**
10. **Flagger stations shall be illuminated during planned night time work operations with a minimum of horizontal luminance of 5-foot candles (50 lux) (see Section 6E.08).**
11. **On divided highways having a median wider than 8', right and left sign assemblies shall be required.**

Option:
12. PTRS may be incorporated into the advanced warning area of lane closures on multi-lane roadways, see Section 6F.99 and TTC-16.[2]
13. RIGHT TURN LANE CLOSED AHEAD (W20-V13R) and/or LEFT TURN LANE CLOSED AHEAD (W20-V13L) sign(s) may be used when closing the turn lanes.
14. For a high volume of turning movements, additional traffic control devices, such as signs (graphic NO LEFT TURN (R3-2), NO RIGHT TURN (R3-1), RIGHT TURN LANE CLOSED AHEAD (W20-V13R) and/or LEFT TURN LANE CLOSED AHEAD (W20-V13L)), cones and vehicles may be used.
15. Traffic signals may be on the flash mode when traffic through the intersection when controlled by a law enforcement officer.[1]
16. Travel and turn lanes may remain open if a law enforcement officer is controlling traffic through the intersection.[1]

1: Revision 1 – 4/1/2015
2: Revision 2 – 9/1/2019

Flagging Operation at a Signalized Intersection
(Figure TTC-30.2)



2: Revision 2 – 9/1/2019

Typical Traffic Control
Sidewalk Closure and Bypass Sidewalk Operation
(Figure TTC-35.1)
NOTES

Standard:
1. **When crosswalks or other pedestrian facilities are closed or relocated, temporary facilities shall be detectable and shall include accessibility features consistent with the features present in the existing pedestrian facility.**

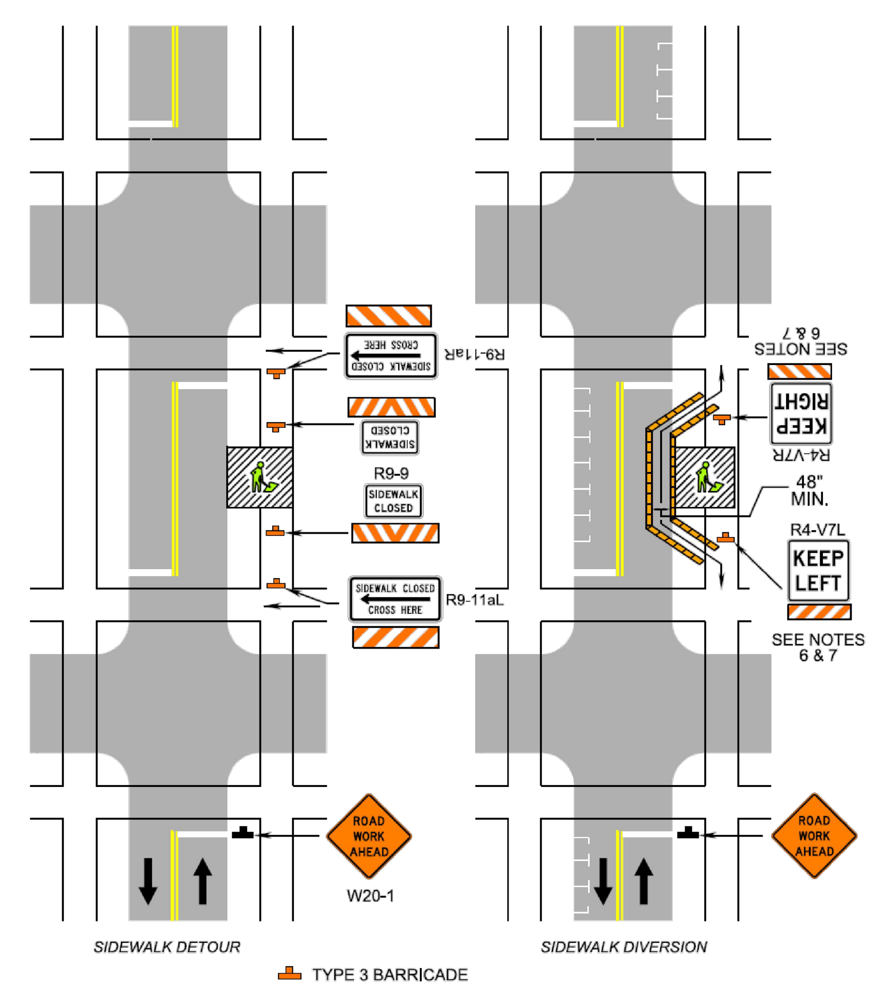
Guidance:
2. *Where high speeds are anticipated, a temporary traffic barrier and, if necessary, a crash cushion should be used to separate the temporary sidewalks from vehicular traffic.*
3. *Audible information devices should be considered where midblock closings and changed crosswalk areas cause inadequate communication to be provided to pedestrians who have visual disabilities.*
4. *Temporary markings should be considered for operations exceeding three days in duration.*

Option:
5. Only the TTC devices related to pedestrians are shown. Other devices, such as lane closure signing or ROAD NARROWS (W5-1) signs, may be used to control vehicular traffic.
6. For nighttime closures, Type A Flashing warning lights may be used on barricades that support signs and close sidewalks.
7. Signs, such as KEEP RIGHT (R4-V7R) and KEEP LEFT (R4-V7L), may be placed along a temporary sidewalk to guide or direct pedestrians.

Standard:
8. **All sidewalk closures shall be closed with Type 3 Barricades. The SIDEWALK CLOSED (R9-9) sign and the SIDEWALK CROSS HERE (R9-11) sign shall be installed above the Type 3 barricade. The KEEP RIGHT sign can cover the top rail of the Type 3 Barricade.**[2]

2: Revision 2 – 9/1/2019

Sidewalk Closure and Bypass Sidewalk Operation
(Figure TTC-35.1)



2: Revision 2 – 9/1/2019

Typical Traffic Control
Crosswalk Closure and Pedestrian Detour Operation
(Figure TTC-36.2)
NOTES

Standard:
1. **When crosswalks or other pedestrian facilities are closed or relocated, temporary facilities shall be detectable and shall include accessibility features consistent with the features present in the existing pedestrian facility.**
2. **Curb parking shall be prohibited for at least 50 feet in advance of the midblock crosswalk.**

Guidance:
3. *Audible information devices should be considered where midblock closings and changed crosswalk areas cause inadequate communication to be provided to pedestrians who have visual disabilities.*
4. *Pedestrian traffic signal displays controlling closed crosswalks should be covered or deactivated.*
5. *Temporary markings should be considered for operations exceeding three days in duration.*

Option:
6. Only the TTC devices related to pedestrians are shown. Other devices, such as lane closure signing or ROAD NARROWS (W5-1) signs, may be used to control vehicular traffic.
7. For nighttime closures, Type A Flashing warning lights may be used on barricades supporting signs and closing sidewalks.

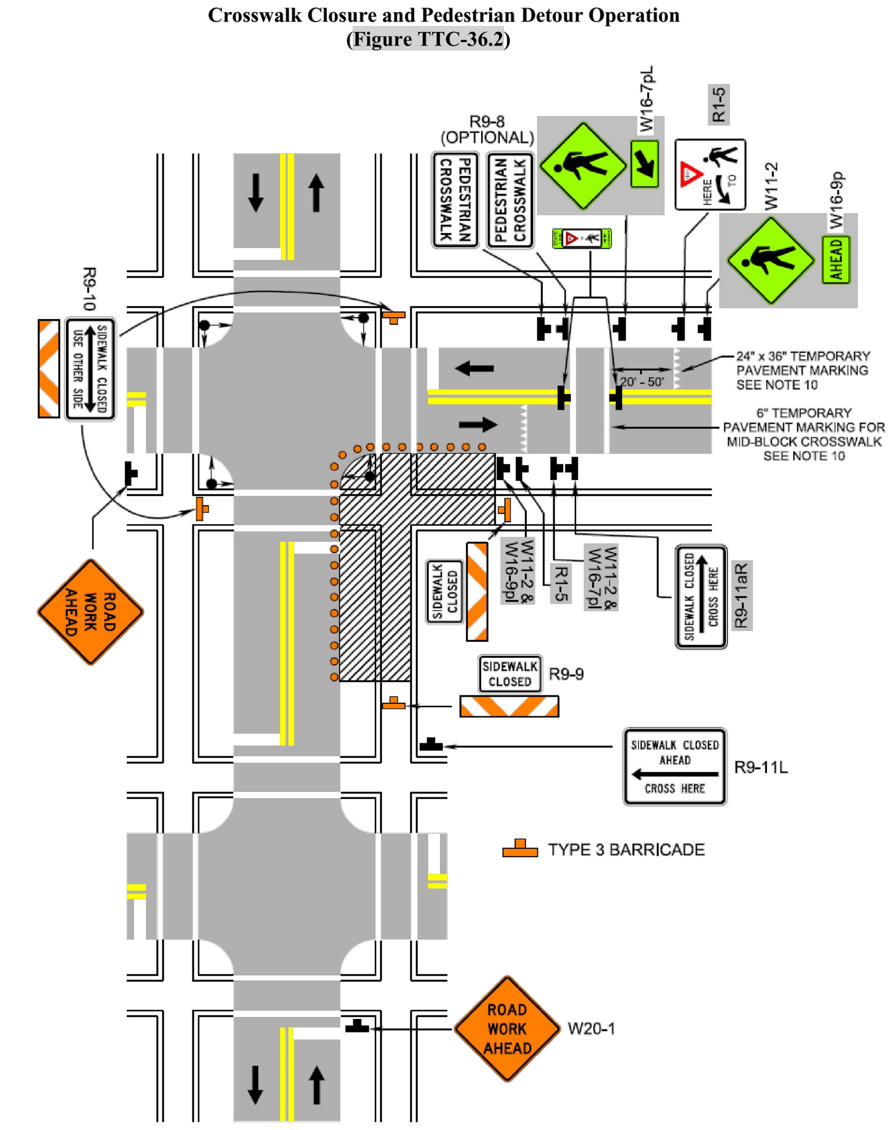
Standard:
8. **In order to maintain the systematic use of the fluorescent yellow-green background for school warning signs in a jurisdiction, the fluorescent yellow-green background for school warning signs shall be used in TTC zones.**[2]
9. **All sidewalk closures shall be closed with Type 3 Barricades. The SIDEWALK CLOSED (R9-9) sign and the SIDEWALK CROSS HERE (R9-11) sign shall be installed above the Type 3 Barricade. The KEEP RIGHT sign can cover the top rail of the Type 3 Barricade.**[2]

Support:
10. Refer to Sections 3B-16 through 3B-18 of the 2009 MUTCD and the Virginia Supplement to the MUTCD[1] for crosswalk[1] lines, yield lines and other related TTC devices that may be used to control vehicular traffic at midblock crosswalks.

Standard:[2]
11. **The YIELD HERE TO PEDESTRIANS (R1-5) sign shall be placed at the Yield Line.**
12. **Fluorescent yellow-green PEDESTRIAN TRAFFIC (W11-2) symbol sign, AHEAD (W16-9p) plaque and ARROW (W16-7p) plaque shall be used to identify the work zone crosswalk.**

1: Revision 1 – 4/1/2015
2: Revision 2 – 9/1/2019

Crosswalk Closure and Pedestrian Detour Operation
(Figure TTC-36.2)



1: Revision 1 – 4/1/2015
2: Revision 2 – 7/1/2018

Typical Traffic Control
Limited Access Highway Closure Operation with a Short-Term Detour
(Figure TTC-46.2)
NOTES

Guidance:
1. *Regulatory traffic control devices should be modified as needed for the duration of the detour.*
2. *Figure TTC-46 illustrates a general layout of detour signs. Additional detour signs should be erected at all connecting roadways.*
3. *Detour signs with an Advanced Turn Arrow (M4-V3) should have a spacing distance of 300' minimum in advance of the intersection. The Detour signs with the Point of Turn Arrow (M4-9) should be placed at the intersection.*
4. *When closing a ramp, the channelizing device spacing should be a maximum of 10'.*

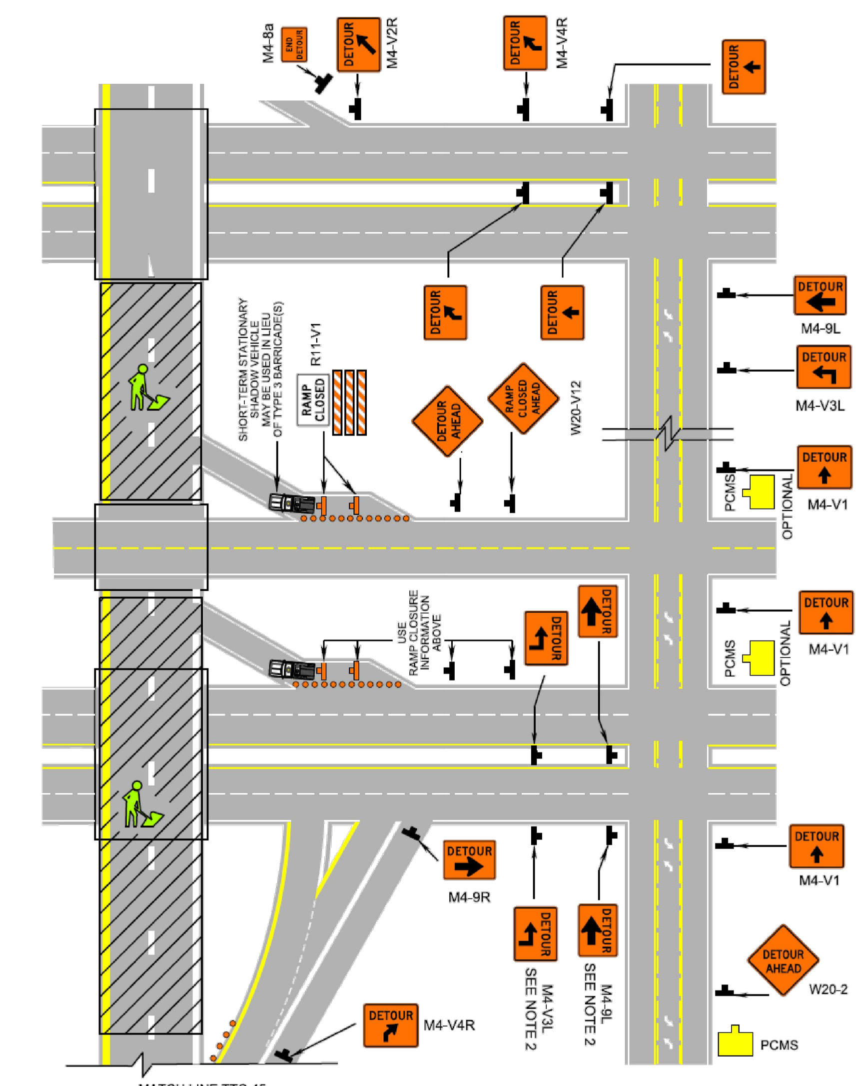
Option:
5. *Other sign layouts may be substituted as directed by the District*[2] *Traffic Engineer.*
6. *Flashing warning lights and/or flags may be used to call attention to the advance warning signs.*

Standard:
7. **On divided highways having a median wider than 8', right and left sign assemblies shall be required.**
8. **A minimum of four (4) drum channelizing devices shall be placed on the shoulder in advance of the PCMS in a taper for delineation (see Figure 6F-6).**

Support:
9. Short-term stationary operation is daytime work that occupies a location for more than 1 hour within a single daylight period.
10. See Chapter 6I for additional information on incident management traffic control.

2: Revision 2 – 9/1/2019

Limited Access Highway Closure Operation with a Short-Term Detour
(Figure TTC-46.2)



1: Revision 1 – 4/1/2015
2: Revision 2 – 9/1/2019

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HARSHIT THAKER
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9-22-2022
PROFESSIONAL ENGINEER

APPROVALS	DATE
QUALITY CONTROL ENGINEER	
CONSTRUCTION MANAGEMENT SUPERVISOR	
WATER, SEWER, STREETS BUREAU CHIEF	
TRANSPORTATION DIRECTOR	
PROJECT MANAGER	

Revisions	Date

Designed: JS
Drawn: TR
Checked: HT/WN
Miss Utility Transmittal #:

Filename: MOT-SegD-110010073_TMP.dwg
Path: T:\1009400 - Master-Arlington County On-Call\1009461 - Seg C-Columbia Pike Multimodal Imp\07 Design\DWG\Seg-D
Plotted: September 22, 2022
Plotted by: james.see

ARLINGTON COUNTY, VIRGINIA
DEPARTMENT OF ENVIRONMENTAL SERVICES

SEGMENT D - MAINTENANCE OF TRAFFIC
TTC DETAILS - 2

COLUMBIA PIKE - MULTIMODAL STREET IMPROVEMENTS
COLUMBIA PIKE - ROUTE 244

SCALE: NOT TO SCALE	SHEET: D23.38

ARLINGTON VIRGINIA
DEPARTMENT OF ENVIRONMENTAL SERVICES
LUIS ARAYA
BUREAU CHIEF, DES - DEVELOPMENT SERVICES
3/7/2023
APPROVAL DATE

Typical Traffic Control

Signing for Project Limits

(Figure TTC-53.0)

NOTES

Support:

1. This layout depicts signing requirements for notifying motorist when they are entering and exiting a potential construction/maintenance area with a duration equal to or greater than 60 days.

Standard:

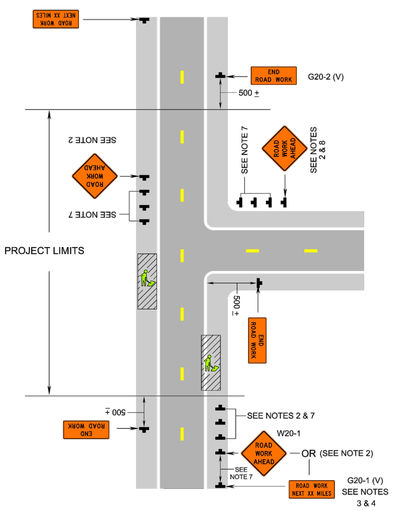
2. **The ROAD WORK AHEAD (W20-1) sign or the ROAD WORK NEXT XX MILES (G20-1 (V)) sign shall be placed far enough in advance of the project limits so that other warning signs in a series may be adequately placed prior to the condition they are warning about.**
3. **The ROAD WORK NEXT XX MILES sign shall be used for projects with activity areas greater than 2 miles in length, or when multiple work activities (such as pavement patching, guardrail installations, shoulder restoration, etc.) occur along a highway.**
4. **The distance displayed on the ROAD WORK NEXT XX MILES sign shall be stated to the nearest whole mile from the point of installation to the END ROAD WORK (G20-2 (V)) sign.**
5. **On divided highways having a median wider than 8', right and left sign assemblies shall be required.**

Guidance:

6. *For projects with activity areas 2 miles or less in length, the ROAD WORK AHEAD sign should be the first sign motorist encounter.*
7. *Sign spacing should be 1300'-1500' for Limited Access highways. For all other roadways, the sign spacing should be 500'-800' where the posted speed limit is greater than 45 mph, and 350'-500' where the posted speed limit is 45 mph or less.*
8. *All connections within the project limits should be identified with signs indicating to motorist they are entering or exiting a potential construction/maintenance area.*

Signing for Project Limits

(Figure TTC-53.0)



Typical Traffic Control

End of Day Signing for Partial Paving Operations on a Multi-Lane Roadway

(Figure TTC-57.2)

NOTES

Standard:

1. **On divided highways having a median wider than 8', right and left sign assemblies shall be used. Median barrier is considered to be part of the shoulder and its measurement shall be used to determined the total width of the shoulder.**
2. **The maximum pavement edge drop-off between traffic lanes shall be 2 inches or less.**
3. **Open travel lane(s) shall not be exposed to more than 2 to 3 mile sections of milled or uneven surface.**
4. **A portable changeable message sign with "ROUGH ROAD AHEAD" and other appropriate messages shall be used.**
5. **A BUMP (W8-1) sign shall be placed in advance of the end of the pavement drop-off.[1]**
6. **The District[2] Traffic Engineer shall determine speed reductions.**
7. **The UNEVEN LANES (W8-11), STAY IN LANE (R4-9), and BUMP signs shall be adjusted daily with the work operation and their sign stand shall be supported with a sand bag weighing approximately 25-pounds on each leg or two (2) drum collar weights positioned on the center of the sign stand[3]. Additional UNEVEN LANES signs shall be installed every 2 miles and on entrance ramps.**
8. **Where conditions warrant, ROUGH ROAD (W8-8) and BUMP signs shall be installed 500' ± in advance of the affected roadway surface on entrance ramps, and BUMP signs shall be installed 500' ± in advance of unaffected roadway surface on exit ramps.**
9. **All signs shall be post-mounted at locations after 72 consecutive hours of non-work activities.**

Guidance:

10. *Sign spacing distance should be 1300'-1500' for Limited Access highways, and on all other roadways 500'-800' where the posted speed limit is greater than 45 mph, and 350'-500' where the posted speed limit is 45 mph or less.*

Option:

11. Only traffic control signing for partial pavement resurfacing is shown. Other devices may be used for the control of traffic through the work area.
12. Temporary pavement markers spaced at 10 foot centers for two-way traffic centerlines or three per skip line for lane division lines may be added as directed by the engineer.
13. The LOW SHOULDER (W8-9) sign may be used to warn of a shoulder condition where there is an elevation difference of less than 2 inches between the shoulder and the travel lane.

Standard:

14. **If used, the LOW SHOULDER sign shall be repeated at 1 mile intervals if the condition extends over a distance in excess of 1 mile.**
15. **The SHOULDER DROP OFF (W8-V5) sign shall be used when an unprotected shoulder drop-off, adjacent to the travel lane, exceeds 2 inches depth between the shoulder and the travel lane. Where the condition extends over a distance in excess of 1 mile, the sign shall be repeated at 1 mile intervals.**

Option:

16. The SHOULDER DROP OFF sign may be eliminated if a 6:1 (desirable) to 4:1 (minimum) wedge is used between the travel lane and the shoulder.

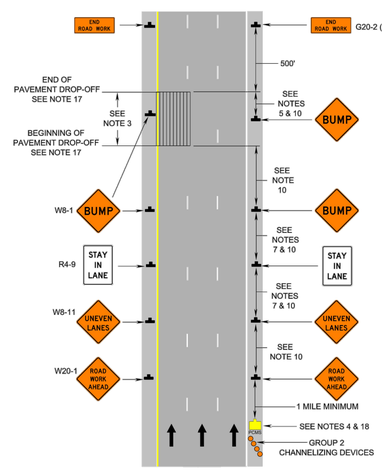
Standard:

17. **A temporary pavement wedge shall be constructed of surface mix asphalt a minimum of three (3) feet in length for every inch of depth of pavement milling on the approach and departure end of the milled travel lane(s). Refer to Standard ACOT-1 of the Road and Bridge Standards for details.**
18. **A minimum of four (4) drum channelizing devices shall be placed on the shoulder in advance of the PCMS in a taper for delineation (see Figure 6F-6).**

1: Revision 1 – 4/1/2015; 2: Revision 2 – 9/1/2019

End of Day Signing for Partial Paving Operations on a Multi-Lane Roadway

(Figure TTC-57.2)



Typical Traffic Control

End of Day Signing for Full Paving Operations on a Multi-Lane Roadway

(Figure TTC-58.1)

NOTES

Standard:

1. **On divided highways having a median wider than 8', right and left sign assemblies shall be used. Median barrier is considered to be part of the shoulder and its measurement shall be used to determined the total width of the shoulder.**
2. **The maximum pavement edge drop-off shall be 2 inches or less.**
3. **Open travel lane(s) shall not be exposed to more than 2 to 3 mile sections of milled or uneven surface.**
4. **A portable changeable message sign with "ROUGH ROAD AHEAD" and other appropriate messages shall be used.**
5. **A BUMP (W8-1) sign shall be placed in advance of the end of the pavement drop-off.[1]**
6. **The District[2] Traffic Engineer shall determine speed reductions.**
7. **The ROUGH ROAD (W8-8), UNMARKED PAVEMENT AHEAD (W8-V4) and BUMP signs shall be adjusted daily with the work operation and their sign stand shall be supported with a sand bag weighing approximately 25-pounds on each leg or two (2) drum collar weights positioned on the center of the sign stand.[3] Additional ROUGH ROAD and UNMARKED PAVEMENT AHEAD signs shall be installed every 2 miles.**
8. **PAVEMENT AHEAD (W8-V4) and BUMP signs shall be adjusted daily with the work operation and their sign stand shall be supported with a sand bag weighing approximately 25-pounds on each leg or two (2) drum collar weights positioned on the center of the sign stand[3]. Additional ROUGH ROAD and UNMARKED PAVEMENT AHEAD signs shall be installed every 2 miles.**
9. **Where conditions warrant, ROUGH ROAD and BUMP signs shall be installed 350' ± in advance of the affected roadway surface on entrance ramps, and BUMP signs shall be installed 500' ± in advance of unaffected roadway surface on exit ramps.**
10. **All signs shall be post-mounted at locations after 72 consecutive hours of non-work activities.**

Guidance:

11. *For sign spacing distances see Table 6H-5.*

Option:

12. Only traffic control signing for partial pavement resurfacing is shown. Other devices may be used for the control of traffic through the work area.
13. Temporary pavement markers spaced at 10 foot centers for two-way traffic centerlines or three per skip line for lane division lines may be added as directed by the engineer.
14. The LOW SHOULDER (W8-9) sign may be used to warn of a shoulder condition where there is an elevation difference of less than 2 inches between the shoulder and the travel lane.

Standard:

15. **If used, the LOW SHOULDER sign shall be repeated at 1 mile intervals if the condition extends over a distance in excess of 1 mile.**
16. **The SHOULDER DROP OFF (W8-V5) sign shall be used when an unprotected shoulder drop-off, adjacent to the travel lane, exceeds 2 inches depth between the shoulder and the travel lane. Where the condition extends over a distance in excess of 1 mile, the sign shall be repeated at 1 mile intervals.**

Option:

17. The SHOULDER DROP OFF sign may be eliminated if a 6:1 (desirable) to 4:1 (minimum) wedge is used between the travel lane and the shoulder.

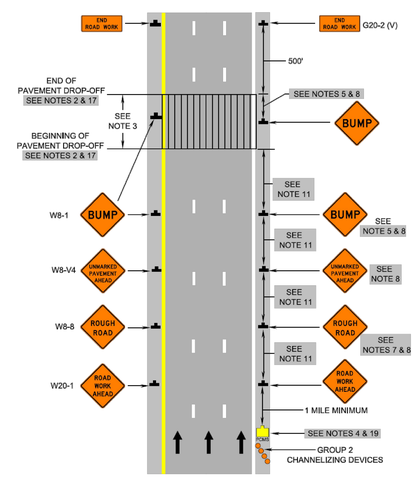
Standard:

18. **A temporary pavement wedge shall be constructed of surface mix asphalt a minimum of three (3) feet in length for every inch of depth of pavement milling on the approach and departure end of the milled travel lane(s). Refer to Standard ACOT-1 of the Road and Bridge Standards for details.**
19. **A minimum of four (4) drum channelizing devices shall be placed on the shoulder in advance of the PCMS in a taper for delineation (see Figure 6F-6).**

1: Revision 1 – 4/1/2015
2: Revision 2 – 9/1/2019

End of Day Signing for Full Paving Operations on a Multi-Lane Roadway

(Figure TTC-58.1)



1: Revision 1 – 4/1/2015
2: Revision 2 – 9/1/2019

Typical Traffic Control

Lane Closure Operation for Flagging Operations on an Intersecting Roadway [2]

(Figure TTC-68.0)

NOTES

Guidance:

1. *Sign spacing distance should be 350'-500' where the posted speed limit is 45 mph or less, 500'-800' where the posted speed limit is greater than 45 mph.*

Standard:

2. **Channelizing devices shall be spaced a maximum of 10' through the intersection.**
3. **Traffic controlled by the flagger on the multi-lane roadway shall not queue traffic into the through lane.**

Guidance:

4. *If room permits, a shadow vehicle with at least one amber rotating, oscillating, or strobe light should be parked 80'-120' in advance of the first work crew.*

Standard:

5. **If the posted speed limit is 45 mph or greater, the shadow vehicle shall have a truck-mounted attenuator.**
6. **For emergency situations (any non-planned operation) of 30 minutes or less duration, two rotating amber lights or two high intensity amber flashing or oscillating lights mounted on the vehicle and visible for 360° shall be required in addition to the channelizing devices shown around the vehicle. Also, vehicle hazard warning signals shall be used.**

Guidance:

7. *If the work space extends across a crosswalk, the crosswalk should be closed using the information and devices shown in Figure TTC-36.*

Standard:

8. **If the left turn lane is closed a NO LEFT TURN (Symbol) (R3-2) shall be used.**
9. **If through traffic is not permitted a NO STRAIGHT THROUGH (Symbol) (R3-27) shall be used.**
10. **If through traffic is not permitted a MANDATORY MOVEMENT LANE CONTROL (Symbol) (R3-5R) shall be used.**

Option:

11. On long-term projects a ONEWAY (R1-6R) sign may be used to supplement the R3-5R sign.[2]

Guidance:

12. *A PCMS should be considered as part of the traffic control plan to provide clear guidance to motorists warning of the movement prohibition.*

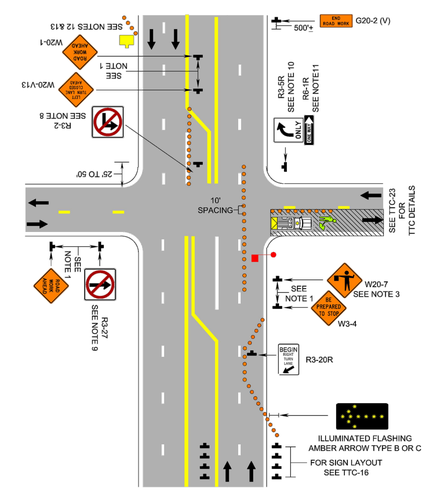
Standard:

13. **A minimum of 4 drum channelizing devices shall be placed on the shoulder in advance of the PCMS in a taper for delineation (see Figure 6F-6).**

2: Revision 2 – 9/1/2019

Lane Closure Operation for Flagging Operations on an Intersecting Roadway [2]

(Figure TTC-68.0)



2: Revision 2 – 9/1/2019

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SEAL

COMMONWEALTH OF VIRGINIA
HARSHIT THAKER
Lic. No. 049174
9-22-2022
PROFESSIONAL ENGINEER

APPROVALS	DATE
QUALITY CONTROL ENGINEER	
CONSTRUCTION MANAGEMENT SUPERVISOR	
WATER, SEWER, STREETS BUREAU CHIEF	
TRANSPORTATION DIRECTOR	
PROJECT MANAGER	

Revisions	Date

Designed: JS
Drawn: TR
Checked: HT/WN
Miss Utility Transmittal #:

Filename: MOT-SegD-110010073_TMP.dwg
Path: T:\1009400 - Mason-Arlington County On-Call\1009402 - Seg C-Columbia Pike Multimodal Imp\07 Design\DWG\Seg-D
Plotted: September 22, 2022
Plotted by: james.see

ARLINGTON COUNTY, VIRGINIA
DEPARTMENT OF ENVIRONMENTAL SERVICES

SEGMENT D - MAINTENANCE OF TRAFFIC
TTC DETAILS - 3

COLUMBIA PIKE - MULTIMODAL STREET IMPROVEMENTS
COLUMBIA PIKE - ROUTE 244

SCALE: NOT TO SCALE | SHEET: D23.39

ARLINGTON VIRGINIA
DEPARTMENT OF ENVIRONMENTAL SERVICES
LUIS ARAYA
BUREAU CHIEF, DES - DEVELOPMENT SERVICES
3/7/2023
APPROVAL DATE