MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES FOR STREETS AND HIGHWAYS

U.S. Department of Transportation Federal Highway Administration

1988
Approved by the Federal Highway Administrator as the National Standard in accordance with Title 23, U.S. Code, Sections 109(d), 114(a), 217, 315 and 402(a), 23 CFR 1204.4 and 49 CFR 1.48(b)(8), 1.48(b)(33), and 1.48(c)(2).

Approved as an American National Standard
by the American National Standards Institute
STANDARD HIGHWAY SIGNS

ORDER FORM

Enclosed is $______  □ check, □ money order, or charge to my Deposit Account No. □ $30.00 domestic □ $37.50 foreign

Credit Card Orders Only
Total charges $______ Fill in the boxes below.
Credit Card No. ________________________________
Expiration Date Month/Year ________

Order No. 950-044-00000-4

Enter my _____ subscription(s) to STANDARD HIGHWAY SIGNS (SHS)

PLEASE PRINT OR TYPE
Name—First, Last

Street address

Company name or additional address line

City ___________________________ State _______ ZIP Code ______

(or Country)

For Office Use Only.

<table>
<thead>
<tr>
<th>Quantity</th>
<th>Charges</th>
</tr>
</thead>
<tbody>
<tr>
<td>Enclosed</td>
<td></td>
</tr>
<tr>
<td>To be mailed</td>
<td></td>
</tr>
<tr>
<td>Subscriptions</td>
<td></td>
</tr>
<tr>
<td>Postage</td>
<td></td>
</tr>
<tr>
<td>Foreign handling</td>
<td></td>
</tr>
<tr>
<td>MMOB</td>
<td></td>
</tr>
<tr>
<td>OPNR</td>
<td></td>
</tr>
<tr>
<td>UPNS</td>
<td></td>
</tr>
<tr>
<td>Discount</td>
<td></td>
</tr>
<tr>
<td>Refund</td>
<td></td>
</tr>
</tbody>
</table>
Addresses

American Association of State Highway and Transportation Officials
444 North Capitol Street, NW, Ste. 225
Washington, D.C. 20001

American Automobile Association
8111 Gatehouse Road
Falls Church, Virginia 22047

Institute of Transportation Engineers
525 School Street, SW,
Washington, D.C. 20024

Traffic Institute
Northwestern University
P.O. Box 1409
Evanston, Illinois 60204
INTRODUCTION

Traffic control devices are all signs, signals, markings, and devices placed on, over, or adjacent to a street or highway by authority of a public body or official having jurisdiction to regulate, warn, or guide traffic.

The need for high uniform standards was recognized long ago. The American Association of State Highway and Transportation Officials published a manual for rural highways in 1927 and the National Conference on Street and Highway Safety published a manual for urban streets in 1929. But the necessity for unification of the standards applicable to the different classes of road and street systems was obvious. To meet this need, a joint committee of the American Association of State Highway and Transportation Officials and the National Conference on Street and Highway Safety developed, and published in 1935, and original edition of this Manual of Uniform Traffic Control Devices. That committee, though changed from time to time in organization and personnel, has been in continuous existence and has contributed to periodic revisions of the Manual, including this 1988 edition. The committee's name was formally changed to the National Committee (NC) on Uniform Traffic Control Devices.
Approved Revisions

This hardbound edition of the Manual incorporates all revisions which have been approved through official rulings issued by the Federal Highway Administrator. Most of these rulings were previously published in Revisions 1 thru 4 of the 1978 Edition. This 1988 Edition includes official rulings approved in four Federal Register notices effective December 12, 1985, March 9, 1987, March 16, 1988, and January 23, 1989. These 4 Federal Register notices comprise Revision 5 of the Manual.

A list of all official rulings with appropriate compliance dates is contained in this latest edition. The official ruling numbers are also identified in the margin of the revised text pages. The dates at the bottom of the text pages indicate the date the official text revisions were distributed.

Symbols and Additions

This edition of the Manual continues the trend set in the previous editions toward broader use of symbols as alternatives to word messages. Also, the following new parts have been added to the Manual:

- II-G, Motorist Service Signing
- II-H, Recreational and Cultural Interest Area Signs
- II-I, Tourist Oriented Directional Signs
- VI-H, Control of Traffic Through Incident Management Areas.

Implementation

It is expected that basic uniformity will be obtained in the visible features and functioning of traffic control devices on all highways in accordance with the Manual. Implementation of standards contained in this Manual on all highways open to public travel will be governed by Federal directive.
CONTENTS

PART 1—GENERAL PROVISIONS

Section 1A-1. Purpose of Traffic Control Devices ........................................... 1A-1
1A-2. Requirements of Traffic Control Devices .............................................. 1A-1
1A-3. Responsibility for Traffic Control Devices ........................................... 1A-3
1A-3.1 Placement Authority ................................................................. 1A-3
1A-4. Engineering Study Required ............................................................ 1A-4
1A-5. Meanings of "Shall," "Should" and "May" ............................................. 1A-4
1A-6. Developing New Standards and Interpretation and Revision of Existing Standards ............................................................... 1A-5
1A-7. Relation to Other Documents .............................................................. 1A-7
1A-8. Color Code ............................................................................. 1A-8
1A-9. Definitions of Words and Phrases ......................................................... 1A-9

Part II—SIGNS

A. Introduction and General Specifications

Section 2A-1. Function of Signs ................................................................. 2A-1
2A-2. Scope of Sign Standards ..................................................................... 2A-1
2A-3. Legal Authority ........................................................................... 2A-2
2A-4. Standardization of Application ......................................................... 2A-2
2A-5. Variable Message Signs ................................................................... 2A-3
2A-6. Excessive Use of Signs ..................................................................... 2A-3
2A-7. Classification of Signs ..................................................................... 2A-3
2A-8. Standardization of Signs .................................................................. 2A-4
2A-9. Design ....................................................................................... 2A-4
2A-10. Shapes ....................................................................................... 2A-4
2A-12. Dimensions ................................................................................ 2A-6
2A-14. Word Messages ........................................................................... 2A-6
2A-15. Lettering ..................................................................................... 2A-7
2A-16. Illumination and Reflectorization .................................................... 2A-7
2A-17. Means of Illumination ................................................................. 2A-7
2A-19. Sign Borders ............................................................................... 2A-8
2A-20. Supplemental Beacons .................................................................... 2A-8
2A-21. Standardization of Location ............................................................ 2A-8
2A-23. Height ......................................................................................... 2A-9
2A-24. Lateral Clearance ......................................................................... 2A-10
2A-25. Position of Signs ........................................................................ 2A-11
2A-27. Posts and Mountings ..................................................................... 2A-11
2A-29. Sign Materials ............................................................................... 2A-12
2A-30. Maintenance ................................................................................ 2A-12
2A-31. Wrong-Way Traffic Control ........................................................... 2A-12
## B. Regulatory Signs

<table>
<thead>
<tr>
<th>Section</th>
<th>Topic</th>
<th>Page</th>
</tr>
</thead>
<tbody>
<tr>
<td>2B-1</td>
<td>Application of Regulatory Signs</td>
<td>2B-1</td>
</tr>
<tr>
<td>2B-2</td>
<td>Classification of Regulatory Signs</td>
<td>2B-1</td>
</tr>
<tr>
<td>2B-3</td>
<td>Design of Regulatory Signs</td>
<td>2B-1</td>
</tr>
<tr>
<td>2B-4</td>
<td>Stop Sign (R1-1)</td>
<td>2B-2</td>
</tr>
<tr>
<td>2B-5</td>
<td>Warrants for Stop Sign</td>
<td>2B-2</td>
</tr>
<tr>
<td>2B-6</td>
<td>Multiway Stop Signs</td>
<td>2B-3</td>
</tr>
<tr>
<td>2B-7</td>
<td>Yield Sign (R1-2)</td>
<td>2B-4</td>
</tr>
<tr>
<td>2B-8</td>
<td>Warrants for Yield Signs</td>
<td>2B-4</td>
</tr>
<tr>
<td>2B-9</td>
<td>Location of Stop Sign and Yield Sign</td>
<td>2B-5</td>
</tr>
<tr>
<td>2B-10</td>
<td>Speed Limit Sign (R2-1)</td>
<td>2B-6</td>
</tr>
<tr>
<td>2B-11</td>
<td>Night Speed Sign (R2-3)</td>
<td>2B-7</td>
</tr>
<tr>
<td>2B-12</td>
<td>Minimum Speed Sign (R2-4)</td>
<td>2B-7</td>
</tr>
<tr>
<td>2B-13</td>
<td>Location of Speed Limit Sign</td>
<td>2B-8</td>
</tr>
<tr>
<td>2B-14</td>
<td>Sign for Reduced Speed Ahead (R2-5)</td>
<td>2B-8</td>
</tr>
<tr>
<td>2B-15</td>
<td>Turn Prohibition Signs (R3-1 to 3)</td>
<td>2B-9</td>
</tr>
<tr>
<td>2B-16</td>
<td>U-Turn Prohibition Sign (R3-4)</td>
<td>2B-10</td>
</tr>
<tr>
<td>2B-17</td>
<td>Lane-Use Control Signs at Intersections</td>
<td>2B-11</td>
</tr>
<tr>
<td>2B-18</td>
<td>Application of Lane-Use Control Signs at Intersections</td>
<td>2B-12</td>
</tr>
<tr>
<td>2B-19</td>
<td>Two-Way Left Turn Only Signs (R3-9a, 9b)</td>
<td>2B-12</td>
</tr>
<tr>
<td>2B-20</td>
<td>Preferential Lane Signing (R3-10 to 15)</td>
<td>2B-13</td>
</tr>
<tr>
<td>2B-21</td>
<td>Do Not Pass Sign (R4-1)</td>
<td>2B-15</td>
</tr>
<tr>
<td>2B-22</td>
<td>Pass With Care Sign (R4-2)</td>
<td>2B-16</td>
</tr>
<tr>
<td>2B-23</td>
<td>Slower Traffic Keep Right Sign (R4-3)</td>
<td>2B-16</td>
</tr>
<tr>
<td>2B-24</td>
<td>Signs for Uphill Traffic Lanes (R4-5, R4-6)</td>
<td>2B-17</td>
</tr>
<tr>
<td>2B-25</td>
<td>Keep Right Sign (R4-7)</td>
<td>2B-17</td>
</tr>
<tr>
<td>2B-26</td>
<td>Do Not Enter Sign (R5-1)</td>
<td>2B-19</td>
</tr>
<tr>
<td>2B-27</td>
<td>Wrong Way Sign (R5-9)</td>
<td>2B-19</td>
</tr>
<tr>
<td>2B-28</td>
<td>Selective Exclusion Signs</td>
<td>2B-20</td>
</tr>
<tr>
<td>2B-29</td>
<td>One Way Sign (R6-1, R6-2)</td>
<td>2B-22</td>
</tr>
<tr>
<td>2B-30</td>
<td>Divided Highway Crossing Sign (R6-3, 3a)</td>
<td>2B-23</td>
</tr>
<tr>
<td>2B-31</td>
<td>Urban Parking and Stopping Signs (R7 Series)</td>
<td>2B-23</td>
</tr>
<tr>
<td>2B-32</td>
<td>Placement of Urban Parking Signs</td>
<td>2B-26</td>
</tr>
<tr>
<td>2B-33</td>
<td>Parking Prohibition Signs in Rural District (R8-1, 2, 3, 5, 6)</td>
<td>2B-26</td>
</tr>
<tr>
<td>2B-34</td>
<td>Emergency Parking Signs (R8-4, 7)</td>
<td>2B-28</td>
</tr>
<tr>
<td>2B-35</td>
<td>Walk on Left and No Hitchhiking Signs (R9-1, 4)</td>
<td>2B-28</td>
</tr>
<tr>
<td>2B-36</td>
<td>Pedestrian Crossing Signs (R9-2, R9-3)</td>
<td>2B-29</td>
</tr>
<tr>
<td>2B-37</td>
<td>Traffic Signal Signs (R10-1 to 11)</td>
<td>2B-30</td>
</tr>
<tr>
<td>2B-38</td>
<td>Keep Off Median Sign (R11-1)</td>
<td>2B-32</td>
</tr>
<tr>
<td>2B-39</td>
<td>Road Closed Sign (R11-2)</td>
<td>2B-33</td>
</tr>
<tr>
<td>2B-40</td>
<td>Local Traffic Only Sign (R11-3, R11-4)</td>
<td>2B-33</td>
</tr>
<tr>
<td>2B-41</td>
<td>Weight Limit Signs (R12-1 to 5)</td>
<td>2B-34</td>
</tr>
<tr>
<td>2B-42</td>
<td>Weigh Station Signs (R13 Series)</td>
<td>2B-35</td>
</tr>
<tr>
<td>2B-43a</td>
<td>Truck Route Sign (R14-1)</td>
<td>2B-36</td>
</tr>
<tr>
<td>2B-43b</td>
<td>Hazardous Cargo Sign (R14-2, R14-3)</td>
<td>2B-36</td>
</tr>
<tr>
<td>2B-43c</td>
<td>National Network Sign (R14-4, R14-5)</td>
<td>2B-36</td>
</tr>
<tr>
<td>2B-44</td>
<td>Other Regulatory Signs</td>
<td>2B-37</td>
</tr>
</tbody>
</table>

## C. Warning Signs

<table>
<thead>
<tr>
<th>Section</th>
<th>Topic</th>
<th>Page</th>
</tr>
</thead>
<tbody>
<tr>
<td>2C-1</td>
<td>Application of Warning Signs</td>
<td>2C-1</td>
</tr>
<tr>
<td>2C-2</td>
<td>Design of Warning Signs</td>
<td>2C-1</td>
</tr>
<tr>
<td>2C-3</td>
<td>Placement of Warning Signs</td>
<td>2C-2</td>
</tr>
<tr>
<td>Page</td>
<td>Section</td>
<td>Description</td>
</tr>
<tr>
<td>------</td>
<td>---------</td>
<td>-------------</td>
</tr>
<tr>
<td>2C-2a</td>
<td>2C-4.</td>
<td>Turn Sign (W1-1)</td>
</tr>
<tr>
<td>2C-3</td>
<td>2C-5.</td>
<td>Curve Sign (W1-2)</td>
</tr>
<tr>
<td>2C-3</td>
<td>2C-6.</td>
<td>Reverse Turn Sign (W1-3)</td>
</tr>
<tr>
<td>2C-4</td>
<td>2C-7.</td>
<td>Reverse Curve Sign (W1-4)</td>
</tr>
<tr>
<td>2C-4</td>
<td>2C-8.</td>
<td>Winding Road Sign (W1-5)</td>
</tr>
<tr>
<td>2C-4</td>
<td>2C-9.</td>
<td>Large Arrow Sign (W1-6, W1-7)</td>
</tr>
<tr>
<td>2C-5</td>
<td>2C-10.</td>
<td>Chevron Alignment Sign (W1-8)</td>
</tr>
<tr>
<td>2C-6</td>
<td>2C-11.</td>
<td>Cross Road Sign (W2-1)</td>
</tr>
<tr>
<td>2C-6</td>
<td>2C-12.</td>
<td>Side Road Sign (W2-2, W2-3)</td>
</tr>
<tr>
<td>2C-7</td>
<td>2C-13.</td>
<td>T Symbol Sign (W2-4)</td>
</tr>
<tr>
<td>2C-7</td>
<td>2C-14.</td>
<td>Y Symbol Sign (W2-5)</td>
</tr>
<tr>
<td>2C-8</td>
<td>2C-15.</td>
<td>Stop Ahead Sign (W3-1)</td>
</tr>
<tr>
<td>2C-8</td>
<td>2C-16.</td>
<td>Yield Ahead Sign (W3-2)</td>
</tr>
<tr>
<td>2C-8</td>
<td>2C-17.</td>
<td>Signal Ahead Sign (W3-3)</td>
</tr>
<tr>
<td>2C-9</td>
<td>2C-18.</td>
<td>Merge Sign (W4-1)</td>
</tr>
<tr>
<td>2C-9</td>
<td>2C-18.1</td>
<td>Added Lane Sign (W4-3)</td>
</tr>
<tr>
<td>2C-9</td>
<td>2C-19.</td>
<td>Lane Reduction Transition Signs (W4-2) (W9-1) (W9-2)</td>
</tr>
<tr>
<td>2C-10</td>
<td>2C-20.</td>
<td>Road Narrows Sign (W5-1)</td>
</tr>
<tr>
<td>2C-10</td>
<td>2C-21.</td>
<td>Narrow Bridge Sign (W5-2)</td>
</tr>
<tr>
<td>2C-11</td>
<td>2C-22.</td>
<td>One Lane Bridge Sign (W5-3)</td>
</tr>
<tr>
<td>2C-11</td>
<td>2C-23.</td>
<td>Divided Highway (Road) Sign (W6-1)</td>
</tr>
<tr>
<td>2C-12</td>
<td>2C-24.</td>
<td>Divided Highway (Road) Ends Sign (W6-2)</td>
</tr>
<tr>
<td>2C-12</td>
<td>2C-25.</td>
<td>Two-Way Traffic Sign (W6-3)</td>
</tr>
<tr>
<td>2C-12</td>
<td>2C-26.</td>
<td>Hill Sign (W7-1 to 4)</td>
</tr>
<tr>
<td>2C-13</td>
<td>2C-27.</td>
<td>Bump and Dip Signs (W8-1, W8-2)</td>
</tr>
<tr>
<td>2C-14</td>
<td>2C-28.</td>
<td>Pavement Ends Sign (W8-3)</td>
</tr>
<tr>
<td>2C-15</td>
<td>2C-29.</td>
<td>Soft Shoulder Sign (W8-4)</td>
</tr>
<tr>
<td>2C-16</td>
<td>2C-30.</td>
<td>Slippery When Wet Sign (W8-5)</td>
</tr>
<tr>
<td>2C-16</td>
<td>2C-31.</td>
<td>Advance Crossing Signs (W11 Series)</td>
</tr>
<tr>
<td>2C-16</td>
<td>2C-32.</td>
<td>Crossing Signs (W11A Series)</td>
</tr>
<tr>
<td>2C-17</td>
<td>2C-33.</td>
<td>Double Arrow Sign (W12-1)</td>
</tr>
<tr>
<td>2C-18</td>
<td>2C-34.</td>
<td>Low Clearance Sign (W12-2)</td>
</tr>
<tr>
<td>2C-18</td>
<td>2C-35.</td>
<td>Advisory Speed Plate (W13-1)</td>
</tr>
<tr>
<td>2C-18</td>
<td>2C-36.</td>
<td>Advisory Exit Speed Signs (W13-2, W13-3)</td>
</tr>
<tr>
<td>2C-19</td>
<td>2C-37.</td>
<td>Dead End Signs (W14-1, W14-2)</td>
</tr>
<tr>
<td>2C-20</td>
<td>2C-38.</td>
<td>No Passing Zone Sign (W14-3)</td>
</tr>
<tr>
<td>2C-20</td>
<td>2C-39.</td>
<td>Playground Sign (W15-1)</td>
</tr>
<tr>
<td>2C-20</td>
<td>2C-40.</td>
<td>Other Warning Signs</td>
</tr>
</tbody>
</table>

### D. Guide Signs—Conventional Roads

<table>
<thead>
<tr>
<th>Section</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>2D-1.</td>
<td>Scope of Conventional Road Guide Sign Standards</td>
</tr>
<tr>
<td>2D-1</td>
<td>2D-2.</td>
</tr>
<tr>
<td>2D-1</td>
<td>2D-3.</td>
</tr>
<tr>
<td>2D-1</td>
<td>2D-4.</td>
</tr>
<tr>
<td>2D-1</td>
<td>2D-5.</td>
</tr>
<tr>
<td>2D-2</td>
<td>2D-6.</td>
</tr>
<tr>
<td>2D-2</td>
<td>2D-7.</td>
</tr>
<tr>
<td>2D-3</td>
<td>2D-8.</td>
</tr>
<tr>
<td>2D-3</td>
<td>2D-9.</td>
</tr>
<tr>
<td>2D-4</td>
<td>2D-10.</td>
</tr>
<tr>
<td>2D-5</td>
<td>2D-11.</td>
</tr>
<tr>
<td>2D-7</td>
<td>2D-12.</td>
</tr>
<tr>
<td>2D-7</td>
<td>2D-13.</td>
</tr>
</tbody>
</table>
E. Guide Signs—Expressway

Section 2E-1. Scope of Expressway Guide Sign Standards ........................................... 2E-1
2E-2. Application ........................................................................................................... 2E-1
2E-3. General Standards .............................................................................................. 2E-1
2E-4. Functions of Expressway Guide Signs ............................................................... 2E-2
2E-5. Color of Expressway Guide Signs ....................................................................... 2E-2
2E-6. Reflectorization or Illumination ........................................................................... 2E-2
2E-7. Size of Expressway Guide Signs ......................................................................... 2E-2
2E-8. Number of Signs at an Overhead Installation .................................................... 2E-3
2E-10. Style Of Lettering .............................................................................................. 2E-3
2E-11. Size of Lettering ............................................................................................... 2E-4
2E-12. Interline and Edge Spacing ............................................................................... 2E-6
F. Guide Signs—Freeways

Section 2F-1. Scope of Freeway Sign Standards ........................................... 2F-1
2F-2. Freeway Signing Principles ............................................................... 2F-1
2F-3. General Characteristics of Freeway Signing ....................................... 2F-2
2F-4. Characteristics of Urban Freeway Signing .......................................... 2F-2
2F-5. Characteristics of Rural Freeway Signing ............................................ 2F-3
2F-6. Sign Layouts ......................................................................................... 2F-3
2F-7. Designation of Destinations ................................................................. 2F-3
2F-8. Limit on Destination Legends ............................................................... 2F-4
2F-9. Routing to a Given Destination ............................................................ 2F-4
2F-10. Overhead Sign Installations ................................................................. 2F-4
2F-11. Style of Lettering and Legend Spacing .............................................. 2F-4
2F-12. Sign Borders ....................................................................................... 2F-7
2F-13. Color, Reflectorization, and Illumination ........................................... 2F-7
2F-14. Sign Arrows ......................................................................................... 2F-7
2F-15. Viewing Factors .................................................................................. 2F-8
2F-16. Vertical Clearance .............................................................................. 2F-8
2F-17. Horizontal Clearance .......................................................................... 2F-8
2F-18. Interchange Classification ................................................................... 2F-9
2F-19. Interchange Exit Numbering (figs. 2–23 through 2–25) ..................... 2F-9
2F-20. Interchange Guide Signs .................................................. 2F-12
2F-21. Post Interchange Signs .................................................. 2F-13
2F-22. Signing by Class of Interchange ...................................... 2F-14
2F-23. Interchanges Between Freeways (figs. 2-27 through 2-31) ...... 2F-14
2F-24. Diagrammatic Signs (figs. 2-28 through 2-32, 2-35) ............... 2F-15
2F-25. Signing for Interchange Lane Drops (fig. 2-33 through 2-35) .... 2F-21
2F-26. Cloverleaf (fig. 2-36) .................................................. 2F-22
2F-27. Cloverleaf with Collector-Distributor Roadways (fig. 2-37) ..... 2F-22
2F-28. Partial Cloverleaf (fig. 2-38) ........................................ 2F-22
2F-29. Diamond (fig. 2-39) .................................................. 2F-29
2F-30. Urban Diamond (fig. 2-40) ............................................ 2F-29
2F-31. Closely Spaced Interchanges (fig. 2-41) ......................... 2F-29
2F-32. Minor Interchange (fig. 2-42) ....................................... 2F-29
2F-33. Signing for General Motorist Services (fig. 2-43) ................. 2F-34
2F-34. Rest and Scenic Area Signs (fig. 2-44) ........................... 2F-37
2F-35. Tourist Information and Welcome Centers ......................... 2F-38
2F-36. Radio Information Signing ............................................ 2F-40
2F-37. Carpool Information Signing ........................................ 2F-41
2F-38. Weigh Station Signing ................................................ 2F-41
2F-39. Milepost Markers .................................................... 2F-42
2F-40. Route Markers and Trailblazers (figs. 2-45, 2-46) ............... 2F-42
2F-41. Miscellaneous Freeway Guide Signs .................................. 2F-44
2F-42. Signing on Freeway Approaches .................................... 2F-44

G. Motorist Service Signing

Section 2G-1. Reserved
2G-2. Reserved
2G-3. Reserved
2G-4. Reserved
2G-5.1 Application of Specific Service Signs ............................. 2G-1
2G-5.2 Logos ........................................................................ 2G-1
2G-5.3 Size of Logos and Signs ............................................. 2G-2
2G-5.4 Size of Lettering ...................................................... 2G-2
2G-5.5 Signing of Interchanges ............................................. 2G-3
2G-5.6 Signing of Intersections ............................................. 2G-4
2G-5.7 Guidelines for Specific Service Signing ......................... 2G-4
2G-5.8 Signing Policy ...................................................... 2G-6

H. Recreational and Cultural Interest Area Signs

Section 2H-1. Scope ............................................................. 2H-1
2H-2. Application of Recreational and Cultural Interest Area Signs ...... 2H-1
2H-3. Regulatory and Warning Signs ....................................... 2H-2
2H-4. General Design Requirements of Recreational and Cultural Interest Area Symbol Signs ........................................ 2H-2
2H-5. Symbol Sign Sizes .................................................... 2H-2
2H-6. Use of Educational Plaque ........................................... 2H-5
2H-7. Use of Prohibitive Slash ............................................. 2H-5
2H-8. Color Format .......................................................... 2H-6
2H-9. Placement of Recreational and Cultural Interest Area Symbol Signs ........................................................................ 2H-6
2H-10. General Information Recreational and Cultural Interest Area Symbol Signs (RG-010 through RG-200) ........................................ 2H-6
2H-11. Motorist Services Recreational and Cultural Interest Area Symbol Signs ........................................ 2H-
2H-12. Accommodation Services Recreational and Cultural Interest Area Symbol Signs ............................ 2H-
2H-13. Land Recreational and Cultural Interest Area Symbol Signs ................................................... 2H-
2H-14. Water Recreational and Cultural Interest Area Symbol Signs .................................................. 2H-
2H-15. Winter Recreational and Cultural Interest Area Symbol Signs .................................................. 2H-

I. Tourist Oriented Directional Signs (TODS)

Section 2I-1. Purpose and Application ................................................................. 2I-
2I-2. Design ......................................................................................... 2I-
2I-3. Style and Size of Lettering ............................................................... 2I-
2I-4. Arrangement and Size of Signs ......................................................... 2I-
2I-5. Advance Signing ........................................................................... 2I-
2I-6. Sign Locations .............................................................................. 2I-
2I-7. State Policy ................................................................................... 2I-

J. Signing for Civil Defense

Section 2J-1. Civil Defense Emergencies ....................................................... 2J-
2J-2. Design of Civil Defense Signs ........................................................... 2J-
2J-3. Evacuation Route Marker (CD-1) ....................................................... 2J-
2J-4. Area Closed Sign (CD-2) ................................................................. 2J-
2J-5. Traffic Regulation Post Sign (CD-3) ................................................. 2J-
2J-6. Emergency Speed Sign (CD-4) ........................................................ 2J-
2J-7. Road Use Permit Sign (CD-5) ............................................................ 2J-
2J-8. Emergency Aid Centers Sign (CD-6) ............................................... 2J-
2J-9. Fallout Shelter Directional Sign (CD-7) ............................................ 2J-

Part III—MARKINGS

A. General Principles

Section 3A-1. Functions and Limitations ....................................................... 3A-1
3A-2. Standardization of Application ......................................................... 3A-1
3A-4. Colors .......................................................................................... 3A-2
3A-5. General Principles—Longitudinal Pavement Markings .................... 3A-2
3A-6. Widths and Patterns of Longitudinal Lines ...................................... 3A-2
3A-7. Types of Longitudinal Lines .............................................................. 3A-3
3A-8. Transverse Markings ................................................................. 3A-4
3A-9. Curb Markings ............................................................................. 3A-4
3A-10. Raised Pavement Markings, Reflectorized and Non-reflectorized ....... 3A-4

B. Applications of Pavement and Curb Markings

Section 3B-1. Center Lines ........................................................................... 3B-1
3B-2. Lane Lines ..................................................................................... 3B-1
3B-3. No-Passing Zone Markings .............................................................. 3B-2
3B-4. Application of No-Passing Zone Markings ...................................... 3B-2
3B-5. Warrants for No-Passing Zones at Curves ...................................... 3B-8
3B-6. Pavement Edge Lines ................................................................. 3B-8
3B-7. Pavement Marking Extensions Through Intersections or Interchanges. 3B-11
<table>
<thead>
<tr>
<th>Page</th>
<th>Title</th>
</tr>
</thead>
<tbody>
<tr>
<td>3B-8</td>
<td>Lane Reduction Transitions</td>
</tr>
<tr>
<td>3B-9</td>
<td>Channelizing Line</td>
</tr>
<tr>
<td>3B-10</td>
<td>Median Islands Formed by Pavement Markings</td>
</tr>
<tr>
<td>3B-11</td>
<td>Marking of Interchange Ramps</td>
</tr>
<tr>
<td>3B-12</td>
<td>Combination Lane and Center Line Markings for Unique Applications</td>
</tr>
<tr>
<td>3B-13</td>
<td>Approach to an Obstruction</td>
</tr>
<tr>
<td>3B-14</td>
<td>Pavement Markers as Vehicle Positioning Guides with Other Longitudinal Markings</td>
</tr>
<tr>
<td>3B-15</td>
<td>Raised Pavement Markers Supplementing Other Markers</td>
</tr>
<tr>
<td>3B-16</td>
<td>Substituting for Pavement Markings</td>
</tr>
<tr>
<td>3B-17</td>
<td>Stop Lines</td>
</tr>
<tr>
<td>3B-18</td>
<td>Crosswalks and Crosswalk Lines</td>
</tr>
<tr>
<td>3B-19</td>
<td>Parking Space Markings</td>
</tr>
<tr>
<td>3B-20</td>
<td>Pavement Word and Symbol Markings</td>
</tr>
<tr>
<td>3B-21</td>
<td>Curb Markings for Parking Restrictions</td>
</tr>
<tr>
<td>3B-22</td>
<td>Preferential Lane Markings</td>
</tr>
<tr>
<td>3B-23</td>
<td>Speed Measurement Markings</td>
</tr>
<tr>
<td>3C-1</td>
<td>Object Marker Design</td>
</tr>
<tr>
<td>3C-1.1</td>
<td>Mounting Height</td>
</tr>
<tr>
<td>3C-2</td>
<td>Objects in the Roadway</td>
</tr>
<tr>
<td>3C-3</td>
<td>Objects Adjacent to the Roadway</td>
</tr>
<tr>
<td>3C-4</td>
<td>End of Roadway</td>
</tr>
<tr>
<td>3D-1</td>
<td>Delineators</td>
</tr>
<tr>
<td>3D-2</td>
<td>Design</td>
</tr>
<tr>
<td>3D-3</td>
<td>Curb Markings for Delineation</td>
</tr>
<tr>
<td>3D-4</td>
<td>Delineator Application</td>
</tr>
<tr>
<td>3D-5</td>
<td>Delineator Placement and Spacing</td>
</tr>
<tr>
<td>3E-1</td>
<td>Colored Pavements</td>
</tr>
<tr>
<td>3E-2</td>
<td>Colors</td>
</tr>
<tr>
<td>3F-1</td>
<td>Barricades</td>
</tr>
<tr>
<td>3F-2</td>
<td>Channelizing Devices</td>
</tr>
<tr>
<td></td>
<td>Part IV—SIGNALS</td>
</tr>
<tr>
<td>4A-1</td>
<td>Types</td>
</tr>
<tr>
<td>4A-2</td>
<td>Basis of Installation</td>
</tr>
<tr>
<td>4A-3</td>
<td>Definitions Relating to Signals</td>
</tr>
<tr>
<td>4B-1</td>
<td>General Aspects</td>
</tr>
<tr>
<td>4B-2</td>
<td>Area of Control</td>
</tr>
<tr>
<td>4B-3</td>
<td>Advantages and Disadvantages of Traffic Control Signals</td>
</tr>
</tbody>
</table>

Rev. 3/89
4B-4. Portable Traffic Control Signals ........................................... 4B-2
4B-5. Meaning of Signal Indications ........................................... 4B-2
4B-6. Application of Signal Indications ....................................... 4B-4
4B-7. Number of Lenses per Signal Face ...................................... 4B-6
4B-8. Size and Design of Signal Lenses ....................................... 4B-7
4B-9. Arrangement of Lenses in Signal Faces .................................. 4B-8
4B-10. Illumination of Lenses .................................................... 4B-10
4B-11. Visibility and Shielding of Signal Faces .............................. 4B-10
4B-12. Number and Location of Signal Faces ................................. 4B-11
4B-13. Height of Signal Faces ................................................... 4B-14
4B-14. Transverse Location of Traffic Signal Supports and Controller
Cabinets .................................................................................. 4B-15
4B-15. Vehicle Change Interval .................................................. 4B-15
4B-16. Unexpected Conflicts During Green or Yellow Interval .......... 4B-16
4B-17. Coordination of Traffic Control Signals ............................... 4B-16
4B-18. Flashing Operation of Traffic Control Signals ...................... 4B-16
4B-19. Continuity of Operation ................................................... 4B-17
4B-20. Signal Operation Must Relate to Traffic Flow ....................... 4B-18
4B-21. Traffic Signals Near Grade Crossings ................................ 4B-18
4B-22. Priority Control of Traffic Signals ..................................... 4B-18
4B-23. Maintenance of Traffic Control Signals ............................... 4B-19
4B-24. Painting ........................................................................... 4B-19
4B-25. Vehicle Detectors ............................................................ 4B-19
4B-26. Auxiliary Signs ................................................................ 4B-20
4B-27. Removal of Confusing Advertising Lights ............................ 4B-20
4B-29. Pedestrian Detectors ........................................................ 4B-21

C. Warrants

Section 4C-1. Advance Engineering Data Required .......................... 4C-1
4C-2. Warrants for Traffic Signal Installation ................................ 4C-2
4C-3. Warrant 1, Minimum Vehicular Volume ................................. 4C-3
4C-4. Warrant 2, Interruption of Continuous Traffic ....................... 4C-4
4C-5. Warrant 3, Minimum Pedestrian Volume ................................ 4C-4
4C-6. Warrant 4, School Crossing ............................................... 4C-5
4C-7. Warrant 5, Progressive Movement ....................................... 4C-6
4C-8. Warrant 6, Accident Experience ......................................... 4C-6
4C-9. Warrant 7, Systems Warrant .............................................. 4C-7
4C-10. Warrant 8, Combination of Warrants ................................. 4C-7
4C-10.1 Warrant 9, Four Hour Volumes ...................................... 4C-7
4C-10.2 Warrant 10, Peak Hour Delay ........................................ 4C-8
4C-10.3 Warrant 11, Peak Hour Volume ....................................... 4C-8
4C-11. Factors Governing Selection of Type of Control ................... 4C-8

D. Pedestrian Signals

Section 4D-1. Pedestrian Signal Indications .................................. 4D-1
4D-2. Meaning of Pedestrian Indications ...................................... 4D-1
4D-3. Applications of Pedestrian Signal Indications ....................... 4D-1
4D-4. Design Requirements ...................................................... 4D-2
4D-5. Location ........................................................................... 4D-2
4D-6. (See Section 4B-29, Pedestrian Detectors) ............................ 4D-4
4D-7. Pedestrian Intervals and Phases ......................................... 4D-4
E. Other Highway Traffic Signals

Section 4E-1. Hazard Identification Beacon ................................................. 4E-1
4E-2. Speed Limit Sign Beacon ................................................................. 4E-1
4E-3. Intersection Control Beacon .......................................................... 4E-1
4E-4. Stop Sign Beacon ............................................................................. 4E-2
4E-5. General Design and Operation of Beacons ........................................ 4E-2
4E-6. Hazard Identification Beacon Location .............................................. 4E-3
4E-7. Intersection Control Beacon Location ................................................. 4E-3
4E-8. Lane-use Control Signals ................................................................. 4E-3
4E-9. Meaning of Lane-use Control Signal Indications ................................. 4E-4
4E-10. Design of Lane-use Control Signals ................................................ 4E-4
4E-11. Location of Lane-use Control Signals .............................................. 4E-5
4E-12. Operation of Lane-use Control Signals ............................................ 4E-5
4E-13. Traffic Control at Movable Bridges ................................................ 4E-6
4E-14. Movable Bridge Signals and Gates .................................................. 4E-6
4E-15. Design of Movable Bridge Signals and Gates .................................... 4E-7
4E-16. Location of Movable Bridge Signals and Gates .................................. 4E-8
4E-17. Operation of Movable Bridge Signals and Gates ............................... 4E-9
4E-22. Traffic Signs at Freeway Entrance Ramps ....................................... 4E-11
4E-23. Guidelines for Freeway Entrance Ramp Control Signals .................. 4E-11
4E-24. Traffic Signs for One-Lane, Two-Way Facilities ............................... 4E-12
4E-25. Applications of One-Lane Bridge or Tunnel Signals .......................... 4E-12
4E-26. Design of Bridge and Tunnel Signals ............................................. 4E-13
4E-27. Location of Narrow Bridge or Tunnel Signals ................................... 4E-13
4E-28. Operation of Narrow Bridge or Tunnel Signals ................................. 4E-14

Part V—ISLANDS

A. General

Section 5A-1. Scope of Island Standards ..................................................... 5A-1
5A-2. Legal Authority ................................................................................ 5A-1
5A-3. Classification and Function ............................................................. 5A-1
5A-4. Pedestrian Refuge Islands ............................................................... 5A-1
5A-5. Traffic Divisional Islands .................................................................. 5A-2
5A-6. Traffic Channelizing Islands ............................................................ 5A-2

B. Design

Section 5B-1. General ............................................................................... 5B-1
5B-2. Size and Shape ................................................................................ 5B-1
5B-3. Designation of Island Areas ............................................................. 5B-2

C. Approach End Treatment

Section 5C-1. General ............................................................................... 5C-1
5C-2. Method ........................................................................................... 5C-1

D. Illumination
E. Signs
Section 5E-1. General ........................................ 5E-1
5E-2. Method ................................................ 5E-1

F. Markings
Section 5F-1. General ........................................ 5F-1
5F-2. Application .............................................. 5F-1
5F-3. Colors .................................................. 5F-1
5F-4. Object Markers .......................................... 5F-1
5F-5. Delineators ............................................. 5F-1

Part VI—TRAFFIC CONTROLS FOR STREET AND HIGHWAY CONSTRUCTION, MAINTENANCE, UTILITY AND EMERGENCY OPERATIONS

A. Introduction and General Specifications
Section 6A-1. Need for Standards ............................ 6A-1
6A-2. Scope .................................................... 6A-1
6A-3. Application of Standards ............................... 6A-1
6A-4. Responsibility .......................................... 6A-3
6A-5. Fundamental Principles ................................ 6A-3
6A-6. Training .................................................. 6A-6

B. Signs
Section 6B-1. Design of Signs ................................. 6B-1
6B-2. Illumination and Reflectorization ...................... 6B-1
6B-3. Position of Signs ....................................... 6B-2
6B-4. Erection of Signs ...................................... 6B-2

Regulatory Signs
6B-5. Authority ............................................... 6B-14
6B-6. Design .................................................... 6B-14
6B-7. Application .............................................. 6B-14
6B-8. Road (Street) Closed Sign (R11-2) .................. 6B-14
6B-9. Local Traffic Only Signs (R11-3,4) ................. 6B-15
6B-10. Weight Limit Signs (R12-1, 2) ..................... 6B-16
6B-11. Special Regulatory Signs ............................ 6B-17

Warning Signs
6B-12. Function ............................................... 6B-17
6B-13. Design and Application ............................... 6B-17
6B-15. Advance Road (Street) Construction Sign (W20-1) 6B-18
6B-16. Advance Detour Sign (W20-2) ....................... 6B-19
6B-17. Advance Road (Street) Closed Sign (W20-3) .... 6B-19
6B-18. Advance One Lane Road Sign (W20-4) ............ 6B-20
6B-19. Advance Lane Closed Sign (W20-5) ............... 6B-20
6B-20. Advance Flagger Sign (W20-7) ..................... 6B-20
6B-21. Two-Way Traffic Sign (W6-3) ....................... 6B-21
6B–22. Application of Maintenance and Minor Construction Warning Signs ........................................ 6B–21
6B–23. Worker Sign (W21–1) .................................................. 6B–21
6B–24. Fresh Oil Sign (W21–2) ........................................... 6B–24
6B–25. Road Machinery Sign (W21–3) .................................. 6B–24
6B–26. Road Work Sign (W21–4) ....................................... 6B–24
6B–27. Shoulder Work Sign (W21–5) ................................. 6B–24
6B–29. Signs for Blasting Areas ................................... 6B–25
6B–30. Blasting Zone Sign (W22–1) ............................... 6B–26
6B–31. Turn Off 2-Way Radio Sign (W22–2) ...................... 6B–26
6B–32. End Blasting Zone Sign (W22–3) ......................... 6B–26
6B–33. Other Warning Signs ................................... 6B–26
6B–34. Advisory Speed Plate (W13–1) ............................ 6B–27

Guide Signs

6B–36. Length of Construction Sign (G20–1) ....................... 6B–28
6B–37. End Construction (Road Work) Sign (G20–2) ............... 6B–28
6B–38. Detour Signs and Markers (M4–8, 9 and 10) ............... 6B–28
6B–39. Pilot Car Sign (G20–4) ....................................... 6B–29

C. Barricades and Channelizing Devices

Section 6C–1. Function .................................................. 6C–1
6C–2a. Taper Lengths .................................................. 6C–1
6C–2b. Channelization ................................................. 6C–3
6C–3. Cone Design ..................................................... 6C–4
6C–4. Cone Application ................................................. 6C–4
6C–7. Drum Application ................................................. 6C–7
6C–9. Barricade Application .......................................... 6C–8
6C–11. High Level Warning Device—Design and Application .... 6C–10

D. Markings

Section 6D–1. Pavement Markings Application ..................... 6D–1
6D–2. Delineators ...................................................... 6D–2
6D–3. Short-Term Markings .......................................... 6D–2

E. Lighting Devices

Section 6E–1. Function .................................................. 6E–1
6E–2. Floodlights ...................................................... 6E–1
6E–3. Hazard Identification Beacons (Flash ing Electric Lights) .... 6E–1
6E–5. Warning Lights ................................................. 6E–2
6E–6. Special Lighting Units ......................................... 6E–3
6E–7. Advance Warning Arrow Panels ............................. 6E–4
6E–8. Advance Warning Arrow Panel Application ................. 6E–4

Rev. 3/86  xx
F. Control of Traffic Through Work Areas

Section 6F-1. Function .................................................. 6F-1
6F-2. Hand Signaling Devices ................................. 6F-1
6F-3. Flaggers ......................................................... 6F-1
6F-4. Flagging Procedures ................................... 6F-2
6F-5. Flagger Stations ........................................... 6F-4
6F-6. One-Way Traffic Control .............................. 6F-5
6F-7. Flagger Control ............................................ 6F-5
6F-8. Flag-Carrying or Official Car ......................... 6F-5
6F-9. Pilot Car ....................................................... 6F-6
6F-10. Traffic Control Signals .................................. 6F-6

G. Expressways and Limited Access Facilities

Section 6G-1. Application of Standards ..................... 6G-1

H. Control of Traffic Through Incident Management Areas

Section 6H-1. Function ............................................. 6H-1
6H-2. Application of Standards ............................... 6H-1
6H-3. Design of Signs ............................................ 6H-1

Part VII—TRAFFIC CONTROLS FOR SCHOOL AREAS

A. General

Section 7A-1. Need for Standards ............................. 7A-1
7A-2. School Routes and Established School Crossings ...... 7A-3
7A-3. School Crossing Control Criteria ..................... 7A-3
7A-4. Scope .......................................................... 7A-4
7A-5. Application of Standards ............................... 7A-4
7A-6. Engineering Study Required ........................... 7A-4
7A-7. Maintenance of Traffic Control Devices ............... 7A-4
7A-8. Legal Authority ............................................. 7A-4
7A-10. Meaning of “Shall,” “Should” and “May” ............... 7A-5

B. Signs

Section 7B-1. Design of Signs ................................. 7B-1
7B-2. Dimensions .................................................. 7B-1
7B-3. Lettering ...................................................... 7B-1
7B-4. Sign Borders ................................................ 7B-1
7B-5. Illumination and Reflectorization ..................... 7B-2
C. Markings

Section 7C-1. Functions and Limitations of Markings
Section 7C-2. Standardization
Section 7C-3. Crosswalk Lines
Section 7C-4. Stop Lines
Section 7C-5. Curb Markings for Parking Restrictions
Section 7C-6. Word and Symbol Markings

D. School Area Traffic Signals

Section 7D-1. Definition
Section 7D-2. Advantages and Disadvantages
Section 7D-3. Standardization
Section 7D-4. Warrants
Section 7D-5. Meaning of Signal Indications
Section 7D-6. Intersection and Non-Intersection Installations
Section 7D-7. Controllers
Section 7D-8. Pedestrian Detectors
Section 7D-9. Operation of Pedestrian Signals
Section 7D-10. Coordination with Adjacent Signals
Section 7D-11. Vehicle Change Interval
Section 7D-12. Location and Placement
Section 7D-13. Visibility, Number, and Location of Signal Faces
Section 7D-14. Height of Signal Faces
Section 7D-15. Transverse Location of Traffic Signal Supports and Controller Cabinets
Section 7D-16. Portable Traffic Control Signals
Section 7D-17. Area of Control
Section 7D-18. Design Requirements for School Signal Indications
Section 7D-19. Number of Lenses per Signal Face
Section 7D-20. Size and Design of Signal Lenses
Section 7D-21. Arrangement of Lenses in Signal Faces
Section 7D-22. Illumination of Lenses in Vehicular Signal Faces
Section 7D-23. Pedestrian Indications
Section 7D-24. Speed Limit Sign Beacon
Section 7D-25. School Crossings at Existing Signal Installations
7D–26. Signal Indications ........................................ 7D–11
7D–27. Signal Control ........................................... 7D–11
7D–28. Signal Operation .......................................... 7D–11

E. Crossing Supervision

Section 7E–1. Types of Crossing Supervision .................. 7E–1
7E–2. Adult Guards ............................................. 7E–1
7E–3. Legal Authority for Adult Guards ....................... 7E–1
7E–4. Choice of Adult Guards ................................ 7E–1
7E–5. Uniform of Adult Guards ................................ 7E–2
7E–6. Operating Procedures for Adult Guards .............. 7E–2
7E–7. Police Officers ........................................... 7E–2
7E–8. Student Patrols ........................................... 7E–2
7E–9. Legal Authority for Student Patrols .................... 7E–2
7E–10. Choice of Student Patrols ............................... 7E–2
7E–11. Operating Procedures for Student Patrols .......... 7E–3

F. Grade Separated Crossings

Section 7F–1. Function ........................................... 7F–1
7F–2. Types of Grade Separated Crossings ................... 7F–1
7F–3. Criteria for Use of Grade Separated Crossings ....... 7F–1

Part VIII—TRAFFIC CONTROL SYSTEMS FOR RAILROAD–HIGHWAY
GRADE CROSSINGS

A. General

Section 8A–1. Functions ........................................ 8A–1
8A–2. Use of Standard Devices ................................ 8A–1
8A–3. Uniform Provisions .................................... 8A–1
8A–4. Crossing Closure ........................................ 8A–2
8A–5. Traffic Controls During Construction and Maintenance 8A–2

B. Signs and Markings

Section 8B–1. Purpose ........................................... 8B–1
8B–2. Railroad Crossing (Crossbuck) Sign (R15–1, 2) .... 8B–1
8B–3. Railroad Advance Warning Sign (W10–1, 2, 3, 4) .... 8B–3
8B–4. Pavement Markings ...................................... 8B–5
8B–5. Illumination at Grade Crossings ....................... 8B–5
8B–6. Exempt Crossing Signs (R15–3, W10–1a) ............. 8B–5
8B–7. Turn Restrictions ....................................... 8B–6
8B–8. Do Not Stop on Tracks Sign (R8–8) .................... 8B–6
8B–9. STOP Signs at Grade Crossings (R1–1, W3–1) ....... 8B–7
8B–10. Tracks Out of Service Sign (R8–9) .................... 8B–7

C. Signals and Gates

Section 8C–1. Purpose and Meaning ........................... 8C–1
8C–2. Flashing Light Signal—Post Mounted ................ 8C–1
8C–3. Flashing Light Signal—Cantilever Supported ........ 8C–2
8C–4. Automatic Gate ......................................... 8C–3
8C–5. Train Detection .......................................... 8C–5
8C–6. Traffic Signals at or Near Grade Crossings (fig. 8–8) 8C–7
8C–7. Component Details ...................................... 8C–8
D. Systems and Devices
Section 8D-1. Selection of Systems and Devices

Part IX—TRAFFIC CONTROLS FOR BICYCLE FACILITIES

A. General
Section 9A-1. Requirements for Bicyclist Traffic Control Devices
9A-2. Scope
9A-3. Definitions Relating to Bicycles
9A-4. Standardization of Devices
9A-5. Maintenance
9A-6. Legal Authority
9A-7. Meanings of “Shall,” “Should,” and “May”
9A-8. Relation to Other Documents
9A-9. Colors

B. Signs
Section 9B-1. Application of Signs
9B-2. Location and Position
9B-3. Design
9B-4. Regulatory Signs
9B-5. Bicycle Prohibition Sign (R5-6)
9B-6. Motor Vehicle Prohibition Sign (R5-3)
9B-7. Bicycle Restriction Signs (R9-5 & 6)
9B-8. Designated Lane Signs (R3-10 & 11)
9B-9. Travelpath Restriction Signs (R9-7)
9B-10. STOP and YIELD Signs (R1-1, 2)
9B-11. No Parking Signs (R7-9, & 9a)
9B-12. Lane-Use Control Signs (R3-7, R4-4)
9B-13. Warning Signs
9B-14. Bicycle Crossing Sign (W11-1)
9B-15. Hazardous Condition Sign (W8-10)
9B-16. Turn and Curve Signs (W1-1, 2, 4, 5, 6, 7)
9B-17. Intersection Signs (W2-1, 2, 3, 4, 5)
9B-18. Other Warning Signs
9B-19. Guide Signs
9B-20. Bicycle Route Sign (D11-1)
9B-21. Bicycle Route Marker (M1-8)
9B-22. Supplemental Sign for Route Signs and Route Markers
9B-23. Bicycle Parking Area Sign (D4-3)

C. Markings
Section 9C-1. Functions and Limitations of Markings
9C-2. General Principles
9C-3. Marking Patterns and Colors
9C-4. Marking of Designated Bikeways
9C-5. Word Messages and Symbols Applied to the Pavement
9C-6. Object Markings on Bicycle Trails

D. Signals
Section 9D-1. Application
9D-2. Visibility Requirements
9D-3. Signal Operation for Bicycles

Rev. 3/86 xxiv