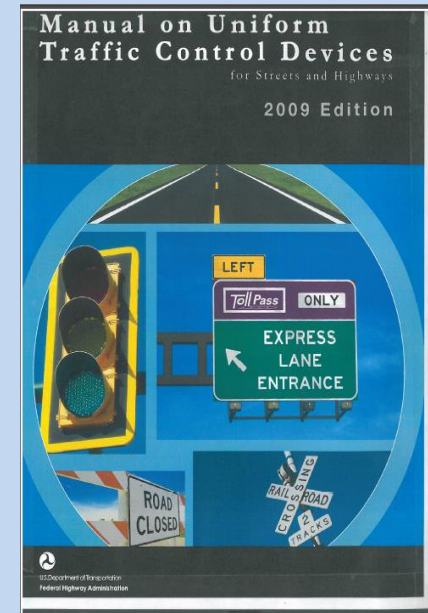


# CURVE SPEED ADVANCED WARNING SIGNS

Differences Between the Manual on Uniform Traffic Control Devices (MUTCD)

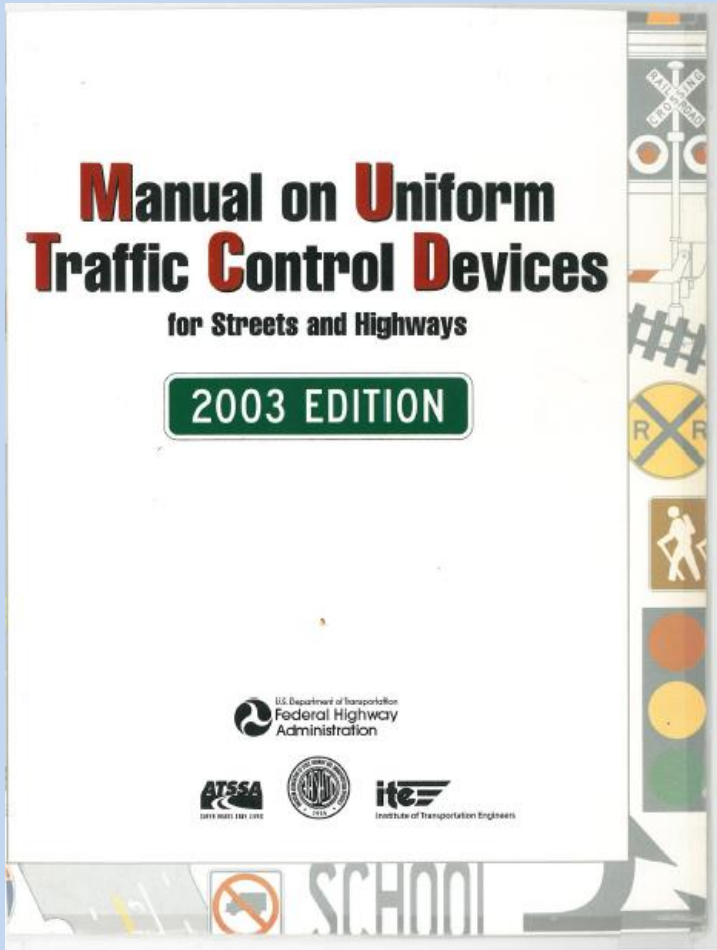
2003 vs. 2009 Editions



# **STATEWIDE TRAFFIC ENGINEERS MEETING JUNE 16, 2011 – BATON ROUGE, LA.**

- Are there any real differences between the two editions or is there just more information and guidance provided.
- This will be examined as we proceed to look at examples from both editions so you can make your own judgments and reach your own conclusions.

# 2003 MUTCD Chapter 2C

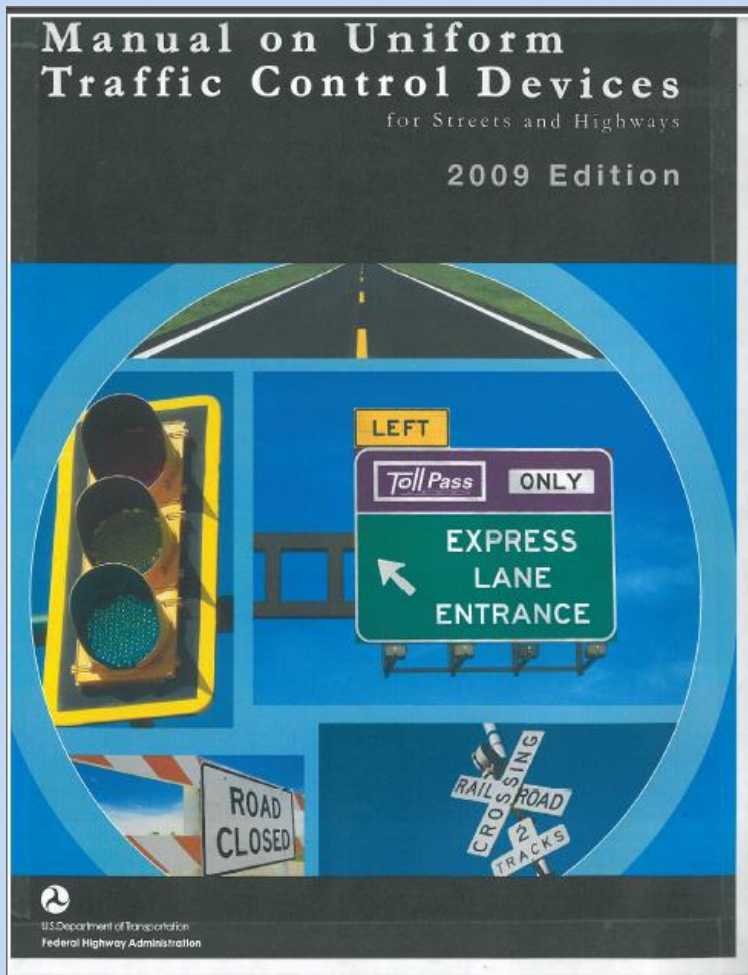


- Continuing as in the past information about warning signs can be found in Chapter 2C of the 2003 Manual

# 2009 MUTCD

## Chapter 2C

- Chapter 2C of the New Manual is still the source of guidance and information about all types of signs.
- It has been reorganized with changes regard to sign size, background color, visibility, installation location (advance & lateral), height and location with regard to other types of signs on the approach to an intersection.

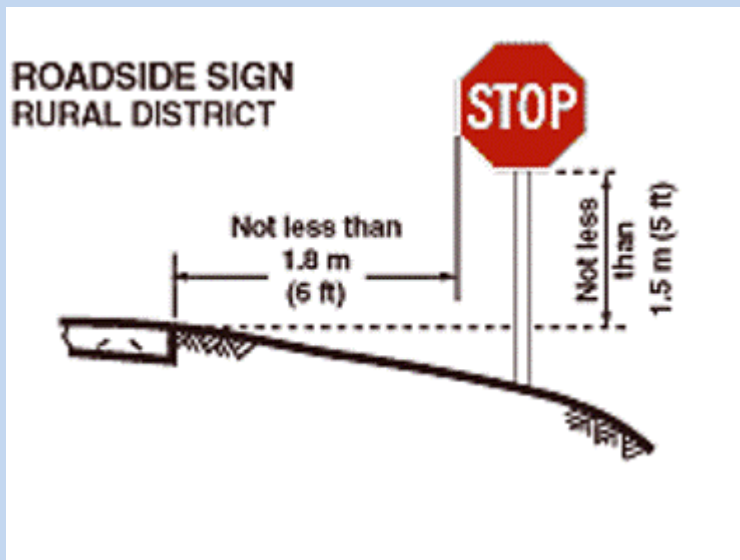


# Major Changes 2009

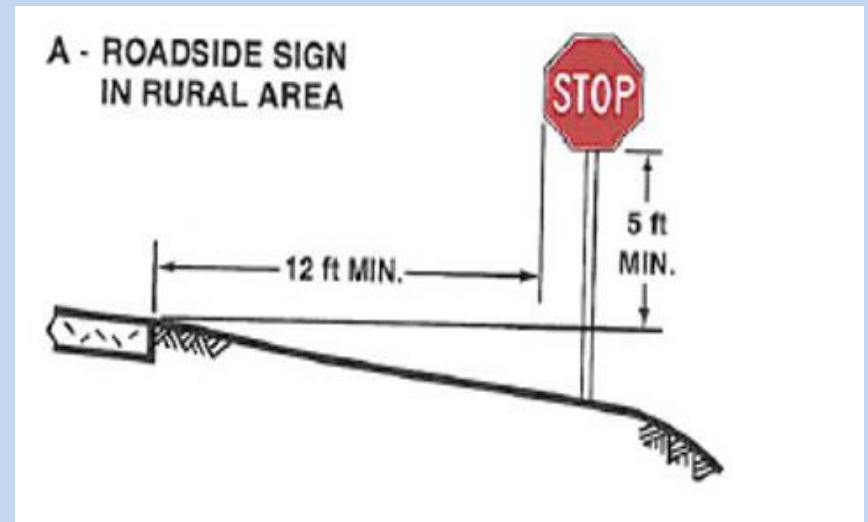
- Warning Signs and Advisory Plaques Minimum Sizes expanded considerably. One page in the 2003 Manual increased to three pages in the 2009 Manual.
- More discussion of the minimum sizes for both the warning signs and any advisory plaques used to display a supplement message.
- Minor changes in the method to determine the proper placement of advanced warning signs (Table 2C-4).
- Major Changes in Lateral Placement and Mounting heights of Regulatory and Warning Signs

# Example of a Major Change in the Lateral Placement of Regulatory Signs in Rural Areas

## 2003 –Rural Locations



## 2009 Rural Locations



# Example of a Major Change in the Mounting Height for Warning Signs with Advisory Plaques in Rural Areas

## 2003 MUTCD Requirements

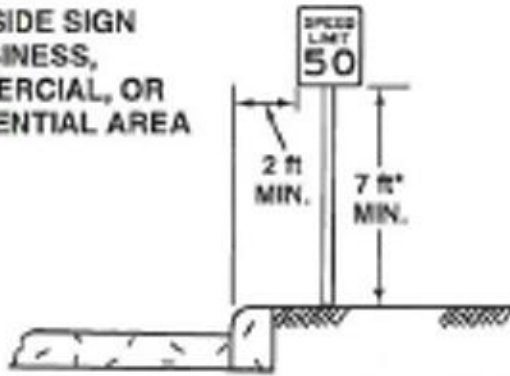


## 2009 MUTCD Requirements



# Changes in the Lateral Placement and Mounting Height in Business, Commercial and Residential Areas

C - ROADSIDE SIGN  
IN BUSINESS,  
COMMERCIAL, OR  
RESIDENTIAL AREA



\*Where parking or pedestrian movements are likely to occur

F - SIGN ON NOSE  
OF MEDIAN

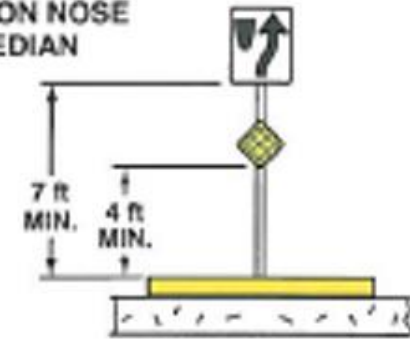
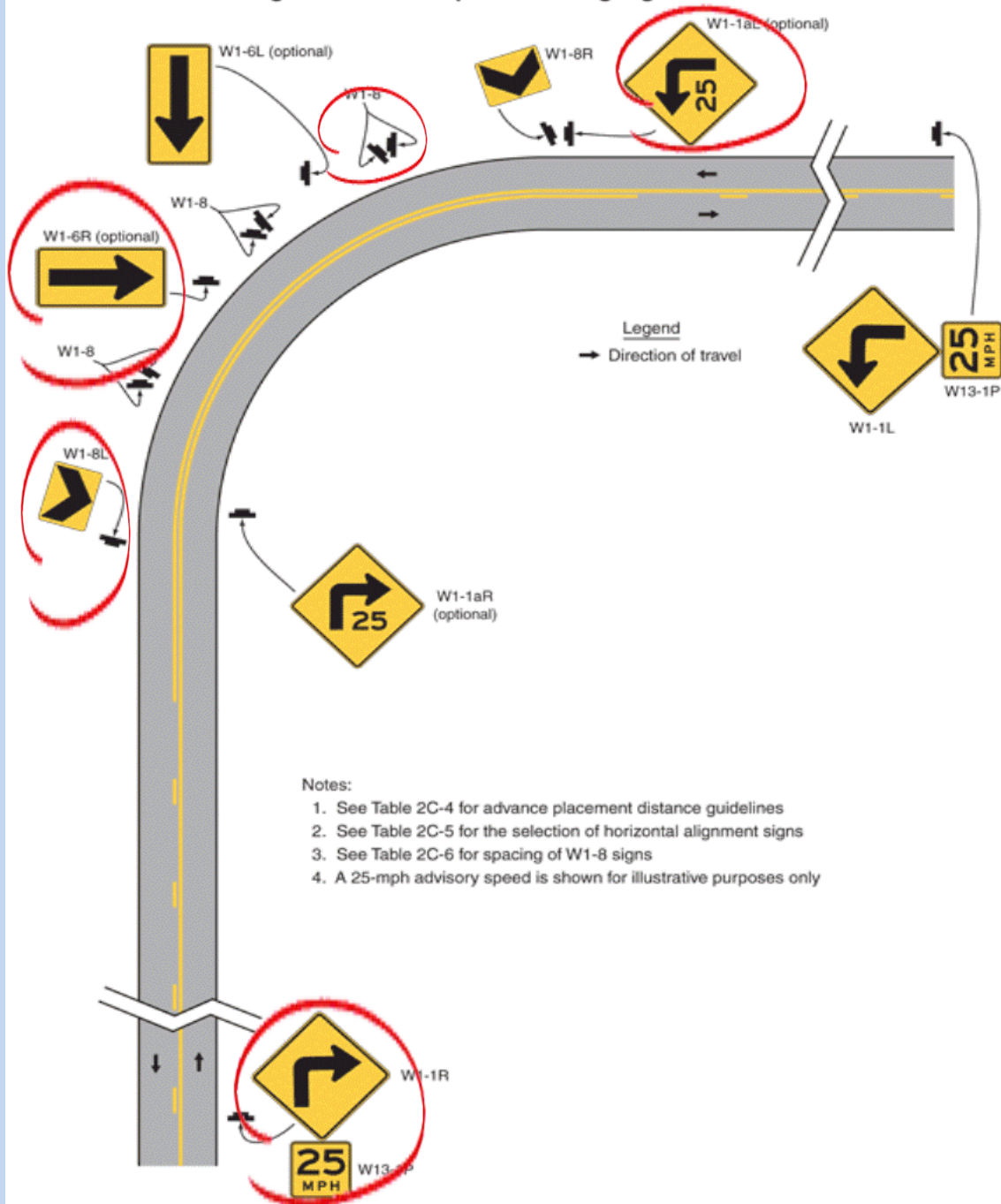




Figure 2C-2. Example of Warning Signs for a Turn



# 2009 Required Changes

- Table 2C-4 contains the new requirements for the spacing of advanced horizontal alignment and advanced warning signs.
- These have been increased from the 2003 Manual with a far greater emphasis placed on providing adequate perception – reaction time (PRT) and visibility.

# 2009 Required Changes (Continued)

- Table 2C -5 provides guidance about the required differences in the posted speed limit (based on the 85 percentile speeds of observed traffic) and the advisory speed that may be used if, an advisory plaque is used.
- Most of the signs in this series require a supplemental plaque and each has a recommended or required minimum difference between the two speeds.

# 2009 Required Changes (Continued)

- Table 2C-6 shows the required spacing between the now required Chevron Alignment Signs used to mark the outside edge of a curve or turn.
- They shall be placed in line and at approximately a right angle (90 degrees) to approaching traffic. They shall be mounted at a minimum height of four feet to the bottom of the sign.

# When Will these Changes be effective and how will they affect DOTD

- There is a Section (I-2, Table 1-4, three pages) in the new manual that identifies target compliance dates and required actions that should be reviewed by all DOTD employees responsible for implementing these changes.
- Some of these date from the 2003 edition of the manual, others were to be effective when the 2009 Manual was adopted by FHWA

# Has LaDOTD Adopted the 2009 Manual?

- LaDOTD has not officially adopted the 2009 edition, but is expected to do so in December of 2011.
- Since our official acceptance has been delayed, this may have some affect on the compliance dates as well. If there are changes from Table 1-4 of the 2009 Manual that information will be forwarded as it becomes available.

# What Must Our Local Districts Do and When

- This is still under consideration Some of the changes as previously indicated date from the 2003 Manual edition and others from when the 2009 Manual became effective immediately on January 1, 2009. As more information becomes available it will be sent out to the various districts, departments and sections of La DOTD that will be affected.
- Attached is an Excel file from the Arizona Department of Transportation dated 5-23-2011 of many of the required changes and their interpretation of how it will affect their system.

Arizona List of Required 2009  
MUTCD Changes