

2011 Virginia Work Area Protection Manual Revision 2 Frequently Asked Questions and Discrepancies Found

1. When does Revision 2 take affect? *Revision 2 of the WAPM became effective Sept. 1 2019 for all work performed by State Force unless the work is under a contract that references the Rev. 1 of the WAPM. It will become effective on all projects advertised on or after January 1, 2020.*
2. Table 6F-1 some of the Section numbers listed in the table do not match the signs listed? *This is an error and will be corrected in the next version of the WAPM, please find the appropriate section number you are seeking by using the index. This has been corrected in Rev. 2.1*
3. TTC-16.2 the notes from Sign W4-2R to the beginning of the taper and the end of the taper say See Note 2? *This is an error and will be corrected in the next version of the WAPM. The note from the W4-2R sign to the beginning of the taper should reference Notes 2 & 4 and the Notes from the beginning of the taper to the end of the taper should reference Note 6 as shown on TTC-17.2 This has been corrected in Rev. 2.1*
4. TTC-23.2 Are the middle set of Rumble strips required? *The TTC references Note 4? This is an error and will be corrected in the next version of the WAPM. The Middle set of Rumble Strips are not a requirement but are Supplemental and Optional and may be eliminated. See TTC-27.2 Note 11. This has been corrected in Rev. 2.1*
5. Section 6F.98 Note 11 paragraph E. states a TMA Shall be used for planned work operations involving snooper trucks or bucket trucks regardless of the posted speed limit? *The only exception to this would be for Ancillary Signal Inspection and a Law Enforcement Vehicle is parked in advance of the Shadow Vehicle, in this scenario a TMA is not required but recommended.*
6. The Guidelines for Temporary Traffic Control Pocket Guide page 74 Properly Equipped Flaggers references Class 2 Visibility apparel for daytime work? *This is an error and will be corrected in the next edition, as per the WAPM Class 3 High visibility safety apparel shall be worn at all times day or night time.*
7. When and who shall wear the Type E trousers? *Leg Gaiters are now allowed as an alternative for Type E trousers for those installing removing or maintaining traffic control devices Day or Night and for Flaggers in Daytime Operations. Type E trousers are still required for Flaggers during nighttime operations.*
8. Are Utility Companies required to use PTRS? *PTRS are optional for utility companies at this time, however as per IIM-TE-386 PTRS will become mandatory for land use permit work with-in sate R/W on 2 lane roadways for flagging operations effective July 1, 2022.*
9. TTC-50 Stoppage of Traffic on a Multi-lane Roadway. *We developed TTC-50.2 to specifically remove the flagger from the left side of the roadway and provide a better way to control traffic through an operation requiring periodic stoppage of traffic on a multi-lane highway. We have had several instances where flaggers have been struck performing this type of operation, especially when they have little to no room for escape on the left side of the roadway. Other states have removed flaggers from the left side of the roadway due to this fact. Traffic is better controlled when reduced to one lane, with the flagger better protected by standing in the closed right lane. It does take a little longer to install an extra set of signs and cones to close off the right or left travel lane but control of approaching motorist is greatly improved by this method. This is the preferred temporary traffic control layout to use, especially if multiple lines are being installed or multiple stoppages are needed to complete an operation. If only one line is being pulled and installed across the roadway, or only one stoppage of traffic is needed to complete an operation and there is ample room on both*

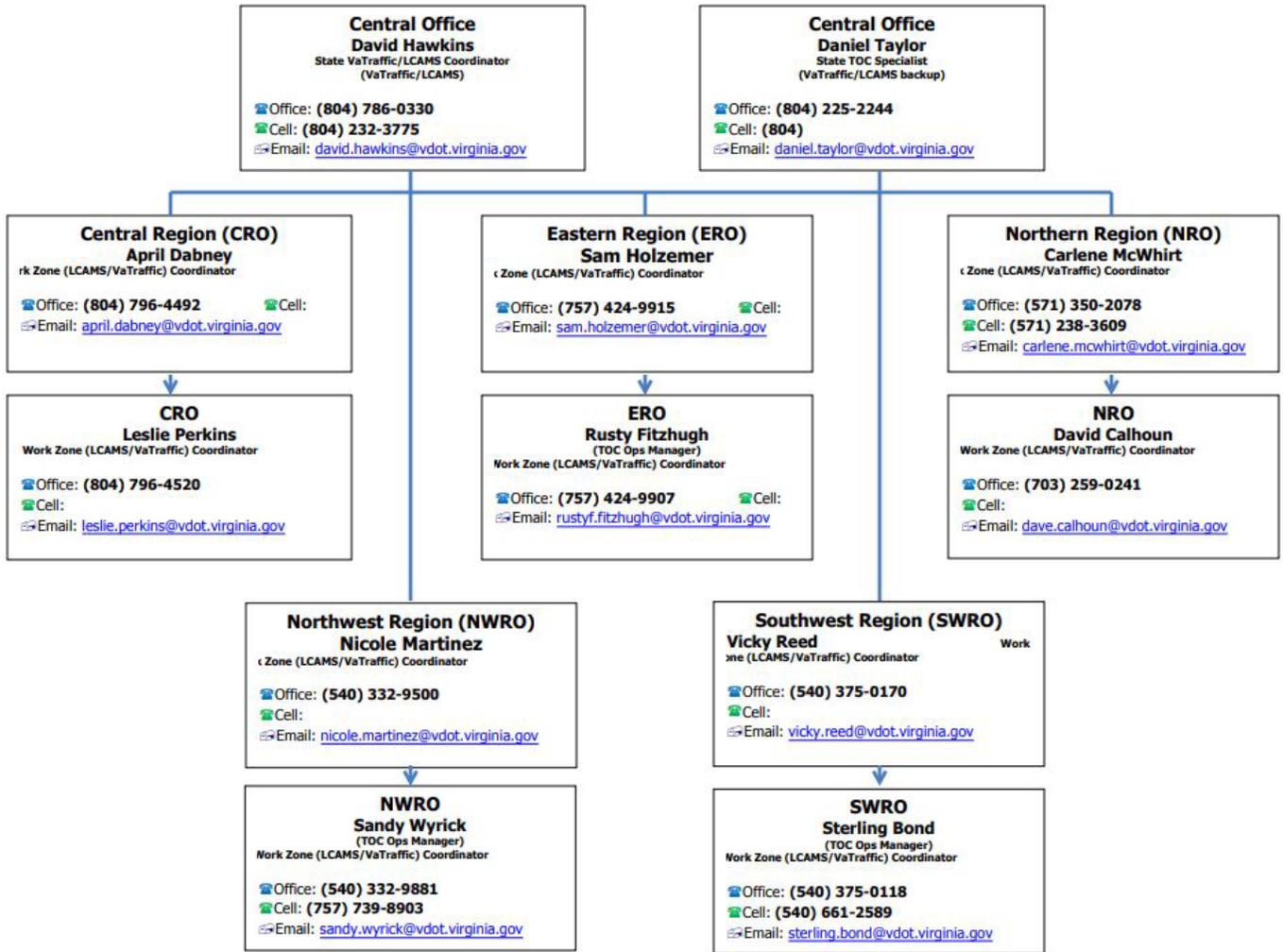
sides of the travel lanes for a flagger to safely stand and move out of the way of an errant vehicle, then the typical traffic control from TTC-50.0 may continue to be deployed.

- 10. What would be the speed limit whereby a crash cushion would be required? Typically 45mph or greater and for planned work operations**
- 11. Is a Road Closed Ahead sign required before a Road Closed sign? In the VA WAPM Rev. 2 section 6F.26 paragraph 1 The ROAD (STREET) CLOSED AHEAD (W20-3) sign should be used in advance of the point where a highway is closed to all road users, or to all but local road. This is a Guidance statement which means while it is not requirement or shall condition it is highly recommended and if it is not going to be used a well-documented reason should be filed with the plan records. In other words unless you have a really good reason as to why it would not be used, then it should be used.**
- 12. Clarification on the requirement for a TMA for snoopers and bucket truck operations: The decision to require the use of a TMA shadow vehicle for snoopers and bucket truck operations stemmed from a request from the operators of the snoopers and from the district safety managers. Employees working under a bridge on a snoopers truck or in the air in a bucket truck are highly vulnerable if the vehicle is struck by an errant vehicle into the work zone, which has occurred on multiple occasions. . For flagging operations on two-lane roadways, a shadow vehicle without a TMA should be sufficient since the speeds of approaching traffic is controlled by the flaggers on site. Also, for roadways posted 45 mph or less, a shadow vehicle without a TMA should also be sufficient due to the low speeds. For speeds higher than 45 mph, we believe the shadow vehicle with a TMA should continue to be used.**
- 13. Section 6F.03 Paragraph 24 states that certain signs when mounted with portable sign supports shall be mounted a minimum of 5' from the pavement surface, however TTC-37.2 and TTC-39.2 Note 5 says the signs should be mounted 7' from the roadway surface, which is right? Section 6F.03 Paragraph 24 is correct with the 5' height, TTC-37.2 and 39.2 Note 5 are incorrect and will be correct in the next edition of the WAPM with the 5' height requirement. This has been corrected in Rev. 2.1**
- 14. Section 6C.11 Paragraph 01 In the next revision we will be adding Commercial/Private to the language to describe entrances, the second sentence will read: *Commercial/Private High Volume Entrances and Commercial/Private Low Volume Entrances.* This has been corrected in Rev. 2.1**
- 15. Table 6F-1 TTC Zone sign and Plaque Sizes (Sheet 7 of 8) Route Shield and Route Marker Signs M1-1, M1-4, M1-V1a thru M1-V1d and M1-V2a thru M1-V2f sizes for Non-Restricted Highway are listed as 36"x 36" and 45"x 36". This is an error and will be corrected in the next edition, to maintain uniformity with standard US Route Shield and Marker signs these signs shall be 24" x 24" for 2 digit signs and 30" x 24" for 3 digit signs. Also, Non-Restricted R/W Roadway Cardinal Directional Auxiliary (North, East, West, South) (M3-1, M3-2, M3-3 and M3.4) signs are incorrectly listed as 18" x 36". This is also in error and the correct sizes are 30" x 15". This has been corrected in Rev. 2.1**
- 16. Appendix A Page A-12. Temporary Barrier Service Anchoring Requirements. The 3rd bullet after the first paragraph: Where materials and/or equipment are stored within the deflection area of the TBS for more than 3 days. *Should say "for more than 72 consecutive hours".* This has been corrected in Rev. 2.1**

17. Spacing Between Double Yellow Pavement Markings will be revised to 7” from 6” in the next edition of the WAPM to reflect the revision made to the Road and Bridge Standards guidance as to the new Standard as follows:
- With implementation of Plastic Inlaid Markers (PIMs), increasing spacing between the double yellow center-line from 6-inch to 7-inch was incorporated in the Road & Bridge Standards.*
- This change helps the contractor installing the markings to minimize over-spray on the Lens and provides added tolerance if the double yellow was already installed and the PIM groove needs to be cut. This change also helps the Pavement Markings Retrace Contracts to minimize over-spray.*
- DIRECTION:**
- A 7 inch space between the double yellow for projects in the Paving Schedule requiring PIMs should be noted at preconstruction.*
- If the PIM is not required, the spacing can be 4 to 6 inches as directed by the District Traffic Engineer or be at the preferred 7 inches for the 2020 Schedule.*
18. Can a reduced advisory speed be used for surface treatment operations?
- On those occasions where a reduced advisory speed limit is requested for surface treatment operations, the request shall go to the District Traffic Engineer for review. If approved, the Advisory Speed Limit sign shall be post mounted below the LOOSE GRAVEL (W8-7) sign.*
19. Can a Supplemental Flagger still be used?
- Yes, A Supplemental Flagger can still be used. In the next revision of the WAPM TTC-23.2 Note 8 and Section 6E.09 note 11 will be revised to include the use of a Supplemental Flagger or a “SLOW” sign.*
20. In the Pocket Guide page 57 the drawing suggest that one AFAD Device can be used in conjunction with a Flagger on the other end of the Work Zone, is this acceptable?
- No, as stated in the WAPM if using AFAD’s you must use 2 AFADS, one at each end of the Work Zone. This drawing will be updated in the next revision.*
21. Are Portable Temporary Rumble Strips (PTRS) required in slurry seal/latex emulsion overlay or surface treatment operations? PTRS should be used when meeting the conditions stated in Section 6F.99 paragraph 4 for slurry seal and latex overlay operations. For surface treatment operations PTRS should be used in both travel directions on the first day at a location. For multiple day operations at the same location, the PTRS would be used on the unimproved approach to that day’s operation, but not on the completed surface treatment side of the roadway due to loose gravel.
22. New TTC for Ancillary Signal Inspection at a signalized Intersection to be included in the next revision of the WAPM. For more information and a copy of the approved TTC please contact Jeff Legg @ Paul.Legg@VDOT.Virginia.gov .
23. Effective immediately, Work Zone Traffic Control (WZTC) trained personnel working within VDOT R/W may now have a photocopy image of their WZTC training verification card on their mobile phone to show when asked in place of the actual training card.
24. Table 6C-4 and Section 6C.09 paragraph 08 contradiction for Shifting taper length of $\frac{3}{4} L$ or $\frac{1}{2} L$ In the notes at the bottom of table 6C-4 it states For all other roadway $\frac{3}{4} L$ should be used for a shifting taper and in Section 6C.09 paragraph 08 it states that a minimum $\frac{1}{2} L$ should be used. This is an error and will be corrected in the next revision. While we recommend the use of $\frac{3}{4} L$ for a shifting taper we also recognize that field conditions may not allow for the use of $\frac{3}{4} L$ therefore keep in mind that this is a guidance statement and may be changed to meet field conditions with proper documentation and approval. This has been corrected in Rev. 2.1

25. *Appendix A Page A-13 in the second Bullet the Word "Maximum" should be "Minimum" making the statement "Minimum lane width of 10 feet with a maximum posted speed of 25 mph" This has been corrected in Rev. 2.1*
26. **TTC-56.2** The reference note on the diagram for the permanent R8-8 "Do Not Stop on Tracks" sign reads "R8-8 SEE NOTE 6". *However, this sign is actually described in NOTE 7.*
27. A TMA that is protecting a damaged impact attenuator device after 24 hours if the unit has not been fixed by the contractor to meet the time limit in the WAPM. *We would not expect the contractor to remove the TMA that is shielding the damaged impact attenuator, that would lead to a greater hazard than using the TMA. However, the TMA was not crash tested in this fashion, and makes use of roll ahead distances to properly disburse the energy of a striking vehicle. Because of this the contractor and department would be liable for any damage experienced by a motorist who strikes the TMA which is a reason the 24 hr time limit is in the WAPM. Some districts do not allow the use of a TMA to protect damaged attenuators because of this reason. We would hope the contractor would plan and repair the damaged impact attenuator as quickly as possible, and not rely on the TMA for protection of the fixed object.*
28. **Section 6F.12 paragraph 3 (Standard)** "Signs shall be installed on roadways where TTC zone exists with physical barriers on both sides of a single lane and the clear zone distance between edge lines is less than 14 feet." To clarify the desired width for over size loads we will be adding the following to the next Revision of the WAPM:
*Guidance:
To allow travel by permitted overwidth loads, a lane width of 16 feet between barriers should be provided.*
29. **How to get LCAMS and VATraffic training:** *prior to COVID-19 LCAMS training was conducted in the classroom by our Regional Work Zone Coordinators located in the TOC; some are now doing live online training, and some are just letting the contractors use the LCAMS online User Manual (no account or login required): <http://vdot.openlcams.com/OpenCones/help/MainPageHelp.htm>
VaTraffic training is handled online on VDOT University, which is available to external users as well.
To get the access process started, it is recommended that contractors contact their respective Regional Work Zone Coordinator (see attached below current list). The Work Zone Coordinators are located at each of the TOCs.
We also have a publicly available OneHub VaTraffic and LCAMS resource site:
<https://vatraffic.onehub.com/vatraffic-user-resources>*

VDOT Regional Work Zone Coordinators/Trainers 2/10/21

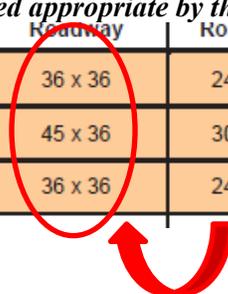


30. TTC-17.2 the Keep Right Sign number designation is erroneously labeled “W9-2L” the correct sign number designation is “R4-V7R” also the Left Lane Closed Ahead Sign should be labeled W9-3L not “R”.

31. When does Revision 2.1 take affect? *Revision 2.1 of the WAPM only addresses minor corrections to errors found and does not affect Standards and practices. Rev. 2.1 will become effective July 1, 2021 for all work performed by State Force unless the work is under a contract that references the Rev. 2 of the WAPM. It will become effective on all contracts and projects advertised on or after November 1, 2021.*

32. Table 6F-1 page 7 of 7. All VA Primary Route marker signs M1-V1 series and M1-V2 series (2 digit) signs should be 24 x 24 and (3 digit) 30 x 24. Unless an oversized sign is deemed appropriate by the engineer.

		Roadway	Roadway	≤ 30 MPH
VA Primary Route Marker for Independent Use (1 or 2 digits) ¹	M1-V1a, V1b	36 x 36	24 x 24	24 x 24
VA Primary Route Marker for Independent Use (3 digits) ¹	M1-V1c, V1d	45 x 36	30 x 24	30 x 24
VA Circular Sec. Route Marker for Independent Use (3 digits) ¹	M1-V2a, V2b, V2c, V2d, V2e, V2f	36 x 36	24 x 24	24 x 24



33. Table 6H-1 page 6H-3, *beginning with Figure number TTC-28.2 the page numbers are off by 2 through TTC-69.0*
34. **Clarification on the Definition of Activity Area:** *Section 6C.07 Activity Area defines this as a “section of highway where the work takes place. It is comprised of the work space and the traffic space.” The Activity Area is also referred to in the field as the work space or work area. We will add the definition to Section 6A.03 Definitions of Words and Phrases in the next revision of the WAPM.*
35. **Definition of a Fixed Object:** *A Fixed Object is any static object, item or slope that would cause damage or/an injury if struck by a motorist and preventing an errant vehicle from returning to the traveled way safely. We will add the definition to Section Section 6A.03 Definitions of Words and Phrases in the next revision of the WAPM.*
36. **Arrow boards Alternating Diamond Caution Mode :** *We have adjusted the implementation date for the total conversion of arrow boards to the alternating diamond caution mode for safety services patrol vehicles to July 1, 2025 to allow the contractor adequate time for fleet conversion.*
37. **Rev. 2.1 Index of sheets:** *An error in the index of sheets (Pages TC-6 and TC-7) has been discovered in the Rev. 2.1 update causing the page numbers listed in the index of sheets for the Typical Drawings starting with TTC-35.1 to be off by one sheet, this will be corrected in the next edition.*
38. **TTC-23.2 Note 15:** *The reference to note 15 in this typical is a typo and should reference Note 14.*
39. **New Typical Drawing TTC-64.1a End of Day Signing for Surface Treatment Operations (See next Page)**
40. **Color of Portable Temporary Rumble Strips Section 6F.99 paragraph 03:** *“If the color of a PTRS used within a travel lane is not the color of the pavement, the color of the rumble strip shall be black or white.” It is now acceptable to use orange PTRS’s and alternating black and silver PTRS’s, this change will be reflected in the next edition of the WAPM.*

Typical Traffic Control
End of Day Signing for Surface Treatment Operations
(Figure TTC-64.1a)

Standard:

NOTES

1. **LOOSE GRAVEL (W8-7) signs shall be installed on surface treated roadways and shall be removed when the roadway has been swept or loose gravel has been removed from the roadway. LOOSE GRAVEL signs shall be installed every mile if the surface treated area is less than 3 miles, or every 2 miles if the surface treated area is longer than 4 miles.**

Option:

2. Advisory Speed Panels may be added under the LOOSE GRAVEL signs.

Standard:

3. **Advisory speeds shall be determined by the District Traffic Engineer based on field and traffic conditions. When used together, Advisory Speed Panels and LOOSE GRAVEL signs shall be posted mounted.**
4. **NO CENTER LINE (W8-12) signs shall be installed whenever the centerline has been obliterated or until permanent pavement markings have been installed. The sign shall be installed in both directions when the centerline is not present.**
5. **A DO NOT PASS (R401) sign shall be used when the centerline has been obliterated or until permanent pavement markings have been installed. The DO NOT PASS sign shall be installed after the NO CENTER LINE sign and their portable sign stand shall be supported with a sand bag weighting approximately 25-pounds on each leg or two (2) drum collar weights positioned on the center of the sign stand. Thereafter, the DO NOT PASS sign shall be installed every mile if the unmarked area is less than 3 miles, or every 2 miles if the unmarked area is longer than 4 miles.**
6. **The UNMARKED PAVEMENT AHEAD (W8-4) sign shall be erected in advanced of resurfaced roadway sections 500 feet or more in length where the center line and edge lines have been removed until pavement markings are applied.**
7. **Signs shall be post-mounted at all locations after 72 consecutive hours of non-work activities.**
8. **If temporary construction or permanent pavement markings cannot be installed in accordance with Road and Bridge Specification 704, then yellow flexible temporary pavement markers (FTPMs) spaced at 20-foot centers for two-way traffic shall be placed along the centerline for lane division. No edge markers will be required.**

Guidance:

9. *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.*

Option:

10. Only traffic control signing for surface treatment operations is shown. Other traffic control devices may be used for the control of traffic through the work area.
11. The advanced warning signs shown may also be used on multi-lane roadways, replacing the NO CENTER LINE signs with UNMARKED PAVEMENT AHEAD (W8-V4) signs.
12. The ROAD WORK NEXT XX MILES sign may be used in place of the ROAD WORK AHEAD sign for activity areas greater than 2 miles in length.

Standard:

13. **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.**
14. **All "Through" connections within the project limits shall be signed with ROAD WORK AHEAD and LOOSE GRAVEL signs. "Through" connections are not dead end and sub-division roads**

