Developing, Using, and Expanding Bikeway Design Standards and Guidelines

National Standards & Guidelines

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Manual on Uniform Traffic Control Devices (MUTCD)

- Published by FHWA
- National standard for all traffic control devices
  - Signs
  - Markings
  - Signals
Manual on Uniform Traffic Control Devices (MUTCD)

- 23 CFR 655.603:
- MUTCD applies to all roads & shared-use paths open to public travel
- All state & local traffic control device standards and manuals must be in “substantial conformance” with National MUTCD
MUTCD

• 9 parts:
  • 1 - General
  • 2 - Signs
  • 3 - Markings
  • 4 - Signals
  • 5 - Low-Volume Roads
  • 6 - Temporary Traffic Control
  • 7 - Schools
  • 8 - Railroad & Light Rail
  • 9 - Bicycle Facilities (since 1978)
MUTCD Changes & Updates

• MUTCD changes initiated by:
  • FHWA research & actions
  • NCUTCD recommendations
  • Requests by agencies & public
  • Experimental results & Interim Approvals

• Typical cycle:
  • New MUTCD edition every 5-9 years
  • Interim Approvals: continuous
National Committee on Uniform Traffic Control Devices

- Advises FHWA on MUTCD content
- Non-profit organization
  - (descended from Federal advisory committee)
NCUTCD

- Comprised of 20 transportation organizations, including
  - AASHTO
  - ITE
  - American Public Works Assoc
  - Natl Assoc of County Engineers
  - League of American Bicyclists
  - APBP
  - ...and others
NCUTCD

- Technical Committees:
  - Regulatory & Warning Sign
  - Guide & Information Sign
  - Markings
  - Signals
  - Temporary Traffic Control
  - Railroad & Light Rail
  - Bicycle
- Research Committee
- Edit Committee
- Rules of the Road Committee (UVC)
NCUTCD

- Technical Committee Members:
  - Experts in their area of specialty
  - Expected to be knowledgeable in all parts of the MUTCD
  - 50% or more must be “government members”
    - Active government employment
    - 20+ years with government
NCUTCD Bicycle Technical Committee

- Currently 20 members from all over US
  - Engineers
  - Planners
  - Technical Experts
NCUTCD Process

1. Proposal to change (or add to) MUTCD
   • From external input or internal discussion

2. Technical Committees develop proposal
   • Other TCs review if appropriate

3. Sent to NCUTCD sponsor organizations for comment
NCUTCD Process

4. Vote by NCUTCD Council
   • Council: comprised of representatives of sponsor organizations

5. Sent to FHWA for action
   • Interim Approval
   • Next MUTCD edition
MUTCD Experimentation

- Allows for new treatments / devices to be evaluated & added
- Must be initiated by a public agency
- Process described in Section 1A.10
  - Must have a plan
  - Must agree to remove if denied/ineffective
- Data-driven
- Objective evaluations are a big help
AASHTO Guide

• AASHTO Guide for Development of Bicycle Facilities
• 4th Edition published early 2012
AASHTO Guide

• Extensive technical detail on design of many facility types
  • Bike lanes
    • Width, offset, signs & marking
    • Bike lanes at intersections
  • Shared roadways
    • Bike routes, “bike boulevards”
  • Shared-use paths
    • Geometric design
    • Sightlines, grades, curves
    • Intersections
AASHTO Guide

- Established reputation
  - AASHTO: 98 years of service
  - 4th edition of Bike Guide
- 8 years in development
  - Three NCHRP projects
- Many levels of review
  - NCHRP panels
  - State bicycle staff
  - State roadway engineers
  - State traffic engineers
ITE Traffic Control Devices Handbook

- Serves as a "how-to" guide
- Contains guidelines and examples
- First edition: 2001
- Second edition: 2012 (fall?)
ITE Traffic Control Devices Handbook

- Expands on MUTCD content
- 2nd edition: chapter on bicycle facilities is three times larger than Part 9 (Bicycle Facilities) of the MUTCD
ITE TCDH 2nd Edition

- **Shared lane markings:**
  - Extensive new information based on practical experience

- **Bicycle Signing:**
  - Significant added guidance

- **Bikes at Intersections:**
  - Suggestions for bike lane treatments, detection, signal timing, and clearance intervals
Noncompliance

- Denial or loss of Federal funds (MUTCD)
- Exposure to claims or liability
  - Failure to follow “established and accepted guidance” can be evidence of negligence