



# Traffic Engineering Update on Bike/Ped Topics

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Central Office Traffic Engineering Division

*Bicycle/Pedestrian Advisory Committee | April 27, 2016*

# Agenda

- Introduction
- Share the Road / Bikes May Use full Lane Signs
- Bicycle Touring Routes
- DMV Drivers Manual Update
- Crosswalk and Pedestrian Accommodation Policies
- ADA Curb Cuts
- Miscellaneous
- Q&A

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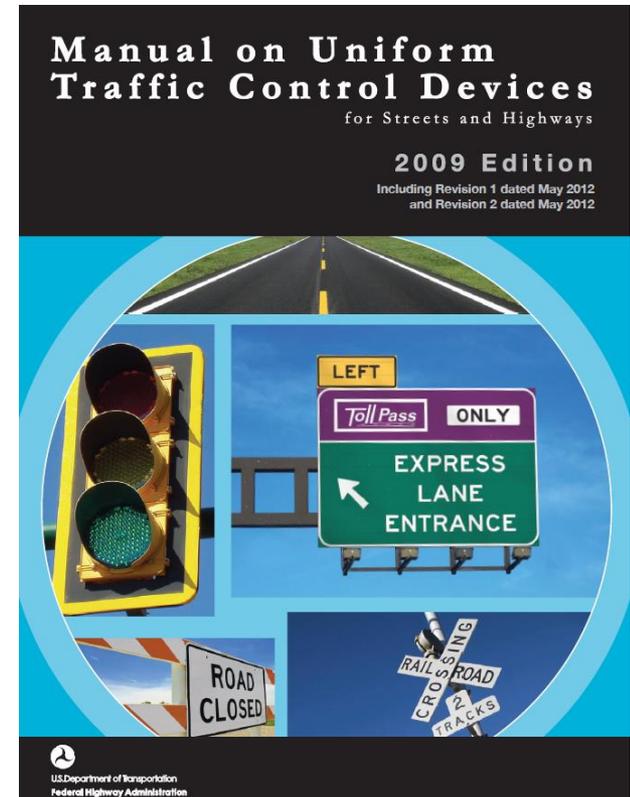
- ➔ • Introduction
  - Share the Road / Bikes May Use full Lane Signs
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  - ADA Curb Cuts
  - Miscellaneous
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## Introduction | *What T.E.D. Does*

- Statewide signing and marking policies
- Standards and specifications (materials, sign supports, signal pole structures, etc.)
- Support VDOT's five Regions
- Liaison to FHWA
- Liaison to DMV
- Review proposed General Assembly bills

# Introduction | MUTCD

- Manual on Uniform Traffic Control Devices (MUTCD)
- FHWA policy document
- Legally applies to all roads and shared use paths
- Sets policy for all traffic control devices (signs, markings, signals, work zones, RR Xings)
- Last updated in 2009
- Next edition not until 2018 or later

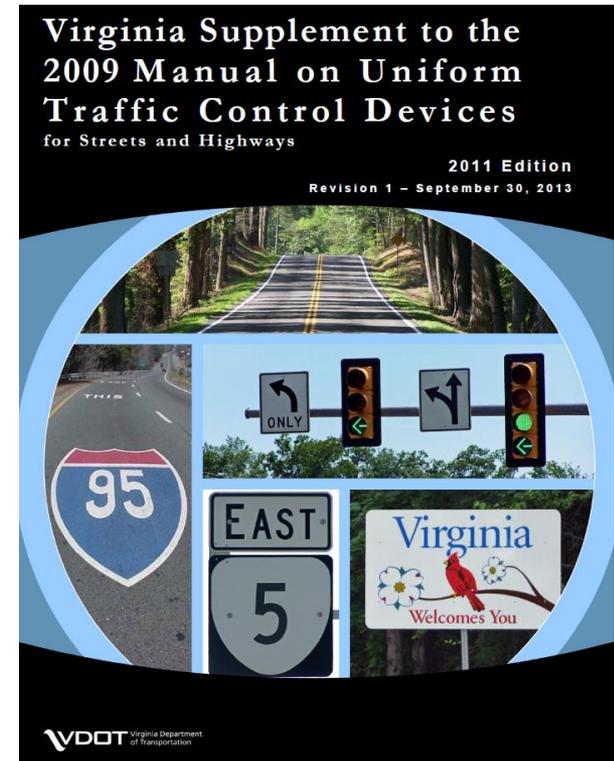


## Introduction | *key MUTCD lingo*

- Standard (“shall”): must be followed unless documented engineering study justifies otherwise
- Guidance (“should”): should be followed unless engineering judgment justifies otherwise
- Option - “may”
- Typically, existing nonconforming devices may remain until end of their useful life

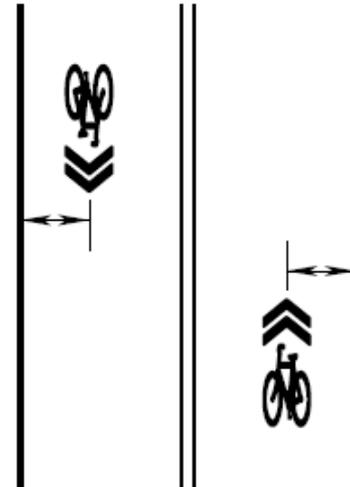
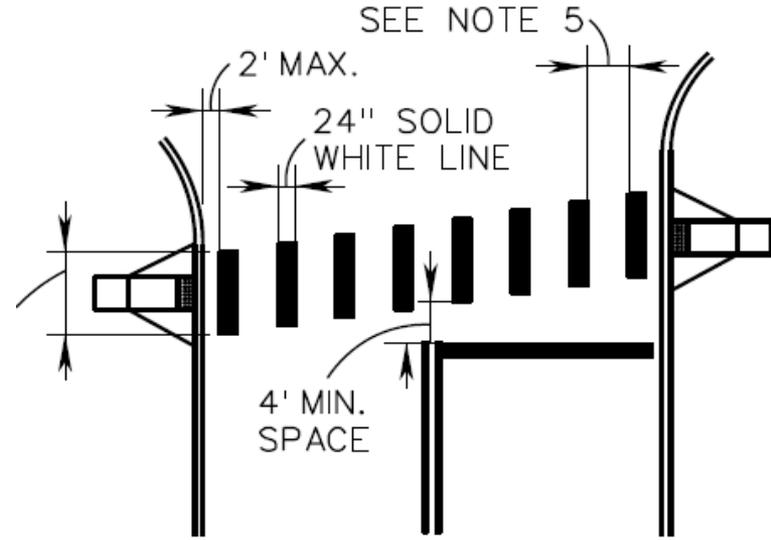
# Introduction | *Virginia Supplement*

- Expands on MUTCD
  - Modification to FHWA requirements
  - Virginia-specific signs
  - Explanation or implementation of Virginia Code
- Applies to all VDOT-maintained roads
- Last updated in 2013



# Introduction | *Other VDOT Policies*

- Design Standards, including:
  - Pavement marking placement
  - ADA curb cuts
  - Pedestrian pushbuttons
- Policy Memoranda, including:
  - Flashing Yellow Arrow signals
  - ADA curb cut policies
  - Speed limit policies



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- Miscellaneous Other Issues
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## STR Signs | *Current VDOT Policy*

- Shall only be used at isolated locations (not to communicate a general policy statement)
- Should only be used on roads with speed limit  $\geq 40$  mph
- May be used at locations like below examples (if routine bicycle use):
  - At ends of SUPs or bike lanes
  - Hazards such as narrow bridges
  - Locations with bicycle crash history



## BMUFL Signs | *Current VDOT Policy*

- Shall not be used where on-road bike facilities exist (bike lanes or wide paved shoulders)
- Shall only be used where lane is too narrow for bikes and vehicles to operate side-by-side
  - “Too Narrow” = 14~15 ft
- Should only be used on roads with speed limit  $\leq 35$  mph



## BMUFL Signs | *Current Policy (Cont.)*

- Northern Virginia Region has additional policies:
  - Should not be used on low-volume roads (< 3,000 vehicles per day)
  - Should not be used on very high-volume roads (> 30,000 veh per day)
  - Where right-most travel lane + shoulder is > 10.5 ft in width (excluding gutter pan)



## STR/BMUFL Signs | *Issues*

- Recent study showed that sign message may be ambiguous
  - BMUFL signs were better understood
- Signs may be confusing (drivers think sign is telling bicyclists to share the road with drivers)
  - STR plaque was historically used beneath tractor, horse-and-buggy, etc. signs
- Two states (OR and DE) have discontinued its use, with support from local cycling groups
- FHWA now discourages bicycle STR signs

## STR/BMUFL | *Options for Discussion*

- Option 1 – keep current policy
- Option 2 – Adopt Oregon DOT approach
  - Similar to current policy, but use “ON ROAD” plaque instead of “SHARE THE ROAD”
- Option 3 – Expand use of BMUFL signs (not recommended)
  - All BMUFL’s on roads with  $\leq 35$  45 mph speed limits



# STR/BMUFL | *Other Considerations*

- All Options:
  - BMUFL signs should not be used on very low-volume or very high-volume roads
  - BMUFL signs shall not be used where bike lane or  $\geq 4$  foot paved shoulder is present
  - STR plaque can continue to be used beneath horse-and-buggy, golf cart, or similar signs
  - Shared Lane Marking (“sharrow”) policy remains unchanged
- Any policy changes do not affect existing signs

# STR/BMUFL | *Open Discussion*

- Which option do you prefer?



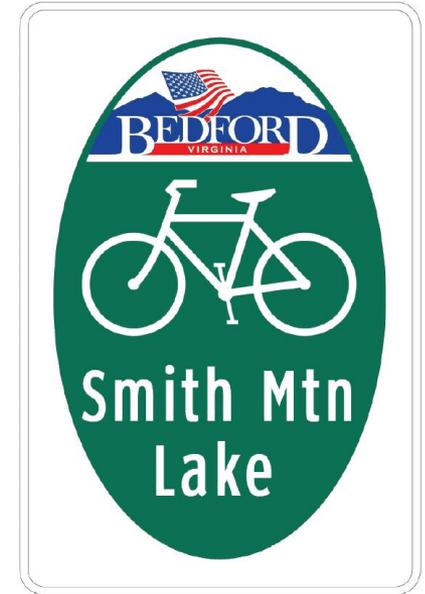
“This isn’t third grade, Bob. You can speak.”

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# Bicycle Touring Routes | *Introduction*

- BTRs becoming increasingly popular
- Current MUTCD sign design uses green oval
- VDOT will also gradually phase in new US Bike Route sign design developed by FHWA



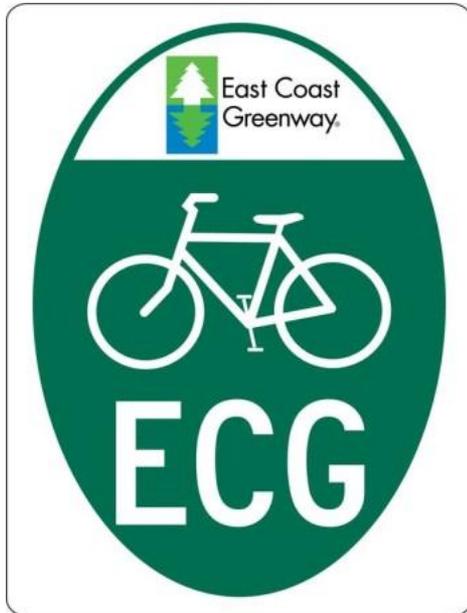
# Bicycle Touring Routes | *Issues*

- Need to standardize sign design
- Desire to avoid over-proliferation or overlapping routes
- VDOT Regions need to approve routes
- Routes that cross from Cities into Counties



## BTRs | *Open Discussion*

- Sign design?
- Criteria for qualifying as a BTR?
- Can localities/regions develop multiple numbered BTRs?

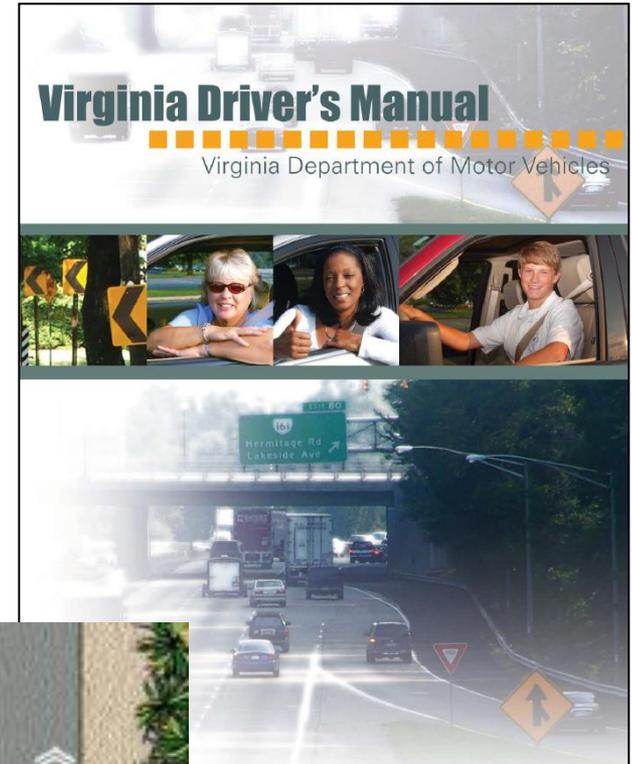


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# DMV Manual | 2015 Changes

- Explanation of shared lane markings
- Suggest to increase following distance when behind bicycle or motorcycle
- Do not park in bike lane
- Watch for bikes before opening car door



# DMV Manual | *Potential 2016 Changes*

- New bicycle lane section
- Yield to pedestrians or bicyclists in crosswalks
- Clarify that bicyclists may ride in center of lane or on sidewalks
- Bicycle's small size can make them easy to miss in your blind spot
- Expanded/corrected section on school zone speed limits



# DMV Manual | *Potential 2016 Changes*

- Current language:
  - *Generally, there are three types of pedestrians most often involved in crashes: children, the elderly and adults under the influence of alcohol or other drugs*
- Proposed edit:
  - *Pedestrians are especially prone to serious injury when struck*

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# Pedestrians | Current Crosswalk Policy

- *Guidelines for Installation of Marked Crosswalks* document
- Research document completed in 2005
- Similar to 2002 FHWA study

	≤ 9,000 ADT			> 9,000 ADT to ≤ 12,000 ADT			> 12,000 ADT to ≤ 15,000 ADT			> 15,000 ADT		
	≤30 mph	35 mph	≥40 mph	≤30 mph	35 mph	≥40 mph	≤30 mph	35 mph	≥40 mph	≤30 mph	35 mph	≥40 mph <sup>b</sup>
2 lanes												
3 lanes												
++4 lanes, raised median <sup>c</sup>												
++4 lanes, no median												

# Pedestrians | *Issues With Xwalk Policy*

- Primarily focuses on midblock crosswalks; little guidance for stop-controlled approaches or at traffic signals
- Predates many recent federal & state policy changes (e.g. ADA, MUTCD)
- Technology changes
- Is not always clear in intent
- Lacks consistent, enforceable requirements for developers



# Crosswalks | *Issues With Policy*



## Crosswalks | *Where we stand*

- Two separate policy documents being developed:
  - Marked crosswalks at unsignalized intersections
  - Pedestrian accommodations at signalized intersections
- Policies will be developed during 2016

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# ADA Curb Cuts | *Current Policy*

- Policy is based on USDOT/USDOJ Agreements
- VDOT will assess curb cuts on any “alteration” project
- Curb cuts assigned functional rating of A-D
- Most VDOT Districts have “on-call” ADA curb ramp contracts



# ADA Curb Cuts | *Functional Rating*

- Grade A – meets all current stds
- Grade B – functional (may have exposed aggregate surface instead of truncated domes)
- Grade C – substandard width, no detectable surface, and/or poor material condition
- Grade D – does not exist



# ADA Curb Cuts | *Current Status*

## Estimated Current Status (As of March 3, 2016)

District	Inventory*		Assessments	Improvements	
				Needed	Delivered
Bristol	551	(1.0%)	293	172	30
Salem	486	(0.9%)	304	205	24
Lynchburg	743	(1.3%)	455	291	76
Richmond	2,654	(4.7%)	849	554	46
Hampton Roads	1,334	(2.4%)	342	239	83
Fredericksburg	2,909	(5.2%)	246	69	53
Culpeper	972	(1.7%)	182	81	30
Staunton	1,372	(2.4%)	124	97	91
NOVA	45,038	(80.3%)	10,172	8,574	1,365
Statewide	56,059		12,967	10,282	1,798
<b>GOAL</b>			8,500 / year		1,400 / year

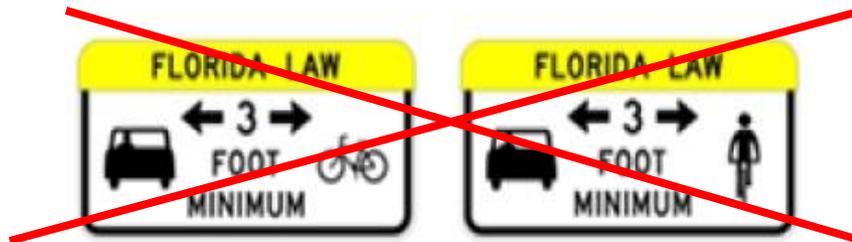
\* *excludes commercial entrances*

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## Miscellaneous | 3' Passing Signs

- A 2013 FSU Study determined only 40% of study participants understood signs like the below
  - Many participants interpret the sign as requiring bicyclists to stay 3' to the right of drivers
- Therefore, FHWA has advised states not to install such signs until a better sign design is developed
- Public outreach (bumper stickers, etc.) may be a superior method of “getting the word out”



## Miscellaneous | *School Zone Speed Limits*

- New VDOT policy released April 2016
- Goals
  - Provide for safety of children (on foot, on bicycle, in bus, in parents' car)
  - Limit SZSLs to locations where necessary
  - Meet State Code



## Miscellaneous | SZSLs (cont.)

- Policy addresses:
  - How VDOT will evaluate SZSL requests
  - What value to set them at
  - Hours of operation
  - Signage design and placement
- Policy can be used to address existing noncompliant SZSLs in cooperation with School Board

## Miscellaneous | ADA Symbol

- Some states/agencies have received requests for “active” ADA symbol
- FHWA has stated that only the standard International Symbol shall be used
- VA State Code requires that all accessible elements be denoted by the standard symbol in Uniform Statewide and Int’l Building Codes



## Miscellaneous | US Bike Routes

- New sign design based on coordination with national bicycle advocacy groups
- VDOT has received “Interim Approval” from FHWA to use new sign design
- New sign design will be incorporated into next MUTCD
- Sign will be gradually rolled on VA’s USBR’s



*old*



*new*



Questions? Comments?

