

Although every effort has been made to keep this list current and updated, it is merely being provided as an additional reference and should not be used as the only means of comparison between the relevant documents. It is recommended that the actual text, figures and tables of the California MUTCD be reviewed in their entirety for a complete and all-inclusive comparison of the changes included in the California MUTCD.

Change List (California MUTCD)

(Compares California Supplement issued on May 20, 2004
to California MUTCD released on September 26, 2006)

As of September 26, 2006 the California Department of Transportation has adopted the California Manual on Uniform Traffic Control Devices (FHWA's MUTCD 2003 Revision 1, as amended for use in California), also called the California MUTCD, to prescribe uniform standards and specifications for all official traffic control devices in California. This action was taken pursuant to the provisions of the California Vehicle Code Section 21400 and the recommendation of the California Traffic Control Devices Committee (CTCDC) at their May 6, 2004 meeting held in San Rafael, California.

This combined document, the California MUTCD incorporates FHWA's MUTCD 2003 Revision 1 dated November 20, 2004 and the MUTCD 2003 California Supplement dated May 20, 2004. It also incorporates all policies on traffic control devices issued by the California Department of Transportation that have been issued since May 20, 2004 and other editorial, errata and format changes that were necessary to update the previous documents.

The California MUTCD's draft versions were made available to the Department's district staff, local agencies and the general public for review and comment through the two open public comment periods, which closed on November 14, 2005 and May 30, 2006. These public comment periods were followed up by CTCDC workshops on November 16, 2005 and June 1, 2006, respectively. Resolutions and decisions reached upon, in these and other regular CTCDC meetings, since May 20, 2004 are reflected in the California MUTCD.

Following are some of the changes that have resulted from the California MUTCD, (combined version of FHWA's MUTCD 2003 Revision 1 and the California Supplement), as compared to the previously adopted May 20, 2004 version of the two manuals, MUTCD 2003 and the MUTCD 2003 California Supplement:

- The overall format for the draft California MUTCD document was discussed and agreed upon by the CTCDC and Caltrans at the regular December 8, 2004 CTCDC meeting in Oakland. The document name, cover design and some outstanding issues from the previous May 20, 2004 MUTCD adoption were discussed and resolved in a CTCDC workshop on June 9, 2005 in Sacramento. Resolutions and decisions reached upon, in the CTCDC meetings and workshops held since May 20, 2004 and Caltrans issued TOPDs are reflected in the combined document and all the changes.

- The California MUTCD uses a format similar to the MUTCD. It incorporates FHWA’s MUTCD in its entirety and explicitly shows which portions thereof are applicable or not applicable in California. The unedited MUTCD text is shown in “Times New Roman” font with black color. The California edited MUTCD text is also shown in “Times New Roman” font with black color but with strikethrough of all text portions that are not applicable in California and a blue margin line for easier distinction between the two types of MUTCD texts. The California text additions and enhancements are incorporated into the combined document at appropriate locations and shown in an “Arial Narrow” font with blue color and a blue margin line on the right to keep them distinct from the MUTCD content, whether the pages are viewed on a computer monitor, as hard copies in color or as black photo copies.
- All MUTCD figures and tables, or portions thereof, which are not applicable in California, are shown with appropriate size blue X cross-outs. The MUTCD figures and tables that have been modified or added to, in the California MUTCD retain the same MUTCD Figure or Table number but include “(CA)” to indicate that it is the California version of the MUTCD Figure or Table. For example:
 - Figure 3B-14(CA) Examples of Yield Line Layouts
 - Table 9B-1(CA) California Minimum Sign Sizes for Bicycle Facilities.
- For California topics where there is no corresponding section, figure or table in the MUTCD, the California MUTCD gives a number that begins with 101 for that section, figure or table and increases in sequence, followed with a “(CA)” to indicate that this is a California created section, figure or table number. The blue margin line on the right is also added to all California figures and tables to keep them distinct from the MUTCD figures and tables. For example:
 - Section 2B.112(CA) – Daylight Headlight Signs (S30(CA) Series)
 - Figure 2C-101(CA) – Determination of Comfortable Speed From Ball Bank Indicator Readings
 - Table 6F-102(CA) – Maximum Spacing of Channelizing Devices.
- The California MUTCD contents within each chapter (Chapter 2B shown as example below) appear in a consistent order for ease of reference. This sequence is as follows:
 1. MUTCD Sections per sequential numbering. For example, Sections 2B.01 through 2B.54.
 2. California Sections per sequential numbering. For example, Sections 2B.101(CA) through 2B.113(CA).
 3. MUTCD Figures (including edited and deleted) per sequential numbering. For example, Figures 2B-1 through 2B-22.
 4. California Figures based upon or modifying MUTCD Figures are placed immediately after the respective MUTCD figure. For example, Figure 2B-14(CA) follows immediately after the deleted MUTCD Figure 2B-14 it replaces. Another example is Figure 2B-18(CA) which immediately follows MUTCD (undeleted) Figure 2B-18 as the California figure supplements the MUTCD Figure, it does not replace it.
 5. California Figures that are stand alone and not based upon MUTCD Figures follow in sequence per their numbering. For example, Figures 2B-101(CA) through 2B-106(CA) follow after the end of MUTCD numbered figures.
 6. MUTCD and California Tables follow the Figures under similar rules described above for the figures.
- See California MUTCD sample page sketches on the front inside cover pages of the California MUTCD, which show these and other format explanations with call outs.

- All signs that were identified with CA Code designation in parenthesis have been changed to reflect only (CA) after the sign code number for all occurrences in text, figures or tables. For example, “Migrating Bears (CA Code SW59) sign” now appears as “Migrating Bears (SW59(CA)) sign”.
- All CA sign Codes in all figures have been changed to blue text color for easier identification.
- All CA Tables entire text has been changed to blue color for easier identification as a CA table.
- All object markers that were identified as CA Type have been changed to reflect only (CA) after the object marker code number for all occurrences in text, figures or tables. For example, “CA Type P object marker” now appears as “Type P(CA) object marker”.
- All metric portions of messages on the traffic control devices contained in the document text have been crossed out. For example, “ROAD (STREET) WORK, XX m (FT), XX km (MILES), or AHEAD” is changed to “ROAD (STREET) WORK, XX ~~m~~ (FT), XX ~~km~~ (MILES), or AHEAD”. A blue margin line has been added to indicate these as California modifications of the MUTCD.
- The references “Traffic Sign Specifications”, “Caltrans Signs Specifications”, “Department of Transportation’s Traffic Sign Specifications”, “TSS” or other similar references to these sign specifications have been changed to the more generic “California Sign Specifications” at all occurrences.
- The spellings of the word “judgment” have been corrected from “judgment”, wherever they appeared in the CA Supplement.
- Wherever applicable, the “List of Known Errors in 2003 MUTCD, updated 9/21/2004” posted on FHWA’s MUTCD web site is incorporated into the combined document.
- The electronic PDF version of this document now includes bookmarks for easier navigation.

Although every effort has been made to keep this list current and updated, it is merely being provided as an additional reference and should not be used as the only means of comparison between the relevant documents. It is recommended that the actual text, figures and tables of the California MUTCD be reviewed in their entirety for a complete and all-inclusive comparison of the changes included in the California MUTCD.

INTRODUCTION

The CA Supplement text has been revised to fit the MUTCD Standard, Guidance, Option and Support format.

The MUTCD 2003 and California Supplement references have been revised to reflect the California MUTCD.

New Support (Paragraph 13) has been added to clarify the applicability of CA MUTCD on private roads and commercial establishments. This support text has been developed in discussions with the CTCDC during the November 16, 2005 workshop.

Paragraph 19, which contains support text regarding figures as typical or examples, not legal standard, has been revised to better clarify the intent. This paragraph in the CA Supplement was based on a paragraph in the Introduction page of Chapter 5 – Traffic Controls for Construction and Maintenance Work Zones of the Traffic Manual. The intent of this paragraph was to convey that the Typical Application Figures (Figures 6H-1 through 6H-46) were not legal standards and did not require strict compliance but are meant only to illustrate how TTC elements are applied in a typical scenario. New Support has been added (page I-3) explaining Caltrans status on Metric and English System of Units.

New Standard (Paragraph 21) has been added to clarify any MUTCD text edited by the appropriate shall, should or may verb shall be considered as Standard, Guidance or Option, respectively, regardless of the topic heading. A support paragraph (Paragraph 22) has been added to explain with examples how this applies.

New Support (Paragraph 24) has been added to offer Caltrans background on the Metric system and re-adoption of the English system.

New paragraphs (Paragraphs 29 through 33) have been added to explain the California MUTCD format and related changes.

All target compliance dates listed on pages I-5 through I-8 have been deleted. New paragraphs have been added at the end of the Introduction on pages I-8 and I-9, explaining how the changes in standards apply to traffic control devices. This text is based upon Caltrans letter dated January 6, 2005 to the CTCDC which is posted on the California MUTCD web site under “New Policy”.

A new Table I-101(CA) has been added to publicize the California signs that are deleted for new applications and require target compliance dates. This table is from the Caltrans letter dated January 6, 2005 to the CTCDC mentioned previously.

A new Figure I-101(CA) has been added to show sign sketches per Table I-101(CA).

A new Table I-102(CA) has been added to publicize the California signs that are deleted for new applications but do not require target compliance dates. Previously these tables were (“hidden”) in the Change List of the prior document.

A new Table I-103(CA) has been added to consolidate all the MUTCD signs that are deleted in the appropriate parts and chapters of the California MUTCD wherever they appear.

PART 1. GENERAL

CHAPTER 1A. GENERAL

Section 1A.02 Principles of Traffic Control Devices

Under first Guidance, second paragraph, the words “by the engineer” and “and geometrics” have been added in response to Caltrans Legal request to make the text more specific.

Section 1A.03 Design of Traffic Control Devices

The Option for highway agencies to develop word message signs has been modified per CTCDC discussion and recommendation to Caltrans at the July 28, 2005 meeting. A new standard paragraph has been added in support of the option modification.

Section 1A.07 Responsibility for Traffic Control Devices

New Standard (repeated from Introduction) has been added to emphasize that this document does not supersede the Standard Plans, Specs and Provisions.

New Support has been added to clarify the applicability of Caltrans adopted traffic control device standards on private roads and commercial establishments. This support text has been developed in discussions with the CTCDC during the November 16, 2005 workshop.

Section 1A.08 Authority for Placement of Traffic Control Devices

New Standard (repeated from Introduction) has been added to emphasize that this document does not supersede the Standard Plans, Specs and Provisions.

Section 1A.10 Interpretations, Experimentations, Changes, and Interim Approvals

In paragraph 21 (page 1A-8), the text “Consultation with the Department of Transportation ...” has been changed to “Informing the Department of Transportation ...” for any FHWA permission to experiment. This was done to clarify that the intent is not for agencies to seek approval or involve Caltrans but only to inform.

Section 1A.11 Relation to Other Publications

Some of the documents editions have been revised based upon their current updates.

The “Flagging Instruction Handbook”, 1999 Edition. (Department of Transportation) has been deleted from this list as it is no longer published by the Department.

The “Highway Design Handbook for Older Drivers and Pedestrians”, 2001 Edition (Federal Highway Administration) has been added to this list.

Section 1A.13 Definitions of Words and Phrases in This Manual

Under the definition of “Engineering Judgment”, the text “experience, education, discretion” has been added per Caltrans Legal’s review and comment.

Under the definition of “Engineering Study”, the text “engineering judgment, experience, education, discretion” has been added per Caltrans Legal’s review and comment.

Under the definition of “Stop Line”, a new sentence has been added to clarify that a limit line is the same as a stop line. .

PART 2. SIGNS

CHAPTER 2A. GENERAL

Section 2A.06 Design of Signs

In Paragraph 13 (last paragraph), the option for highway agencies to develop word message signs has been modified per CTCDC discussion and recommendation to Caltrans at the July 28, 2005 meeting. New standard and option paragraphs have been added in support of the option modification.

Section 2A.07 Changeable Message Signs

The CA Supplement deletion of MUTCD policy for the use of safety-related messages on changeable message signs has been reversed by un-deleting this CA Supplement text. This action was taken per Caltrans TOPD 05-07 dated 3/30/05, which becomes effective on 3/30/05. This TOPD allows the use of safety-related messages on changeable message signs in accordance with MUTCD 2003 Section 2A.07.

Section 2A.11 Sign Colors

The CA Supplement standard text pertaining to colors and color coordinates and values has been deleted and is not incorporated in the combined document. The first sentence which required sign colors to be specific per Part 2 was redundant as the MUTCD standard text "...applicable Sections of this Manual" includes Part 2. The second sentence which required the color coordinates and values to be per the SHS book and Caltrans Sign Specs was wrong as both of these documents do not contain color coordinates or values.

Section 2A.16 Standardization of Location

Reference to Figure "2A-2" has been changed to "2A-2(CA)" under Support to reflect the deleted figure and its replacement.

Section 2A.19 Lateral Offset

Reference to Figure "2A-2" has been changed to "2A-2(CA)" under Support to reflect the deleted figure and its replacement.

Section 2A.23 Median Opening Treatments for Divided Highways with Wide Medians

Second paragraph, under Option, the CA Supplement text "9 m" has been changed to "9 m (30 ft)".

Figure 2A-1(CA). Examples of Heights and Lateral Locations of Signs for Typical Installations

The figure title has been changed from the CA Supplement "Figure 2A-1(CA). Heights and Lateral Locations of Signs for Typical Installations" to "Figure 2A-1(CA). Examples of Heights and Lateral Locations of Signs for Typical Installations".

In the top left sketch, the cardinal direction plate has been moved above the route shield. This correction has been made to be consistent with Section 2D.15 Standard.

In both of the sketches on the right, top and bottom, the shoulder has been dipped down to clarify that the minimum heights for the signs are measured from the ETW and not the edge of paved shoulder.

Table 2A-1(CA) Illumination of Sign Elements (CA Supplement)

This CA Supplement table has been deleted as this tables changes are now reflected in the edited version of the MUTCD Table 2A-1.

Table 2A-4 Common Uses of Sign Colors

This MUTCD table is now deleted as the CA Supplement Table 2A-4(CA) has been expanded to include this MUTCD table and also to be a single comprehensive source for this information.

Table 2A-4(CA) Common Uses of Sign Colors

The table title has been changed from the CA Supplement “Table 2A-4(CA). Common Use of Sign Colors”.

This table has been expanded to include this MUTCD Table 2A-4 and also to be a single comprehensive source for this information.

New column for “Fluorescent Pink” has been added. The “Coral” column which was blank has been removed.

New rows have been added for “Reference Location”, “Incident Management”, “Changeable Message Signs” and “Playground”. The MUTCD Table 2A-4 note for CMS has been added to this table.

CHAPTER 2B. REGULATORY SIGNS

Section 2B.01 Application of Regulatory Signs

New support reference has been added for CVC 21461.

Section 2B.02 Design of Regulatory Signs

Reference to Table 2A-4(CA) has been added under Support.

Reference to new Table 2B-102(CA) has been added under Support.

Section 2B.03 Size of Regulatory Signs

The Paragraph 1 Standard (“shall”) requiring the sizes of regulatory signs per Table 2B-1 has been deleted and replaced with a Guidance (“should”) statement recommending the sizes per Table 2B-1. The reason for this is that FHWA’s Standard Highway Signs book is inadequate in its current form and does not provide all the sizes that are either included in Table 2B-1 or are necessary on the various classifications of roadways.

Section 2B.06 STOP Sign Placement

Reference to Figure “2A-2” has been changed to “2A-2(CA)” under Support to reflect the deleted figure and its replacement.

Section 2B.13 Speed Limit Sign (R2-1)

CA Supplement Section 2B.116 – Speed Limits and Zones has been consolidated to this section for ease of use and ready reference since its close link to the Speed Limit sign.

The MUTCD Guidance that a speed limit should be within 5 mph of the 85th-percentile speed of free-flowing traffic has been deleted as it conflicted with CA Supplement Section 2B.116 policy that it be at the nearest 5 mph increment. The two different “should” criteria, which were due to oversight, caused confusion. The preference for the “nearest 5 mph increment” criteria has been validated by CTCDC discussions on this topic in their 12/8/04, 7/28/05 and 11/17/05 meetings subsequent to the 5/20/04 publication of the CA Supplement.

The CA Supplement Section 2B.116 option to reduce the speed by another 5 mph increment has been added to this section. The “engineering judgment” has been changed to “engineering study” based upon June 1, 2006 CTCDC workshop discussion.

New support paragraph has been added to explain the nearest criteria with an example of 37 and 38 mph 85th percentile speeds.

New support paragraph has been added to explain and give examples of how this May 20, 2004 change becomes effective.

The term “accident” has been replaced with the term “collision” at various locations. This includes when it is used in reference to accident records, rates and histories.

The terms “temporary traffic control areas” and “work zones” have been replaced with generic term “temporary traffic control zones”.

The term “readily apparent to a motorist” has been changed to “readily apparent to a driver” to be consistent with CVC 627 terminology.

Under the Engineering and Traffic Survey sub-heading, the sentence “When qualifying an appropriate speed limit, State and local authorities may also consider the following findings:” has been changed to “When qualifying an appropriate speed limit, local authorities may also consider all of the following findings:”

Reference to Figure 2B-1(CA) has been added for R2-4(CA), R3(CA), R48(CA), R48-1(CA) and R48-2(CA) signs.

Reference to Figure 2B-3(CA) has been added for R6-3(CA) and R6-4(CA) signs.

Section 2B.17 FINES HIGHER Plaque (R2-6)

The Double Fine Zone Signs (SR53(CA), SR54(CA) and SR55(CA)) sign policies have been moved from former Section 2B.118 of the CA Supplement to this section for consolidation of similar signs and easier reference of similar topics.

Reference to Figure 2B-1(CA) has been added.

The text “BEGINES” has been corrected to “BEGINS”.

CVC reference 42010 has been corrected to 42011. The error was corrected in paragraph 10 but was omitted by mistake for paragraphs 11 and 12. It will be corrected for paragraphs 11 and 12 in future.

Section 2B.19 Turn Prohibition Signs (R3-1 through R3-4, and R3-18)

The R33(CA) and R33A(CA) signs specification has been modified to make the “No Left Turn” portion of the message a symbol rather than the current word message.

Reference to Figure 2B-3(CA) has been added for R33(CA) and R33A(CA) signs.

Section 2B.20 Intersection Lane Control Signs (R3-5 through R3-8)

Reference to Figure 2B-4(CA) has been added for R61(CA) Series and R73(CA) Series signs.

Section 2B.21 Mandatory Movement Lane Control Signs (R3-5, R3-5a, and R3-7)

The MUTCD code for THRU TRAFFIC MERGE LEFT (RIGHT) sign has been corrected to W4-7 to match the MUTCD 2003 code change. The W4-1a code was per MUTCD 2000.

Section 2B.22 Optional Movement Lane Control Sign (R3-6)

Reference to Figure 2B-4(CA) has been added for R60B(CA) sign.

Section 2B.24 Two-Way Left Turn Only Signs (R3-9a, R3-9b)

The CA Supplement Two-Way Left Turn Lane (R67(CA)) sign has been replaced with MUTCD Two-Way Left Turn Only (R3-9a or R3-9b) signs due to their similarity and to aid national uniformity.

Section 2B.26 Preferential Only Lane Signs (R3-10 through R3-15)

The CA Supplement text has been modified by replacing the NO TURN ON RED (R10-11a) sign with the symbolic NO TURN ON RED (R10-11) or No Right Turn on Red (R13A(CA)) signs to be consistent with Section 2B.45 which had deleted the R10-11a sign.

Reference to Figure 2B-19 and 2B-19(CA) has been added for R10-11 and R13A(CA) signs.

The R33A(CA), R33B(CA) and R33C(CA) signs specification has been modified to make the “No Left Turn” portion of the message a symbol rather than the current word message.

Reference to Figure 2B-3(CA) has been added for R33A(CA) sign.

Reference to Figure 2B-7(CA) has been added for Preferential Only Lane signs.

Section 2B.29 DO NOT PASS Sign (R4-1)

Reference to Figure 2B-8(CA) has been added for SR5-1(CA) sign.

Section 2B.32 Slow Moving Traffic Lane Signs (R4-5, R4-6)

The Turnout Signs (R50(CA), R51(CA), R52(CA) and R52A(CA)) sign policies have been moved from former Section 2B.102 of the CA Supplement to this section for consolidation of similar signs and easier reference of similar topics.

The TRUCKS OK Sign (R70(CA)) sign policy has been moved from former Section 2B.104 of the CA Supplement to this section for consolidation of similar signs and easier reference of similar topics.

The RUNAWAY VEHICLES ONLY (R4-10) and NO STOPPING ANY TIME (R26A(S)(CA)) signs policies have been moved from former Section 2B.107 of the CA Supplement to this section for consolidation of similar signs and easier reference of similar topics.

Reference to Figure 2B-8(CA) has been added for R6-3A(CA), R6-4A(CA), R50(CA) thru R52A(CA), R53A(CA), R53B(CA), R53E(CA), R70(CA) and R82A(CA) signs.

The PASSING LANE AHEAD (R68(CA)) sign has been deleted as it is inappropriate as a regulatory sign. The existing PASSING LANE AHEAD (G69(CA)) sign is adequate, more appropriate and serves the purpose for this R68(CA) sign.

Section 2B.33 Keep Right and Keep Left Signs (R4-7, R4-8)

New Guidance added for using next higher sign size. This change was initiated by CHP's Older Californian Traffic Safety Task Force and is based upon CTCDC's discussion and recommendation to Caltrans at the June 14, 2006 meeting.

Section 2B.34 DO NOT ENTER Sign (R5-1)

The CA Supplement option to use WRONG WAY (R5-1a) sign on streets and highways under local jurisdiction is deleted as it conflicts with the Standard, requiring their use regardless of the jurisdiction. This action was taken based upon June 1, 2006 CTCDC workshop discussion.

New Guidance added for using minimum 36 in x 36 in size for DO NOT ENTER sign on multi-lane roadways. New Guidance added for using next higher sign size for offset left-turn lanes. Both of these changes were initiated by CHP's Older Californian Traffic Safety Task Force and are based upon CTCDC's discussion and recommendation to Caltrans at the June 14, 2006 meeting.

Section 2B.36 Selective Exclusion Signs

The FREEWAY – ACCESS RIGHTS RESTRICTED ON THIS SECTION OF HIGHWAY (CA Code S3-1) sign policy has been moved from CA Supplement Section 2D.108 to this section for consolidation of similar signs and easier reference of similar topics.

Reference to Figure 2B-9(CA) has been added for R20-1(CA), R20-1A(CA), R20D(CA) Series, R20H(CA), R21(CA) and R53D(CA) signs.

The spellings on the R20H(CA) sign sketch have been corrected from “LEGNTH” to “LENGTH”.

Section 2B.37 ONE WAY Signs (R6-1, R6-2)

New Guidance added for using next higher sign size. This change was initiated by CHP's Older Californian Traffic Safety Task Force and is based upon CTCDC's discussion and recommendation to Caltrans at the June 14, 2006 meeting.

Section 2B.38 Divided Highway Crossing Signs (R6-3, R6-3a)

New Guidance added for using next higher sign size. This change was initiated by CHP's Older Californian Traffic Safety Task Force and is based upon CTCDC's discussion and recommendation to Caltrans at the June 14, 2006 meeting.

Section 2B.39 Parking, Standing, and Stopping Signs (R7 and R8 Series)

There are two choices for VAN ACCESSIBLE sign requirement below the Disabled Parking Only (R99(CA)) sign, the green on white R7-8a or white on blue R7-8b. The R7-8a green on white sign has been deleted as its purpose is guidance rather than enforcement. Only the white on blue R7-8b sign has been retained as it matches the white on blue Disabled Parking Only (R99(CA)) sign.

The “California Building Standards Code Section 3107.1(c)” reference has been corrected to “California Building Code Section 1129B”.

The R26E plaque policy has been expanded to show all messages allowed on this plaque.

The Chain Control Signs (R74(CA), R75(CA), R76(CA), R76-1(CA), R77(CA), R78(CA), R79(CA) and R80-1(CA)) signs policies have been moved from former Section 2B.106 of the CA Supplement to this section for consolidation of similar signs and easier reference of similar topics. MUTCD Section 2B.40 paragraph 6 first sentence recognizes the need for these signs as special parking restrictions imposed during heavy snowfall,

Reference to Figure 2B-16(CA) has been added.

Section 2B.40 Design of Parking, Standing, and Stopping Signs

In the last paragraph of the Guidance statement, the “Known Errors in the 2003 MUTCD” changes are reflected. The sign number of the VAN ACCESSIBLE plaque used to direct drivers to van-accessible parking spaces was changed to R7-8b (from R7-8a). The D4-1 sign was changed to D9-6. The sign number of the VAN ACCESSIBLE plaque used below the R7-8 sign was changed to R7-8a (from R7-8b).

Section 2B.41 Placement of Parking, Stopping, and Standing Signs

Reference to Sections 2A.14 and 2A.20 have been added for sign legibility and orientation, respectively.

Section 2B.42 Emergency Restriction Signs (R8-4, R8-7, R8-8)

The BEGIN FREEWAY (R57(CA)) and END FREEWAY (R58(CA)) sign policies have been moved from former Section 2B.103 of the CA Supplement to this section for consolidation of similar signs and easier reference of similar topics.

Section 2B.45 Traffic Signal Signs (R10-1 through R10-21)

New Guidance has been added for using symbolic No Turn on Red signs at intersections with angle of skew less than 75 degrees. This change is based on California Traffic Control Devices Committee (CTCDC) recommendation and Caltrans TOPD 05-03, which became effective on 12/08/04.

New Option added for using an additional R10-12 sign with R73-9(CA) plaque. This change was initiated by CHP’s Older Californian Traffic Safety Task Force and is based upon CTCDC’s discussion and recommendation to Caltrans at the June 14, 2006 meeting.

The existing option to use the NO TURN ON RED word message sign at extremely wide intersections has been modified to include only the symbolic No Turn on Red signs.

Reference to Figure 2B-18(CA) has been added for the R62E(CA) sign..

Reference to Figure 2B-19(CA) has been added for the SR39A(CA) and SR39A(U)(CA) signs.

Section 2B.46 Photo Enforced Signs (R10-18, R10-19)

Reference to Figure 2B-1(CA) has been added for SR56(CA) and SR58(CA) signs.

Reference to CVC 21455.5 has been added.

The Standard text for the Traffic Signal PHOTO ENFORCED (SR56(CA)) sign has been split into Standard and Option to clarify that its use at traffic signals is required but they are optional at jurisdictional boundaries. The previous text indicated an option to use them at the signal or jurisdictional boundaries. This change is consistent with FHWA’s “Red Light Camera Systems Operational Guidelines”, Chapter V.

Section 2B.49 Weight Limit Signs (R12-1 through R12-5)

The “___ MILES AHEAD Plaque (CA Code W34A)” has been corrected to “Distance Ahead Plaque (W34A(CA))” to be consistent with Section 2C.45.

References to Figure 2B-20 and 2B-20(CA) have been added for the R12-1, R12-5, R20A(CA) and R36(CA) signs.

Section 2B.50 Weigh Station Signs (R13 Series)

Reference to Figure 2B-20(CA) has been added for SR40(CA) sign.

Reference to Figure 2B-21(CA) has been added for Weigh Station signs.

Section 2B.52 Hazardous Material Signs (R14-2, R14-3)

Reference to Figure 2B-21(CA) has been added for R102(CA) thru R105A(CA) signs.

Section 2B.101(CA) NO FISHING (JUMPING) FROM BRIDGE Sign (R23(CA))

The Section number has been changed from 2B.108 to 2B.101(CA).

Reference to Figure 2B-101(CA) has been added.

Section 2B.102(CA) TWO WAY TRAFFIC AHEAD Sign (R40(CA))

The Section number has been changed from 2B.101 to 2B.102(CA).

Reference to Figure 2B-8(CA) has been added.

Section 2B.103(CA) \$1000 Fine Signs (R47(CA) and R47A(CA))

The Section number has been changed from 2B.109 to 2B.103(CA).

References to Figure 2B-101(CA) have been added.

Section 2B.104(CA) PRIVATE ROAD (PRIVATE PROPERTY) VEHICLE CODE ENFORCED Sign (R101(CA))

The Section number has been changed from 2B.105 to 2B.104(CA).

Reference to Figure 2B-101(CA) has been added.

Section 2B.105(CA) Rest Area Disclaimer Sign (SR2(CA))

The Section number has been changed from 2B.110 to 2B.105(CA).

Reference to Figure 2B-101(CA) has been added.

Section 2B.106(CA) Garbage Prohibition Signs (SR22-1(CA) and SR23-1(CA))

The Section number has been changed from 2B.119 to 2B.106(CA).

References to Figure 2B-101(CA) have been added.

Section 2B.107(CA) GOLF CARTS OK DAYLIGHT HOURS Sign (SR43(CA))

The Section number has been changed from 2B.111 to 2B.107(CA).

Reference to Figure 2B-101(CA) has been added.

Section 2B.108(CA) Bus and Truck Registration Sign (SR44(CA))

The Section number has been changed from 2B.117 to 2B.108(CA).

Reference to Figure 2B-101(CA) has been added.

Section 2B.109(CA) EMERGENCY ACCESS KEEP CLEAR Sign (SR46(CA))

The Section number has been changed from 2B.112 to 2B.109(CA).

Reference to Figure 2B-101(CA) has been added.

Section 2B.110(CA) Off Highway Vehicle Signs (SR47(CA) and SR48(CA))

The Section number has been changed from 2B.113 to 2B.110(CA).

References to Figure 2B-101(CA) have been added.

Section 2B.111(CA) State Property Signs (S8(CA) and S20(CA))

This is a new section created by moving these two signs policies from Section 2D.108 to this section.

References to Figure 2B-101(CA) have been added.

Section 2B.112(CA) Daylight Headlight Signs (S30(CA) Series)

The Section number has been changed from 2B.114 to 2B.112(CA).
Reference to Figure 2B-101(CA) has been added.

Section 2B.113(CA) Safety Corridor Sign (S33(CA))

The Section number has been changed from 2B.115 to 2B.113(CA).
Reference to Figure 2B-101(CA) has been added.

Figure 2B-1(CA) STOP, YIELD, Speed Limit, FINES HIGHER, and Photo Enforcement Signs

New figure to match MUTCD figure but is based upon the previous CA Supplement Figure 2B-101.

Figure 2B-3(CA) Speed Limit and Turn Prohibition Signs

New figure to match MUTCD figure but is based upon the previous CA Supplement Figure 2B-101.

Figure 2B-4(CA) Intersection Lane Control Signs

New figure to match MUTCD figure but is based upon the previous CA Supplement Figure 2B-101.

Figure 2B-5 Center and Reversible Lane Control Signs

The metric version of the R3-9h sign has been deleted.

Figure 2B-7 Examples of Preferential Only Lane Signs

This figure has been deleted to match Section 2B.26 text.

Figure 2B-7(CA) Examples of Preferential Only Lane Signs

New figure to match MUTCD figure but is based upon the previous CA Supplement Figure 2B-101.

Figure 2B-8(CA) Passing, Keep Right, and Truck Lane Signs

New figure to match MUTCD figure but is based upon the previous CA Supplement Figure 2B-101.

Figure 2B-9(CA) Traffic Prohibition Signs

New figure to match MUTCD figure but is based upon the previous CA Supplement Figure 2B-101.

Figure 2B-13(CA) Examples of ONE WAY Signing for Divided Highways with Medians of 9 m (30 ft) or Greater

The note has been deleted as it isn't consistent with Section 2B.34, thereby creating confusion. This action was taken based upon June 1, 2006 CTCDC workshop discussion.

Figure 2B-14(CA) Examples of ONE WAY Signing for Divided Highways with Medians Less Than 9 m (30 ft)

A note has been added to reference Section 2B.37 to determine whether the ONE WAY signs are required or optional. This edit makes the figure consistent with Section 2B.37 policy. The previous figure was in conflict with Section 2B.37 policy. This action was taken based upon June 1, 2006 CTCDC workshop discussion.

Figure 2B-16(CA) California No Parking Signs

New figure to match MUTCD figure but is based upon the previous CA Supplement Figure 2B-101.

Figure 2B-18(CA) Pedestrian Signs

New figure to match MUTCD figure but is based upon the previous CA Supplement Figure 2B-101.

Figure 2B-19(CA) Traffic Signal Signs

New figure to match MUTCD figure but is based upon the previous CA Supplement Figure 2B-101.

Figure 2B-20(CA) Road Closed and Weight Limit Signs

New figure to match MUTCD figure but is based upon the previous CA Supplement Figure 2B-101.

Figure 2B-21(CA) Truck Signs

New figure to match MUTCD figure but is based upon the previous CA Supplement Figure 2B-101.

Figure 2B-22(CA) Seat Belt Signs

New figure showing the SR15(CA) and SR15A(CA) signs.

Figure 2B-101(CA) Example of Speed Zone Survey Sheet

The Figure number has been changed from 2B-103 to 2B-101(CA).

Figure 2B-102(CA) Example of Cumulative Speed Curve Sheet

The Figure number has been changed from 2B-104 to 2B-102(CA).

Figure 2B-103(CA) Example of Vehicle Speed Survey Sheet for City and County Through Highways, Arterials, and Collector Roads

The Figure number has been changed from 2B-105 to 2B-103(CA).

This figure has been corrected by modifying the number of X's in the box to be consistent with the number of vehicles.

Figure 2B-104(CA) Example of Vehicle Speed Survey Sheet (For 40 mph and Under)

The Figure number has been changed from 2B-106 to 2B-104(CA).

This figure has been corrected by modifying the number of X's in the box to be consistent with the number of vehicles.

The critical speed calculation formula has been corrected to multiply by 0.15 rather than divide by 6 which yielded 83rd percentile (1-1/6) rather than 85th percentile (1-0.15).

Figure 2B-105(CA) U-Turn Signs for Signalized Intersections with Separate Turn Phase

The Figure number has been changed from 2B-102 to 2B-105(CA).

Figure 2B-106(CA) California Miscellaneous Regulatory Signs

New figure to match MUTCD figure but is based upon the previous CA Supplement Figure 2B-101.

Table 2B-1 Regulatory Sign Sizes

A note, "Includes Arterial Highway (Street) as defined in Section 1A.13." has been added to the Expressway column due to differing terminology in use in the engineering community on the east coast versus west coast.

Table 2B-101(CA) California Regulatory Signs

This table has been modified by consolidating the last two columns for "Supplement Section" and "MUTCD Section" into a single column titled "California MUTCD Section" due to the combined nature of the document. Also, the section numbers have been updated in various rows.

A suffix "(CA)" has been added to all California sign codes.

In row for R26E(CA) plaque, the MUTCD sign code has been changed from "R8-3d" to "R8-3b,c&d" to include other MUTCD plaque messages that are covered by the CA plaque.

In row for R67(CA) sign, the MUTCD column has been changed from "None" to "R3-9a".

The R68(CA) sign has been deleted as the existing G69(CA) sign is more appropriate.

In row for SR56(CA) sign, the Section number has been corrected from “2B.40” to “2B.46”.

A new AT SIGNAL (R73-9(CA)) sign has been added to the table.

The PASSING LANE AHEAD R68(CA) sign has been deleted from this table to reflect Section 2B.32.

Table 2B-102(CA) MUTCD Regulatory Signs

This is a new table created for ease of use to list the MUTCD codes for regulatory signs in sequential order.

Table 2B-103(CA) Standard Application of Speed Limits per California Vehicle Code

This is a new table created based upon the CA Supplement text in Section 2B.116 for ease of use and to prevent any misinterpretation due to paraphrasing that was done in the CA Supplement.

Table 2B-104(CA) Optional Application of Speed Limits per California Vehicle Code

This is a new table created based upon the CA Supplement text in Section 2B.116 for ease of use and to prevent any misinterpretation due to paraphrasing that was done in the CA Supplement.

CHAPTER 2C. WARNING SIGNS

Section 2C.02 Application of Warning Signs

In Paragraph 5 (last paragraph), the option for highway agencies to develop word message signs has been modified per CTCDC discussion and recommendation to Caltrans at the July 28, 2005 meeting.

Section 2C.03 Design of Warning Signs

Reference to new Table 2C-102(CA) has been added under Support.

Section 2C.04 Size of Warning Signs

The Paragraph 1 Standard (“shall”) requiring the sizes of warning signs per Table 2C-2 has been deleted and replaced with a Guidance (“should”) statement recommending the sizes per Table 2C-2. The reason for this is that FHWA’s Standard Highway Signs book is inadequate in its current form and does not provide all the sizes that are either included in Table 2C-2 or are necessary on the various classifications of roadways.

Section 2C.06 Horizontal Alignment Signs (W1-1 through W1-5, W1-11, W1-15)

In Paragraph 8, the Curve Speed (W13-5) sign has been deleted to be consistent with Section 2C.36 deletion.

Reference to Figure 2C-1(CA) has been added.

Section 2C.07 Combination Horizontal Alignment/Advisory Speed Signs (W1-1a, W1-2a)

The CA Supplement references “(CA Code W4 Series)” and “(see Figure 2C-1)” (was duplicated) at various locations in this section are deleted due to redundancy and their being covered by this MUTCD section and Figure 2C-1.

The combination advisory speed versions of Reverse Turn (W4-1(CA)), Hairpin Curve (W4-10(CA)), 270-degree Loop (W4-14(CA)), Reverse Curve (W4-18(CA)) and Truck Rollover Warning (W4-22(CA)) signs policies have been added. These signs and their policies are being re-authorized as they were inadvertently omitted earlier, thinking the MUTCD W1-1a and W1-2a signs would cover these scenarios. This action was taken based upon June 1, 2006 CTCDC workshop discussion.

Section 2C.13 Truck Escape Ramp Signs (W7-4 Series)

In Paragraph 3 (last paragraph), the option for highway agencies to develop word message signs has been modified per CTCDC discussion and recommendation to Caltrans at the July 28, 2005 meeting.

Reference to Figure 2C-2(CA) has been added.

Section 2C.17 ONE LANE BRIDGE Sign (W5-3)

The DRAW BRIDGE (W49(CA)) sign policy has been moved from former Section 2C.104 of the CA Supplement to this section for consolidation of similar signs and easier reference of similar topics. Reference to Figure 2C-3(CA) has been added.

Section 2C.21 DEAD END/NO OUTLET Signs (W14-1, W14-1a, W14-2, W14-2a)

Reference to Figure 2C-3(CA) has been added.

Section 2C.22 Low Clearance Signs (W12-2 and W12-2p)

Reference to Figure 2C-3(CA) has been added.

Section 2C.27 Slippery When Wet Sign (W8-5)

The WATCH FOR SNOW SLIPPERY (SW46(CA)) sign policy has been moved from former Section 2C.115 of the CA Supplement to this section for consolidation of similar signs and easier reference of similar topics.

Reference to Figure 2C-4(CA) has been added.

Section 2C.28 BRIDGE ICES BEFORE ROAD Sign (W8-13)

The ICY (W43(CA)) sign policy has been moved from former Section 2C.103 of the CA Supplement to this section for consolidation of similar signs and easier reference of similar topics.

Reference to Figure 2C-4(CA) has been added.

Section 2C.29 Advance Traffic Control Signs (W3-1, W3-2, W3-3, W3-4)

Reference to Figure 2C-4(CA) has been added.

Section 2C.30 Speed Reduction Signs (W3-5, W3-5a)

The TRAILERS-CAMPERS-GUSTY WIND AREA NEXT ___ MILES (SW17-1(CA)) sign policy has been moved from former Section 2C.120 of the CA Supplement to this section for consolidation of similar signs and easier reference of similar topics.

Reference to Figure 2C-5(CA) has been added.

Section 2C.33 Lane Ends Signs (W4-2, W9-1, W9-2)

The RIGHT (LEFT) LANE EXITS AHEAD sign (W73(CA)), RIGHT(LEFT) LANE TURNS RIGHT(LEFT) AHEAD (W73A(CA)) and THRU TRAFFIC MERGE LEFT (RIGHT) sign (W4-7) sign policies has been moved from former Section 2C.109 of the CA Supplement to this section for consolidation of similar signs and easier reference of similar topics.

Reference to Figure 2C-6(CA) has been added.

At all occurrences in this section, the MUTCD code for THRU TRAFFIC MERGE LEFT (RIGHT) sign has been corrected to W4-7 to match the MUTCD 2003 code change. The W4-1a code shown in CA Supplement was per MUTCD 2000.

The W61(CA) Series signs have been added as an alternative to the MUTCD E11-1 Series signs.

Section 2C.35 NO PASSING ZONE Sign (W14-3)

New Option added for using the NO PASSING ZONE sign. This change was initiated by CHP's Older Californian Traffic Safety Task Force and is based upon CTCDC's discussion and recommendation to Caltrans at the June 14, 2006 meeting.

Section 2C.37 Intersection Warning Signs (W2-1 through W2-6)

The END FREEWAY _____ MI (W69(CA)), CROSS TRAFFIC AHEAD (W70(CA)) and END FREEWAY sign (SW36(CA)) sign policies has been moved from former Section 2C.108 of the CA Supplement to this section for consolidation of similar signs and easier reference of similar topics.

Reference to Figure 2C-8(CA) has been added.

Section 2C.40 Vehicular Traffic Signs (W8-6, W11-1, W11-5, W11-5a, W11-8, W11-10, W11-11, W11-12p, W11-14)

The WATCH FOR SNOW REMOVAL EQUIPMENT (SW58(CA)) sign policy has been moved from former Section 2C.115 of the CA Supplement to this section for consolidation of similar signs and easier reference of similar topics.

The OFF HIGHWAY VEHICLES (SW47(CA)) sign policy has been moved from former Section 2C.116 of the CA Supplement to this section for consolidation of similar signs and easier reference of similar topics.

Reference to Figure 2C-9(CA) has been added.

Section 2C.41 Nonvehicular Signs (W11-2, W11-3, W11-4, W11-6, W11-7, W11-9)

The standard has been modified to reflect the use of W16-7p plaque for roadside-mounted signs and W66B(CA) plaque for the overhead mounted signs. This action was taken based upon June 1, 2006 CTCDC workshop discussion.

New standard added for using the W16-7p plaque below the appropriate warning sign at cattle guards. This action was taken based upon June 1, 2006 CTCDC workshop discussion.

The DEAF CHILDREN NEAR (SW38(CA)) sign policy has been moved from former Section 2C.112 of the CA Supplement to this section for consolidation of similar signs and easier reference of similar topics.

The SENIOR CITIZEN FACILITY (SW50(CA)) sign policy has been moved from former Section 2C.118 of the CA Supplement to this section for consolidation of similar signs and easier reference of similar topics.

Reference to Figure 2C-10(CA) has been added.

Section 2C.42 Playground Sign (W15-1)

Reference to Figure 2C-10(CA) has been added.

Section 2C.46 Advisory Speed Plaque (W13-1)

During the adoption of the MUTCD and development of the California Supplement, on May 20, 2004 the Traffic Manual criteria of 10, 12.5 and 15 degrees was changed to the MUTCD's 16 degree criteria and the text, table and figures were modified to reflect this change. The MUTCD adopted 16-degree ball bank criteria has now been reversed to the previous Traffic Manual criteria of 10, 12.5 and 15 degrees. The appropriate portions of this section have been modified accordingly. See Section 2C.101(CA) changes for more details.

Section 2C.50 CROSS TRAFFIC DOES NOT STOP Plaque (W4-4p)

New Guidance statement has been added recommending the use of CROSS TRAFFIC DOES NOT STOP (W4-4p) plaque when converting from a 4-way to a 2-way stop. This change is based on California Traffic Control Devices Committee (CTCDC) recommendation and Caltrans TOPD 05-04, which became effective on 03/14/05.

Section 2C.101(CA) Advisory Speed on Curve and Turn Warning Signs

During the adoption of the MUTCD and development of the California Supplement, on May 20, 2004 the Traffic Manual criteria of 10, 12.5 and 15 degrees was changed to the MUTCD's 16 degree criteria and the text, table and figures were modified to reflect this change. The MUTCD adopted 16-degree ball bank criteria has now been reversed to the previous Traffic Manual criteria of 10, 12.5 and 15 degrees. The appropriate portions of this section have been modified accordingly.

The option to use comfortable speed charts per Figure 2C-103 and the figure itself have been deleted as these are design elements, not TCD.

The main reason for this reversal is the difficulty in implementing the new criteria once the public has been used to it for over 75 years. Some concerns voiced as hindrances in the actual implementation were: financial and practical implications of making the change at once; If not, how to distinguish new criteria versus old; major public relation campaign is needed to educate the road users so that they do not continue to mentally add 10 to 20 mph for their respective vehicles and driving habits, etc. Another reason is that some recent AASHTO ballots have proposed changes to the next version of the MUTCD calling for a phased in approach to increase this criteria gradually over the next few versions of the future MUTCDs.

Section 2C.102(CA) Roadway Surface Condition Signs (W8-8, W38(CA), W50(CA), W50-1(CA), W55(CA), W55B(CA), SW28(CA), SW32(CA), SW35(CA), SW41(CA), SW45(CA))

The former sections 2C.102, 2C.105, 2C.107, 2C.110, 2C.114 and 2C.121 have been moved to this section for consolidation of similar signs and easier reference of similar topics.

Reference to Figure 2C-4 has been added.

Section 2C.103(CA) SLOW TRUCKS Sign (W51(CA))

The Section number has been changed from 2C.106 to 2C.103(CA).

Reference to Figure 2C-6(CA) has been added.

Section 2C.104(CA) TUNNEL Sign (SW37(CA))

The Section number has been changed from 2C.111 to 2C.104(CA).

Reference to Figure 2C-3(CA) has been added.

Section 2C.105(CA) Downward Arrow Sign (SW44(CA))

The Section number has been changed from 2C.113 to 2C.105(CA).

Reference to Figure 2C-3(CA) has been added.

Section 2C.106(CA) TRACTOR-SEMIS OVER FEET KINGPIN TO REAR AXLE NOT ADVISED Sign (SW48(CA))

The Section number has been changed from 2C.117 to 2C.106(CA).

Reference to Figure 2C-3(CA) has been added.

In Paragraph 4, the text NEXT RIGHT has been changed to NEXT EXIT for the SW48-1(CA) sign to show the more generic message and to be consistent with paragraph 2. The NEXT RIGHT message has been added to the list of alternative message mentioned in this paragraph.

Section 2C.107(CA) HOV Signs (W11-1(CA), W59-1(CA), W72B(CA), W74-1(CA), W75-1(CA), SW54(CA), SW54-1(CA), SW54A(CA), SW54B(CA) and SW54C(CA))

The Section number has been changed from 2C.119 to 2C.107(CA).

Reference to Figures 2C-4(CA), 2C-5(CA) and 2C-6(CA) has been added.

Figure 2C-1(CA) Horizontal Alignment Signs

New figure to match MUTCD figure but is based upon the previous CA Supplement Figure 2C-101.

The W4-1(CA), W4-10(CA), W4-14(CA), W4-18(CA) and W4-22(CA) sign sketches have been added to this figure. The sketches were formerly omitted from the CA Supplement in error.

Figure 2C-2(CA) Vertical Grade Signs

New figure to match MUTCD figure but is based upon the previous CA Supplement Figure 2C-101.

Figure 2C-3 Miscellaneous Warning Signs

The W6-1a, W6-1b and W6-2a signs have been deleted to be consistent with Sections 2C.18 and 2C.19. These signs were deleted in the California Supplement under Section text but were not included in the deletions comments for Figure 2C-3.

Figure 2C-3(CA) Miscellaneous Warning Signs

New figure to match MUTCD figure but is based upon the previous CA Supplement Figure 2C-101.

Figure 2C-4(CA) Roadway Condition and Advance Traffic Control Signs

New figure to match MUTCD figure but is based upon the previous CA Supplement Figure 2C-101.

Figure 2C-5 Advisory Speed and Speed Reduction Signs

The W13-5 sign has been deleted to be consistent with Sections 2C.36. This sign was deleted in the California Supplement under Section text but was not included in the deletions comments for Figure 2C-5.

Figure 2C-5(CA) Advisory Speed and Speed Reduction Signs

New figure to match MUTCD figure but is based upon the previous CA Supplement Figure 2C-101.

Figure 2C-6 Merging and Passing Signs

The W9-2 sign has been deleted to be consistent with Sections 2C.33. This sign was deleted in the California Supplement under Section text but was not included in the deletions comments for Figure 2C-6.

Figure 2C-6(CA) Merging and Passing Signs

New figure to match MUTCD figure but is based upon the previous CA Supplement Figure 2C-101.

Figure 2C-8(CA) Intersection Warning Signs

New figure to match MUTCD figure but is based upon the previous CA Supplement Figure 2C-101.

Figure 2C-9(CA) Vehicular Traffic Signs

New figure to match MUTCD figure but is based upon the previous CA Supplement Figure 2C-101.

Figure 2C-10(CA) Nonvehicular Traffic Signs

New figure to match MUTCD figure but is based upon the previous CA Supplement Figure 2C-101.

Figure 2C-11 Supplemental Warning Plaques

The W16-13p plaque has been deleted to be consistent with Sections 2C.29. This plaque was deleted in the California Supplement under Section text but was not included in the deletions comments for Figure 2C-11.

Figure 2C-11(CA) Supplemental Warning Plaques

New figure to match MUTCD figure but is based upon the previous CA Supplement Figure 2C-101.

Figure 2C-101 California Warning Signs (California Supplement)

This figure has been deleted and the California warning sign sketches have been moved respectively to the newly created CA figures which match the MUTCD figure titles and categories.

Figure 2C-101(CA) Determination of Comfortable Speed From Ball Bank Indicator Readings

Figure 2C-102 has been renumbered as Figure 2C-101(CA).

This figure has been revised to reflect the Traffic Manual criteria of 10, 12.5 and 15 degrees to be consistent with the reversal of the change per Sections 2C.46 and 2C.101(CA). The California Supplement figure showed the MUTCD criteria of 16 degrees.

Figure 2C-103 Comfortable Speed on Horizontal Curves (California Supplement)

This figure has been deleted as it is a design element, not a traffic control device topic. This figure duplicates the Caltrans Highway Design Manual Figure 202.2 which needs to be referenced directly to avoid confusion and any future inconsistencies..

Table 2C-1 Categories of Warning Signs

The W9-2, W13-5, W25-1 and W25-2 signs have been deleted to be consistent with respective section text and figures.

Table 2C-2 Warning Sign Sizes

A note, “Includes Arterial Highway (Street) as defined in Section 1A.13.” has been added to the Expressway column due to differing terminology in use in the engineering community on the east coast versus west coast.

The W25 sign series has been deleted to be consistent with respective section text and figures.

Table 2C-5 Horizontal Alignment Sign Usage

Note 1, which allowed deviation from the table based upon engineering judgment, has been deleted. As per Section 2C.06, the application of this table is a Guidance, which inherently allows deviations based upon engineering judgment or engineering study. This note further encouraged using judgment over using the table, watering down the role of the table. The Traffic Manual had included this table as policy without mentioning the discretion to use engineering judgment. The CA Supplement adoption of this MUTCD table watered down the policy. This action was taken based upon June 1, 2006 CTCDC workshop discussion.

Table 2C-101(CA) California Warning Signs

This table has been modified by consolidating the last two columns for “Supplement Section” and “MUTCD Section” into a single column titled “California MUTCD Section” due to the combined nature of the document. Also, the section numbers have been updated and in various rows.

A suffix “(CA)” has been added to all California sign codes.

New rows have been added for the reauthorized W4-1(CA), W4-10(CA), W4-14(CA), W4-18(CA) and W4-22(CA) signs.

New row has been added for the new W66B(CA) sign.

In row for W74(CA) sign, the MUTCD code has been corrected to W4-7 to match the MUTCD 2003 code change. The W4-1a code shown in CA Supplement was per MUTCD 2000.

The LANE ENDS MERGE LEFT (RIGHT) (W9-2 and W75(CA)) sign has been deleted to be consistent with Section 2C.33 text.

Table 2C-102(CA) MUTCD Warning Signs

This is a new table created for ease of use to list the MUTCD codes for warning signs in sequential order.

CHAPTER 2D. GUIDE SIGNS – CONVENTIONAL ROADS

Section 2D.01 Scope of Conventional Road Guide Sign Standards

The standard topic has been modified to clarify that chapter 2D also applies to freeways and expressways unless it is superseded by chapter 2E.

Section 2D.02 Application

Added the text “substitute” between “or” and “for” in third paragraph.

Reference to new Table 2D-102(CA) has been added under Support

Section 2D.38 Street Name Sign (D3-1)

Under Guidance, first paragraph, the G7-1(CA) sign has been added as an alternative to the D3-1 sign.

New option added for eliminating borders. This change was initiated by CHP's Older Californian Traffic Safety Task Force and is based upon CTCDC's discussion and recommendation to Caltrans at the June 14, 2006 meeting.

Section 2D.45 General Service Signs (D9 Series)

Under the third Standard, second and third sentences pertaining to Pharmacy (D9-20) sign and 24HR (D9-20a) plaque are deleted. This deletion is based on CTCDC's discussion and recommendation to Caltrans at the August 12, 2004 meeting.

Under Hospital Sign heading, the text "Section 70005 of Title 22 of the California Administrative Code" has been changed to "California Code of Regulations, Title 22, Division 5, Chapter 1, Article 1, Section 70005".

Under Telephone Signs, the text "in a remote are" has been corrected to "in a remote area".

The SG49A(CA) sign has been added to the D12-5 sign policy. The D12-5 sign has a blank box for logo, the SG49A(CA) incorporates the logo into the D12-5 sign.

Figure 2D-3(CA) California Route Signs

New figure to match MUTCD figure but is based upon the previous CA Supplement Figure 2D-101.

Figure 2D-4(CA) California Route Sign Auxiliaries

New figure to match MUTCD figure but is based upon the previous CA Supplement Figure 2D-101.

Figure 2D-5(CA) California Directional Arrow Auxiliary Signs

New figure to match MUTCD figure but is based upon the previous CA Supplement Figure 2D-101.

Figure 2D-7(CA) California Destination and Distance Signs

New figure to match MUTCD figure but is based upon the previous CA Supplement Figure 2D-101.

Figure 2D-8(CA) California Street Name and Parking Signs

New figure to match MUTCD figure but is based upon the previous CA Supplement Figure 2D-101.

Figure 2D-9(CA) California Rest Area and Scenic Overlook Signs

New figure to match MUTCD figure but is based upon the previous CA Supplement Figure 2D-101.

Figure 2D-10(CA) California Weigh Station Signs

New figure to match MUTCD figure but is based upon the previous CA Supplement Figure 2D-101.

Figure 2D-11(CA) California General Service Signs

New figure to match MUTCD figure but is based upon the previous CA Supplement Figure 2D-101.

Figure 2D-12(CA) California General Information Signs

New figure to match MUTCD figure but is based upon the previous CA Supplement Figure 2D-101.

Figure 2D-101(CA) California Miscellaneous Guide Signs

New figure to match MUTCD figure but is based upon the previous CA Supplement Figure 2D-101.

The cardinal direction "South" and "North" have been changed to "SOUTH" and "NORTH" on the G21-1(CA) sign with larger first letter "S" and "N", respectively.

Table 2D-101(CA) California Guide Signs

This table has been modified by consolidating the last two columns for “Supplement Section” and “MUTCD Section” into a single column titled “California MUTCD Section” due to the combined nature of the document. Also, the section numbers have been updated and in various rows.

A suffix “(CA)” has been added to all California sign codes.

In row for G7(CA) sign, the sign code has been corrected to G7-1(CA). Also, the MUTCD sign code D3 (per MUTCD 2000) has been corrected to D3-1 (per MUTCD 2003).

In row for G27-1(CA), the MUTCD sign code “M1-1” has been changed to “None” as they are not compatible due to their differing sizes.

In row for G87(CA), the MUTCD sign code “E9” has been changed to “None”. This sign was shown with an “E9” code in 1988 MUTCD but since then the code has been deleted in the MUTCD 2000 and 2003 Editions. The SHS 2004 book does not contain sign specs for this sign either.

The TRAVEL INFO CALL 511 (SG49A(CA)) sign has been added to this table.

Table 2D-102(CA) MUTCD Guide Signs

This is a new table created for ease of use to list the MUTCD codes for guide signs in sequential order.

In row for D3 sign, the sign code has been corrected to D3-1. The MUTCD sign code D3 was per MUTCD 2000 and changed to D3-1 in MUTCD 2003.

Table 2D-103(CA) Route Shield Sizes for Guide Signs

This table has been renumbered. It was formerly Table 2D-102.

Table 2D-104(CA) Criteria for Supplemental Destination Signs

This table has been renumbered. It was formerly Table 2D-103.

CHAPTER 2E. GUIDE SIGNS – FREEWAYS AND EXPRESSWAYS

Section 2E.19 Diagrammatic Signs

Under Guidance, sub-heading E is changed to have the arrow shafts match number of lanes rather than showing lane lines. This change was initiated by CHP’s Older Californian Traffic Safety Task Force and is based upon CTCDC’s discussion and recommendation to Caltrans at the June 14, 2006 meeting.

Section 2E.20 Signing for Interchange Lane Drops

Reference to Figure 2E-9(CA) has been added.

Section 2E.39 NEXT X EXITS Sign

The G87(CA) sign has been added to text as it has been re-authorized. This sign was shown with an “E9” code in 1988 MUTCD but since then the code has been deleted in the MUTCD 2000 and 2003 Editions. The SHS 2004 book does not contain sign specs for this sign either.

Section 2E.51 General Service Signs

Under the sixth Paragraph, sub-heading F pertaining to Pharmacy (D9-20) sign and 24HR (D9-20a) plaque is deleted. Under the eleventh Paragraph, last sentence listing the services, the service pertaining to 24-Hour Pharmacy is deleted. Under the seventeenth Paragraph, last sentence, the text pertaining to 24-Hour Pharmacy (D9-20 and D9-20a) symbol is deleted. This deletion is based on CTCDC’s discussion and recommendation to Caltrans at the August 12, 2004 meeting.

Figure 2E-2(CA) California Pull-Through Signs

New figure to match MUTCD figure but is based upon the previous CA Supplement Figure 2D-101.

Figure 2E-9(CA) EXIT Only Panels

New figure to match MUTCD figure but is based upon the previous CA Supplement Figure 2D-101.

Figure 2E-15(CA) California Interchange Advance Guide Signs

New figure to match MUTCD figure but is based upon the previous CA Supplement Figure 2D-101.

Figure 2E-20(CA) California Interchange Exit Direction Signs

New figure to match MUTCD figure but is based upon the previous CA Supplement Figure 2D-101.

The cardinal direction “East” has been changed to “EAST” on the G85-5(CA) sign with larger first letter “E”.

Figure 2E-21(CA) California Exit Gore Signs

New figure to match MUTCD figure but is based upon the previous CA Supplement Figure 2D-101.

Figure 2E-24(CA) California Interchange Sequence Signs

New figure to match MUTCD figure but is based upon the previous CA Supplement Figure 2D-101.

Figure 2E-26(CA) California NEXT EXITS Sign

New figure to match MUTCD figure but is based upon the previous CA Supplement Figure 2D-101.

Figure 2E-30(CA) Examples of Partial Cloverleaf Interchange Guide Signs

On the westbound approach, the G85-4(CA) sign (third sign on the approach) has been corrected to show it as a ground-mounted sign rather than as an overhead-mounted sign. This is also consistent with the eastbound approach signs.

Figure 2E-42 Examples of General Service Signs (with Exit Numbering)

The lower signs which show Pharmacy text and symbol are deleted to be consistent with Section 2E.51 change.

Figure 2E-44(CA) California Rest Area and Scenic Overlook and Welcome Center Signs

New figure to match MUTCD figure but is based upon the previous CA Supplement Figure 2D-101.

Figure 2E-45 Enhanced Reference Location Signs

The metric version of the D10-4 and D10-5 signs has been deleted.

CHAPTER 2F. SPECIFIC SERVICE SIGNS

Section 2F.01 Eligibility

Under the Sign Eligibility Criteria – 4. Camping heading (sub-heading A) the distance “4.8 km (3 mi)” has been corrected to “16 km (10 mi)” per Streets and Highways Code.

Under the second Standard, third paragraph pertaining to 24-hour pharmacies is deleted. The third Guidance and second Option pertaining to pharmacies are deleted. The third Standard topic pertaining to pharmacies is deleted. This deletion is based on CTCDC’s discussion and recommendation to Caltrans at the August 12, 2004 meeting.

Section 2F.02 Application

Under Standard, first paragraph second sentence and second paragraph first sentence references to 24-hour pharmacy are deleted. This deletion is based on CTCDC’s discussion and recommendation to Caltrans at the August 12, 2004 meeting.

Under Option, the first paragraph was deleted per MUTCD Revision 1 changes by FHWA as it was deemed to be redundant as it was adequately covered per Section 2F.01 Option.

Figure 2F-1(CA) Example of California Specific Service Signs

This is a new figure created for ease of reference and is based upon CA Supplement Figure 2D-101.

CHAPTER 2G. TOURIST-ORIENTED DIRECTIONAL SIGNS

Figure 2G-1(CA) Example of California Tourist-Oriented Directional Signs

Sign codes have been added to the signs shown.

CHAPTER 2H. RECREATIONAL AND CULTURAL INTEREST AREA SIGNS

Section 2H.02 Application of Recreational and Cultural Interest Area Signs

In the Lookout Tower (RG-140) sign policy paragraph, corrected “4.8 km (mi)” to “4.8 km (3 mi)”.

In the Trail (Hiking) (RL-100) sign policy, corrected “1.6 km” to “1.6 km (1 mi)”.

In the Camping (Trailer) (RM-020) sign policy, corrected “RM-010” to “RM-020”.

Section 2H.09 Destination Guide Signs

New reference added for Figure 2H-101(CA).

New Support is added for using the name of culturally unique and historically significant community on supplemental guide signs per Streets and Highways code.

Figure 2H-2(CA) Examples of General Directional Guide Signs for Conventional Roads

This is a new figure created for ease of reference and is based upon CA Supplement Figure 2D-101.

Figure 2H-5 Recreational and Cultural Interest Area Symbol Signs

On Sheet 2 of 5, the 24-Hour Pharmacy (RM-230) sign has been deleted. This deletion is based on CTCDC’s discussion and recommendation to Caltrans at the August 12, 2004 meeting.

Figure 2H-5(CA) California Recreational and Cultural Interest Area Symbol Signs

This is a new figure created for ease of reference and is based upon CA Supplement Figure 2D-101.

Figure 2H-101(CA) California Recreational and Cultural Interest Area Signs

This is a new figure created for ease of reference and is based upon CA Supplement Figure 2D-101.

Table 2H-1 Category Chart for Symbols

In the left hand column, towards the bottom, the 24-Hour Pharmacy (RM-230) sign listing has been deleted. This deletion is based on CTCDC’s discussion and recommendation to Caltrans at the August 12, 2004 meeting.

CHAPTER 2I. EMERGENCY MANAGEMENT SIGNING

None.

PART 3. MARKINGS

CHAPTER 3A. GENERAL

Section 3A.04 Colors

Under first Support (CA Supplement text), reference to “Figure 3A-101” has been corrected to “Figure 3A-102(CA)” and Detail “14A” has been added.

Figure 3A-102(CA) Lane Lines – Multilane Highways

The color of the Red-Clear Reroreflective Markers has been changed from clear to clear-opaque red in the figure.

Figure 3A-111(CA) Lane Drop Markings

The color of the Red-Clear Reroreflective Markers has been changed from clear to clear-opaque red in the figure.

Figure 3A-112(CA) Channelizing Line and Lane Line/Centerline Extensions

The dimension “60 m (200 ft)” in Detail 39A has been changed to “30 m (100 ft) to 60 m (200 ft)” to match Part 9 Figures 9C-101(CA) and 9C-102(CA).

CHAPTER 3B. PAVEMENT AND CURB MARKINGS

Section 3B.01 Yellow Centerline Pavement Markings and Warrants

New support added for using Detail 22 instead of Detail 21 on curves with radii less than 3280 ft and without street lighting. This change was initiated by CHP’s Older Californian Traffic Safety Task Force and is based upon CTCDC’s discussion and recommendation to Caltrans at the June 14, 2006 meeting.

Section 3B.03 Other Yellow Longitudinal Pavement Markings

New support added for using channelized raised-curb lanes versus TWLTL. This change was initiated by CHP’s Older Californian Traffic Safety Task Force and is based upon CTCDC’s discussion and recommendation to Caltrans at the June 14, 2006 meeting.

Section 3B.04 White Lane Line Pavement Markings and Warrants

Under Support, reference to Figure 3B-24 is deleted to match the CA Supplement deletion of this figure.

Under Support, new reference to Figure 3B-23(CA) has been added as it includes lane line marking details.

Section 3B.05 Other White Longitudinal Pavement Markings

Reference to Figures 3B-8, 3B-9 and 3B-10 has been corrected to Figures 3B-8(CA), 3B-9(CA) and 3B-10(CA), respectively, at various occurrences to reflect the deleted MUTCD figures and their replacements.

Section 3B.09 Lane Reduction Transition Markings

Reference to Figure 3B-12 has been corrected to Figures 3B-12(CA) to reflect the deleted MUTCD figure and its replacement.

Section 3B.12 Raised Pavement Markers as Vehicle Positioning Guides with Other Longitudinal Markings

Under Second Option, the first paragraph has been modified and the second paragraph has been deleted as they pertain to the “N” criteria for spacing. The “N” criteria is not used in California due to its

inherent ambiguity and vagueness and is replaced with specific details (Details 1 through 41A per Figures 3A-101(CA) through 3A-112(CA)) and spacing for each application. Further, the application of the N criteria in this instance results in a far greater spacing than the California Details, hence the CA Details are a higher standard in this particular application.

Section 3B.13 Raised Pavement Markers Supplementing Other Markings

Under sub-heading B, notes 1, 2 and 5 are deleted. See Section 3B.12 notes for more information.

Section 3B.14 Raised Pavement Markers Substituting for Pavement Markings

Portions of the fifth paragraph and the sixth and ninth paragraphs are deleted in their entirety. See Section 3B.12 notes for more information.

Section 3B.16 Stop and Yield Lines

Reference to Figure 3B-14 has been corrected to Figures 3B-14(CA) to reflect the deleted MUTCD figure and its replacement.

The CA Supplement standard has been revised to clarify that a limit line is required with a STOP sign on paved approaches unless a crosswalk already exists. The previous standard required (in error) a limit line with a STOP sign on paved approaches not controlled by traffic signals, which meant a limit line in addition to the crosswalk marking on all paved approaches to a STOP sign. This action was taken based upon June 1, 2006 CTCDC workshop discussion.

Section 3B.18 Parking Space Markings

Reference to Figures 3B-18 and 3B-19 has been corrected to Figures 3B-18(CA) and 3B-19(CA), respectively, at various occurrences to reflect the deleted MUTCD figures and their replacements.

The Standard (Paragraphs 12 and 13) prohibiting parking for one stall length from the crosswalk and requiring 6 ft clearance at alleys and driveways is changed to Guidance. This change is based on California Traffic Control Devices Committee (CTCDC) recommendation and Caltrans TOPD 05-08, which became effective on 08/26/05.

Section 3B.19 Pavement Word and Symbol Markings

Reference to Figures 3B-19, 3B-20, 3B-21 and 3B-23 has been corrected to Figures 3B-19(CA), 3B-20(CA), 3B-21(CA) and 3B-23(CA), respectively, at various occurrences to reflect the deleted MUTCD figures and their replacements.

In second Standard, pertaining to SCHOOL pavement markings, references for Section 7C.06 and Figure 7C-101(CA) have been added.

Under Option, 16th paragraph, new sentence added for NO PARKING pavement markings on accessibility aisle per new sketch added in Figure 3B-19(CA).

Section 3B.20 Speed Measurement Markings

Reference to Figure 3B-10 has been corrected to Figures 3B-105(CA) to reflect the deleted MUTCD figure and its replacement.

Section 3B.21 Curb Markings

The ninth paragraph option for local agencies to prescribe colors for curb markings has been deleted as it conflicts with CVC 21458.

Section 3B.23 Preferential Lane Longitudinal Markings for Motor Vehicles

In Paragraph 4 (“The following four...”), sub-heading D, corrected “Figure 3B-25c” to “Figure 3B-26c” and “Figure 3B-25e” to “Figure 3B-26e”.

Section 3B.106(CA) Rumble Strips

Under the Standard topic, the first sentence which pertained to the requirement to use raised and inverted thermoplastic stripe has been deleted per Don Howe, Chief, Pavement Markings Branch, Division of Traffic Operations, Caltrans.

New option to use rumble strips upstream of stop-controlled or signalized intersections has been added. This change was initiated by CHP's Older Californian Traffic Safety Task Force and is based upon CTCDC's discussion and recommendation to Caltrans at the June 14, 2006 meeting.

Figure 3B-2 Examples of Four-or-More Lane Two Way Marking Applications

The strike-out of the text "optional" has been removed and the first arrow asterisk has been crossed out. This is done to reflect that only the second arrow is optional, not both and is consistent with Figure 3B-101(CA).

Figure 3B-7(CA) Example of Two-Way Left-Turn Lane Marking Applications

The title of the top sketch has been changed from "Standard Stripe" to "Roadway Segment".

The optional (per Note 2) Two-Way Left-Turn Lane (R67(CA)) sign sketches have been added to the figure.

The R67A(CA) sign reference in Note 2 has been deleted as this was a deleted sign.

In the bottom sketch, the yellow marking in the lower left corner has been deleted at the beginning of the TWLTL to match the Traffic Manual Figure 6-19.

Figure 3B-8(CA) Example of Signing and Channelizing Line Applications for Exit Ramp Markings

On Sheet 1 of 3, the text "Mile" has been changed to "mi".

On Sheet 2 of 3, the location of the beginning of deceleration lane taper has been corrected. It was linked in error to the theoretical gore whereas the beginning of the deceleration lane was further upstream.

On Sheet 3 of 3, the orientation of the sketch has been changed. Figure (1) (formerly Traffic Manual Figure 6-25) has been added for 600 ft to 0.5 mi weaving lane lengths as it is better suited for urban, lower speed congested high turning conflict segments during peak periods. Figure (2) which had replaced Traffic Manual Figure 6-25 is retained for weaving lanes longer than 0.5 mi to account for higher speed, free flow and less turning conflict situations. In text below the sketch, the text "Mile" has been changed to "mi". Note 3 has been removed as it applies only to acceleration lanes and is applicable in Figure 3B-9(CA) Sheet 2 of 2.

Figure 3B-9(CA) Example of Channelizing Line Applications for Entrance Ramp Marking

On Sheet 1 of 2, the text "Mile" has been changed to "mi".

On Sheet 2 of 2, the orientation of the sketch has been changed.

Figure 3B-10(CA) Example of Lane Drop Signing and Markings at Exit Ramps

The MUTCD code for THRU TRAFFIC MERGE LEFT (RIGHT) sign has been corrected to W4-7 to match the MUTCD 2003 code change. The W4-1a code was per MUTCD 2000.

The advance placement distance of "225 m (750 ft)" for the W4-7 sign has been changed to "d" per section 2C.05.

The text "Mile" has been changed to "mi"

The notes have been consolidated to the bottom of the figure.

The W61(CA) Series sign have been added as options to the MUTCD E11-1 signs in figures as well as note on the bottom to be consistent with Section 2E.20.

Figure 3B-12(CA) Examples of Signs and Lane reduction Markings

Sheet 1 of 3 has been redrawn to an approximate scale and expanded from one sketch to two sketches (for 35 mph and 60 mph speeds) to show more realistic examples of application. This was done to remove confusion that the previous figure generated, as it was not a true depiction of actual application per

formula and real life speeds. The location of the three arrows has been changed from fixed 200 ft spacing to a distance of $d/2$ spacing to have a more uniform application per speed as the location of the end of the lane line marking and the location of warning signs are also based upon speed.

On sheet 1 of 3, the formula and legend were consolidated for ease of reference.

On sheet 1 of 3, the orientation was changed for clarity.

On sheet 1 of 3, in Note 2, the section reference to 2B.24 was corrected to 2B.29.

Sheet 2 of 3 has been modified to match Sheet 1 of 3 changes for arrows, $d/2$ distance and scale.

On sheet 3 of 3, the yellow marking on the left side has been deleted at the beginning of the TWLTL to match the Traffic Manual Figure 6-17.

Figure 3B-19(CA) Examples of Disabled Persons Parking Symbol and NO PARKING

Legend

The NO PARKING Accessibility Aisle Pavement Marking Legend detail has been added and is new in this figure. This detail is included in Caltrans Standard Plan A24E but was not included the previous CA Supplement or the Traffic Manual. It is based on California Code of Regulations (CCR), Title 24, also known as the California Building Standards Code, Section 1129B.4.1 and 1129B.4.2.

Figure 3B-20(CA) Examples of Elongated Letters for Word Pavement Markings

The notes have been modified by replacing Caltrans with Department of Transportation.

Figure 3B-21(CA) Examples of Arrows for Pavement Markings

The note has been modified by replacing Caltrans with Department of Transportation.

Figure 3B-22 Examples of Lane Use Control Word and Symbol Markings

The strike-out of the text “optional” has been removed and the first arrow asterisk has been crossed out. This is done to reflect that only the second arrow is optional, not both and is consistent with Figure 3B-101(CA).

Figure 3B-23(CA) Examples of Entrance/Exit Ramp terminal Signs and Pavement Markings

On Sheet 6 of 6, the two way left turn arrows have been added to the TWLTL to emphasize that this is a TWLTL and not an error in the figure.

Figure 3B-101(CA) Examples of Left-Turn Channelization Markings

The title of both sketches has been changed to include “Roadway”.

In the formula, for description of S, the text “In urban areas where space is restricted, “S” may be reduced 15 or 30 km/h (10 or 20 mph)” has been removed. The speed reduction in the HDM pertains to the “Deceleration Lane Length” which includes the bay taper and storage length. It does not apply to the approach taper. It appears that the speed reduction note was mistakenly applied to the approach taper in the Traffic Manual and the same error was then carried over to the CA Supplement.

In Note 3, the text “...Details 15 through 20...” is changed to “Details 21 through 23...”. This action was taken based upon June 1, 2006 CTCDC workshop discussion.

Figure 3B-102(CA) Examples of Fire Hydrant Location Pavement Markers

The color of the Blue Retroreflective Raised Pavement Marker has been changed from black to blue in the sketches.

Figure 3B-103(CA) Examples of Intersection Markings

Statement added to note 1 that limit line is optional and reference to Section 3B.16.

Note 2 is revised and adds Stop Ahead (W3-1) symbol sign and also specifies STOP AHEAD pavement marking.

Figure 3B-107(CA) Passing Lanes

The lower sketch has been redrawn to an approximate scale to show more realistic example of application. This was done to also make it consistent with modified Figure 3B-12(CA).

This figure has been modified to match Sheet 1 of 3 changes for arrows, d/2 distance and scale. The orientation was changed for clarity.

Note 1 was modified to include taper lengths and the different speed examples shown in modified Figure 3B-12(CA).

In Note 2, the text “Mile” has been changed to “mi”.

Table 3B-2(CA) Standard Edge Line Lane Markings for Preferential Lanes

All references to Figure 3B-25c, 3B-25d and 3B-25e have been corrected to Figure 3B-26c, 3B-26d and 3B-26e, respectively.

The text “...where crossing is permitted” has been added to the “...single broken 100 mm (4 in) white line” text.

CHAPTER 3C. OBJECT MARKERS

Section 3C.03 Markings for Objects Adjacent to the Roadway

New option added use of Type R object marker if exit gore cannot be negotiated in a reasonably safe manner. This change was initiated by CHP’s Older Californian Traffic Safety Task Force and is based upon CTCDC’s discussion and recommendation to Caltrans at the June 14, 2006 meeting.

Figure 3C-1(CA) California Object Markers and End-of-Roadway Markers

The figure title and number has been changed from the CA Supplement “Figure 3C-101. Examples of Object Markers”.

Table 3C-101(CA) List of California Object Markers

The title of this figure has been changed from “Cross-Reference of Object Markers” to “List of California Object Markers”.

This table has been modified by consolidating the last two columns for “Supplement Section” and “MUTCD Section” into a single column titled “Section” due to the combined nature of the document.

A suffix “(CA)” has been added to all California object markers.

CHAPTER 3D. DELINEATORS

Section 3D.03 Delineator Application

The CA Supplement standard that allowed exception for using yellow delineators on the right at narrow bridges is deleted as it conflicts with the MUTCD standard. The Type J red delineator is retained as a California exception due to the critical nature of truck escape ramps.

The Type I delineator is deleted as it is no longer needed per the above change.

Section 3D.04 Delineator Placement and Spacing

New option added for delineation at exit gores that are not illuminated or partially illuminated. This change was initiated by CHP’s Older Californian Traffic Safety Task Force and is based upon CTCDC’s discussion and recommendation to Caltrans at the June 14, 2006 meeting.

Figure 3D-101(CA) Examples of Delineators

The Type I delineator is deleted from the table as it is no longer needed per section 3D.03 changes.

Figure 3D-102(CA). Examples of Delineator Placement When Used at Intersections, Islands, Ramps, and Connectors

Changed the roadway portion to a gray shade for better contrast.

Color coded the delineators and object markers for better depiction of actual colors and as a visual aid.

New Sheet 2 of 2 added that provides delineation details at exit gores that are not illuminated or partially illuminated. This figure supports Section 3D.04 changes. This change was initiated by CHP's Older Californian Traffic Safety Task Force and is based upon CTCDC's discussion and recommendation to Caltrans at the June 14, 2006 meeting.

Figure 3D-103(CA). Examples of Runaway Truck Ramp Signs and Markings

Changed the roadway portion to a gray shade for better contrast.

Color coded the delineators and object markers for better depiction of actual colors and as a visual aid.

Figure 3D-104(CA). Narrow Bridge Signs and Markings (One-Way and Two-Way Roadways)

The Type G and I yellow delineators have been changed to F and I white delineators as they conflicted with the MUTCD standard per Section 3D.03.

Table 3D-1. Approximate Spacing for Delineators on Horizontal Curves

This table has been edited, as shown. This change was initiated by CHP's Older Californian Traffic Safety Task Force and is based upon CTCDC's discussion and recommendation to Caltrans at the June 14, 2006 meeting.

CHAPTER 3E. COLORED PAVEMENTS

None.

CHAPTER 3F. BARRICADES AND CHANNELIZING DEVICES

Section 3F.02 Channelizing Devices

Under second Support, first paragraph, first sentence, the text "retroreflectorive" is corrected to "retroreflective".

CHAPTER 3G. ISLANDS

Section 3G.01 General

New support added for using raised versus flush channelization. This change was initiated by CHP's Older Californian Traffic Safety Task Force and is based upon CTCDC's discussion and recommendation to Caltrans at the June 14, 2006 meeting.

PART 4. HIGHWAY TRAFFIC SIGNALS

CHAPTER 4A. GENERAL

None.

CHAPTER 4B. TRAFFIC CONTROL SIGNALS - GENERAL

Section 4B.02 Basis of Installation or Removal of Traffic Control Signals

In last paragraph (Standard), the text “portable signal” is changed to “temporary signal” per Caltrans Traffic Signal Operations Committee. This action was taken based upon June 1, 2006 CTCDC workshop discussion.

Section 4B.05 Adequate Roadway Capacity

The CA Supplement Support and Guidance texts discussing the need to widen roadway, tapers and approaches when installing newly warranted traffic signals are deleted per Caltrans Traffic Signal Operations Committee. This action was taken based upon June 1, 2006 CTCDC workshop discussion.

Section 4B.102(CA) Project Report

The Standard has been modified to clarify that it is applicable to State highways and not local agencies. This action was taken based upon June 1, 2006 CTCDC workshop discussion.

CHAPTER 4C. TRAFFIC CONTROL SIGNAL NEEDS STUDIES

Section 4C.01 Studies and Factors for Justifying Traffic Control Signals

MUTCD Paragraph 13 option, first option first paragraph, has been revised to reflect the 1991 Traffic Manual footnotes for Warrants 1 and 2. These footnotes were removed from subsequent Traffic Manual editions (1992 onwards). This change is based on CTCDC’s discussion and recommendation to Caltrans at the December 8, 2004 meeting.

Section 4C.02 Warrant 1, Eight-Hour Vehicular Volume

The CA Supplement deletion of the last Option was in error since the Traffic Manual allowed it. It pertained to the use of 56% column in Table 4C-1. This has now been corrected by “un-deleting” this MUTCD option.

Section 4C.06 Warrant 5, School Crossing

The CA Supplement text option to use flashing beacons is deleted as it is already covered in Section 4K.103(CA). This action was taken based upon June 1, 2006 CTCDC workshop discussion.

The CA Supplement school crossing traffic signal warrant has been deleted. This Traffic Manual warrant was more stringent and conflicted with the MUTCD warrant that had been adopted as well. This action was taken based upon June 1, 2006 CTCDC workshop discussion.

Section 4C.101(CA) Function of School Crossing Traffic Signals (California Supplement)

This CA Supplement section is deleted as it contains a very generic support statement of minimal value.

Section 4C.101(CA) Criterion for School Crossing Traffic Signals

This section has been renumbered. It was formerly 4C-102(CA) in the CA Supplement.

Section 4C.102(CA) Bicycle Signal Warrant

This section has been renumbered. It was formerly 4C-103(CA) in the CA Supplement.

Figure 4C-101(CA) Traffic Signal Warrants Worksheet

Major revisions have been made to all four sheets to correct and reflect the MUTCD warrants and policy that was adopted with the CA Supplement on May 20, 2004. These CA Supplement warrant sheets were in conflict with the adopted policy as they were still based upon obsolete Traffic Manual policies.

A new foot note has been added to all sheets to indicate that satisfaction of any warrant doesn't require the installation of a traffic control signal.

On Sheet 1 of 4 header, Count Date has been added and the km/h speed has been changed to mph.

In Warrant 1 (Sheet 1 of 4), an overall Satisfied Yes/No condition has been added and a note added to clarify that Condition A, B or combination must be satisfied. Under Combination of Conditions A & B, the column heading "Warrant" is changed to "Condition" and a new row is added to address the consideration of other alternatives.

In Warrant 2 (Sheet 2 of 4), in the sub-heading, the text "four hours" is changed to "any four hours of an average day". Two new rows are added to document if the plotted points in the graph fall above the curves or not.

In Warrant 3 (Sheet 2 of 4), the sub-heading clarifies Parts A or B must be satisfied. Under Part A sub-heading clarifies that rows 1, 2 and 3 must be satisfied for the same one hour, for any four consecutive 15-min. periods. In rows 1 and 2, the minor street approach is clarified as one direction only. In row 1, the text "and" is corrected to "or" for delays for one-lane approach or two-lane approach. Under Part B, the number of blank columns have been reduced as it applies only to peak hour and two new rows are added to document if the plotted points in the graph fall above the curves or not. The note under Part B is deleted as it is no longer necessary per these edits.

The header on Sheet 3 of 4 is deleted as the header on Sheet 1 of 4 is sufficient.

In Warrant 4 (Sheet 3 of 4), the warrant has been split into Parts A and B. Under Part A, the text "4 hours > 100" has been changed to "4 hours \geq 100". Under Part A, item 2 rows are added for Pedestrian Volume and Crossings.

In Warrant 5 (Sheet 3 of 4), the warrant is expanded to three parts, Parts A, B and C. Under Part A, the blank columns have been reduced from 2 to 1 and the school age pedestrians Crossing Street has been clarified to "per hour". New row has been added to Part A to ensure consideration has been given to lesser remedial measures. Part B is new. Part C is new except for note 3.

In Warrant 6 (Sheet 4 of 4), in rows 3 and 4, the text has been edited to better reflect section text.

In Warrant 7 (Sheet 4 of 4), the title has been changed to "Crash Experience Warrant". To be consistent with the MUTCD Section 4C.08 text and terminology, Warrant 1 (Row 2 in Warrant 7) has been changed to Condition A and Warrant 2 (Row 3 in Warrant 7) to Condition B. The term "WARRANT" has been changed to "WARRANT 1" in the first row for Warrant 7. Pedestrian Volume Condition has been added. Also, the terms "accident", "Acc." And "ACCIDENTS" have been replaced with "crash" and "crashes" to be consistent with the MUTCD Section 4C.08 text and terminology. Rows 4 and 5 that dealt with disruption of traffic flow and lesser remedies are deleted.

In Warrant 8 (Sheet 4 of 4), the column headings "MAJOR ST." and "MINOR ST." have been corrected to "MAJOR ROUTE A" and "MAJOR ROUTE B" to be consistent with the MUTCD Section 4C.09 text. In row 2, the text "has 5-year projected traffic volumes..." has been added.

Figure 4C-103(CA) Traffic Signal Warrants Worksheet (Average Traffic Estimate Form)

This figure has been renumbered to be consistent with other warrants worksheets. It was Table 4C-101(CA) in the CA Supplement.

New header info similar to Figure 4C-101(CA) has been added. It includes date, location, speed and person using the worksheet info.

Minor changes to titles as Condition A & B and 80% have made for clarity purpose.

A new foot note has been added to all sheets to indicate that satisfaction of any warrant doesn't require the installation of a traffic control signal.

Table 4C-1. Warrant 1, Eight-Hour Vehicular Volume

The CA Supplement deletion of the 56% column and note (d) was in error since the Traffic Manual allowed it. This has now been corrected by “un-deleting” this column and note (d).

In sub notes c and d, the “70 km/h” speed has been corrected to “64 km/h” to be consistent with similar changes elsewhere in this chapter.

CHAPTER 4D. TRAFFIC CONTROL SIGNAL FEATURES

Section 4D.01 General

The MUTCD standard allowing exceptions for using STOP signs at intersections controlled by traffic signals has been deleted as it conflicts with CVC 21355(a). New standard added to prohibit the use of STOP signs at any intersection controlled by traffic signals. This action was taken based upon June 1, 2006 CTCDC workshop discussion.

Section 4D.05 Application of Steady Signal Indications

Under Standard, sub-heading E.1.(c) pertaining to two or more green arrow indications is new. This is necessary to allow a four section signal face with two green arrows and no circular green indication to be terminated with a yellow ball. These signal faces are commonly used at freeway ramp terminus and other locations where there is no straight through move.

Section 4D.06 Application of Steady Signal Indications for Left Turns

Under last Guidance, sub-heading 3, the text “100,00” has been corrected to “100,000”.

Section 4D.10 Yellow Change and Red Clearance Intervals

The minimum yellow light change interval criteria, which was based on the approach speed and caused some confusion for the courts, has been changed so that now it is based on the posted speed limit or the prima facie speed limit. This change is based on California Traffic Control Devices Committee (CTCDC) recommendation and Caltrans TOPD 05-01, which became effective on 01/26/05.

The CA Supplement Options for considering red clearance intervals is deleted per Caltrans Traffic Signal Operations Committee. This action was taken based upon June 1, 2006 CTCDC workshop discussion.

In the CA Supplement first Support paragraph, the adjective “steady” is added before the text “red indication” to be clear and explicit so that it is not misinterpreted as “flashing”. All occurrences of “red indications” in the CA MUTCD are now preceded with either “flashing” or “steady” adjective for clarity. This action further reinforces NTSB’s recommendation to not allow flashing red indications when conflicting with a train.

Section 4D.13 Preemption and Priority Control of Traffic Control Signals

For clarity and to reduce confusion, CA Supplement Sections 4D.115, 4D.116 and 4D.117 have been consolidated into Section 4D.13, which discusses the preemption topic.

Changed CA Supplement text “upraised HAND” to “UPRAISED HAND” at 3 occurrences for consistency and to match the MUTCD terminology.

New Guidance added under Emergency Vehicle Preemption to ensure vehicle equipment is capable of encoding IDs.

The term “timing” has been changed to “programming” at the two occurrences in this section.

In the first Support, sub-heading C and CA Supplement sub-heading “Railroad Preemption” 2 b second sentence, the adjective “steady” is added before the text “red indication” to be clear and explicit so that it is not misinterpreted as “flashing”. All occurrences of “red indications” in the CA MUTCD are now preceded with either “flashing” or “steady” adjective for clarity. This action further reinforces NTSB’s recommendation to not allow flashing red indications when conflicting with a train.

Under sub-heading “Bus/Transit Vehicle Priority”, the first paragraph has been split into Support and Standard to be consistent with the policy text. No change has been made to the policy text.

Section 4D.15 Size, Number, and Location of Signal Faces by Approach

The CA Supplement Standard text “There shall be at least two signal faces for each controlled approach of an intersection including signalized left turn lanes.” has been changed to “There shall be at least two signal faces for each movement on each signal-controlled approach.” to clarify the meaning of signalized left turn lane, as all left turn lanes at a signalized intersection are signalized. This change is based upon e-mail discussions between John Fisher (CTCDC member) and Theresa Gabriel (Caltrans).

Section 4D.17 Visibility, Shielding, and Positioning of Signal Faces

New Guidance added for the use of signal backplates. This change was initiated by CHP’s Older Californian Traffic Safety Task Force and is based upon CTCDC’s discussion and recommendation to Caltrans at the June 14, 2006 meeting.

Section 4D.20 Temporary Traffic Control Signals

Under second Standard, sub-headings E thru K are new and replace CA Supplement text that required specific details on plans and equipment details. New option has been added for using semi, fully actuated or manual controller units. These changes were submitted by Caltrans Signals Committee.

Section 4D.101(CA) Traffic Signal Design and Operations

The section title has been changed from “Traffic Signal Design Introduction” to “Traffic Signal Design and Operations”.

The references to the MUTCD and CA Supplement documents have been deleted as they are redundant.

Section 4D.104(CA) Bicycle Signals

Reference to CVC 21450 has been added under Support.

Reference to Section 4C.103(CA) for Bicycle Signal Warrants has been added.

Under Standard, the January 1, 2005 date reference until which bicycle signals will remain effective has been deleted. Assembly Bill 56 (now reflected in 2006 California Vehicle Code) extended the CVC 21450 provisions, as they relate to bicycle signals, indefinitely by deleting the January 1, 2005 sunset date.

Section 4D.105(CA) Bicycle Detectors

The CA Supplement Standard requiring Type D loop configuration is deleted. The CA Supplement Guidance recommending the use of logo in the center of Type D loop is deleted.

New Support paragraph added to ensure detection of bicyclists. This action was taken based upon June 1, 2006 CTCDC workshop discussion.

Section 4D.115 Railroad Preemption (CA Supplement)

For clarity and to reduce confusion, CA Supplement Sections 4D.115, 4D.116 and 4D.117 have been consolidated into Section 4D.13, which discusses the preemption topic.

Section 4D.116 Emergency Vehicle Preemption (CA Supplement)

For clarity and to reduce confusion, CA Supplement Sections 4D.115, 4D.116 and 4D.117 have been consolidated into Section 4D.13, which discusses the preemption topic.

Section 4D.117 Bus/Transit Vehicle Priority (CA Supplement)

For clarity and to reduce confusion, CA Supplement Sections 4D.115, 4D.116 and 4D.117 have been consolidated into Section 4D.13, which discusses the preemption topic.

Figure 4D-3(CA) Typical Arrangements of Signal Lenses in Signal Faces

This is a new figure and has been added to support Section 4D.05 change.

Figure 4D-104(CA) Typical Signal Layout(Three Phase Operation)

This figure was inadvertently omitted from the CA Supplement during the transition from the Traffic Manual, but is now included. In the Traffic Manual, this was Figure 9-18 and it appeared on page 9-54.

Figure 4D-107(CA) Typical Signal Layout(Eight Phase “Quad Left” Operation)

The signal head for the northbound through movement phase has been corrected to “Ø8” from “Ø3”.

Figure 4D-108(CA) Typical Signal Layout(Eight Phase “Quad Left” Operation)

Changed “170 Controller Assembly” to “2070 Controller Assembly”.

In Note 8, Traffic Manual reference has been changed to California MUTCD reference.

Table 4D-101(CA) Suggested Detector Setbacks from Limitline

Minor changes of clarifying nature have been made to the equations for units and terminology for consistency.

Table 4D-102(CA) Minimum Yellow Light Change Interval

This table has been modified per California Traffic Control Devices Committee (CTCDC) recommendation and Caltrans TOPD 05-01, which became effective on 01/26/05. The column title “Approach Speed” has been changed to “Posted Speed or Prima Facie Speed”. The formula and equation details to calculate the minimum yellow light change interval has been added to the table.

Table 4D-105(CA) Signal Operation – Cycle Percentage Conversion (CA Supplement)

This CA Supplement table has been deleted as it is not commonly used.

Table 4D-105(CA) Pole and Equipment Schedule

This table has been renumbered. It was formerly 4D-106 in the CA Supplement. The wind velocity has been changed from 129 km/h (80 mph) to 161 km/h (100 mph). The note at the bottom has been deleted as its applicability is not clear.

Table 4D-106(CA) Conductor and Conduit Schedule

This table has been renumbered. It was formerly 4D-107 in the CA Supplement. In the bottom row, conduit sizes in inches have been added.

CHAPTER 4E. PEDESTRIAN CONTROL FEATURES

The chapter title has been corrected to “Pedestrian Control Features” from “Pedestrian Control Signals”.

Section 4E.09 Accessible Pedestrian Signal Detectors

In paragraph 3, under Guidance, sub-heading B, the text “B. Within 1.5 m (5 ft) of the crosswalk extended,” is changed to “B. Within 1.5 m (5 ft) of the crosswalk extended boundaries,”. This change is based on CTCDC’s discussion and recommendation to Caltrans at the February 23, 2006 meeting.

Section 4E.10 Pedestrian Intervals and Signal Phases

A new option to accommodate older and disabled pedestrians has been added for walking speed of 2.8 fps per California Traffic Control Devices Committee (CTCDC) recommendation to Caltrans at the March 25, 2005 meeting.

New Option added for using leading pedestrian interval. This change was initiated by CHP’s Older Californian Traffic Safety Task Force and is based upon CTCDC’s discussion and recommendation to Caltrans at the June 14, 2006 meeting.

Section 4E.101(CA) Financing

The text "...and maintaining..." has been added as the same procedures that apply to traffic signals in general also apply to Audible Pedestrian Signals when it comes to financing.

Figure 4E-2 Recommended Pushbutton Locations for Accessible Pedestrian Locations

The text "3 m (10 ft) MAX." is changed to "1.5 m (5 ft) MAX.". This change is based on CTCDC's discussion and recommendation to Caltrans at the February 23, 2006 meeting.

**CHAPTER 4F. TRAFFIC CONTROL SIGNALS FOR
EMERGENCY VEHICLE ACCESS**

None.

**CHAPTER 4G. TRAFFIC CONTROL SIGNALS FOR
ONE-LANE, TWO-WAY FACILITIES**

None.

**CHAPTER 4H. TRAFFIC CONTROL SIGNALS FOR
FREEWAY ENTRANCE RAMP**

None.

CHAPTER 4I. TRAFFIC CONTROL FOR MOVABLE BRIDGES

None.

CHAPTER 4J. LANE-USE CONTROL SIGNALS

Section 4J.03 Design of Lane-Use Control Signals

New Guidance added for stroke width of RED X and green arrow symbol. This change was initiated by CHP's Older Californian Traffic Safety Task Force and is based upon CTCDC's discussion and recommendation to Caltrans at the June 14, 2006 meeting.

CHAPTER 4K. FLASHING BEACONS

Section 4K.102(CA) Signal Ahead Flashing Beacons

The section title has been corrected from "Signal Ahead Flashing" to "Signal Ahead Flashing Beacons".

Figure 4K-101(CA) Flashing Beacon at School Crossings Worksheet

The header information has been edited to match Figure 4C-101(CA) header changes.

CHAPTER 4L. IN-ROADWAY LIGHTS

Section 4L.101(CA) In-Roadway Warning Lights at Crosswalks Financing and Maintenance-State Highways

The text "Section" added to section title as it had inadvertently been omitted in the CA Supplement.

The text "Caltrans" has been replaced with "Department of Transportation" to be consistent with the rest of the document.

PART 5. TRAFFIC CONTROL DEVICES FOR LOW-VOLUME ROADS

CHAPTER 5A. GENERAL

Table 5A-1 Minimum Sign Sizes on Low-Volume Roads

Various rows of specific signs have been crossed out to be consistent with the Sections and Figures in the text, which indicated the signs had been deleted for CA application.

CHAPTER 5B. REGULATORY SIGNS

None.

CHAPTER 5C. WARNING SIGNS

None.

CHAPTER 5D. GUIDE SIGNS

None.

CHAPTER 5E. MARKINGS

None.

CHAPTER 5F. TRAFFIC CONTROL FOR HIGHWAY-RAIL GRADE CROSSINGS

None.

CHAPTER 5G. TEMPORARY TRAFFIC CONTROL ZONES

None.

PART 6. TEMPORARY TRAFFIC CONTROL

In all chapters of Part 6 where applicable, the following references were modified to reflect the deleted figures and tables with their respective replacements:

Figure 6C-2 to Figure 6C-2(CA)
Figure 6H-1 to Figure 6H-1(CA)
Figure 6H-4 to Figure 6H-4(CA)
Figure 6H-5 to Figure 6H-5(CA)
Figure 6H-7 to Figure 6H-7(CA)
Figure 6H-10 to Figure 6H-10(CA)
Figure 6H-12 to Figure 6H-12(CA)
Figure 6H-13 to Figure 6H-13(CA)
Figure 6H-14 to Figure 6H-14(CA)
Figure 6H-31 to Figure 6H-31(CA)
Figure 6H-32 to Figure 6H-32(CA)

In all chapters of Part 6 where applicable, the following references were deleted to reflect the deleted figures:

Figure 6H-37
Figure 6H-38

CHAPTER 6A. GENERAL

None.

CHAPTER 6B. FUNDAMENTAL PRINCIPLES

Section 6B.01 Fundamental Principles of Temporary Traffic Control

Under paragraph 9, Guidance, sub-heading B, second sentence, the text "...an official knowledgeable (for example, trained and/or certified) in proper TTC practices" has been changed to "...the Engineer of the public agency or authority having jurisdiction over the highway". This change is consistent with Section 6A.01, last standard (CA Supplement text).

CHAPTER 6C. TEMPORARY TRAFFIC CONTROL ELEMENTS

Section 6C.01 Temporary Traffic Control Plans

The CA Supplement Support paragraph reference to DOT's Construction Manual and COZEEP has been deleted.

The CA Supplement text under sub-heading Construction Speed Zones, fourth Guidance "15 km/h (10 mph)" has been changed to "16 km/h (10 mph)" to be consistent with the MUTCD and the rest of the manual.

Support reference for Speed Limit and Speed Zone signs has been added.

Support reference for Road Work/Speed Limit (C17(CA)) sign has been added.

Section 6C.04 Advance Warning Area

In the last paragraph, the CA Supplement text "...4.5 m (15 ft)..." has been changed to "...4.6 m (15 ft)..." to be consistent with the MUTCD and rest of the manual.

Section 6C.07 Termination Area

The CA Supplement paragraph for END ROAD WORK (G20-2) sign is moved to Section 6F.52.

Figure 6C-2(CA) Types of Tapers and Buffer Spaces

References for Tables 6C-2 and 6C-2(CA) are changed to Tables 6C-3, 6C-4 & 6C-3(CA) at each occurrence.

Table 6C-3(CA) Taper Length Criteria for Temporary Traffic Control Zones for 3.6 m (12 ft) Width Offset

The title has been modified by adding "...for 3.6m (12 ft) Width Offset".

The note "On State highways use Traffic Control Systems in the Caltrans Standard Plans" has been deleted.

CHAPTER 6D. PEDESTRIAN AND WORKER SAFETY

Section 6D.03 Worker Safety Considerations

Under third paragraph, sub-heading B – Worker Safety Apparel, new reference has been added for Construction Safety Order 1523 – Illumination.

Under third paragraph, sub-heading D – the CA Supplement text "...with law enforcement." is changed to "when law enforcement is present."

CHAPTER 6E. FLAGGER CONTROL

Section 6E.01 Qualifications for Flaggers

New Support reference has been added for Construction Safety Orders 1599 for flagger training.

Section 6E.03 Hand-Signaling Devices

The option for the use of red lights has been deleted as it is not consistent with CVC 21457.

The CA Supplement Support paragraph reference to Flagging Instruction Handbook has been deleted.

The C28A(CA) and C28B(CA) designations have been added to the STOP/SLOW paddle to be consistent with Table 6F-101(CA).

New Support reference for short and long handle specifications for STOP/SLOW paddle has been added.

Section 6E.05 Flagger Stations

New Support reference has been added for Construction Safety Orders 1523 – Illumination and 1599 - Flaggers.

Table 6E-101(CA) Longitudinal Buffer Space on Downgrades

In title row 1, for both Metric and English unit portions, the text "Downgrade" is changed to "% Downgrades (Buffer Space)" for clarity of column headings.

In top Metric portion of table, row 1 column 2 value "32" has been corrected to "35".

CHAPTER 6F. TEMPORARY TRAFFIC CONTROL ZONE DEVICES

Section 6F.01 Types of Devices

New text has been added per Caltrans TOPD 05-09 dated 9/9/05, which becomes effective on 12/1/05 for crashworthy TTC devices in TTC zones for Categories 1, 2 and 3 on State highways per NCHRP 350.

Section 6F.02 General Characteristics of Signs

Reference to Table 2A-4(CA) has been added at appropriate location in text.

Reference to newly created Table 6F-1(CA) has been added at appropriate location in text.

In paragraph 5, the text "TCC" has been corrected to "TTC".

Section 6F.08 ROAD (STREET) CLOSED Sign (R11-2)

The BRIDGE OUT word message option has been deleted to be consistent with the CA Supplement deletion in Section 2B.48.

Section 6F.10 Weight Limit Signs (R12-1, R12-2, R12-5)

In Paragraph 1, the “ ... or axle weight...” text has been deleted to be consistent with Section 2B.49 and Figure 6F-3.

Section 6F.14 Special Regulatory Signs

Reference to CA Supplement Section 6F.106(CA) for Traffic Fines signs has been added.

The CA Supplement Support paragraph reference to Section 6C.01 for construction speed zones has been deleted.

Section 6F.21 Lane(s) Closed Signs (W20-5, W20-5a)

The RIGHT LANE CLOSED AHEAD (C20(CA)) sign has been deleted and replaced with the Lane Closed (W20-5) sign.

Section 6F.23 THRU TRAFFIC MERGE LEFT (RIGHT) Sign (W4-7)

The MUTCD code for THRU TRAFFIC MERGE LEFT (RIGHT) sign has been corrected to W4-7 to match the MUTCD 2003 code change. The W4-1a code was per MUTCD 2000.

The CA Supplement support reference to W9-2 sign has been deleted to be consistent with Section 2C.33.

Section 6F.35 Shoulder Work Signs (W21-5, W21-5a.)

The SHOULDER WORK AHEAD (C24(CA)) sign and policy have been added as it is not truly replaced by MUTCD W21-5b, as was identified in the CA Supplement.

Section 6F.45 Double Reverse Curve Signs (W24 Series)

The Double Reverse Curve signs, W24-1a and W24-1b showing number of lanes are deleted. This is consistent with the previous CA Supplement deletion of Reverse Curve signs, W1-4b and W1-4c, which showed number of lanes as well.

Section 6F.51 ROAD WORK NEXT XX km (MILES) Sign (G20-1)

The alternate message options of “ROAD CONSTRUCTION NEXT XX MILES” or “STATE HIGHWAY CONSTRUCTION NEXT XX MILES” have been added to reinstate C11(CA) sign as MUTCD G20-1 sign size in SHS is too small for freeway applications.

Section 6F.52 END ROAD WORK Sign (G20-2)

The section 6C.07 paragraph for END ROAD WORK (G20-2) sign is moved to this section.

Section 6F.55 Portable Changeable Message Signs

Reference to Section 2B.13 for Vehicle Speed Feedback Signs is added.

New guidance has been added for delineating PCMS trailers when they are located within 4.6 m (15 ft) of the ETW.

Section 6F.56 Arrow Panels

In paragraphs 6 and 7, the text for “Type B” is changed to “Type II” and “Type C” is changed to “Type I” to be consistent with Figure 6F-6 modifications and CA Supplement terminology.

Section 6F.59 Cones

New Support added for 36 in. and 42 in. high cones. This change was initiated by CHP's Older Californian Traffic Safety Task Force and is based upon CTCDC's discussion and recommendation to Caltrans at the June 14, 2006 meeting.

Section 6F.60 Tubular Markers

New Support added for 42 in. high tubular markers. This change was initiated by CHP's Older Californian Traffic Safety Task Force and is based upon CTCDC's discussion and recommendation to Caltrans at the June 14, 2006 meeting.

Section 6F.61 Vertical Panels

New Guidance added for 12 in. minimum vertical panels. This change was initiated by CHP's Older Californian Traffic Safety Task Force and is based upon CTCDC's discussion and recommendation to Caltrans at the June 14, 2006 meeting.

Section 6F.62 Drums

In the CA Supplement Guidance paragraph, the text "On State highways" is corrected to "On local roads".

Section 6F.63 Type I, II, or III Barricades

Paragraph 3 Standard has been amended and a new Guidance statement added changing the "shall" to "should" for the stripes on barricades to slope downward in the direction road users are to pass. This change is based on Caltrans TOPD 05-06, which became effective on 04/01/05.

New Support added for 36 in. long Type I & II Barricades. This change was initiated by CHP's Older Californian Traffic Safety Task Force and is based upon CTCDC's discussion and recommendation to Caltrans at the June 14, 2006 meeting.

Section 6F.65 Temporary Traffic Barriers as Channelizing Devices

New option added for the use of side or top mounted reflectors. This change was initiated by CHP's Older Californian Traffic Safety Task Force and is based upon CTCDC's discussion and recommendation to Caltrans at the June 14, 2006 meeting.

Section 6F.76 Floodlights

Second paragraph Guidance has been amended to reflect that work area shall be illuminated per CSO1523.

The text "50 lux (5 foot candles)" has been changed to "108 lux (10 foot candles)".

New Support references have been added for Construction Safety Order 1523 – Illumination and 1599 - Flaggers.

Section 6F.81 Temporary Traffic Barriers

New Option and Guidance added for the use of side or top mounted reflectors. This change was initiated by CHP's Older Californian Traffic Safety Task Force and is based upon CTCDC's discussion and recommendation to Caltrans at the June 14, 2006 meeting.

Section 6F.82 Crash Cushions

New web reference added for approved products.

Section 6F.85 Screens

New Option and Guidance added for the use of traffic screen. This change was initiated by CHP's Older Californian Traffic Safety Task Force and is based upon CTCDC's discussion and recommendation to Caltrans at the June 14, 2006 meeting.

Section 6F.101(CA) Channelizers (Permanent type, flexible post)

Paragraph 5 Standard, the text “75 x 300 mm (3 x 24 in)” has been corrected to “75 x 300 mm (3 x 12 in)”.

Section 6F.105(CA) OPEN TRENCH Sign (CA Code C27)

The dimension “48 mm (0.15 ft)” has been corrected to “46 mm (0.15 ft)”.

Section 6F.107(CA) Moving Lane Closure Signs (W23-1 and SC10(CA), SC11(CA), SC13(CA), SC15(CA))

The alternative message ROAD WORK AHEAD has been added to the SC10(CA) sign to be consistent with the sign specification.

Figure 6F-1 Height and Lateral Location of Signs—Typical Installations

This figure has been modified by deleting the metric version of the signs shown.

Figure 6F-2 Methods of Mounting Signs Other Than on Post

The MUTCD Flagger symbol sign has been deleted and replaced with the CA Flagger symbol sign per Section 6F.29.

Figure 6F-3 Regulatory Signs in Temporary Traffic Control Zones

On Sheet 2 of 2, the R12-2 sign has been deleted to be consistent with Section 2B.49.

Figure 6F-4 Warning Signs in Temporary Traffic Control Zones

On Sheet 2 of 4, the W9-2 sign has been deleted to be consistent with Section 2C.33.

On Sheet 4 of 4, the W24-1a and W24-1b signs have been deleted to be consistent with Section 6F.45.

Figure 6F-7 Channelizing Devices

The dimensions for cones has been modified “to 900 mm (36 in.) MAX” to be consistent with Section 6F.59 change..

Figure 6F-101(CA) California Temporary Traffic Control Signs

This figure has been modified as per Table 6F-101(CA). A suffix “(CA)” has been added to all sign codes and the Note at the bottom indicating all sign codes are CA Codes has been deleted.

Figure 6F-103(CA) Examples of Object Markers in Temporary Traffic Control Zones

The CA Type R Object Marker dimension “1050 mm (42 in)” has been changed to “1050 mm (42 in) to 1650 (65 in)” to be consistent with Caltrans Standard Plan A73B.

Table 6F-1 Sizes of Temporary Traffic Control Signs

Various rows of specific signs have been crossed out to be consistent with the Sections and Figures in the text, which indicated the signs had been deleted for CA application.

References to other sign sizes with codes have been added where the SHS book does not cover the sizes needed for field applications and Traffic Sign Specifications have been re-authorized for similar California signs that provide the correct sizes. In other cases, signs have been deleted and replaced with other recommended signs.

Table 6F-1(CA) Sizes of California Temporary Traffic Control Signs

This new table has been added to address the California TTC signs and their sizes.

Table 6F-101(CA) List of California Temporary Traffic Control Signs

This table has been modified by consolidating the last two columns for “Supplement Section” and “MUTCD Section” into a single column titled “California MUTCD Section” due to the combined nature of the document.

A suffix “(CA)” has been added to all California sign codes

In row for C20 sign, the MUTCD code W20-5 and MUTCD Section 6F.21 have been added.

In row for C24 sign, the MUTCD code W21-5b is deleted. The text “6F.35” has been deleted from the MUTCD Section column and added to the Supplement Section column.

A new row for C28C(CA) STOP/SLOW paddle handle details has been added.

In row for C31A sign, corrected Section reference from “6F.41” to “6F.42”.

Table 6F-102(CA) Maximum Spacing of Channelizing Devices

The values in the lower English unit portion of the Table have been corrected.

The footnote for spacing on State highways on TA-31 & TA-32 has been removed and shifted to the Notes for these figures 6H-31 & 6H-32.

CHAPTER 6G. TYPE OF TEMPORARY TRAFFIC CONTROL ZONE ACTIVITIES

Section 6G.06 Work Outside of Shoulder

The CA Supplement which replaced the MUTCD ROAD WORK AHEAD sign with SHOULDER WORK AHEAD sign has now been changed to Workers Sign to be consistent with Notes for Figure 6H-1.

Section 6G.14 Work Within the Traveled Way of Freeways and Expressways

The Guidance topic referring Figures 6H-37 and 6H-38 has been deleted to be consistent with these figures deleted for application in California.

Section 6G.20 Temporary Traffic Control During Nighttime Hours

New Standard has been added for Construction Safety Order 1523 – Illumination.

New Support has been added for the MUTCD Standard (for lighting at flagger stations) and Construction Safety Order 1599 - Flaggers.

CHAPTER 6H. TYPICAL APPLICATIONS

In various figures, the text “(Optional)” is added to the END ROAD WORK (G20-2) sign in all the MUTCD TA’s to be consistent with other TA’s and Sections 6C.07 and 6F.52 showing it as optional. The CA Supplement TA’s already showed it as optional. This action was taken based upon June 1, 2006 CTCDC workshop discussion.

Notes for Figure 6H-1(CA) Work Beyond the Shoulder (TA-1)

In Note 3, the ROAD WORK AHEAD sign is changed to Workers (W21-1a) sign to be consistent with Note 2.

Figure 6H-1(CA) Work Beyond the Shoulder (TA-1)

In Note, changed Table reference from “6C-1(CA)” to “6H-3”.

Added sign code for the sign shown.

Notes for Figure 6H-4(CA) Short Duration or Mobile Operation on Shoulder (TA-4)

In Note 2, the “ROAD WORK AHEAD” text is replaced with the “SHOULDER WORK (W21-5)” text to be consistent with the CA Supplement Figure 6H-4(CA), as modified.

In Note 3, the text “The ROAD WORK NEXT XX km (MILES) sign may be used instead of the ROAD WORK AHEAD sign” is replaced with the text “The Next Distance (W7-3a) plaque may be used

with the SHOULDER WORK (W21-5) sign” to be consistent with the CA Supplement Figure 6H-4(CA), as modified.

Figure 6H-4(CA) Short Duration or Mobile Operation on Shoulder (TA-4)

In Note, changed Table reference from “6C-1(CA)” to “6H-3”.
Changed SHOULDER WORK AHEAD sign to SHOULDER WORK sign to match W21-5 sign.
Added sign codes for the signs shown.

Figure 6H-5(CA) Shoulder Closure on Freeway (TA-5)

In Note, changed Table reference from “6C-1(CA)” to “6H-3”.
Added new note for table references to determine taper lengths.
Changed SHOULDER WORK AHEAD sign to SHOULDER WORK sign to match W21-5 sign.
Changed SHOULDER CLOSED XXX FT sign to RIGHT SHOULDER CLOSED XXX FT sign to match W21-5b sign.
Added sign codes for the signs shown.

Notes for Figure 6H-5 Typical Application 5

In note 7, changed “protected” to “shielded”.

Notes for Figure 6H-7(CA) Road Closure with Diversion (TA-7)

A new note #12 has been added for the option to use a one Double Reverse Curve sign instead of two Reverse Curve signs if the recommended speed is the same for both the curves.
A new note #13 has been added to support the use of crash cushions.

Figure 6H-7(CA) Road Closure with Diversion (TA-7)

In Note, changed Table reference from “6C-1(CA)” to “6H-3”.
Added sign codes for the signs shown.

Figure 6H-10(CA) Lane Closure on Two-Lane Road Using Flaggers (TA-10)

In Note, changed Table reference from “6C-1(CA)” to “6H-3”.
Added new note for table references for buffer spaces to determine location of flagger stations.
Changed the BE PREAPRED TO STOP sign from 4 to 3 lines to match W3-4 sign specifications.
Added sign codes for the signs shown.

Figure 6H-12(CA) Lane Closure on Two-Lane Road Using Traffic Control Signals (TA-12)

In Note, changed Table reference from “6C-1(CA)” to “6H-3”.
Added new note for table references to determine taper lengths.
Added sign codes for the signs shown.

Figure 6H-13(CA) Temporary Road Closure (TA-13)

In Note, changed Table reference from “6C-1(CA)” to “6H-3”.
Added new note for table references for buffer spaces to determine location of flagger stations.
Changed the BE PREAPRED TO STOP sign from 4 to 3 lines to match W3-4 sign specifications.
Added sign codes for the signs shown.

Figure 6H-14(CA) Haul Road Crossing (TA-14)

In Note, changed Table reference from “6C-1(CA)” to “6H-3”.
Added new note for table references for buffer spaces to determine location of flagger stations.
Added sign codes for the signs shown.

Figure 6H-16 Surveying Along Centerline of Road with Low Traffic Volumes (TA-16)

The MUTCD Flagger symbol sign has been deleted and replaced with the CA Flagger symbol sign per Section 6F.29.

Notes for Figure 6H-19 Detour for One Travel Direction (TA-19)

In Notes 9 & 10, the DETOUR sign code has been corrected to M4-8 from C5A(CA).

Figure 6H-19 Detour for One Travel Direction (TA-19)

The arrow on the Detour Sign in the bottom left corner has been reversed to show the correct direction.

Figure 6H-27 Closure at Side of Intersection (TA-27)

The MUTCD Flagger symbol sign has been deleted and replaced with the CA Flagger symbol sign per Section 6F.29.

Notes for Figure 6H-31(CA) Lane Closures on Street with Uneven Directional Volumes (TA-31)

A new note #11 has been added regarding spacing on State highways. This was previously a foot note under Table 6F-102.

Figure 6H-31(CA) Lane Closures on Street with Uneven Directional Volumes (TA-31)

In Note, changed Table reference from “6C-1(CA)” to “6H-3”.

Added new note for table references to determine taper lengths.

Added new note for table references for buffer spaces to determine location of flagger stations.

Modified Lane Ends (W4-2) symbol sign by including the lane line to match the W4-2 sign specification.

Added sign codes for the signs shown.

Notes for Figure 6H-32(CA) Half Road Closure on Multilane, High-Speed Highway (TA-32)

A new note #11 has been added regarding spacing on State highways. This was previously a foot note under Table 6F-102.

Figure 6H-32(CA) Half Road Closure on Multilane, High-Speed Highway (TA-32)

In Note, changed Table reference from “6C-1(CA)” to “6H-3”.

Added new note for table references to determine taper lengths.

Modified Lane Ends (W4-2) symbol sign by including the lane line to match the W4-2 sign specification.

Added sign codes for the signs shown.

Notes for Figure 6H-36(CA) Lane Shift on Freeway (TA-36)

The first sentence in note #11 has been deleted to be consistent with Section 6F.45.

Figure 6H-36 Lane Shift on Freeway (TA-36)

The Reverse Curve (W1-4c) sign showing 3 lanes has been deleted per Section 6F.45.

Figure 6H-43 Partial Exit Ramp Closure (TA-43)

The RAMP NARROWS and ON RAMP signs have been deleted per Section 6F.25 & 6F.26.

Figure 6H-45 Temporary Reversible Lane Using Movable Barriers (TA-45)

The Reverse Curve (W1-4b) sign showing 2 lanes has been deleted and replaced with Reverse Curve (W1-4) per Section 6F.45.

Notes for Figure 6H-46(CA) Work in Vicinity of Highway-Rail Grade Crossing (TA-46)

In note #8, the text “before” has been changed to “after” to be consistent with the other TA’s.

Figure 6H-46 Work in Vicinity of Highway-Rail Grade Crossing (TA-46)

The MUTCD Flagger symbol sign has been deleted and replaced with the CA Flagger symbol sign per Section 6F.29.

**CHAPTER 6I. CONTROL OF TRAFFIC THROUGH TRAFFIC INCIDENT
MANAGEMENT AREAS**

None.

PART 7. TRAFFIC CONTROLS FOR SCHOOL AREAS

CHAPTER 7A. GENERAL

Section 7A.01 Need for Standards

The Guidance topic recommending school route plan for elementary to high schools has been changed based upon CTCDC's discussion and recommendation to Caltrans at the November 17, 2005 meeting. For middle and high schools, the school route plan is now an option.

CHAPTER 7B. SIGNS

References to Figures have been revised to reflect the change in figure numbers throughout the chapter. The assemblies mentioned only by name in text throughout this chapter have been identified with a specific assembly as A, B, C, D or E.

Section 7B.01 Size of School Signs

The first Standard has been amended to include newly created Table 7B-1(CA).

Section 7B.07 Sign Color for School Warning Signs

Under Option, sub-heading D has been deleted to reflect the deleted S5-1 sign.

Section 7B.08 School Advance Warning Assembly (S1-1 with Supplemental Plaque)

In CA Supplement Standard topic, the first paragraph (requiring D in advance of B unless C already posted) has been corrected as it conflicted with the second paragraph. The second paragraph (requiring D in advance of C) has been deleted.

In CA Supplement Support topic, the "School Advance Warning Assembly A" is corrected to "School Warning Assembly A".

The MUTCD option for in-street School Advance Warning signs which was deleted inadvertently in the CA Supplement has been retained and now is consistent with Section 7B.09.

Section 7B.09 School Crosswalk Warning Assembly (S1-1 with Diagonal Arrow)

The School Crosswalk Warning Assembly E has been added to section text at appropriate locations as an alternate to Assembly B for overhead installation. This change is based on CTCDC's discussion and recommendation to Caltrans at the July 28, 2005 meeting. This assembly includes the new Double Diagonal Arrows (W66B(CA)) plaque.

Section 7B.10 SCHOOL BUS STOP AHEAD Sign (S3-1)

The CA Supplement standard has been revised to more accurately reflect the CVC. The previous text was based on the MUTCD Guidance text but differed from the CVC. This action was taken based upon June 1, 2006 CTCDC workshop discussion.

Section 7B.11 School Speed Limit Assembly (S4-1, S4-2, S4-3, S4-4, S4-6, S5-1)

The CVC reference of "22353" has been corrected to "22352" at two occurrences.

Figure 7B-1(CA) School Area Signs

CA Supplement Figure 7B-101 changed to 7B-1(CA).

The W16-7 sign code has been corrected to W16-7p. The W16-2 code has been corrected to W16-2a and the W16-2 plaque has been added as another option.

The School Crosswalk Warning Assembly E has been added to this figure. This change is based on CTCDC's discussion and recommendation to Caltrans at the July 28, 2005 meeting.

Figure 7B-2 Example of Signing for School Crosswalk Warning Assembly

The MUTCD Figure 7B-2 is deleted to remove conflict with Figure 7B-2(CA) and California policy.

Figure 7B-2(CA) Example of Signing for School Crosswalk Warning Assembly

CA Supplement Figure 7B-102 (Sheet 2 of 2) changed to 7B-2(CA).

The School Crosswalk Warning Assembly E has been added to this figure as an alternate to Assembly B for overhead installation. This change is based on CTCDC's discussion and recommendation to Caltrans at the July 28, 2005 meeting.

Figure 7B-3 Example of Signing for School Area Traffic Control with School Speed Limits

The MUTCD Figure 7B-3 is deleted to remove conflict with Figure 7B-3(CA) and California policy.

Figure 7B-3(CA) Example of Signing for School Area Traffic Control with School Speed Limits

CA Supplement Figure 7B-102 (Sheet 1 of 2) changed to 7B-3(CA).

The School Crosswalk Warning Assembly E has been added to this figure as an alternate to Assembly B for overhead installation. This change is based on CTCDC's discussion and recommendation to Caltrans at the July 28, 2005 meeting.

Figure 7B-101(CA) Example of School Area Signs with Flashing Yellow Beacons

CA Supplement Figure 7B-104 changed to 7B-101(CA).

The School Crosswalk Warning Assembly E has been added to this figure as an alternate to Assembly B for overhead installation. This change is based on CTCDC's discussion and recommendation to Caltrans at the July 28, 2005 meeting. This assembly includes the new Double Diagonal Arrows (W66B(CA)) plaque.

Figure 7B-102(CA) Example of Signing for Traffic Control in School Areas with Flashing Yellow Beacons

CA Supplement Figure 7B-103 changed to 7B-102.

The School Crosswalk Warning Assembly E has been added to this figure as an alternate to Assembly B for overhead installation. This change is based on CTCDC's discussion and recommendation to Caltrans at the July 28, 2005 meeting.

Table 7B-1 Size of School Area Signs and Plaques

This table has been edited per CA Supplement policy.

Table 7B-1(CA) Size of School Area Signs and Plaques

This new table has been created for CA sign sizes.

CHAPTER 7C. MARKINGS

Section 7C.03 Crosswalk Markings

In Paragraph 9 first sentence, the text "white" has been changed to "white or yellow" at the second occurrence. Previously, in the CA Supplement this change had been made only at the first occurrence and the second occurrence was omitted due to oversight.

Section 7C.05 Curb Markings for Parking Regulations

Third Paragraph (Option) has been deleted as it conflicts with CVC 21458.

Section 7C.06 Pavement Word and Symbol Markings

Changed reference in Standard to "Figure 7C-101(CA)" from "Figure 3B-20(CA)" since the SHOOL details are essentially the same and it is easy to refer to the figure on next page than in chapter 3B.

CHAPTER 7D. SIGNALS

Section 7D.01 General

Detailed references to sections and figures with topics covered are added to this section.

CHAPTER 7E. CROSSING SUPERVISION

None.

CHAPTER 7F. GRADE-SEPARATED CROSSINGS

None.

PART 8. TRAFFIC CONTROLS FOR HIGHWAY-RAIL GRADE CROSSINGS

CHAPTER 8A. GENERAL

Section 8A.01 Introduction

In paragraph 4, corrected “light rail transit agency or authority” to “railroad agency”, and “highway-light rail transit grade crossing” to “highway-rail grade crossing” at two instances. This paragraph has been rewritten based upon CPUC’s submitted comments and discussion at the June 1, 2006 CTCDC workshop.

Section 8A.02 Use of Standard Devices, Systems, and Practices

The CA Supplement text that replaced Paragraph 2 deletion and started as “The appropriate traffic control system...” has been deleted as it is adequately covered by paragraph 7 (“Before any new highway-rail grade...”).

CHAPTER 8B. SIGNS AND MARKINGS

Section 8B.04 Highway-Rail Grade Crossing Advance Warning Signs (W10 Series)

In the CA Supplement under added text, the first paragraph “The Highway-Rail Grade Crossing Advance Warning (W10 Series) signs shall be placed...” is deleted as it is redundant. The first paragraph in the combined document, as amended, reflects this text.

New Option has been added for using the Number of Tracks sign below the W10-2, W10-3 or W10-4 signs.

Section 8B.05 EXEMPT Highway-Rail Grade Crossing Signs (R15-3, W10-1a)

Text has been revised to clarify more explicitly the colors of the EXEMPT signs and the deletion of R15-3 sign.

Section 8B.06 Turn Restrictions During Preemption

In Paragraph 2 option, the R3-1a and R3-2a Activated Blank-Out signs have been deleted and replaced with R3-1, R3-2 and R5-1 blank-out versions. This change is based on CTCDC’s discussion and recommendation to Caltrans at the December 8, 2004 meeting.

New Support paragraph from Section 4D.13 added. It pertains to pre-emption and ways to prohibit left turns, through turns and right turns.

New Support added for Part 4 reference to preemption.

New Support added for ITE reference to example placement of blank-out sign.

Section 8B.07 DO NOT STOP ON TRACKS Sign (R8-8)

This section has been edited to increase application and improve visibility of these signs per CPUC recommendation.

Section 8B.08 STOP (R1-1) or YIELD (R1-2) Signs at Highway-Rail Grade Crossings

New Guidance added for using the Yield sign as an assembly. This change was initiated by CHP’s Older Californian Traffic Safety Task Force and is based upon CTCDC’s discussion and recommendation to Caltrans at the June 14, 2006 meeting.

Section 8B.12 Emergency Notification Sign (I-13 or I-13a)

The entire section has been deleted (as opposed to only paragraph 2 per the CA Supplement). The CA Supplement text has been rewritten with minor revisions.

Section 8B.17 Low Ground Clearance Highway-Rail Grade Crossing Sign (W10-5)

Sign codes from MUTCD Figure 8B-5 have been added to the appropriate text for W10-14, W10-14a plaques and W10-15 sign.

Section 8B.20 Pavement Markings

In fifth paragraph, the standard text has been revised to clarify that the RXR markings are required only where highway-rail crossing warning devices are installed pursuant to CPUC General Order.

New Guidance paragraph added to clarify that advance markings should be placed adjacent to the W10-1 sign.

The option to omit markings at exempt crossings per CVC 22452 and 22452.5 has been deleted because the CVC provides no such requirements or exceptions for markings. This could have been an error in the Traffic Manual or the CVC references have been now made obsolete.

Section 8B.21 Stop Lines

In first paragraph second sentence, the text "...from the gate..." has been changed to "...in advance of the gate...".

In second paragraph, the word "Double" is deleted to be consistent with the modifications made in Figure 8B-6(CA).

Section 8B.22 Dynamic Envelope Markings

In paragraph 1, text has been deleted to make this option more general.

In last paragraph, the figure reference has been changed to "8B-6(CA)" from "8B-8" to be consistent with the modifications made in Figure 8B-6(CA) and the deletion of Figure 8B-8.

Figure 8B-3 Regulatory Signs

The R3-1a and R3-2a Activated Blank-Out signs have been deleted to be consistent with Section 8B.06.

The NO TURN ON RED (R10-11a) sign is deleted to be consistent with section 2B.45 and 8D.07. The R10-11 sign with the symbolic red ball will be used instead.

The EXEMPT (R15-3) sign is deleted to be consistent with section 8B.05.

Figure 8B-3(CA) Regulatory Signs

This is a new figure that has been added to show the Activated Blank-Out versions of the signs.

The Yield Sign assembly is also new per Section 8B.08 change.

Figure 8B-6(CA) Example of Placement of Warning Signs and Pavement Markings at Highway-Rail Grade Crossings

There have been extensive revisions to this figure as compared to the CA Supplement figure based upon CPUC recommendations. Majority of these changes have been made to reflect the MUTCD Figure 8B-6 details. However, the MUTCD figure does not show enough scenarios to lend itself for field application and contains minor inconsistencies with the California policies. Following are some of these changes:

Four sheets have been consolidated into three.

The double stop lines have been modified to show a single 24" wide stop line.

The optional lane line extensions have been shown in one scenario.

The advance placement distance criteria has been corrected so as not to require an additional 50 ft for the W10-1 sign. Also, this distance criteria has been added for all warning signs shown in the scenarios.

The optional dynamic envelope marking shown in MUTCD Figure 8B-8 has been incorporated into one scenario as this MUTCD figure has been deleted.

The notes have been revised per the changes and section policies and have been reordered per the consolidated sheets.

Sheet 1 has been modified to show the right edge lines so as not to cause confusion for the lane line extensions.

The scenario titles have been modified to better represent the scenario depiction and policy.

Figure 8B-7(CA) Examples of Highway-Rail Grade Crossing Pavement Markings

The figure has been modified to show the right edge line.

Figure 8B-8 Typical Train Dynamic Envelope Pavement Markings

This figure has been deleted as it causes confusion due to omission of various required traffic control devices. Also, dynamic envelope markings are rarely used as depicted in this simplistic figure. The dynamic envelope marking sketch is now incorporated into Figure 8B-6 (CA).

Figure 8B-101(CA) California Warning Signs and Train Station Signs

The figure title has been changed to be consistent with Figure 10C-3 title.

A suffix “(CA)” has been added to all sign codes and the Note at the bottom indicating all sign codes are CA Codes has been deleted.

A note has been added for the W46A(CA) sign.

Table 8B-1 Sign Sizes for Grade Crossing Signs

Various rows of specific signs have been crossed out to be consistent with the sections and figures in the text, which indicated the signs had been deleted for CA application. The EXEMPT sign has been deleted and replaced with other recommended signs.

Table 8B-1(CA) California Sign Sizes for Grade Crossing Signs

This new table has been created for CA sign sizes.

CHAPTER 8C. ILLUMINATION

Section 8C.01 Illumination at Highway-Rail Grade Crossings

New support added for use of delineators at non-illuminated rural grade crossings. This change was initiated by CHP’s Older Californian Traffic Safety Task Force and is based upon CTCDC’s discussion and recommendation to Caltrans at the June 14, 2006 meeting.

CHAPTER 8D. FLASHING-LIGHT SIGNALS, GATES, AND TRAFFIC CONTROL SIGNALS

Section 8D.02 Flashing-Light Signals, Post-Mounted

The CA Supplement had deleted the second paragraph of this MUTCD section which was an option to use bells or other audible devices and replaced it with a Standard, requiring bells or other audible devices. This combined document section now reverts back to MUTCD by deleting the CA Supplement text and un-deleting the MUTCD text, leaving the usage of bells or other audible devices as only an option. The reason for this is concerns expressed by the CTCDC members at the 6/9/05 workshop and the fact that standards on this topic are under development at both CPUC and AREMA. CPUC has recommended this action for the interim.

Section 8D.05 Four-Quadrant Gate Systems

Paragraph 9, standard text “Timed Exit Gate ...” is new.

Paragraphs 13 thru 17 are deleted per CPUC recommendation.

Section 8D.07 Traffic Control Signals at or Near Highway-Rail Grade Crossings

First Support reference to Section 4D.13 is deleted as the reference is included elsewhere within this section of the MUTCD text.

PART 9. TRAFFIC CONTROL FOR BICYCLE FACILITIES

CHAPTER 9A. GENERAL

Section 9A.03 Definitions Relating to Bicycles

Definitions for Class I, II & III Bikeways have been revised to more closely reflect the definitions in the Streets and Highway Code.

Section 9A.06 Placement Authority

CVC 21212 reference for youth bicycle helmets is deleted as it is not a traffic control device.

CHAPTER 9B. SIGNS

Section 9B.01 Application and Placement of Signs

The Support has been revised to reflect the Figure 9B-101 split into two separate figures, 9B-2(CA) and 9B-4(CA), to match the MUTCD figures.

Section 9B.04 Bicycle Lane Signs (R3-17, R3-17a, R3-17b)

The CA Supplement Standard (“shall”) requiring installation of Bike Lane (R81(CA)) signs at every arterial street and at ½ mile intervals has been lowered to a Guidance (“should”). Please note that the CA Supplement Standard (“shall”) requiring installation of Bike Lane (R81(CA)) signs at the beginning of each designated Bike Lane and at all major changes in direction has been retained without any change.

New Support reference added for Figure 9B-2(CA) and R81(CA), R81A(CA) and R81B(CA) signs.

Section 9B.07 NO MOTOR VEHICLES Sign (R5-3)

The R5-3 sign and policy which was deleted in the CA Supplement has been adopted for use.

Section 9B.10 Bicycle Regulatory Signs (R9-5, R9-6, R10-3)

The R9-5 sign and policy which was deleted in the CA Supplement has been adopted for use. New option statement has been added for the R62C(CA) sign.

Section 9B.20 Bicycle Route Signs (M1-8, M1-9)

New Support reference added for Figure 9B-4(CA) and SG45(CA) and S17(CA) signs.

Section 9B.22 Bicycle Parking Area Sign (D4-3)

The G93C(CA) sign has been added as an option to the D4-3 sign.

Figure 9B-2 Regulatory Signs for Bicycle Facilities

The R3-17, R3-17a and R3-17b signs are deleted to be consistent with Section 9B.04.

The R5-3 sign has been “un-deleted” to be consistent with Section 9B.07 modification.

The R9-5 sign has been “un-deleted” to be consistent with Section 9B.10 modification.

Figure 9B-2(CA) California Regulatory Signs for Bicycle Facilities

This new figure is based on CA Supplement Figure 9B-101, which was split into two separate figures.

Figure 9B-4(CA) California Guide Signs for Bicycle Facilities

This new figure is based on CA Supplement Figure 9B-101, which was split into two separate figures.

The Bike PARKING (G93C(CA)) sign sketch has been added to this figure. It was previously omitted due to an oversight.

Figure 9B-5 Example of Signing for the Beginning and End of a Designated Bicycle Route on a Shared-Use Path

Suggested using the R44A(CA) sign as an alternate to the R5-3 sign and to be consistent with Section 9B.07.

Figure 9B-7 Examples of Signing and Markings for Shared-Use Paths

Suggested using the R44A(CA) sign as an alternate to the R5-3 sign and to be consistent with Section 9B.07.

Table 9B-1 Minimum Sign Sizes for Bicycle Facilities

Various rows of specific signs have been crossed out to be consistent with the sections and figures in the text, which indicated the signs had been deleted for CA application.

Table 9B-1(CA) California Minimum Sign Sizes for Bicycle Facilities

This new table has been created for CA sign sizes.

CHAPTER 9C. MARKINGS

Section 9C.03 Marking Patterns and Colors on Shared-Use Paths

New Support added based on HDM 1003.1(3) describing conditions under which centerline markings are beneficial.

Section 9C.04 Markings For Bicycle Lanes

The CA Supplement had changed the phrase “at least 100 feet” to “30 to 60 m (100 to 200 ft)” under second Guidance, paragraph 8. This change is being “undone” as it was mistakenly applied from the HDM Figure 1004.3 Note to the through lane becoming a right turn only lane situation, whereas it applied in the HDM to only a normal situation where vehicles were permitted to make right turns from an ongoing through lane.

Support paragraph on Class III Bikeways (Bike Route) which was mistakenly placed in Section 9C.03 of the CA Supplement has now been moved to this section.

Under Bicycle Lane Markings for Class II Bikeway (Bike Lane) sub-heading, in second Guidance second sentence, the words “Where right turns are permitted...” have been changed to “Where there is no right turn only lane and right turns are permitted...” for clarity.

A new option for Bicycle Lane Markings for Class II Bikeway (Bike Lane) has been added to clarify that physical barrier may be used to convert a Class II Bikeway (Bike Lane) to Class I Bikeway (Bike Path).

Under sub-heading Bicycle Lane Treatment at Right Turn Only Lanes, the first three paragraphs of the CA Supplement have been deleted. They pertained to dropping of the bike lane markings when approaching intersections. This action retains the MUTCD dotted line option when approaching intersections. This action was taken based upon June 1, 2006 CTCDC workshop discussion.

Section 9C.05 Bicycle Detector Symbol

New Support reference added for Section 4D.105(CA).

Section 9C.101(CA) Barrier Posts on Class I Bikeways

New paragraph added under Support to encourage use of signs or redesigning path entry before installing barrier posts.

Section 9C.103(CA) Shared Roadway Bicycle Marking

This new section has been added per California Traffic Control Devices Committee (CTCDC) recommendation and Caltrans TOPD 05-10 dated 9/12/05, which became effective on 9/12/05 for shared roadway bicycle marking.

The Standard topic has been clarified to clearly indicate that the shared roadway bicycle marking is applicable on Class III Bikeway (Bike Route) and Shared Roadway (No Bikeway Designation), not just the Shared Roadway (No Bikeway Designation) as the name of the marking would indicate.

Figure 9C-3(CA) Examples of Bicycle Lane Treatments at Right Turn Only Lanes

The figure number has been changed to better match the MUTCD Figure. The title has been modified to show plural depiction of the scenarios. The two scenarios shown in MUTCD Figures 9C-3 and 9C-4 have been deleted from this figure to reduce duplicity and confusion. In the CA Supplement this was Figure 9C-103.

Figure 9C-5(CA) Example of Pavement Markings for Bicycle Lanes on a Two-Way Street

Deleted the R3-17 sign in this figure and suggested using the R81(CA) sign to be consistent with Section 9B.04.

Figure 9C-6 Example of Optional Word and Symbol Pavement Markings for Bicycle Lanes

Deleted the Directional Arrow and Bicycle symbol grids and the BIKE LANE word message grids to be consistent with Figure 9C-6(CA).

Figure 9C-6(CA) Example of Optional Word and Symbol Pavement Markings for Bicycle Lanes

The title and figure number has been changed to better match the MUTCD Figure. In the CA Supplement this was Figure 9C-105. No changes have been made to the figure itself.

Figure 9C-101(CA) Marking Details for Bicycle Lanes

The title has been changed for better description.

In Detail 39A, the dimension “60 m (200 ft)” has been corrected to “30 m (100 ft) to 60 m (200 ft)” to be consistent with Section 9C.04.

The figure has been redrawn to somewhat better scale than before for more accurate depiction.

Figure 9C-102(CA) Examples of Bicycle Lane Treatment Where Vehicle Parking is Prohibited/Permitted

The bike lane dimensions in this figure have been modified to address more scenarios and to be consistent with HDM Figure 1003.2A.

In the top figure, the text “1.2 m (4 ft) Minimum” has been changed to “1.2 m (4 ft) Minimum Without Gutter” and “1.5 m (5 ft) Minimum With Gutter”.

In the bottom figure on the upstream side, a new note has been added as “3.3m (11 ft) Minimum for Rolled Curb” and “3.6m (12 ft) Minimum for Vertical Curb”.

The previous note has been deleted, as it is not needed since this figure is now consistent with HDM Figure 1003.2A.

The R7-9a sign has been added as an alternative to the R26(CA) & R81(CA) combination.

Figure 9C-103(CA) Example of Bicycle Lane Treatment Through an Interchange

The title and figure number have been changed. In the CA Supplement this was Figure 9C-104. Changes to the figure are limited to correcting the “CA Code” to “(CA)” for the R81 sign. .

Figure 9C-104(CA) Shared Roadway Bicycle Marking

This new figure has been added per California Traffic Control Devices Committee (CTCDC) recommendation and Caltrans TOPD 05-10 dated 9/12/05, which became effective on 9/12/05 for shared roadway bicycle marking.

Figure 9C-106(CA) Examples of Centerline Markings for Shared-Use Paths (CA Supplement)

This CA Supplement figure has been deleted as it conflicts with MUTCD Figure 9C-2. The yellow stripe at the posts is 1 ft clearance from the outside of the post in the MUTCD figure, versus 1 ft clearance from the centre of the post in the CA Supplement Figure. The 4 in. marking will not be feasible per the CA Supplement figure once the post/obstruction starts approaching 2 ft dia/width.

CHAPTER 9D. SIGNALS

Section 9D.01 Application

New Support reference added for sections 4C.103(CA), 4D.104(CA) and 4D.105(CA).

PART 10. TRAFFIC CONTROLS FOR HIGHWAY-LIGHT RAIL TRANSIT GRADE CROSSINGS

CHAPTER 10A. GENERAL

Section 10A.01 Introduction

Paragraph 7 (“A diagnostic team...”) has been rewritten based upon CPUC’s submitted comments and discussion at the June 1, 2006 CTCDC workshop.

CHAPTER 10B. HIGHWAY-LIGHT RAIL TRANSIT GRADE CROSSING CONTROL SYSTEMS

None.

CHAPTER 10C. SIGNS, ILLUMINATION, AND MARKINGS

Section 10C.02 Highway-Rail Grade Crossing (Crossbuck) Sign (R15-1) and Number of Tracks Sign (R15-2)

Paragraph 6 option to use Number of Tracks sign when automatic gates are present is deleted so as not to conflict with the (CA Supplement) amended Standard topic which requires this sign for 2 or more tracks regardless of whether the gates are present or not.

Section 10C.09 Light Rail Transit-Activated Blank-Out Turn Prohibition Signs (R3-1a, R3-2a)

In Paragraph 1, Support, the R3-1a and R3-2a Activated Blank-Out signs have been deleted and replaced with R3-1, R3-2 and R5-1 blank-out versions. Also, a sentence is added to Paragraph 3 option regarding the R3-1, R3-2 and R5-1 signs. This change is based on CTCDC’s discussion and recommendation to Caltrans at the December 8, 2004 meeting.

The NO TURN ON RED (R10-11a) sign is deleted to be consistent with section 2B.45 and 8D.07. The R10-11 sign with the symbolic red ball will be used instead.

Under Option, second paragraph, the adjective “steady” is added before the text “red indication” to be clear and explicit so that it is not misinterpreted as “flashing”. All occurrences of “red indications” in the CA MUTCD are now preceded with either “flashing” or “steady” adjective for clarity. This action further reinforces NTSB’s recommendation to not allow flashing red indications when conflicting with a train.

Section 10C.10 EXEMPT Highway-Rail Grade Crossing Sign (R15-3, W10-1a)

This section has been deleted per CPUC recommendation.

Section 10C.15 Highway-Rail Grade Crossing Advance Warning Signs (W10 Series)

The Support reference for Figure 10C-101 has been changed to Figure 10C-3(CA) to be consistent with the change in figure number.

Section 10C.20 Light Rail Transit Station Sign (I-12)

The G96(CA) and G96A(CA) signs and Figure 10C-3(CA) reference have been added to paragraph text. The CA Supplement included these signs in Table 2D-101 and had reference to Section 10C.20.

Section 10C.21 Emergency Notification Sign(I-13 or I-13a)

This section has been deleted and replaced with the standard text paragraph based upon CPUC’s submitted comments and discussion at the June 1, 2006 CTCDC workshop.

Figure 10C-2 Regulatory Signs

The R3-1a and R3-2a Activated Blank-Out signs have been deleted to be consistent with Section 10C.09.

The NO TURN ON RED (R10-11a) sign is deleted to be consistent with section 2B.45, 8D.07 and 10C.09. The R10-11 sign with the symbolic red ball will be used instead.

The EXEMPT (R15-3) sign is deleted to be consistent with section 10C.10.

Figure 10C-2(CA) Regulatory Signs

This is a new figure that has been added to show the Activated Blank-Out versions of the signs.

Figure 10C-3 Warning Signs and Light Rail Station Sign

The EXEMPT (W10-1a) sign is deleted to be consistent with section 10C.10.

Figure 10C-3(CA) California Warning Signs and Light Rail Station Signs

The title and figure number has been changed to better match the MUTCD Figure. In the CA Supplement this was Figure 10C-101. The G96(CA) and G96A(CA) signs have been added to this figure..

Figure 10C-8 Typical Light Rail Transit Vehicle Dynamic Envelope Pavement Markings

This figure has been deleted as it causes confusion due to omission of various required traffic control devices. Also, dynamic envelope markings are rarely used as depicted in this simplistic figure. The dynamic envelope marking sketch is now incorporated into Figure 8B-6 (CA).

**CHAPTER 10D. HIGHWAY-LIGHT RAIL TRANSIT ACTIVE TRAFFIC CONTROL
GRADE CROSSING SYSTEMS**

Section 10D.04 Four-Quadrant Gate Systems

Paragraph 9 standard text prohibiting timed exit gate operating mode is new and is added per CPUC's submitted comments and June 1, 2006 CTCDC workshop.

Paragraphs 12 through 17 have been deleted per CPUC's submitted comments.

Section 10D.06 Highway Traffic Signal Preemption Turning Restrictions

Under first Standard, the adjective "steady" is added before the text "red indication" to be clear and explicit so that it is not misinterpreted as "flashing". All occurrences of "red indications" in the CA MUTCD are now preceded with either "flashing" or "steady" adjective for clarity. This action further reinforces NTSB's recommendation to not allow flashing red indications when conflicting with a train. Support reference added for preemption per Part 4.

Figure 10D-1 Examples of Light Rail Transit Signals

The "Flashing" operation, as shown in 4 occurrences in the Three-Lens Signal column, has been modified to make it Optional to allow the use of solid triangular display. This action was taken based upon June 1, 2006 CTCDC workshop discussion.

APPENDIX

New Appendix A101(CA) has been added to include the California Sign Chart.

New Appendix A102(CA) has been added for the list of traffic control device related acronyms and abbreviations.

New Appendix A103(CA) has been added for the list web sites related to traffic control devices.