

PART 2

SIGNS

CHAPTER 2A. GENERAL

Section 2A.01 Function and Purpose of Signs

Support:

- 01 This Manual contains Standards, Guidance, and Options for the signing of all types of highways, and site roadways open to public travel (refer to definition in Section 1C.02). The functions of signs are to provide regulations, warnings, and guidance information for road users. Words, symbols, and arrows are used to convey the messages. Signs are not typically used to confirm rules of the road (see Paragraph 4 of this Section).
- 02 Detailed sign requirements are located in the following Chapters of Part 2:
- Chapter 2B—Regulatory Signs, Barricades, and Gates
 - Chapter 2C—Warning Signs and Object Markers
 - Chapter 2D—Guide Signs for Conventional Roads
 - Chapter 2E—Guide Signs for Freeways and Expressways
 - Chapter 2F—Toll Road Signs
 - Chapter 2G—Preferential and Managed Lane Signs
 - Chapter 2H—General Information Signs
 - Chapter 2I—General Service Signs
 - Chapter 2J—Specific Service Signs
 - Chapter 2K—Tourist-Oriented Directional Signs
 - Chapter 2L—Changeable Message Signs
 - Chapter 2M—Recreational and Cultural Interest Area Signs
 - Chapter 2N—Emergency Management Signs
- 03 Definitions and acronyms that are applicable to signs are provided in Chapter 1C.

Guidance:

- 04 *Permanent signs should not be used on a frequent basis to confirm rules of the road or statutes. Instead, when determined necessary to advise of new regulations as part of an educational campaign, temporary signs or messages should be used instead of permanent signs. These temporary signs or messages should be used sparingly and only at strategic locations, and should be considered only as a supporting element of a larger educational campaign rather than as the primary source of notification. If engineering judgment determines a need for a permanent sign to distinguish between differing requirements of similar statutes in different jurisdictions, then a sign should be located in the vicinity of the jurisdictional boundary, and should be located away from warning, directional, and higher-priority regulatory signs, so as not to contribute to sign clutter (see Section 2A.20).*

Section 2A.02 Standardization of Application

Support:

- 01 It is recognized that urban traffic conditions differ from those in rural environments, and in many instances signs are applied and located differently. Where pertinent and practical, this Manual sets forth separate recommendations for urban and rural conditions.
- 02 Low-volume rural roads typically include access to rural residences, agricultural, recreational, resource management and development (such as mining, logging, and grazing), and local roads in rural areas. On low-volume rural roads, the use of traffic control devices is limited to essential information regarding regulation, warning, and guidance. On low-volume rural roads, it is important to consider the needs of unfamiliar road users for occasional, recreational, and commercial transportation purposes.

Guidance:

- 03 *Signs should be used only where justified by engineering judgment or studies, as provided in Section 1D.03.*
- 04 *Results from traffic engineering studies of physical and traffic safety or operational factors should indicate the locations where signs are deemed necessary or desirable.*

05 *Roadway geometric design and sign application should be coordinated so that signing can be effectively placed to give the road user any necessary regulatory, warning, guidance, and other information.*

Standard:

06 **Each standard sign (see Paragraph 1 of Section 2A.04) shall be displayed only for the specific purpose as prescribed in this Manual. Before any new highway, site roadway open to public travel (see definition in Section 1C.02), detour, or temporary route is opened to public travel, all necessary signs shall be in place. Signs required by road conditions or restrictions shall be removed when those conditions cease to exist or the restrictions are withdrawn.**

Section 2A.03 Classification of Signs

Standard:

01 **Signs shall be defined by their function as follows:**

- A. **Regulatory signs give notice of traffic laws or regulations.**
- B. **Warning signs give notice of a situation that might not be readily apparent.**
- C. **Guide signs show route designations, destinations, directions, distances, services, points of interest, and other geographical, recreational, or cultural information.**

Support:

01a **Construction signs can be Warning, Regulatory, or Guide signs. Construction signs are included in Part 6.**

02 **Barricades are described in Sections 2B.75 and 6K.07.**

03 **Gates are described in Section 2B.76.**

04 **Object markers are described in Section 2C.70.**

Section 2A.04 Design of Signs

Support:

01 **This Manual shows many standard signs and object markers approved for use on streets, highways, bikeways, and pedestrian crossings. Standard signs and object markers have a standardized design, shape, background, and legend as shown in this Manual.**

02 **In the provisions for individual standard signs and object markers, the general appearance of the legend, color, and size are shown in the accompanying tables and illustrations, and are not always detailed in the text.**

03 **Detailed drawings of standard signs, object markers, alphabets, symbols, and arrows (see Figure 2D- 3) are contained in the “Standard Highway Signs” publication and the California Sign Specifications. Section 1A.05 contains information regarding this publication.**

04 **The basic requirements of a sign are that it be legible to those for whom it is intended and that it be understandable in time to allow for a proper response. Desirable attributes include:**

- A. **High visibility by day and night; and**
- B. **High legibility (adequately-sized letters, symbols, or arrows, and a short legend for quick comprehension by a road user approaching a sign).**

05 **Standardized colors and shapes are specified so that the several classes of traffic signs can be promptly recognized. Simplicity and uniformity in design, position, and application are essential for a sign to be effective.**

Standard:

06 **The term legend shall include all word messages and symbol and arrow designs that are intended to convey specific meanings.**

07 **Uniformity in design shall include shape, color, dimensions, legends, letter style, borders, and illumination or retroreflectivity.**

08 **Standardization of these designs does not preclude further improvement by minor modifications to the orientation of symbols (see Section 2A.09), width of borders, or layout of word messages, but all shapes and colors shall be as indicated.**

09 **All symbols (see Section 2A.09) shall be unmistakably similar to, or mirror images of, the adopted symbol signs, all of which are shown in the “Standard Highway Signs” publication (see Section 1A.05). Symbols and colors shall not be modified unless otherwise provided in this Manual. All symbols, colors, or other design features for signs not shown in the “Standard Highway Signs” publication (see Section 1A.05) shall follow the procedures for experimentation and change described in Chapter 1B.**

- 10 **Where a standard word message is applicable, the wording shall be as provided in this Manual.**
- 11 **In situations where word messages are necessary other than those provided in this Manual (see Paragraph 15 of this Section), the signs shall be of the same shape and color as standard signs of the same functional type.**
- 12 **Where the legend of a standard sign is a symbol or a combination of a symbol and words, an alternative word legend shall not be allowed in place of the symbol, except as otherwise provided in this Manual.**
- 13 **Where a standard sign provided in this Manual or the “Standard Highway Signs” publication (see Section 1A.05) is applicable, an alternative legend sign or alternative sign design shall not be allowed in place of the standardized legend or design except as provided in this Manual.**
- 14 **Where a standard sign provided in this Manual or the “Standard Highway Signs” publication (see Section 1A.05) is applicable, but the legend is variable, such as for destination names, an alternative sign design or dimensions shall not be allowed in place of the standardized design for the non-variable elements except as provided in this Manual.**

Option:

- 15 ~~State and local highway agencies~~ Caltrans (in accordance with CVC § 21400) and owners of site roadways open to public travel may develop special word legend signs in situations where engineering judgment determines roadway conditions make it necessary to provide road users with additional regulatory, warning, or guidance information, such as when road users need to be notified of special regulations or warned about a situation that might not be readily apparent. Unlike colors that have not been assigned or symbols that have not been approved for signs, new word legend signs may be used without the need for experimentation.

Standard:

- 15a **Except as noted in the Option below, in accordance with CVC § 21401, highway agencies shall not develop word message signs and plaques. Only word message signs and plaques conforming to FHWA's “Standard Highway Signs” publication or the Caltrans standards and specifications shall be placed on streets and highways. Any new word message signs or plaques that do not conform to these standards must be submitted to the California Traffic Control Devices Committee (CTCDC) for possible inclusion in the CA MUTCD and adoption in the Caltrans standards and specifications.**

Option:

- 15b **Local agencies may develop place/facility name or day, date, time portion of the word message on signs to notify road users of special events/circumstances or to warn road users of a situation that might not be readily apparent. Unlike symbol signs and colors, these place/facility name or day, date, time modified word message signs may be used without the need for experimentation.**

Support:

- 16 The message conveyed by some special word legend signs might be unclear to the road user. Although experimentation is not required for such word legends, they might still warrant an evaluation to determine comprehension or possible misinterpretation of the intended message by the road user.
- 17 Scanning graphics are graphics designed for scanning by machine, and include bar codes, quick-response (QR) codes or other matrix bar-code formats, or similar graphics.

Standard:

- 18 **Unless otherwise provided in this Manual for a specific sign or as provided in Paragraph 19 of this Section, telephone numbers, Internet addresses, e-mail addresses, domain names, uniform resource locators (URL), metadata tags (“hash-tags”), and scanning graphics (see Paragraph 17 of this Section) for the purpose of obtaining information (other than those for maintenance or inventory purposes per the provisions of Paragraphs 21 through 23 of this Section) shall not be displayed on any sign, plaque, sign panel, or changeable message sign.**

Option:

- 19 Internet addresses, e-mail addresses, telephone numbers, scanning graphics, or other graphics for the purpose of conveying information may be displayed on the face of signs, plaques, sign panels, and changeable message signs that are oriented away from or otherwise not readily visible to operators of motor vehicles but rather are intended for viewing only by pedestrians, occupants of parked vehicles, and driving automation systems.

Standard:

- 20 **Pictographs (see definition in Section 1C.02) shall not be displayed on signs except as specifically provided in this Manual for a particular type of sign. Pictographs shall be simple, dignified, and devoid of any advertising and shall not contain any scanning graphics (see Paragraph 17 of this Section) for the purpose of conveying information. When used to represent a political jurisdiction (a State, county, or municipal corporation) the pictograph shall be the official designation adopted by the jurisdiction, except as provided otherwise in this**

Manual. When used to represent any other type of jurisdiction, the pictograph shall be the official designation adopted by the jurisdiction. When used to represent a college or university, the pictograph shall be the official seal adopted by the institution. College or university pictographs shall not include pictorial representations of university or college programs, or athletic mascots.

- 21 No items other than official traffic control signs, inventory stickers or decals, sign installation dates, manufacturer name, sign sizes, sign designations, anti-vandalism stickers, inventory or maintenance codes, and maintenance-related scanning graphics shall be mounted on the back of a sign.

Option:

- 22 The date of fabrication, sign designation, sign size, and/or manufacturer name may be displayed on the front of a sign face in accordance with the provisions of Paragraph 23 of this Section.

Standard:

- 23 If displayed on the sign face, the date of fabrication, sign designation, sign size, manufacturer name, or similar maintenance and inventory information shall be completely within the border or inset along the bottom edge of the sign. The letter height or scanning graphic shall not exceed $\frac{3}{4}$ of the width of the border or inset or, if no border is used, shall not exceed 1.75 inches and shall be within 2 inches of the edge of the sign. The color of the lettering within the border shall be the same as the color of the sign background. The color of the lettering or scanning graphic within the inset shall be the same as the color of the sign border. For changeable message signs or blank-out signs, such information, if displayed, shall be embossed in a non-contrasting color in the housing of the sign.

Support:

- 24 Refer to FHWA's List of Known Errors for error in Paragraph 23 text. Refer to Section 1A.04 for more details.

Guidance:

- 25 If no border is used, the letter height or scanning graphic should be 11% of the legend.

Section 2A.05 Shapes

Standard:

- 01 Particular shapes, as shown in Table 2A-1, shall be used exclusively for specific signs or a series of signs, unless otherwise provided in this Manual for a particular sign or class of signs.
- 02 The Crossbuck is a shape exclusive to the Grade Crossing (R15-1) sign and shall not be obscured by mounting a different shape sign on the back of the Crossbuck (see Section 8B.03).

Guidance:

- 03 Shapes that are exclusive to a particular sign (such as an octagon for STOP, a pennant for NO PASSING ZONE, or a circle for Railroad Advance) should not be obscured by another sign mounted on the back of the same assembly protruding or extending beyond the edge of the sign with the exclusive shape. The following methods should be considered in lieu of mounting a sign on the back of another sign that would obscure the exclusive shape of the sign:
- A. Install the signs on separate mountings to maintain the exclusive shape.
 - B. Increase the size of the sign with the exclusive shape so the sign installed on the back does not obscure its shape.
 - C. Increase the mounting height of the sign with the exclusive shape to allow the installation of a back-mounted sign below the bottom edge while still ensuring the minimum required mounting height for the lower sign.
- 04 Where the lateral space available in which to install a standard sign is constrained, such as mounting on a narrow median barrier or adjacent to a retaining wall, the following methods should be considered to maintain the shape of the sign:
- A. Angle the sign up to 45 degrees toward the roadway while still maintaining adequate legibility.
 - B. Install the sign at a different location that still provides adequate advance warning, supplementing the sign with a Distance plaque (see Section 2C.61), if appropriate
 - C. Reduce the size of the sign, but supplement it with a duplicate sign on the opposite side of the roadway (see Section 2A.11).
 - D. In addition to either angling or reducing the size of the sign, supplement it with a duplicate warning sign and Distance plaque at an upstream location.
 - E. Mount the sign asymmetrically on the sign support, such as when the support is mounted on a bridge parapet or railing, such that the edge of the sign does not overhang the roadway, shoulder, or other areas used by

bicyclists or pedestrians.

Option:

05 Where the shape of the sign cannot be maintained due to lateral constraints, the following methods may be considered:

- A. For warning signs or other types of signs displayed in a horizontally-oriented rectangle, the legend may be displayed in a vertically-oriented rectangle.
- B. When mounted overhead, the word legend for a standard warning sign may be displayed in a horizontally-oriented rectangle.

Support:

06 Provisions for mounting height of signs that overhang any portion of the traveled way are contained in Section 2A.15.

07 Provisions for lateral offset are contained in Section 2A.16.

Standard:

08 **Modifications to sign shapes, such as cutting off the left and right points of a diamond, shall not be allowed.**

Option:

09 Where the methods described in Paragraph 3 of this Section are impracticable, the legend of the warning sign may be displayed in a vertically-oriented rectangle.

Section 2A.06 Colors

Standard:

01 **The colors to be used on signs and their specific uses on signs shall be as provided in the applicable Sections of this Manual. The color coordinates and values shall be as described in 23 CFR, Part 655, Subpart F, Appendix.**

02 **Colors (see Section 1D.05) shall be consistent across the face of a sign or a sign panel. Color gradients (smooth or defined gradual transitions either within a color or transition to another color) shall not be allowed, except as specifically provided in Section 2J.03 for business identification sign panels.**

Support:

03 Common uses of sign colors are shown in Table 2A-2. Color schemes on specific signs are shown in the illustrations located in each applicable Chapter.

04 Whenever white is specified in this Manual or in the “Standard Highway Signs” publication (see Section 1A.05) as a color, it is understood to include silver-colored retroreflective coatings or elements that reflect white light.

05 The colors coral and light blue are being reserved for uses that will be determined in the future by the Federal Highway Administration.

06 Information regarding color coding of destinations on guide signs, including community wayfinding signs, is contained in Chapter 2D.

Option:

07 The approved fluorescent version of the standard red, yellow, green, or orange color may be used as an alternative to the corresponding standard color.

08 *The fluorescent version of red, yellow, green or orange colors provide higher conspicuity than the standard colors, especially during twilight.*

Section 2A.07 Dimensions

Support:

01 The “Standard Highway Signs” publication (see Section 1A.05) prescribes design details for different sizes of each sign or plaque depending on the type of traffic facility, including bikeways. Smaller sizes are designed to be used on bikeways and some other off-road applications. Larger sizes are designed for use on freeways and expressways, and can also be used in oversized applications to enhance road user safety and convenience on other facilities, especially on multi-lane divided highways and on undivided highways having five or more lanes of traffic and/or high speeds. The intermediate sizes are designed to be used on other highway types. Minimum sizes of signs and plaques for specific applications are prescribed in the various sign size tables in each Chapter of this Manual.

Standard:

02 **The sign dimensions prescribed in the sign size tables in the various Parts and Chapters in this Manual and in the “Standard Highway Signs” publication (see Section 1A.05) and Caltrans’ California Sign Specifications shall be**

used unless engineering judgment determines that other sizes are appropriate in accordance with the following. Except as provided in Paragraph 3 of this Section, where engineering judgment determines that sizes smaller than the prescribed dimensions are appropriate for use, the sign dimensions shall not be less than the minimum dimensions specified in this Manual. The sizes shown in the Minimum columns that are smaller than the sizes shown in the Conventional Road columns in the various sign size tables in this Manual shall only be used on low-speed roadways, alleys, site roadways open to public travel (refer to definition in Section 1C.02), and on low-volume rural roads with operating speeds of 30 mph or less; and only where the reduced legend size would be adequate for the regulation or warning or where physical conditions preclude the use of larger sizes.

Option:

- 03 For alleys with restrictive physical conditions and vehicle use that limits installation of the Minimum size sign (or the Conventional Road size sign if no Minimum size is shown), both the sign height and the sign width may be decreased by up to 6 inches.

Support:

- 03a Refer to FHWA's List of Known Errors for error in Paragraph 3 text. Refer to Section 1A.04 for more details.

Guidance:

- 04 *The sizes shown in the Freeway and Expressway columns in the various sign size tables in this Manual should also be used for other higher-speed applications on conventional roads, based upon engineering judgment, to provide larger signs for increased visibility and recognition.*
- 05 *The sizes shown in the Oversized columns in the various sign size tables in this Manual should be used for those special applications where speed, volume, or other factors result in conditions where increased emphasis, improved recognition, or increased legibility is needed, as determined by engineering judgment or study.*
- 06 *Except as provided in Paragraph 7 of this Section, and where specifically prohibited in this Manual, increases above the minimum prescribed sizes should be used where greater legibility or emphasis is needed. If signs larger than the prescribed sizes are used, the overall sign dimensions should be increased in 6-inch increments.*

Standard:

- 07 **Where a maximum allowable sign size is prescribed, increases in sign size above the maximum size shall not be allowed.**
- 08 **Where engineering judgment determines that sizes that are different from the minimum prescribed dimensions are appropriate for use, standard shapes and colors shall be used. Standard proportions shall be retained as much as practicable.**

Guidance:

- 09 *Except where specifically prohibited in this Manual, when supplemental plaques are installed with larger-sized signs, a corresponding increase in the size of the plaque and its legend should also be made. The resulting plaque size should be approximately in the same relative proportion to the larger-sized sign as the conventional-sized plaque is to the conventional-sized sign.*
- 10 *At intersections where the left-turn lane treatment results in channelized offset left-turn lanes (e.g., a parallel or tapered left-turn lane between two medians), the size of regulatory signs, if used, should be of the next higher roadway classification, if feasible, as shown in Table 2B-1 and 2B-1(CA).*

Section 2A.08 Word Messages

Standard:

- 01 **Except as otherwise provided in this Manual, all word messages shall be aligned horizontally across a sign, reading left to right.**
- 02 **Except as provided in Section 2A.04, all word messages shall use standard wording as shown in this Manual and in the “Standard Highway Signs” publication (see Section 1A.05).**
- 03 **All sign lettering, numerals, and other characters shall be of the Standard Alphabets as provided in the “Standard Highway Signs” publication (see Section 1A.05), unless otherwise provided in this Manual.**
- 04 **The sign lettering for names of places, streets, and highways shall be composed of a combination of lower-case letters with initial upper-case letters. The sign lettering for other legends shall be composed of upper-case letters, unless otherwise provided in this Manual for a particular sign or type of message.**
- 05 **Except as provided in Chapter 2E of this Manual, when a mixed-case legend is used, the nominal loop height**

of the lower-case letters shall be $\frac{3}{4}$ of the height of the initial upper-case letter.

- 06 **The unique letter forms for each of the Standard Alphabet series shall not be stretched, compressed, warped, or otherwise manipulated.**

Support:

- 07 Section 2D.03 contains information regarding the acceptable methods of modifying the length of a word for a given letter height and series.

Guidance:

- 08 *Word messages should be as brief as practical to convey a clear, simple meaning, and the lettering should be large enough to provide the necessary legibility distance. A minimum specific ratio of 1 inch of letter height per 30 feet of legibility distance should be used.*

- 09 *Abbreviations (see Section 1D.08) should be kept to a minimum, except as otherwise prescribed in this Manual.*

- 10 *Word messages should not contain periods, apostrophes, question marks, ampersands, or other punctuation or characters that are not letters, numerals, or hyphens unless necessary to avoid confusion.*

Support:

- 11 Diacritical marks on words or names that are adapted to English are not normally needed on signs for comprehension or navigational purposes.

Option:

- 12 A legend in a secondary language, in addition to English, may be displayed on the face of signs, plaques, sign panels, and changeable message signs that are oriented away from or otherwise not readily visible to operators of motor vehicles, but rather are intended for viewing only by pedestrians and occupants of parked vehicles.

Guidance:

- 13 *The solidus (slanted line or forward slash) is intended to be used for fractions only and should not be used to separate words on the same line of legend. Instead, a hyphen should be used for this purpose, such as "TRUCKS - BUSES."*

Standard:

- 14 **Fractions shall be displayed with the numerator and denominator diagonally arranged about the solidus. The overall height of the fraction is measured from the top of the numerator to the bottom of the denominator, each of which is vertically aligned with the upper and lower ends of the solidus. The overall height of the fraction shall be determined by the height of the numerals within the fraction, and shall be 1.5 times the height of an individual numeral within the fraction.**

- 15 **Except as otherwise provided in this Manual, distances shall be displayed on signs using fractions of a mile rather than decimals.**

Support:

- 16 The "Standard Highway Signs" publication (see Section 1A.05) contains details regarding the layouts of fractions on signs.

Guidance:

- 17 *When initials are used to represent an abbreviation for separate words (such as "U S" for a United States route), the initials should be separated by a space of between $\frac{1}{2}$ and $\frac{3}{4}$ of the letter height of the initials.*

- 18 *When an Interstate route is displayed in text form instead of using the route shield, a hyphen should be used for clarity, such as "I-50."*

Support:

- 19 Letter height is expressed in terms of the height of an upper-case letter. For mixed-case legends (those composed of an initial upper-case letter followed by lower-case letters), the height of the lower-case letters is derived from the specified height of the initial upper-case letter based on a prescribed ratio. Letter heights for mixed-case legends might be expressed in terms of both the upper- and lower-case letters, or in terms of the initial upper-case letter alone. When the height of a lower-case letter is specified or determined from the prescribed ratio, the reference is to the nominal loop height of the letter. The term loop height refers to the portion of a lower-case letter that excludes any ascending or descending stems or tails of the letter, such as with the letters "d" or "q." The nominal loop height is equal to the actual height of a non-rounded lower-case letter whose form does not include ascending or descending stems or tails, such as the letter "x." The rounded portions of a lower-case letter extend slightly above and below the baselines projected from the top and bottom of such a non-rounded letter so that the appearance of a uniform letter height within a word is achieved. The actual loop height of a rounded lower-case letter is slightly greater than the nominal loop height and this

additional height is excluded from the expression of the lower-case letter height.

Section 2A.09 Symbols

Standard:

- 01 **Symbol designs shall in all cases be unmistakably similar to those shown in this Manual, and in the “Standard Highway Signs” publication (see Section 1A.05).**

Option:

- 02 Although most standard symbols are oriented facing left, mirror images of these symbols may be used where the reverse orientation might better convey to road users a direction of movement.

Support:

- 03 New symbol designs are adopted by the Federal Highway Administration based on research evaluations to determine road user comprehension, sign conspicuity, and sign legibility.

- 03a **The use of symbols to word messages is preferred.**

Option:

- 04 State and/or local highway agencies may conduct research studies to determine road user comprehension, sign conspicuity, and sign legibility in compliance with the provisions for official experimentation (see Section 1B.05) when a new symbol design is under consideration.

Support:

- 05 Sometimes a change from word messages to symbols requires significant time for public education and transition. Therefore, this Manual sometimes includes the practice of using educational plaques to accompany new symbol signs.
Guidance:

- 06 *New standard warning or regulatory symbol signs should be accompanied by an educational plaque where engineering judgment determines that the plaque will improve road user comprehension during the transition from word message to symbol signs.*

Option:

- 07 Educational plaques may be left in place as long as they are in serviceable condition.

Standard:

- 08 **A symbol used for a given category of signs (regulatory, warning, or guide) shall not be used for a different category of signs, except as specifically authorized in this Manual.**

- 09 **A recreational and cultural interest area symbol (see Chapter 2M) shall not be used on streets or highways outside of recreational and cultural interest areas.**

- 10 **A recreational and cultural interest area symbol (see Chapter 2M) shall not be used on any regulatory or warning sign on any street, road, or highway.**

Support:

- 11 Section 2M.07 contains provisions for the use of recreational and cultural interest area symbols to indicate prohibited activities or items in non-road applications.

Section 2A.10 Sign Borders

Standard:

- 01 **Unless otherwise provided, signs shall have a border of the same color as the legend in order to outline their distinctive shape and thereby give them easy recognition and a finished appearance.**

- 02 **The corners of all sign borders shall be rounded, except for STOP signs.**

Guidance:

- 03 *A dark border on a light background should be set in from the edge, while a light border on a dark background should extend to the edge of the sign. A border for 30-inch signs with a light background should be from ½ to ¾ inch in width, ½ inch from the edge. For similar signs with a light border, a width of 1 inch should be used. For other sizes, the border width should be of similar proportions, but should not exceed the stroke-width of the major lettering of the sign. On signs exceeding 72 x 120 inches in size, the border should be 2 inches wide. On unusually large signs with oversized letter heights, route shields, or other legend elements, the border should be 2.5 inches wide and should not exceed 3 inches in width. Except for STOP signs and large guide signs and as otherwise provided in Section 2E.14, the corners of the sign should be rounded to a radius that is concentric with that of the border.*

Support:

04 Section 2A.12 contains information regarding the use of light-emitting diode (LED) units within the border of a sign.

Section 2A.11 Enhanced Conspicuity for Standard Signs

Option:

- 01 Based upon engineering judgment, where the improvement of the conspicuity of a standard regulatory, warning, or guide sign is desired, any of the following methods may be used, as appropriate, to enhance the sign's conspicuity (see Figure 2A-1):
- A. Increasing the size of a standard regulatory, warning, or guide sign. [Refer to Paragraph 7 of Section 2A.07 for maximum sign sizes.](#)
 - B. Dual signing of a standard regulatory, warning, or guide sign by adding a second identical sign on the left-hand side of the roadway at the same location.
 - C. Adding a solid yellow or fluorescent yellow rectangular header panel above a standard regulatory sign, with the width of the panel corresponding to the width of the standard regulatory sign. A legend of "NOTICE," "STATE LAW," or other appropriate text may be added in black letters within the header panel for a period of time determined by engineering judgment.
 - D. Adding a NEW plaque (see Section 2C.60) above a new standard regulatory or warning sign, for a period of time in accordance with Paragraph 3 of this Section, to call attention to the new sign.
 - E. Adding one or more red or orange flags (cloth or retroreflective sheeting) above a standard regulatory or warning sign, with the flags oriented at 45 degrees to the vertical.
 - F. Adding a solid yellow, a solid fluorescent yellow, or a diagonally-stripped black and yellow (or black and fluorescent yellow) strip of retroreflective sheeting at least 3 inches wide around the perimeter of a standard warning sign. This may be accomplished by affixing the standard warning sign on a background that is 6 inches larger than the size of the standard warning sign.
 - G. Adding a Warning Beacon (see Section 4S.03) to a standard regulatory (other than a STOP, DO NOT ENTER, WRONG WAY, or a Speed Limit sign), warning, or guide sign.
 - H. Adding a Speed Limit Sign Beacon (see Section 4S.04) to a standard Speed Limit sign.
 - I. Adding a Stop Beacon (see Section 4S.05) to a STOP, DO NOT ENTER, or WRONG WAY sign.
 - J. Adding a rectangular rapid-flashing beacon (see Chapter 4L) to a Pedestrian, School, or Trail warning sign at an uncontrolled marked crosswalk.
 - K. Adding light-emitting diode (LED) units within the symbol, legend, or border of a standard regulatory, warning, or guide sign, as provided in Section 2A.12.
 - L. Adding a strip of retroreflective material to the sign support in accordance with the provisions of Paragraph 5 of this Section.
 - M. Using other methods that are specifically allowed for certain signs as described elsewhere in this Manual.
 - N. [For applicable sign types and colors, using a sign with its color in a fluorescent version. \(Refer to Section 2A.06\).](#)
 - O. [Repeat sets of warning signs to give notice of a situation that might not be readily apparent on high-speed roads.](#)

Support:

02. Sign conspicuity improvements can also be achieved by removing non-essential and illegal signs from the right-of-way (see Section 1D.02), and by relocating signs to provide better spacing. Section 2A.20 contains information on excessive use of signs.

Guidance:

03. *If a NEW plaque is used, it should remain in place for a period of time determined by engineering judgment, but not more than 12 months.*

Standard:

04. **Strobe lights shall not be used to enhance the conspicuity of highway signs.**
05. **If a strip of retroreflective material is used on the sign support, it shall be at least 2 inches in width, it shall be placed for the full length of the support from the sign to within 2 feet above the near edge of the roadway, and its color shall match the background color of the sign, except that the color of the strip for the YIELD and DO NOT ENTER signs shall be red. The retroreflective strip shall not display any legend or other information.**
06. **For a post-mounted sign installation, placing a duplicate sign in the same assembly facing the same direction of traffic shall not be permitted as a method of enhancing conspicuity.**

Section 2A.12 LEDs Used for Conspicuity Enhancement on Standard Signs

Support:

- 01 This Section regarding light-emitting diode (LED) units applies to the use of illuminated elements that supplement a sign legend to enhance the conspicuity of the sign.
- 02 LED units that are used to illuminate the full sign display, background, or legend are changeable message signs (CMS), which are covered in Chapters 2B, 2C, and 2L, and Part 7.
- 03 The application of LED units in compliance with Paragraph 8 of this Section does not create a changeable message sign because the legend of the sign is always displayed when the LED units are not illuminated. Changeable message or blank-out signs whose legends change or extinguish by means of illuminated elements are addressed elsewhere in this Manual.

Option:

- 04 Light-emitting diode (LED) units may be used individually within the symbol, legend, or border of a sign to enhance the sign conspicuity and legibility (see Section 2A.11).
- 05 Except as provided in Paragraph 11 of this Section, LED units may either operate continuously or be actuated.

Standard:

- 06 Where LED units are used to enhance the conspicuity of a sign, the sign shall otherwise comply with the requirements for retroreflection and illumination for nighttime viewing (see Section 2A.21).
- 07 Except as provided in Paragraphs 16 and 17 of this Section, and for changeable message signs, neither individual LEDs nor groups of LEDs shall be placed within the background area of a sign.
- 08 The application of LEDs to display sign legends or symbols shall use a maximum pitch of 20 millimeters to cover the stroke width of the letter or symbol.
- 09 The LEDs shall not protrude outside the sign border or legend when used in such applications, shall have a maximum diameter of ¼ inch, and shall be the following colors based on the type of sign:
- A. ~~White or~~ red, with STOP, YIELD, DO NOT ENTER, or WRONG WAY signs.
 - B. White, with other regulatory signs including YIELD signs.
 - C. ~~White or~~ yellow, with warning signs.
 - D. ~~White or~~ green, with guide signs.
 - E. ~~White, yellow, or~~ orange with temporary traffic control signs of warning type.
 - F. ~~White, yellow, or~~ fluorescent yellow-green, with school area or pedestrian or bicycle warning signs.
- 10 If flashed, all LED units shall flash simultaneously at a steady rate between 50 and 60 times per minute. All the LED units in a sign legend or border shall be illuminated simultaneously with no sequential (chasing) or variable flash rates (dancing), except as otherwise allowed in this Manual. A cluster of LEDs shall not be used within the border of a sign.
- 11 Where used in STOP or YIELD signs, flashing LED units shall operate continuously. Actuation of the LED units shall not be allowed.
- 12 Flashing LED units shall not be used within the legend or border of a Speed Limit sign to indicate that the displayed speed limit is in effect.
- 13 LED units shall not be used within the legend or border of a sign in conjunction with the phrase WHEN FLASHING in its legend or on a supplemental WHEN FLASHING plaque (see Item E in Paragraph 1 of Section 4S.03 for the use of Warning Beacons to indicate when a regulatory or warning message is in effect).
- 14 Where LED units are used along the edge of a sign, at least one LED unit shall be placed along each edge of the sign, in addition to one LED unit at each corner of the sign, so that the distinct outline of the sign shape is recognized under nighttime viewing conditions. The LED units along each side of the sign shall be spaced approximately equidistantly. For a circular sign shape, the number of LED units shall clearly form the appearance of a circle and not be perceived as some other shape.
- 15 The uniformity of the sign design shall be maintained without any decrease in visibility, legibility, or driver comprehension during either daytime or nighttime conditions. The LED units shall have the capability to be dimmed automatically by a timing mechanism or a device sensitive to ambient light (photoelectric cell) such that the LEDs do not reduce the visibility of the sign legend.

Option:

- 16 For STOP, YIELD, DO NOT ENTER, and WRONG WAY signs, LEDs may be placed within the border or within one border width within the background of the sign.

Support:

- 17 Section 6D.02 contains information about STOP/SLOW paddles used by flaggers. Section 7D.02 contains information about STOP paddles used by adult crossing guards.
- 18 Other methods of enhancing the conspicuity of standard signs are described in Section 2A.11.

Section 2A.13 Standardization of Location

Support:

- 01 Standardization of position cannot always be attained in practice. Examples of heights and lateral locations of signs for typical installations are illustrated in Figure 2A-2 and 2A-2(CA), and examples of locations for some typical signs at intersections are illustrated in Figure 2A-3 and all four sheets in Figure 2A-4.
- 01a Refer to FHWA's List of Known Errors for error in Paragraph 1 text. Refer to Section 1A.04 for more details.
- 02 Examples of advance signing on intersection approaches are illustrated in all four sheets in Figure 2A- Chapters 2B, 2C, and 2D contain provisions regarding the application of regulatory, warning, and guide signs, respectively.
- 02a Refer to FHWA's List of Known Errors for error in Paragraph 2 text. Refer to Section 1A.04 for more details.

Standard:

- 03 **Signs requiring separate decisions by the road user shall be spaced sufficiently far apart for the appropriate decisions to be made.**

Guidance:

- 04 *One of the factors considered when determining the appropriate spacing of signs should be the posted ~~or 85th-~~ percentile-speed limit.*
- 05 *Except as provided in Paragraph 8 of this Section, signs should be located on the right-hand side of the roadway where they are easily recognized and understood by road users. Signs in other locations should be considered only as supplementary to signs in the normal locations, except as otherwise provided in this Manual.*
- 06 *Signs should be individually installed on separate posts or mountings except where:*
- A. *One sign supplements another;*
 - B. *Route or directional signs are grouped to clarify information to motorists;*
 - C. *~~Regulatory~~ signs that do not conflict with each other are grouped, such as Turn Prohibition signs posted with ONE WAY signs or a parking regulation sign posted with a ~~Speed Limit~~ another sign; or*
 - D. *Street Name signs are posted with a STOP or YIELD sign.*
- 07 *Signs should be located so that they:*
- A. *Are outside the clear zone unless placed on a crashworthy (see definition in Section 1C.02) support,*
 - B. *Optimize nighttime visibility,*
 - C. *Minimize the effects of mud splatter and debris,*
 - D. *Do not obscure each other,*
 - E. *Do not obscure the sight distance to approaching vehicles on the major street for drivers who are stopped on minor-street approaches, and*
 - F. *Are not hidden from view.*
- 08 *Except for STOP, YIELD, DO NOT ENTER, and WRONG WAY signs, or as otherwise provided in this Manual, where a sign on a one-way roadway indicates an action intended exclusively or primarily for a road user in the left-hand lane or at the left-hand side of that roadway, such as LEFT LANE MUST TURN LEFT (R3-7) or LEFT LANE ENDS (W9-1), the sign should be located on the left-hand side of the roadway. In the case of a divided road, the sign should be located in the median.*

Option:

- 09 Signs located on the left-hand side of a one-way roadway or in the median of a divided road, in accordance with Paragraph 8 of this Section, may be supplemented by an identical sign located on the right-hand side of the roadway.
- Support:
- 10 The clear zone (see definition in Section 1C.02) is the total roadside border area, starting at the edge of the traveled way, available for an errant driver to stop or regain control of a vehicle. The width of the clear zone is dependent upon traffic volumes, speeds, and roadside geometry. Additional information can be found in the "Roadside Design Guide," 4th Edition, 2011, AASHTO.

Guidance:

- 11 *With the increase in traffic volumes and the need to provide road users regulatory, warning, and guidance information, an order of priority for sign installation should be established.*

Support:

- 12 An order of priority is especially critical where space is limited for sign installation and there is a demand for several different types of signs. Overloading road users with too much information is not desirable. Priority according to type of sign will depend on the specific situation and conditions of the site at which the signs are to be installed. For example, in the vicinity of an exit ramp, guide signs and warning signs for the exit ramp might take precedence over regulatory signs that confirm rules of the road, such as a STATE LAW-NO HANDHELD PHONE USE BY DRIVER sign, or a mainline Speed Limit sign where there is no change in the speed zone.

Guidance:

- 13 *Because regulatory and warning information is typically more critical to the road user than guidance information, regulatory and warning signing whose locations are critical should be displayed rather than guide signing in cases where conflicts occur. In such cases, the guide sign should be relocated to another appropriate location where it will still be effective. In other cases, such as at a decision point, the guide sign should take precedence over other signs whose locations are not as critical to an immediate decision or action necessary by the road user. In all cases, careful attention should be given to minimizing sign clutter (see Section 2A.20). Community wayfinding and acknowledgment guide signs should have a lower priority as to placement than other guide signs. Signs conveying information of a less-critical nature should be moved to less-critical locations or omitted.*

Option:

- 14 Under some circumstances, such as on curves to the right, signs may be placed on median islands or on the left-hand side of the road. A supplementary sign located on the left-hand side of the roadway may be used on a multi-lane road where traffic in a lane to the right might obstruct the view to the right.

Guidance:

- 15 *In urban areas where crosswalks exist, signs should not be placed within 4 feet in advance of the crosswalk (see Drawing D in Figure 2A-3).*

Section 2A.14 Overhead Sign Installations

Guidance:

- 01 *Overhead signs should be used on freeways and expressways, at locations where some degree of lane- use control is desirable, and at locations where space is not available at the roadside.*

Support:

- 02 The operational requirements of the present highway system are such that overhead signs have value at many locations. The factors to be considered for the installation of overhead sign displays are not definable in specific numerical terms. In some cases, overhead mounting of a sign might be required by other provisions of this Manual.

Option:

- 03 The following conditions (not in priority order) may be considered in an engineering study to determine if overhead signs would be beneficial:
- A. Traffic volume at or near capacity,
 - B. Complex interchange and intersection design,
 - C. Three or more lanes in each direction,
 - D. Restricted sight distance,
 - E. Closely-spaced interchanges,
 - F. Multi-lane exits,
 - G. Large percentage of trucks,
 - H. Street lighting background,
 - I. High-speed traffic,
 - J. Consistency of sign message location through a series of interchanges,
 - K. Insufficient space for post-mounted signs,
 - L. Junction of two freeways, and
 - M. Left-side exit ramps.
 - N. "Exit Only" lanes and lane drops.

O. Necessity to have a sign message directly over the lane to which it refers.

04 Over-crossing structures may be used to support overhead signs.

Support:

05 Under some circumstances, the use of over-crossing structures as sign supports might be the only practical solution that will provide adequate viewing distance. The use of such structures as sign supports might eliminate the need for the foundations and sign supports along the roadside.

06 On state highways, refer to Caltrans' Standard Plans publication for standard application of overhead signs. Refer to Section 1A.05 for information regarding this publication.

Standard:

07 On State highways, any deviation from standard plans requires a structural analysis. All such signage must be referred to Caltrans' Division of Engineering Services, Office of Structure Design Services.

Guidance:

08 Signs mounted on overcrossing structures should not project above the bridge rail by more than 1 foot.

Option:

09 Structure mounted signs may be placed parallel with the structures for skews up to 10°. At greater angles of skew, position the sign as close to 10° from the normal as possible.

Standard:

10 If the skew is so great that this is not practical, separate sign structures shall be used.

Section 2A.15 Mounting Height

Standard:

01 The provisions of this Section shall apply unless specifically stated otherwise for a particular sign or object marker elsewhere in this Manual.

Support:

02 It might be necessary to use larger minimum mounting heights than those prescribed in this Manual to ensure appropriate crash performance of sign installations that are required to be crashworthy (see Section 1D.11).

03 In addition to the provisions of this Section, information affecting the minimum mounting height of signs as a function of crash performance can be found in the "Roadside Design Guide," 4th Edition, 2011, AASHTO.

Standard:

04 In rural areas, the minimum height, measured vertically from the bottom of the sign to the elevation of the near edge of the pavement, of signs installed at the side of the road shall be 5 feet (see Figure 2A-2).

05 In business, commercial, or residential areas where parking, bicyclist, or pedestrian movements are likely to occur, or where the view of the sign might be obstructed, the minimum height, measured vertically from the bottom of the sign to the top of the curb, or in the absence of curb, measured vertically from the bottom of the sign to the elevation of the near edge of the traveled way, of signs installed at the side of the road shall be 7 feet (see Figure 2A-2).

Option:

06 The height to the bottom of a secondary sign mounted below another sign may be 1 foot less than the height specified in Paragraphs 4 and 5 of this Section.

Standard:

07 The minimum height of signs, measured vertically from the bottom of the sign to the sidewalk shall be 7 feet.

08 If the bottom of a secondary sign that is mounted below another sign is mounted lower than 7 feet above a pedestrian sidewalk or pathway (see Section 6C.02), the secondary sign shall not project more than 4 inches into the pedestrian facility.

Support:

09 Section 9A.02 contains provisions for the minimum mounting height of signs on shared-use paths. *Option:*

10 Signs that are placed 30 feet or more from the edge of the traveled way may be installed with a minimum height of 5 feet, measured vertically from the bottom of the sign to the elevation of the near edge of the pavement.

Standard:

11 Directional signs on freeways and expressways shall be installed with a minimum height of 7 feet, measured vertically from the bottom of the sign to the elevation of the near edge of the pavement. All route signs, warning signs, and regulatory signs on freeways and expressways shall be installed with a minimum height of 7 feet,

measured vertically from the bottom of the sign to the elevation of the near edge of the pavement. If a secondary sign is mounted below another sign on a freeway or expressway, the major sign shall be installed with a minimum height of 8 feet and the secondary sign shall be installed with a minimum height of 5 feet, measured vertically from the bottom of the sign to the elevation of the near edge of the pavement.

- 12 Where large signs having an area exceeding 50 square feet are installed on multiple breakaway posts, the clearance from the ground to the bottom of the sign shall be at least 7 feet.

Option:

- 13 A route sign assembly (see Section 2D.29 and 2D.12) consisting of a route sign and auxiliary signs may be treated as a single sign for the purposes of this Section.

- 14 The mounting height may be adjusted when supports are located near the edge of the right-of-way on a steep backslope in order to avoid the sometimes less desirable alternative of placing the sign closer to the roadway.

Standard:

- 15 Signs that are post-mounted on a median barrier that overhang any portion of the traveled way shall be mounted with a vertical clearance that complies with that of overhead signs.

- 16 Overhead signs shall provide a vertical clearance of not less than 17 feet to the sign, light fixture, or sign bridge over the entire width of the pavement and shoulders, except where the structure on which the overhead signs are to be mounted or other structures along the roadway near the sign structure have a lesser vertical clearance.

- 16a The lowest element of the overhead sign structure, including any attachments or known possible future additions, located over a roadway shall provide a minimum vertical clearance of 18 feet and 6 inches on State highways. Refer to Caltrans' Standard Plans publication. Refer to Section 1A.05 for information regarding this publication.

Option:

- 17 If the vertical clearance of other structures along the roadway near the sign structure is less than 16 feet, the vertical clearance to an overhead sign structure or support may be as low as 1 foot higher than the vertical clearance of the other structures in order to improve the visibility of the overhead signs.

- 18 In special cases the clearance to overhead signs may be reduced if necessary because of substandard dimensions in tunnels and other major structures such as double-deck bridges.

Guidance:

- 19 While a maximum mounting height for signs is generally not prescribed in this Manual, agencies should ensure that signs are not mounted at such a height as to be out of the road user's normal field of vision (see Paragraph 3 of Section 1D.09), especially in urban settings where signs are mounted on traffic signal or light poles.

Support:

- 20 Figure 2A-2 and 2A-2(CA) illustrates some examples of the mounting height requirements contained in this Section.

- 21 Exceptions to the mounting heights are the FREEWAY ENTRANCE (D13-3) and DO NOT ENTER (R5-1) sign packages which are mounted lower to avoid sight restrictions and be most responsive to headlights.

Guidance:

- 22 The FREEWAY ENTRANCE (D13-3) and DO NOT ENTER (R5-1) sign packages should be mounted with the bottom of the lower sign 2 feet above the edge of the pavement. The ONE WAY (R6-1) signs should be mounted 1.5 foot above the edge of the pavement.

Standard:

- 23 Reference Location and Intermediate Reference Location signs as well as Enhanced Reference Location Signs and Intermediate Enhanced Reference Location shall have a minimum mounting height of 4 feet, measured vertically from the bottom of the sign to the elevation of the near edge of the roadway. Refer to Sections 2H.11 and 2H.12.

Section 2A.16 Lateral Offset

Standard:

- 01 For overhead sign supports, the minimum lateral offset from the edge of the shoulder (or if no shoulder exists, from the edge of the pavement) to the near edge of overhead sign supports (cantilever or sign bridges) shall be 6 feet. Overhead sign supports shall have a barrier or crash cushion to shield them if they are within the clear zone.

- 02 Post-mounted sign and object marker supports shall be crashworthy (see Section 1D.11) if within the clear zone.

Guidance:

03 *For post-mounted signs, the minimum lateral offset should be 12 feet from the edge of the traveled way. If a shoulder wider than 6 feet exists, the minimum lateral offset for post-mounted signs should be 6 feet from the edge of the shoulder.*

04 *Supports for signs mounted laterally behind a longitudinal barrier should be placed so that the near edge of the support is located beyond the deflection distance of the longitudinal barrier.*

Support:

05 The minimum lateral offset requirements for object markers are provided in Chapter 2C.

06 The minimum lateral offset is intended to keep trucks and cars that use the shoulders from striking the signs or supports. The minimum lateral offset requirements do not supersede the requirement for crashworthiness (see Paragraph 2 of this Section) if the sign is located within the clear zone.

Guidance:

07 *All supports should be located as far as practical from the edge of the shoulder. Advantage should be taken to place signs behind existing roadside barriers, on over-crossing structures, or other locations that minimize the exposure of the traffic to sign supports.*

Support:

07a *Overcrossing structures can often serve for the support for overhead signs, and may be the only practical location that will provide adequate viewing distance. Use of these structures, as sign supports will minimize the need for sign supports along the roadway. Where overhead crossings are closely spaced and the proximity of other structures does not limit visibility, it is desirable to place signs on the bridges for economy, to reduce fixed objects and to enhance safety.*

Option:

08 Lesser lateral offsets may be used on connecting roadways or ramps at interchanges, but not less than 6 feet from the edge of the traveled way.

09 On conventional, low-volume rural, and special-purpose roads in areas where it is impractical to locate a sign with the lateral offset prescribed by this Section because of roadside features such as terrain or vegetation, a lateral offset of at least 2 feet may be used.

10 A lateral offset of at least 1 foot from the face of the curb may be used in business, commercial, or residential areas where sidewalk width is limited or where existing poles are close to the curb.

Guidance:

11 *Overhead sign supports and post-mounted sign and object marker supports should not intrude into the usable width of a sidewalk or other pedestrian facility.*

Support:

12 Guidance for maintaining sign shape in laterally-constrained conditions is described in Section 2A.05.

13 Figures 2A-2 and 2A-3 illustrate some examples of the lateral offset requirements contained in this Section.

14 Refer to Caltrans' Highway Design Manual Section 309.1 for horizontal clearances. Refer to Section 1A.05 for information regarding this publication.

Guidance:

15 *Where a freeway or an expressway median is 12 feet or less in width, consideration should be given to spanning both roadways without a center support. Butterfly-type signs or other overhead sign supports should not be erected in neutral areas (gores) or other exposed locations.*

Standard:

16 **In cuts steeper than 4:1, where there are no recovery areas, the sign supports shall be placed on the slopes a minimum of 4 feet vertically from the hinge point. In fill sections, sign supports shall be protected by a minimum of 50 feet of guardrail plus the breakaway end anchor. The supports shall be placed over the hinge point approximately 4 feet from the face of the guard rail.**

Guidance:

17 *Overhead signs should be placed at least 30 feet from light standards.*

Section 2A.17 Orientation

Guidance:

01 *Unless otherwise provided in this Manual, signs should be vertically mounted at right angles to the direction of, and facing, the traffic that they are intended to serve.*

02 *Where mirror reflection from the sign face is encountered to such a degree as to reduce legibility, the sign should be turned slightly away from the road. Signs that are placed 30 feet or more from the pavement edge should be turned toward the road. On curved alignments, the angle of placement should be determined by the direction of approaching traffic rather than by the roadway edge at the point where the sign is located.*

Option:

03 On grades, sign faces may be tilted forward or back from the vertical position to improve the viewing angle.

Section 2A.18 Posts and Mountings

Standard:

01 **Sign posts, foundations, and mountings shall be so constructed as to hold signs in a proper and permanent position, and to resist swaying in the wind or displacement by vandalism.**

Support:

02 The latest edition of AASHTO's "Specifications for Structural Supports for Highway Signs, Luminaires, and Traffic Signals" contains additional information regarding posts and mounting.

Option:

03 Where permitted, signs may be placed on existing supports used for other purposes, such as highway traffic signal supports, highway lighting supports, and utility poles.

Guidance:

03a *The installation of signs, including route shields, on traffic signal supports should be avoided unless they directly affect traffic movements in the intersection.*

Support:

04 Section 2A.11 contains criteria for enhanced conspicuity of standard signs.

05 Sections 2A.15 and 2A.16 contain lateral and height placement criteria for signs placed on existing supports.

Standard:

06 **If mounted to the sign support, equipment for powering electronic components of a sign, including solar panels, shall be mounted so as not to compromise the crashworthy performance of the sign installation (see Section 1D.11). Such equipment shall be mounted so as not to obscure the shape of the sign.**

Option:

07 *When needed for emphasis to facilitate traffic safety on streets with speed limits of 35 mph or less, small plastic signs not exceeding 12 inch in width may be mounted on channelizers, cones, or portable delineators to be placed on lane lines and/or centerlines.*

Standard:

08 **When installed, they shall supplement permanently mounted standard signs and shall use standard legends, sign colors and retroreflectivity, but in a smaller, proportional format. If the device is used on lane lines, there shall be an engineering study, which documents the limited potential of the device to be struck due to lane changing.**

Section 2A.19 Maintenance

Guidance:

01 *Maintenance activities should consider proper position, cleanliness, legibility, and daytime and nighttime visibility (see Sections 2A.21 and 2A.22). Damaged or deteriorated signs, gates, or object markers should be replaced.*

02 *To assure adequate maintenance, a schedule for inspecting (both day and night), cleaning, and replacing signs, gates, and object markers should be established. Employees of highway, law enforcement, and other public agencies whose duties require that they travel on the roadways should be encouraged to report any damaged, deteriorated, missing or obscured signs, gates, or object markers at the first opportunity.*

03 *Steps should be taken to see that weeds, trees, shrubbery, and construction, maintenance, and utility materials and equipment do not obscure the face of any sign or object marker.*

04 *A regular schedule of replacement of lighting elements for illuminated signs should be maintained.*

Section 2A.20 Excessive Use of Signs

Guidance:

01 *Signs should be used and located judiciously, minimizing their proliferation in order to maintain their effectiveness. Regulatory and warning signs should be used conservatively because these signs, if used to excess, tend to lose their*

effectiveness. Route signs and directional guide signs for primary routes and destinations should be used frequently at strategic locations because their use promotes efficient operations by keeping road users informed of their location. In all cases, however, sign clutter (see Paragraph 2 of this Section) should be avoided and minimized as much as practicable.

Support:

02 Sign clutter is the proliferation of sign installations or assemblies along the roadway or roadside, either separately or grouped, to such an extent that adequate spacing between installations necessary for orderly processing of the sign messages by the driver cannot be achieved. Sign clutter can reduce the effectiveness of one or more signs in a sequence of signs.

03 The basic role of traffic control devices is to provide only as much information to the road user as necessary to promote the safe and efficient operation of streets and highways. Sign clutter can result from the overuse of MUTCD-compliant signs and or signs that display information unrelated to traffic operation, navigation, or transportation information. Examples of such signs would include, but are not limited to, those displaying the birthplace or home of a noted person, [memorializing or dedicating a segment or facility of roadway](#), local sports team accomplishments, population information, and self-described qualities of a community such as “friendly” or “open for business.”

03a [Sign information overload occurs when the frequency of signing, complexity of messages or diversity of messages is so great that they cannot be readily assimilated by motorists in time to respond properly and safely to roadway situations. Sign information overload can be avoided by:](#)

- A. [Increasing the spacing between signs so that they can be understood before encountering new messages.](#)
- B. [Minimizing content and using accepted symbols so as to simplify messages.](#)
- C. [Spreading the information so that each element of stand-alone information is presented in a separate sign.](#)
- D. [Using standard sign formats applied in a consistent fashion to enhance motorist recognition.](#)
- E. [Using redundant signing or a combination of signing and pavement messages to offer multiple opportunities for motorists to recognize and respond to the situation.](#)
- F. [Reducing or eliminating less-essential signs.](#)

03b [Refer to ITE's Traffic Control Devices Handbook, Chapter 2 for more information on this topic. Refer to Section 1A.05 for information regarding this publication.](#)

Guidance:

04 *Signs and other traffic control devices should be installed and maintained from a systematic standpoint rather than individually. When a new sign is installed, the existing signs in the vicinity should be considered for replacement, relocation, or removal as a result of the new sign that is installed. Existing systems of signs should be reviewed periodically for evidence of sign clutter and adjustments should be made accordingly.*

Support:

05 Section 2A.13 contains information regarding an order of priority for signs where available spacing along the roadway is limited.

Section 2A.21 Retroreflection and Illumination

Support:

01 There are many materials currently available for retroreflection and various methods currently available for the illumination of signs and object markers. New materials and methods continue to emerge. New materials and methods can be used as long as the signs and object markers meet the standard requirements for color, both by day and by night.

02 This Section applies to visibility of signs at night or in low-light or adverse weather conditions, whose legends are otherwise visible under typical daytime viewing conditions.

Standard:

03 **Regulatory, warning, and guide signs (see Section 2A.03), and object markers, shall be retroreflective or illuminated to show the same shape and similar color by both day and night, unless otherwise provided in this Manual for a particular sign or group of signs.**

04 **Where the color black is specified for the legend or background of a sign, an opaque and non- retroreflective material shall be used.**

05 **The requirements for sign illumination shall not be considered to be satisfied by street or highway lighting.**

Option:

06 Sign elements may be illuminated by the means shown in Table 2A-3.

- 07 Retroreflection of sign elements may be accomplished by the means shown in Table 2A-4. Support:
08 Information regarding the use of retroreflective material on the sign support is contained in Section 2A.11.

Section 2A.22 Maintaining Minimum Retroreflectivity

Support:

- 01 Retroreflectivity is one of several factors associated with maintaining nighttime sign visibility (see Section 2A.21).

Standard:

- 02 **Public agencies or officials having jurisdiction shall use an assessment or management method that is designed to maintain sign retroreflectivity at or above the minimum levels in Table 2A-5.**

Support:

- 03 Compliance with the Standard in Paragraph 2 of this Section is achieved by having a method in place and using the method to maintain the minimum levels established in Table 2A-5. Provided that an assessment or management method is being used, an agency or official having jurisdiction would be in compliance with the Standard in Paragraph 2 of this Section even if there are some individual signs that do not meet the minimum retroreflectivity levels at a particular point in time.

Guidance:

- 04 *Except for those signs specifically identified in Paragraph 5 of this Section, one or more of the methods described in "Maintaining Traffic Sign Retroreflectivity," (FHWA-SA-07-020, Revised 2013), FHWA, or a method developed based on an engineering study, should be used to maintain sign retroreflectivity at or above the minimum levels in Table 2A-5. Signs that are identified through the agency's method as being below the minimum levels should be replaced.*

Option:

- 05 Highway agencies may exclude the following signs from the retroreflectivity maintenance guidelines described in this Section:
- A. Parking, Standing, and Stopping (R7 and R8 series) signs;
 - B. Walking/Hitchhiking/Crossing (R9 series, R10-1 through R10-4b) signs;
 - C. Acknowledgment signs; and
 - D. Bikeway signs that are intended for exclusive use by bicyclists or pedestrians.

Section 2A.23 Median Opening Treatments for Divided Highways

Guidance:

- 01 *A divided highway crossing should be signed and marked as separate intersections when both of the following conditions are present:*

- A. The paths of opposing left turns from the divided highway cross each other (see Figure 2A-5), and*
- B. There is adequate storage in the interior approaches for the design vehicles expected to cross the divided highway.*

- 02 *If either one or both of the conditions in Paragraph 1 of this Section do not exist, the divided highway crossing should be signed and marked as a single intersection.*

- 03 *At the crossing of two divided highways, engineering judgment should be used to determine the number of separate intersections.*

Support:

- 04 Divided highway crossings with median widths between 30 feet and 85 feet might function as either one or two intersections depending upon the interaction of the opposing left-turn vehicle paths and the available interior storage in the median for a crossing vehicle. Other factors that could determine whether a divided highway crossing is operating as one or two intersections include:

- A. The geometric design of the divided highway crossing,
- B. The use of positive offset mainline left-turn lanes,
- C. The length of the median opening (as measured parallel to the center line of the divided highway),
- D. The geometric design of the median noses,
- E. Other roadway geometric considerations such as a skewed side street approach or a variable median width,
- F. Intersection sight distance,
- G. The physical characteristics of the design vehicle, and
- H. The observed prevailing driver behavior with regard to opposing left-turn path interaction.

Option:

- 05 Additional signs may be placed at divided highway crossings that function as two separate intersections.
- 06 Standard directional or wrong way arrow pavement markings may be placed in each approach lane of each roadway in advance of a grade intersection and at other selected locations to indicate the direction of traffic flow.
- 07 At locations which are determined to have special need, other standard warning or prohibitive methods and devices may be used as a deterrent to the wrong way movement.

Support:

- 08 Refer to Chapter 2B for Wrong-Way Traffic Control at Interchange Ramps.

Section 2A.101(CA) Signs Off the State Right-of-Way

Support:

- 01 CVC § 21350 permits Caltrans, with the consent of the local authorities, to place and maintain along city streets and county roads appropriate signs as may be necessary or desirable to direct traffic to State highways.

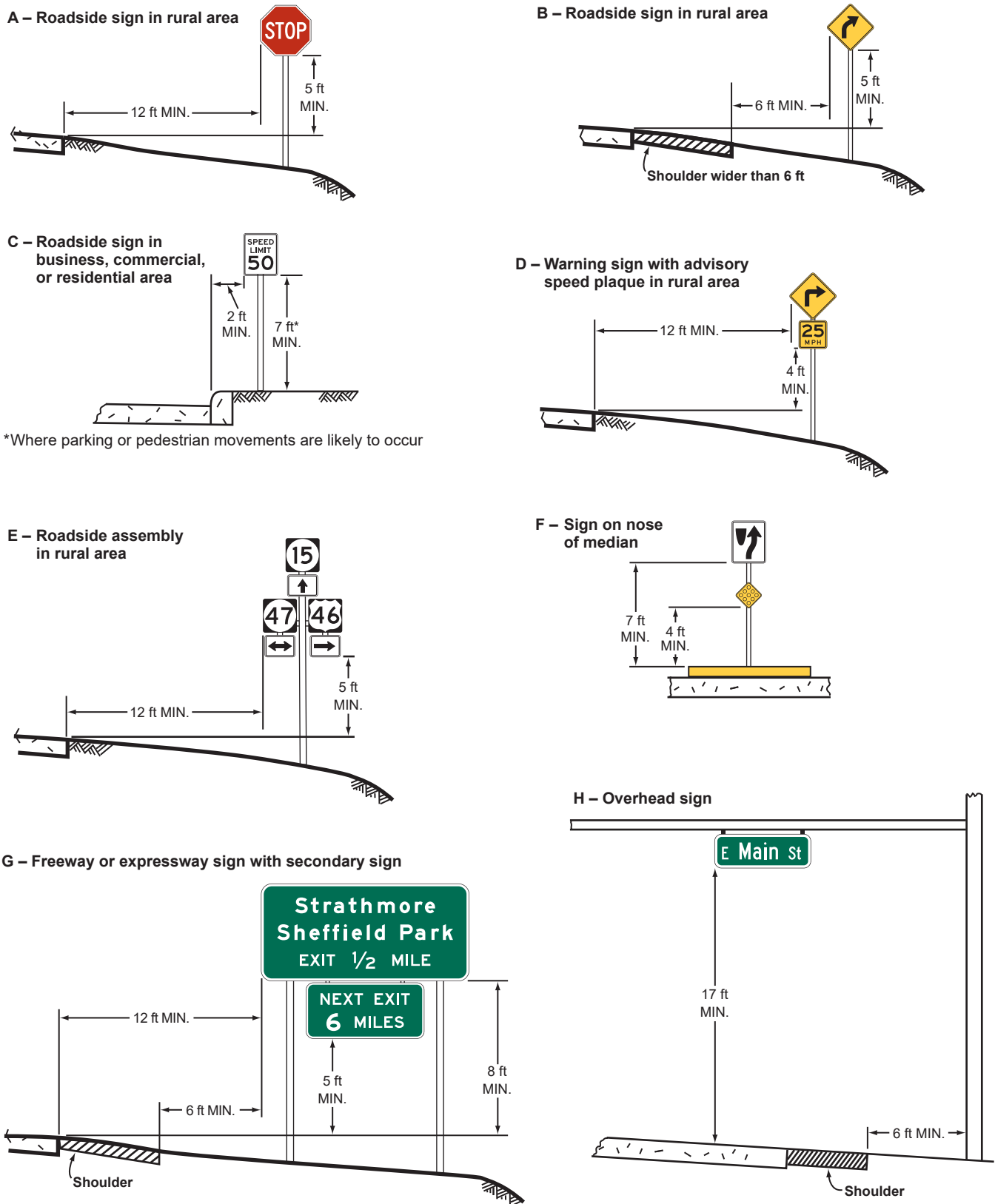
Guidance:

- 02 *Where a sign beyond the right-of-way line is required for the proper operation of a State highway, such sign should be placed and maintained at State expense.*

Figure 2A-1. Examples of Enhanced Conspicuity for Signs



Figure 2A-2. Examples of Heights and Lateral Locations of Sign Installations



Note: See Section 2A.16 for reduced lateral offset distances that may be used in areas where lateral offsets are limited, and in business, commercial, or residential areas where sidewalk width is limited or where existing poles are close to the curb.

Figure 2A-2(CA). California Examples of Heights and Lateral Locations of Sign Installations

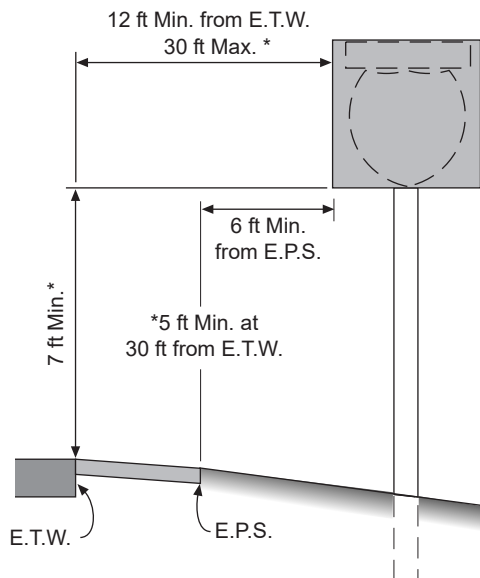
Notes:

These sign positions are typical and should be considered a standard. When physical conditions require deviation from these typicals, they should be documented. When clear roadside recovery areas are provided, signs shall be placed as far from the traveled way as possible, up to 30 ft. When possible, they should be placed in protected locations.

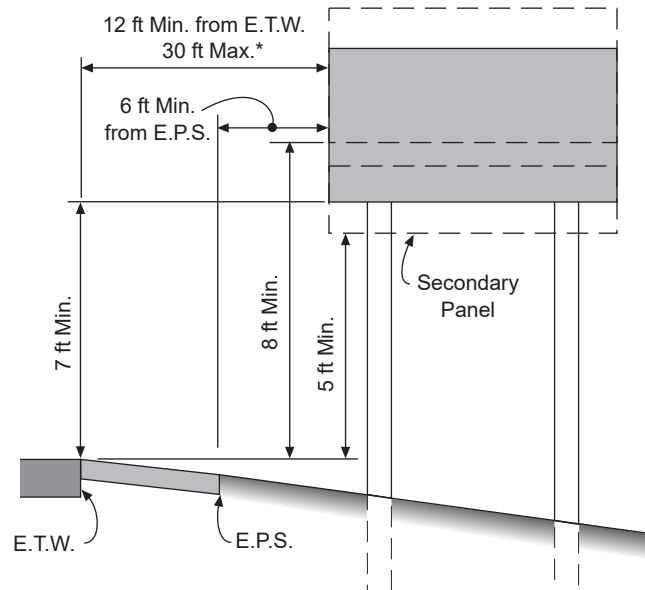
Signs in medians shall be placed at midpoint of median, and should not be closer than 6 ft from the edge of a paved shoulder, or if none, 12 ft from the edge of the traveled way. When appropriate, signs for opposing directions shall be placed back to back.

E.T.W. = Edge of Traveled Way
E.P.S. = Edge of Paved Shoulder

Freeway and Expressway Locations

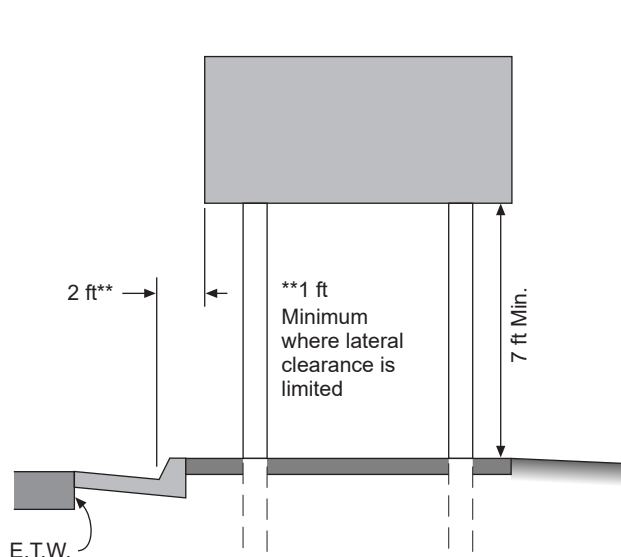


**ROUTE SHIELDS
REGULATORY AND WARNING SIGNS**

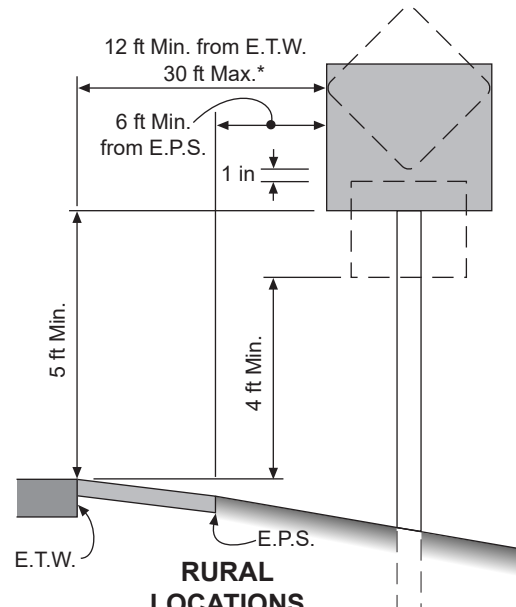


GUIDE SIGNS

Conventional Highways and Interchange Areas

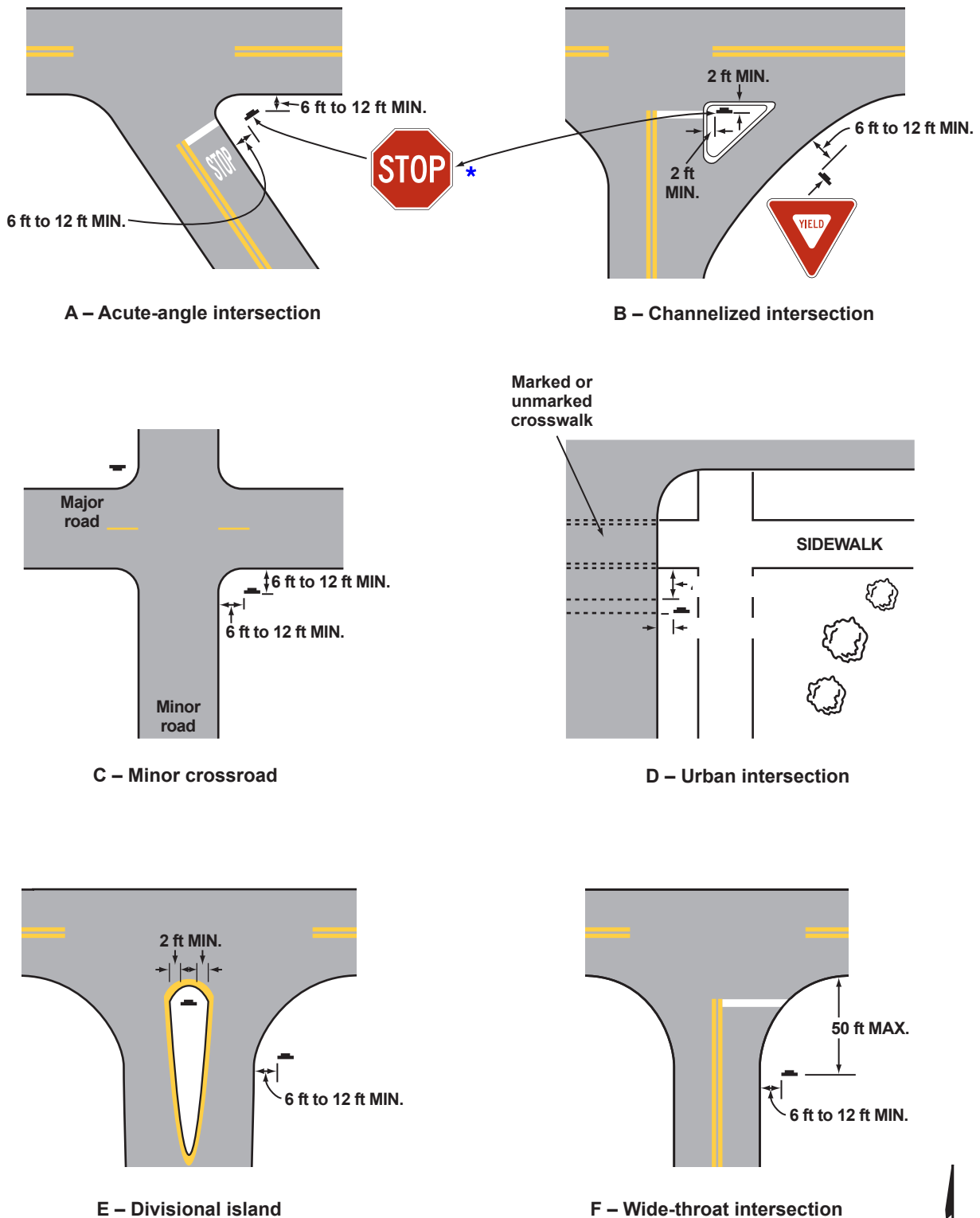


**URBAN LOCATIONS AND RURAL
LOCATIONS WITH SIDEWALK**



**RURAL
LOCATIONS**

Figure 2A-3. Examples of Locations for Some Typical Signs at Intersections



Note: Lateral offset is a minimum of 6 feet measured from the edge of the shoulder, or 12 feet measured from the edge of the traveled way. See Section 2A.16 for lower minimums that may be used in urban areas, or where lateral offset space is limited.

★ Refer to FHWA's List of Known Errors for error. Refer to Section 1A.04 for more details.

A – Single-lane approach

U.S. 46

Defense Highway

200 ft MIN.

200 ft MIN.

200 ft MIN.

200 ft MIN.

200 ft MIN.

400 ft MIN.

600 ft MIN.

800 ft MIN.

← Dover
Singac →

WEST 46 EAST 46

JCT 46

Defense Hwy

W2-1

B – Multi-lane approach

Wood Avenue

STOP

ONLY ONLY (Optional)

← Richford
Woodbridge →

Wood Ave

W3-1

Legend

→ Direction of travel

- * See Table 2C-3 for the recommended minimum distance
- ** See Section 2C.41 for the application of the W2-1 sign and Section 2C.35 for the application of the W3-1 sign
- *** See Section 2B.27 for the application of Intersection Lane Control signs

Figure 2A-4. Relative Locations of Regulatory, Warning, and Guide Signs on an Intersection Approach (Sheet 2 of 4)

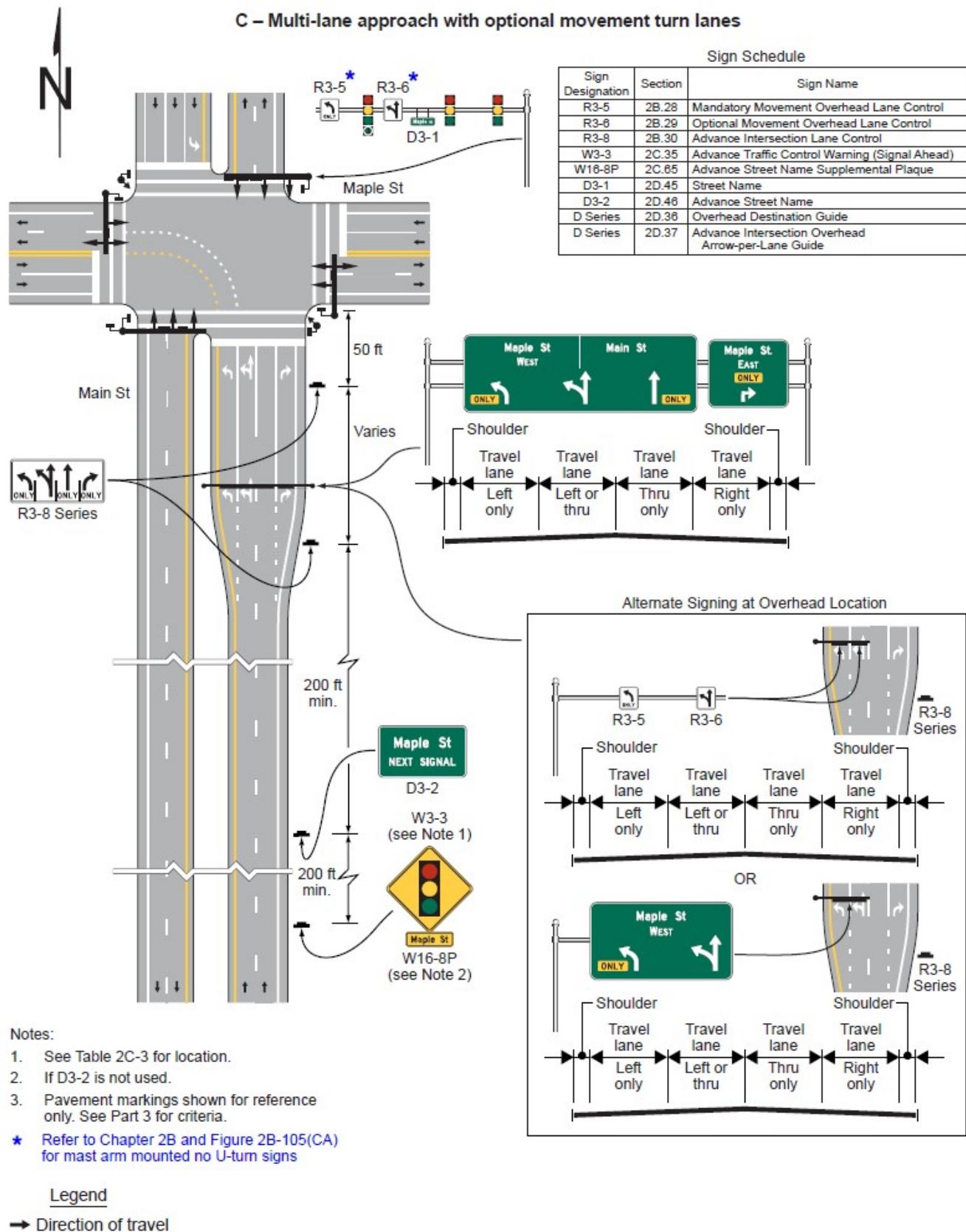
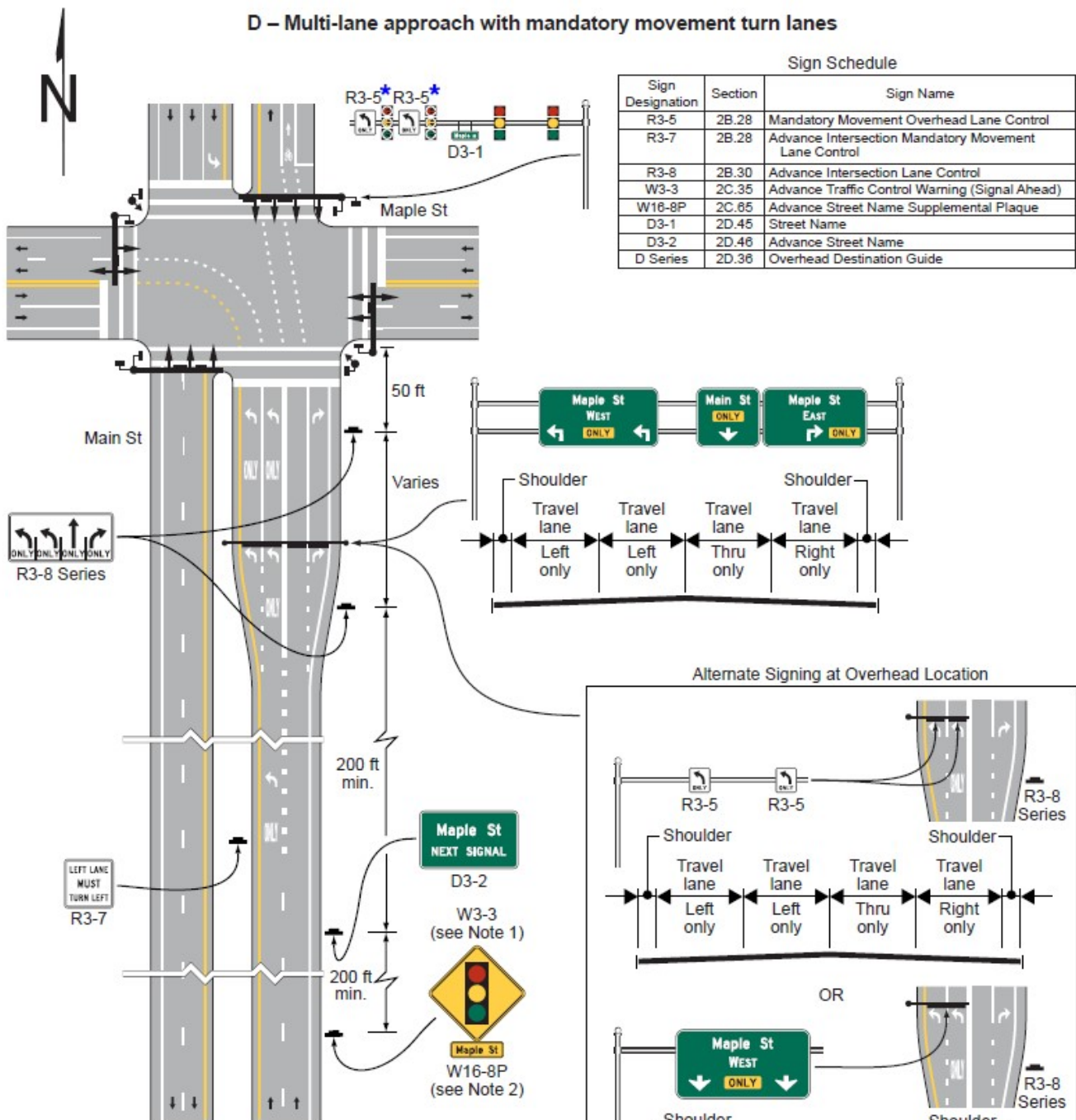


Figure 2A-4. Relative Locations of Regulatory, Warning, and Guide Signs on an Intersection Approach (Sheet 3 of 4)



Notes:

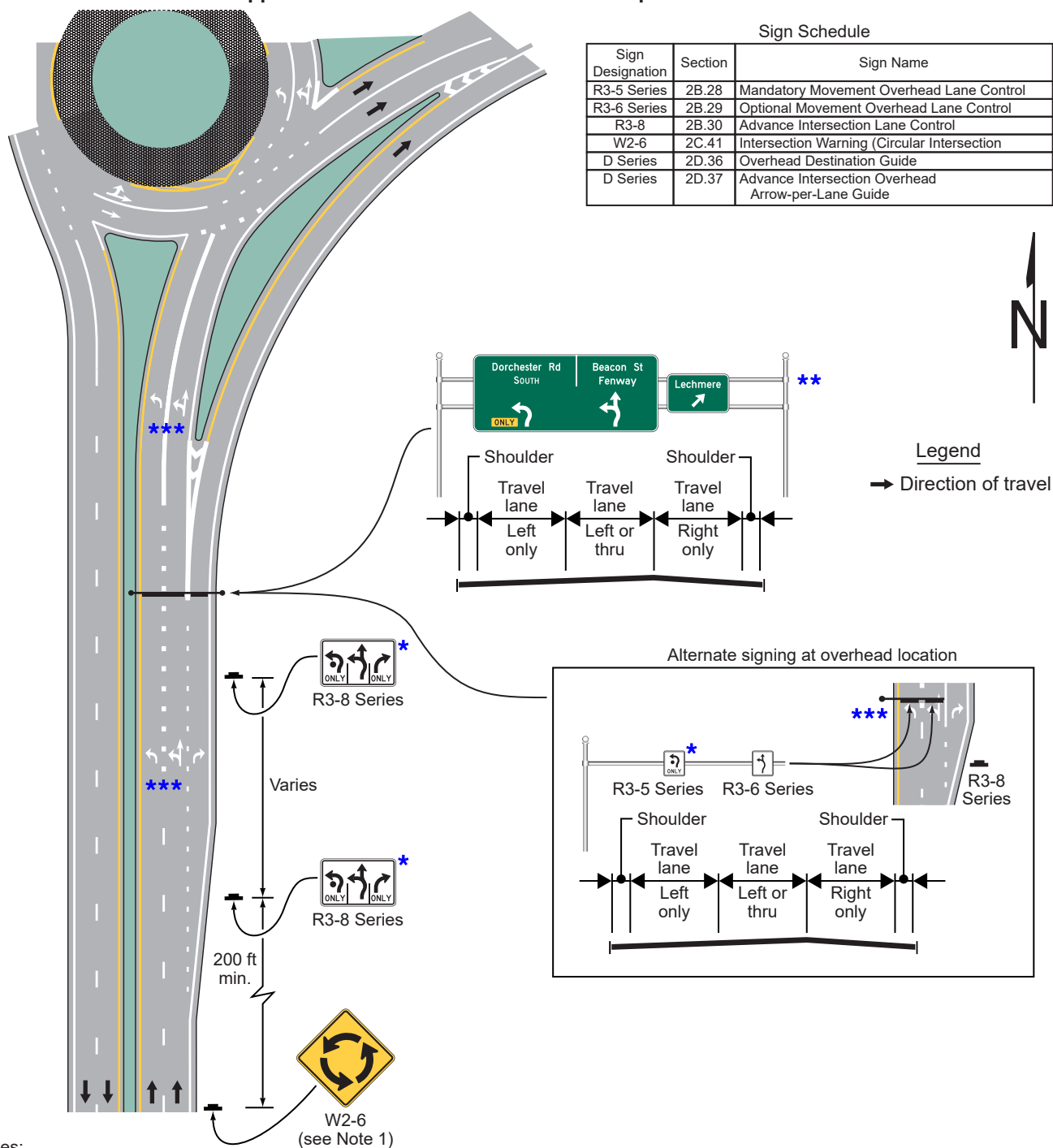
1. See Table 2C-3 for location.
 2. If D3-2 is not used.
 3. Pavement markings shown for reference only. See Part 3 for criteria.
- ★ Refer to Chapter 2B and Figure 2B-105(CA) for mast arm mounted no U-turn signs

Legend

→ Direction of travel

Figure 2A-4. Relative Locations of Regulatory, Warning, and Guide Signs on an Intersection Approach (Sheet 4 of 4)

E – Multi-lane approach to a circular intersection with optional movement turn lanes



Notes:

1. See Table 2C-3 for location.
2. Pavement markings shown for reference only. See Part 3 for criteria.

* Refer to Figure 2B-5 for intersection lane control sign arrow options.

** All adjacent sign panels mounted on an overhead sign structures on state highways should have the same sign depth.

*** Refer to FHWA's List of Known Errors for error in lane-use arrow pavement markings. Refer to Section 1A.04 for more details.

Figure 2A-5. Intersection Configuration at a Divided Highway Crossing

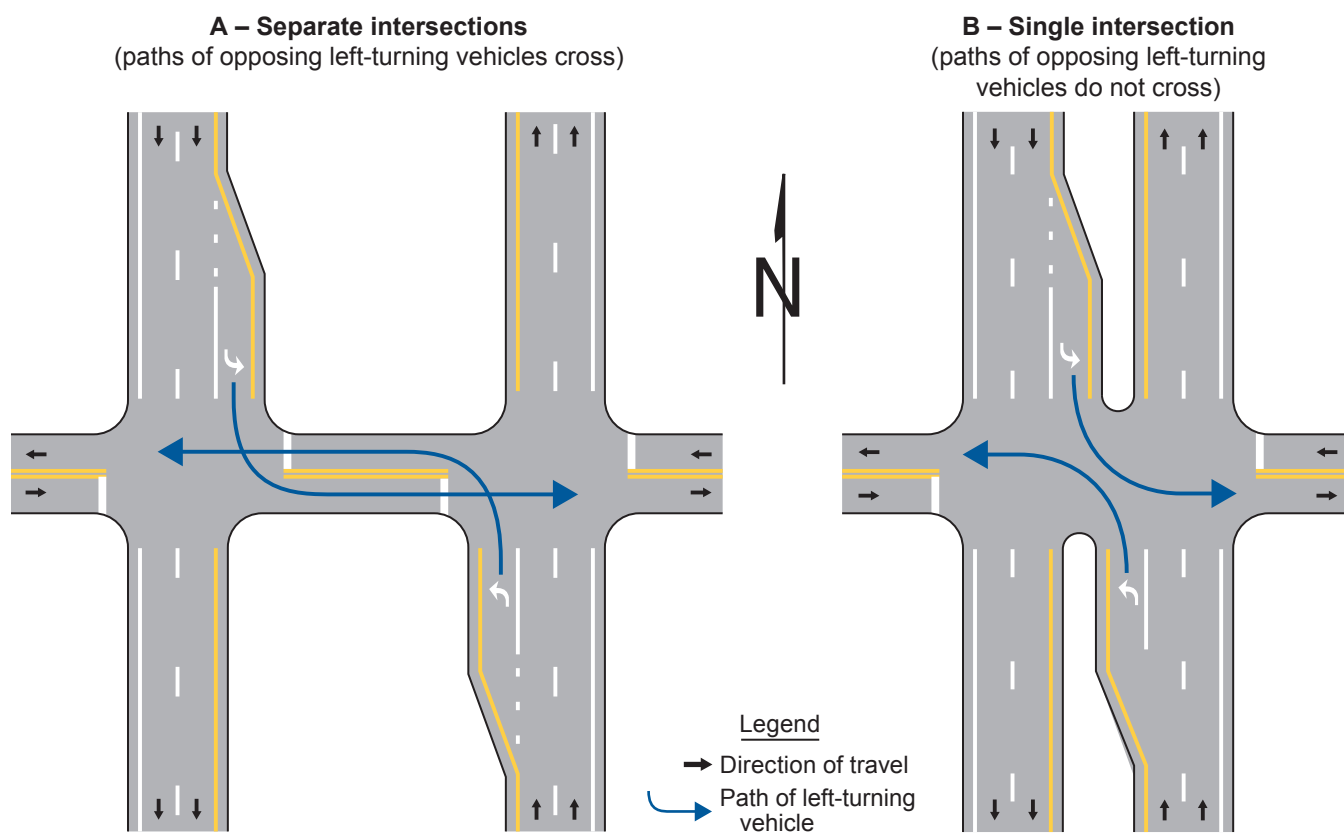


Table 2A-1. Use of Sign Shapes

Shape	Signs
Octagon*	Stop (R1-1)**
Equilateral Triangle (downward-pointing)*	Yield (R1-2)**
Circle*	Grade Crossing Advance Warning (W10-1)**
Pennant (Isosceles Triangle with longer axis horizontal, pointed right)*	No Passing Zone (W14-3)**
Pentagon (upward-pointing)*	School (S1-1) (squared bottom corners)** County Route (M1-6) (tapered lower sides)**
Crossbuck (two rectangles in a perpendicular "X" configuration)*	Grade Crossing (R15-1)**
Diamond	Warning Series
Rectangle (including square)	Regulatory Series Guide Series*** Warning Series
Trapezoid*	Recreational and Cultural Interest Area Guide Series (isosceles or right-angled) National Forest Route Sign (M1-1) (isosceles)**

* This shape shall be limited exclusively to the sign(s) indicated.

** This sign shall be exclusively the shape shown.

*** Guide series includes general service, specific service, tourist-oriented directional, general information, recreational and cultural interest area, and emergency management signs.

Note: Signs with standardized designs shall not be modified to accommodate a different shape except as provided in this Manual.

Table 2A-2. Common Uses of Sign Colors

Type of Sign	Legend								Background										
	Black	Green	Red	White	Yellow	Orange	Fluorescent Yellow-Green	Fluorescent Pink	Black	Blue	Brown	Green	Orange ¹	Red ¹	White	Yellow ¹	Purple	Fluorescent Yellow-Green	Fluorescent Pink
Regulatory	X		X	X					X					X	X				
Prohibitive			X	X ²										X ²	X				
Permissive		X													X				
Warning	X															X			
Pedestrian	X															X		X	
Bicycle	X															X		X	
Guide				X								X							
Interstate Route				X						X				X					
State Route	X			X								X		X					
U.S. Route	X														X				
County Route					X					X									
Forest Route				X							X								
Street Name				X								X							
Destination				X								X							
Reference Location				X								X							
Information				X						X		X							
Evacuation Route				X						X									
Road User Service				X						X									
Recreational				X							X	X							
Temporary Traffic Control	X												X						
Incident Management	X												X						X
School	X																	X	
ETC-Account Only	X																X ⁵		

Changeable Message Signs																			
Regulatory			X ⁴	X					X										
Warning					X				X										
Temporary Traffic Control					X	X			X										
Guide				X					X			X ³							
Motorist Services				X					X	X ³									
Incident Management					X			X	X										
School, Pedestrian, Bicycle					X		X		X										

¹ Fluorescent versions of these background colors may also be used.

² Legend and background color combination for use only as identified for specific signs in this Manual or Standard Highway Signs.

³ These alternative background colors would be provided by blue or green lighted pixels such that the entire CMS would be lighted, not just the legend.

⁴ Red is used only for the circle and diagonal or other red elements of a similar static regulatory sign.

⁵ The use of purple on signs is restricted per the provisions of Chapter 2F.

Notes:

- The purpose of the information in this table is to provide a general overview of common color combinations. The color combinations and orientations for signs with standardized designs shall not be modified. For signs with unique legends, the shape and color shall be the same as standard signs of the same functional type.
- The colors shown for changeable message signs are for those with electronic displays.

Table 2A-3. Illumination of Sign Elements

Means of Illumination	Sign Element to be Illuminated
Light behind the sign face	• Symbol or word message • Background • Symbol, word message, and background (through a translucent material)
Attached or independently-mounted light source designed to direct essentially uniform illumination onto the sign face	• Entire sign face
Light-emitting diodes (LEDs)	• Symbol or word message • Entire sign border
Other devices or treatments that highlight the sign shape, color, or message: Luminous tubing Fiber optics Incandescent light bulbs Luminescent panels	• Symbol or word message • Entire sign face

Table 2A-4. Retroreflection of Sign Elements

Means of Retroreflection	Sign Element
Prismatic reflector “buttons” or similar units	Symbol Word message Border
A material that has a smooth, sealed outer surface over a microstructure that reflects light	Symbol Word message Border Background

Table 2A-5. Minimum Maintained Retroreflectivity Levels¹

Sign Color	Beaded Sheeting Type (ASTM D4956)			Prismatic Sheeting	Additional Criteria
	I	II	III		
White on Green	W*; G ≥ 7	W*; G ≥ 15	W*; G ≥ 25	W ≥ 250; G ≥ 25	Overhead
	W*; G ≥ 7	W ≥ 120; G ≥ 15			Post-mounted
White on Blue	W*; B ≥ 3	W*; B ≥ 5	W*; B ≥ 12	W ≥ 250; B ≥ 12	Overhead
	W*; B ≥ 3	W ≥ 120; B ≥ 7			Post-mounted
White on Brown	W*; Br ≥ 1	W*; Br ≥ 5	W*; Br ≥ 10	W ≥ 350; Br ≥ 10	Overhead
	W*; Br ≥ 1	W ≥ 150; Br ≥ 5			Post-mounted
Black on Yellow or Black on Orange	Y*; O*	Y ≥ 50; O ≥ 50			2
	Y*; O*	Y ≥ 75; O ≥ 75			3
White on Red	W ≥ 35; R ≥ 7				4
Black on White	W ≥ 50				—
¹ The minimum maintained retroreflectivity levels shown in this table are in units of cd/lx/m ² measured at an observation angle of 0.2° and an entrance angle of -4.0°.					
² For word legend and fine symbol signs measuring at least 48 inches and for all sizes of bold symbol signs					
³ For word legend and fine symbol signs measuring less than 48 inches					
⁴ Minimum sign contrast ratio ≥ 3:1 (white retroreflectivity ÷ red retroreflectivity)					
* This sheeting type shall not be used for this color for this application					
Bold Symbol Signs					
• W1-1,2 – Turn and Curve • W1-3,4 – Reverse Turn and Curve • W1-5 – Winding Road • W1-6,7 – Large Arrow • W1-8 – Chevron • W1-10 – Intersection in Curve • W1-11 – Hairpin Curve • W1-15 – 270 Degree Loop • W2-1 – Cross Road • W2-2,3 – Side Road • W2-4,5 – T and Y Intersection • W2-6 – Circular Intersection • W2-7,8 – Double Side Roads		• W3-1 – Stop Ahead • W3-2 – Yield Ahead • W3-3 – Signal Ahead • W4-1 – Merge • W4-2 – Lane Ends • W4-3 – Added Lane • W4-5 – Entering Roadway Merge • W4-6 – Entering Roadway Added Lane • W6-1,2 – Divided Highway Begins and Ends • W6-3 – Two-Way Traffic • W10-1,2,3,4,11,12 – Grade Crossing Advance Warning		• W11-2 – Pedestrian Crossing • W11-3,4,16-22 – Large Animals • W11-5 – Farm Equipment • W11-6 – Snowmobile Crossing • W11-7 – Equestrian Crossing • W11-8 – Fire Station ** • W11-10 – Truck Crossing • W12-1 – Double Arrow • W16-5P,6P,7P – Pointing Arrow Plaques • W20-7 – Flagger • W21-1 – Worker	
Fine Symbol Signs (symbol signs not listed as bold symbol signs)					
Special Cases					
• W3-1 – Stop Ahead: Red retroreflectivity ≥ 7 • W3-2 – Yield Ahead: Red retroreflectivity ≥ 7; White retroreflectivity ≥ 35 • W3-3 – Signal Ahead: Red retroreflectivity ≥ 7; Green retroreflectivity ≥ 7 • W3-5 – Speed Reduction: White retroreflectivity ≥ 50 • For non-diamond shaped signs, such as W14-3 (No Passing Zone), W4-4P (Cross Traffic Does Not Stop), or W13-1P,2,3,6,7 (Speed Advisory Signs), use the largest sign dimension to determine the proper minimum retroreflectivity level.					

** Refer to FHWA's List of Known Errors for error in table. Refer to Section 1A.04 for more details.

CHAPTER 2B. REGULATORY SIGNS, BARRICADES, AND GATES

Chapter 2B Subchapter and Section Organization

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- 2B.01 Application of Regulatory Signs
- 2B.02 Design of Regulatory Signs
- 2B.03 Size of Regulatory Signs
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- 2B.06 General Considerations
- 2B.07 Determining the Minor Road for Unsignalized Intersections
- 2B.08 Right-of-Way Intersection Control Considerations
- 2B.09 No Intersection Control
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- 2B.11 Minor Road Stop Control
- 2B.12 All-Way Stop Control
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- 2B.14 All-Way Stop Control Warrant B: Sight Distance
- 2B.15 All-Way Stop Control Warrant C: Transition to Signal Control or YIELD Control at a Circular Intersection
- 2B.16 All-Way Stop Control Warrant D: 8-Hour Volume (Vehicles, Pedestrians, Bicycles)
- 2B.17 All-Way Stop Control Warrant E: Other Factors
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- 2B.19 Yield Here to Pedestrians Signs and Stop Here for Pedestrians Signs (R1-5 Series)
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SPEED LIMIT SIGNS AND PLAQUES

- 2B.21 Speed Limit Sign (R2-1)
- 2B.22 Vehicle Speed Limit Plaques (R2-2P Series)
- 2B.23 Night Speed Limit Plaque (R2-3P)
- 2B.24 Minimum Speed Limit Plaque (R2-4P) and Combined Maximum and Minimum Speed Limits Sign (R2-4a)
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MOVEMENT AND LANE CONTROL SIGNS AND PLAQUES

- 2B.26 Movement Prohibition Signs (R3-1 through R3-4, R3-18, and R3-27)
- 2B.27 Intersection Lane Control Signs (R3-5 through R3-8)
- 2B.28 Mandatory Movement Lane Control Signs (R3-5, R3-5a, R3-7, R3-19 Series, and R3-20) and Plaques
- 2B.29 Optional Movement Lane Control Signs (R3-6 Series)
- 2B.30 Advance Intersection Lane Control Signs (R3-8 Series)
- 2B.31 RIGHT (LEFT) LANE MUST EXIT Signs (R3-33 and R3-33a)
- 2B.32 Two-Way Left-Turn-Only Signs (R3-9a and R3-9b) and Plaques
- 2B.33 BEGIN and END Plaques (R3-9cP and R3-9dP)
- 2B.34 Reversible Lane Control Signs (R3-9e through R3-9i)
- 2B.35 Jughandle Signs (R3-23, R3-24, R3-25, and R3-26 Series)

PASSING, KEEP RIGHT AND SLOW TRAFFIC SIGNS

- 2B.36 DO NOT PASS Sign (R4-1)
- 2B.37 PASS WITH CARE Sign (R4-2)

- 2B.38 KEEP RIGHT EXCEPT TO PASS Sign (R4-16), SLOWER TRAFFIC KEEP RIGHT Sign (R4-3), and TRUCKS USE RIGHT LANE Sign (R4-5)
- 2B.39 Keep Right and Keep Left Signs (R4-7 Series and R4-8 Series)
- 2B.40 STAY IN LANE Sign (R4-9)
- 2B.41 RUNAWAY VEHICLES ONLY Sign (R4-10)
- 2B.42 Slow Vehicle Turn-Out Signs (R4-12, R4-13, and R4-14)
- 2B.43 DO NOT DRIVE ON SHOULDER Sign (R4-17) and DO NOT PASS ON SHOULDER Sign (R4-18)
- 2B.44 ALL TRAFFIC Sign (R4-20) and RIGHT (LEFT) TURN ONLY Sign (R4-21)

SELECTIVE EXCLUSION SIGNS AND PLAQUES

- 2B.45 Selective Exclusion Signs and Plaques

DO NOT ENTER, WRONG WAY, ONE WAY, AND RELATED SIGNS AND PLAQUES

- 2B.46 DO NOT ENTER Sign (R5-1)
- 2B.47 WRONG WAY Sign (R5-1a)
- 2B.48 Wrong-Way Traffic Control at Interchange Ramps
- 2B.49 ONE WAY Signs (R6-1 and R6-2)
- 2B.50 Divided Highway Crossing Signs (R6-3 and R6-3a)
- 2B.51 Roundabout Circulation Plaque (R6-5P)

PARKING, STANDING, STOPPING, AND EMERGENCY RESTRICTION SIGNS

- 2B.52 Parking, Standing, and Stopping Signs (R7 and R8 Series)
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- 2B.56 WALK ON LEFT FACING TRAFFIC and No Hitchhiking Signs (R9-1, R9-4, and R9-4a)
- 2B.57 Pedestrian Crossing Signs (R9-2 and R9-3)
- 2B.58 Traffic Signal Pedestrian and Bicycle Actuation Signs (R10-1 through R10-4 and R10-24 through R1-26)

TRAFFIC SIGNAL SIGNS

- 2B.59 Traffic Signal Signs (R10-5 through R10-30)
- 2B.60 No Turn on Red Signs (R10-11 Series, R10-17a, and R10-30)
- 2B.61 Ramp Metering Signs (R10-28 and R10-29)

ROAD CLOSED AND WEIGHT LIMIT SIGNS

- 2B.62 KEEP OFF MEDIAN Sign (R11-1)
- 2B.63 ROAD CLOSED Sign (R11-2) and LOCAL TRAFFIC ONLY Signs (R11-3 Series and R11-4)
- 2B.64 Weight Limit Signs (R12-1 through R12-7)
- 2B.65 Weigh Station Sign (R13-1)
- 2B.66 TRUCK ROUTE Sign (R14-1)
- 2B.67 Hazardous Material Signs (R14-2 and R14-3)
- 2B.68 National Network Signs (R14-4 and R14-5)

OTHER REGULATORY SIGNS AND PLAQUES

- 2B.69 Photo Enforced Signs and Plaques (R10-18, R10-18a, R10-19P, and R10-19aP)
- 2B.70 MINOR CRASHES MOVE VEHICLES FROM TRAVEL LANES Sign (R16-4)
- 2B.71 Move Over or Reduced Speed Sign (R16-3)
- 2B.72 No Hand-Held Phone Use by Driver Signs (R16-15 and R16-15a)
- 2B.73 Headlight Use Signs (R16-5 through R16-11)
- 2B.74 Seat Belt Symbol

BARRICADES AND GATES

2B.75 Barricades

2B.76 Gates

CALIFORNIA SECTIONS

2B.101(CA) NO FISHING (JUMPING) FROM BRIDGE Sign (R23(CA))
2B.102(CA) \$1000 Fine Signs (R47(CA) and R47A(CA))
2B.103(CA) PRIVATE ROAD (PRIVATE PROPERTY) VEHICLE CODE ENFORCED Sign (R101(CA))
2B.104(CA) GOLF CARTS OK DAYLIGHT HOURS Sign (SR43(CA))
2B.105(CA) Bus and Truck Registration Sign (SR44(CA))
2B.106(CA) EMERGENCY ACCESS KEEP CLEAR Sign (SR46(CA))
2B.107(CA) Off Highway Vehicle Signs (SR47(CA) and SR48(CA))
2B.108(CA) NO CAMPING OR SLEEPING IN VEHICLE Sign (R119(CA))
2B.109(CA) BEGIN/END FREEWAY Signs (R57(CA) and R58(CA))
2B.110(CA) No Loitering, Camping, Vending or Parking of Vehicles 30 Feet or Longer Sign (S22(CA))

GENERAL

Section 2B.01 Application of Regulatory Signs

Standard:

- 01 Regulatory signs shall be used to inform road users of selected traffic laws or regulations and to indicate the applicability of the legal requirements.
- 02 Regulatory signs shall be installed at or near where the regulations apply. The signs shall clearly indicate the requirements imposed by the regulations and shall be designed and installed to provide adequate visibility and legibility in order to obtain compliance.
- 03 Regulatory signs shall be retroreflective or illuminated (see Section 2A.21).
- 04 Traffic control device related orders, ordinances and resolutions by local authorities which affect State highways shall be approved by Caltrans.

Support:

- 05 Signs required for enforcement are normally placed by, and at the expense of, the authority establishing the regulation.
- 06 Refer to CVC § 21461 for failure to obey a regulatory sign.

Section 2B.02 Design of Regulatory Signs

Standard:

- 01 Regulatory signs shall be rectangular unless specifically designated otherwise in this Manual. Regulatory signs shall be designed in accordance with the sizes, shapes, colors, and legends contained in the “Standard Highway Signs” publication and Caltrans’ California Sign Specifications (see Section 1A.05).

Support:

- 02 The use of educational plaques to supplement symbol signs is described in Section 2A.09.
- 03 The use of LEDs in the border or legend of regulatory signs is described in Section 2A.12.

Standard:

- 04 LED signs displaying a part-time prohibitory message incorporating a red circle and diagonal of a static sign shall display a red symbol that approximates the same red circle and diagonal as closely as possible. The symbol of the action to be prohibited shall be displayed in white LEDs on a black background.
- 05 A regulatory sign displayed entirely with LEDs and incorporated within the border of a larger full-matrix changeable message sign shall display the regulatory sign legend in the size, shape, color, and legend of the standard regulatory sign.

Section 2B.03 Size of Regulatory Signs

Standard:

- 01 Except as provided in Section 2A.07, the minimum sizes for regulatory signs shall be as shown in Table 2B-1 and Table 2B-1(CA).

Support:

- 02 Section 2A.07 contains information regarding the applicability of the various columns in Table 2B-1.

Standard:

- 03 Except as provided in Paragraphs 5 and 6 of this Section, the minimum sizes for regulatory signs facing traffic on multi-lane conventional roads shall be as shown in the Multi-Lane column of Table 2B-1 and Table 2B-1(CA).
- 04 The minimum size of regulatory signs applied on low-volume rural roads with operating speeds of 30 mph or less shall be as shown in the Minimum column of Table 2B-1.

Option:

- 05 Where the posted speed limit is 35 mph or less on a multi-lane highway or street, other than for a STOP sign, the minimum size shown in the Single Lane column in Table 2B-1 and 2B-1(CA) may be used.
- 06 Where a regulatory sign, other than a STOP sign, is placed on the left-hand side of a multi-lane roadway in addition to the installation of the same regulatory sign on the right-hand side of the roadway, the minimum size shown in the Single Lane column in Table 2B-1 and 2B-1(CA) may be used for both the sign on the right-hand side and the sign on the left-hand side of the roadway.

Guidance:

- 07 The minimum sizes for regulatory signs facing traffic on exit and entrance ramps at major interchanges connecting an Expressway or Freeway with an Expressway or Freeway (see Section 2E.11) should be as shown in the column of

Table 2B-1 that corresponds to the mainline roadway classification (Expressway or Freeway). If a minimum size is not provided in the Freeway column, the minimum size in the Expressway column should be used. If a minimum size is not provided in the Freeway or Expressway Column, the size in the Oversized column should be used.

- 08 *The minimum sizes for all regulatory signs facing traffic on exit and entrance ramps at all other classifications of interchanges (see Section 2E.11) should be the sizes shown in Table 2B-1 in the Conventional Road Single Lane column for single-lane ramps and in the Multi-Lane column for multi-lane ramps.*

Section 2B.04 STOP Sign (R1-1) and ALL-WAY Plaque (R1-3P)

Standard:

- 01 **When it is determined that a full stop is always required on an approach to an intersection, a STOP (R1-1) sign (see Figure 2B-1) shall be used.**
- 01a **When a required stop is to apply at the entrance to an intersection from a one-way street with a roadway of 30 feet or more in width, stop signs shall be erected both on the left and the right sides of the one-way street at or near the entrance to the intersection. Refer to CVC § 21355.**
- 02 **Secondary legends shall not be used on STOP sign faces.**
- 03 **The STOP sign shall not be displayed using a changeable message sign.**
- 04 **At intersections where all approaches are controlled by STOP signs (see Section 2B.12), an ALL-WAY (R1-3P) supplemental plaque (see Figure 2B-1) shall be mounted below each STOP sign. The ALL-WAY plaque shall have a white legend and border on a red background.**
- 05 **Supplemental plaques with legends such as 2-WAY, 3-WAY, 4-WAY, or other numbers of ways shall not be used with STOP signs.**

Support:

- 06 The use of the CROSS TRAFFIC DOES NOT STOP (W4-4P Series) and other plaques with variations of this legend is described in Section 2C.66.

Guidance:

- 07 *The TRAFFIC FROM LEFT (RIGHT) DOES NOT STOP (W4-4aP) plaque or ONCOMING TRAFFIC DOES NOT STOP (W4-4bP) plaque should be used at intersections where STOP signs control all but one approach to the intersection, unless the only non-stopped approach is from a one-way street.*

Option:

- 08 The EXCEPT RIGHT TURN (R1-10P) plaque (see Figure 2B-1) may be mounted below the STOP sign if an engineering study determines that a special combination of geometry and traffic volumes is present that makes it possible for right-turning traffic on the approach to be allowed to enter the intersection without stopping.

Support:

- 09 The design and application of Stop Beacons are described in Section 4S.05.
- 10 A STOP (R1-1) sign is not a “cure-all” and is not a substitute for other traffic control devices and/or other traffic calming strategies. Often, the need for a STOP (R1-1) sign can be eliminated if the sight distance is increased by removing obstructions.

Through Highways

Option:

- 11 STOP (R1-1) signs may be installed either at or near the entrance to a State highway, except at signalized intersections, or at any location so as to control traffic within an intersection. Refer to CVC §§ 21352 and 21355. See Section 1A.05 for information regarding this publication.

Support:

- 12 Authority to place STOP (R1-1) signs facing State highway traffic is delegated to the Caltrans District Directors.

Option:

- 13 Local authorities may designate any highway under their jurisdiction as a through highway and install STOP (R1-1) signs in a like manner. Refer to CVC § 21354.

Standard:

- 14 **No local authority shall erect or maintain any STOP (R1-1) sign or other traffic control device requiring a stop, on any State highway, except by permission of Caltrans. Refer to CVC § 21353.**

Support:

- 15 Caltrans will grant such permission only when an investigation indicates that the STOP (R1-1) sign will benefit traffic.

Section 2B.05 YIELD Sign (R1-2)

Support:

- 01 The YIELD sign requires road users to yield the right-of-way to other traffic on certain approaches to an intersection or on a two way approach to a one way section of roadway, such as a narrow bridge or underpass. Vehicles controlled by a YIELD sign need to slow down to a speed that is reasonable for the existing conditions or stop when necessary to avoid interfering with conflicting traffic.

Standard:

- 02 **The YIELD (R1-2) sign (see Figure 2B-1) shall not be displayed using a changeable message sign.**

SIGNING FOR RIGHT-OF-WAY AT INTERSECTIONS

Section 2B.06 General Considerations

Support:

- 01 Unsignalized intersections represent the most common form of intersection right-of-way control. Selection of control type might be impacted by specific requirements of State law or local ordinances.
- 02 Roundabouts and traffic circles are circular intersection designs and are not traffic control devices. The decision to convert an intersection from a conventional intersection to a circular intersection is an engineering design decision and not a traffic control device decision. As such, criteria for conversion from a conventional intersection to a circular intersection are not included in the MUTCD.

Guidance:

- 03 *The type of traffic control used at an unsignalized intersection should be the least restrictive that provides appropriate levels of safety and efficiency for all road users.*

Support:

- 04 Some types of right-of-way control that can exist at an unsignalized intersection in order from the least restrictive to the most restrictive are the following:
- A. No intersection control (see Section 2B.09): There are no right-of-way traffic control devices on any of the approaches to the intersection.
 - B. Yield control (see Section 2B.10): YIELD signs are placed on all approaches (for a circular intersection), ~~on opposing approaches for a four-leg intersection~~, on a single approach for a three-leg intersection, ~~or in the median of a divided highway~~. The YIELD signs are placed on the minor road.
 - C. Minor road stop control (see Section 2B.11): STOP signs are typically placed on opposing approaches (for a four-leg intersection) or on a single approach (for a three-leg intersection). The STOP signs are normally placed on the minor road. Section 2B.07 contains guidance on selecting the minor road.
 - D. All-way stop control (see Section 2B.12): STOP signs are placed on all approaches to the intersection.

Guidance:

- 05 *When selecting a form of intersection control, the following factors should be considered:*
- A. *Motor vehicle, bicycle, and pedestrian traffic volumes on all approaches; where the term units/day or units/hour is indicated, it should be the total of motor vehicle, bicycle, and pedestrian volume;*
 - B. *Driver yielding behavior with regard to all modes of conflicting traffic, including bicyclists and pedestrians;*
 - C. *Number and angle of approaches;*
 - E. *Approach speeds;*
 - E. *Sight distance available on each approach;*
 - F. *Reported crash experience; and*
 - G. *The presence of a grade crossing near the intersection.*

Standard:

- 06 **YIELD or STOP signs shall not be used for speed control.**

Support:

- 07 Appropriate traffic calming or other speed control measures are available to control vehicle speeds, such as those that do not have the potential to diminish the effectiveness of traffic control devices when used for their specified purpose.

Standard:

- 08 **Because the potential for conflicting commands could create driver confusion, YIELD or STOP signs shall not be used in conjunction with any traffic control signal operation, except in the following cases:**
- ~~A. If the signal indication for an approach is a flashing red at all times;~~
 - B. **If a minor street or driveway is located within or adjacent to the area controlled by the traffic control signal, but does not require separate traffic signal control because an extremely low potential for conflict exists; or**
 - C. **If a channelized turn lane is separated from the adjacent travel lanes by an island and the channelized turn lane is not controlled by a traffic control signal.**

- 08a **STOP signs shall not be erected at any entrance to an intersection controlled by traffic signals. Refer to CVC § 21355(a).**

Option:

- 08b STOP signs may be used at a channelized turn lane if it is separated from the adjacent travel lanes moving in same direction by an island and the channelized turn lane is not controlled by a traffic control signal.

Standard:

- 09 STOP signs and YIELD signs shall not be installed on different approaches to the same unsignalized intersection if those approaches conflict with or oppose each other, except as provided for in Items A and B in Paragraph 3 of Section 2B.10.
- 10 Portable or part-time STOP or YIELD signs shall not be used except for emergency and temporary traffic control zone purposes.
- 11 A portable or part-time (folding) STOP sign that is manually placed into view and manually removed from view shall not be used during a power outage to control a signalized approach unless the maintaining agency establishes that the signal indication that will first be displayed to that approach upon restoration of power is a flashing red signal indication and that the portable STOP sign will be manually removed from view prior to resuming stop-and-go operation of the traffic control signal.

Option:

- 12 A portable or part-time (folding) STOP sign that is electrically or mechanically operated such that it only displays the stop message during a power outage and ceases to display the stop message upon restoration of power may be used during a power outage to control a signalized approach.

Support:

- 13 The use of STOP signs at grade crossings is described in Sections 8B.04 and 8B.05.
- 14 Section 9B.01 contains provisions regarding the assignment of priority where a shared-use path crosses a roadway.

Section 2B.07 Determining the Minor Road for Unsignalized Intersections

Guidance:

- 01 The selection of the minor road to be controlled by YIELD or STOP signs should be based on one or more of the following criteria:
- A. A roadway intersecting a designated through or numbered highway,
 - B. A roadway with the lower functional classification,
 - C. A roadway with the lower traffic volume,
 - D. A roadway with the lower speed limit, and/or
 - E. A roadway that intersects with a roadway that has a higher priority for one or more modes of travel.
- 02 When two roadways that have relatively equal volumes, speeds, and/or other characteristics intersect, the following factors should be considered in selecting the minor road for installation of YIELD or STOP signs:
- A. Controlling the direction that conflicts the most with established pedestrian crossing activity or school walking routes;
 - B. Controlling the direction that has obscured vision, dips, or bumps that already require drivers to use lower operating speeds; and
 - C. Controlling the direction that has the best sight distance from a controlled position to observe conflicting traffic.

Support:

- 03 Refer to CVC § 21356 for the erection of YIELD signs upon the approaches to more than one of the intersecting streets.

Section 2B.08 Right-of-Way Intersection Control Considerations

Guidance:

- 01 Before converting to a more restrictive form of right-of-way control at an unsignalized intersection, the following alternative treatments to address safety, operational, or other concerns should be among those to be considered:
- A. Where yield or stop controlled, installing Yield Ahead or Stop Ahead signs on the appropriate approaches to the intersection;
 - B. Removing parking on one or more approaches;
 - C. Removing sight distance obstructions;
 - D. Installing signs along the major street to warn road users approaching the intersection;
 - E. Relocating the stop line(s) and making other changes to improve the sight distance at the intersection;

- F. Installing measures designed to reduce speeds on the approaches;*
- G. Installing an Intersection Control Beacon (see Section 4S.02) or Stop Beacon (see Section 4S.05) at the intersection to supplement STOP sign control;*
- H. Installing a Warning Beacon (see Section 4S.03) on warning signs in advance of a stop-controlled intersection on major-street and/or minor-street approaches;*
- I. Adding one or more lanes on a minor-street approach to reduce the number of vehicles per lane on the approach;*
- J. Revising the geometrics at the intersection to channelize vehicular movements and reduce the time required for a vehicle to complete a movement, which could also assist pedestrians;*
- K. Revising the geometrics at the intersection to add pedestrian median refuge islands and/or curb extensions;*
- L. Installing roadway lighting if a disproportionate number of crashes occur at night;*
- M. Restricting one or more turning movements on a full-time or part-time basis if alternate routes are available;*
- N. Installing on the major street a pedestrian-actuated device: Warning Beacon (see Section 4S.03), rectangular rapid-flashing beacon (see Section 4L.01), or In-Roadway Warning Lights (see Chapter 4U), if pedestrian safety is the major concern;*
- O. If the warrant is satisfied, installing all-way stop control;*
- P. Installing a pedestrian hybrid beacon (see Chapter 4J) on the major street to address pedestrian safety;*
- Q. Installing a circular intersection; and*
- R. Employing other alternatives, depending on conditions at the intersection.*

Section 2B.09 No Intersection Control

Guidance:

- 01 *The decision not to use intersection control should be based on engineering judgment.*

Option:

- 02 The following factors may be considered:
 - A. Intersection sight distance is adequate on all approaches.
 - B. All approaches to the intersection are a single lane and there are no separate turn lanes.
 - C. The combined motor vehicle, bicycle, and pedestrian volume (existing or projected) entering the intersection from all approaches averages less than 1,000 units per day or 80 units in the peak hour.
 - D. There are no marked crosswalks or bicycle lanes on any approach.
 - E. None of the approaches to the intersection are for a through highway, main road, or higher functional classification.
 - F. The angle of intersection is between 90 and 75 degrees.
 - G. The functional classification of the intersecting streets is either the intersection of two local streets or the intersection of a local street with a collector street.

Section 2B.10 Yield Control

Guidance:

- 01 *At intersections where a full stop is not necessary at all times, consideration should first be given to using less restrictive measures such as YIELD signs.*
- 02 *Yield control should be considered when engineering judgment indicates that all of the following conditions exist:*
 - A. *Intersection sight distance is adequate on the approaches to be controlled by YIELD signs.*
 - B. *All approaches to the intersection are a single lane and there are no separate turn lanes.*
 - C. *One of the following crash-related criteria applies:*
 - D. *For changing from no intersection control to yield control, there have been two or more reported crashes in the previous 12 months that are susceptible to correction by the installation of a YIELD sign.*
 - E. *For changing from minor road stop control to yield control, there have been two or fewer reported crashes in the previous 12 months.*
 - F. *The combined motor vehicle, bicycle, and pedestrian volume entering the intersection averages less than 1,800 units per day or 140 units in the peak hour.*

G. The angle of intersection is between 90 and 75 degrees.

H. The functional classification of the intersecting streets is either the intersection of two local streets or the intersection of a local street with a collector street.

Support:

02a Refer to FHWA's List of Known Errors for errors in Paragraph 2, Items D and E text. Refer to Section 1A.04 for more details.

Option:

03 YIELD signs may be installed at an intersection when any of the following conditions apply:

- A. ~~At the second intersection of a divided highway crossing or median break functioning as two separate intersections (see Figure 2B-19). In this case, a YIELD sign may be installed at the entrance to the second intersection.~~
- B. For a channelized turn lane that is separated from the adjacent travel lanes by an island, even if the adjacent lanes at the intersection are controlled by a highway traffic control signal or by a STOP sign.
- C. At an intersection where a special problem exists and where engineering judgment indicates the problem to be susceptible to correction by the use of the YIELD sign.
- D. Facing the entering roadway for a merge-type movement if engineering judgment indicates that control is needed because acceleration geometry and/or sight distance is not adequate for merging traffic operation.
- E. On low-volume rural roads if engineering judgment indicates that a YIELD sign would provide adequate control.
- F. On an approach to an intersection where the only permissible movement is a right-turn movement with an intersection geometry similar to a channelized right-turn lane or an approach to a roundabout.

Guidance:

04 *The YIELD signs should be installed on opposing minor-street approaches (for a four-leg intersection) or on the minor-street approach (for a three-leg intersection). When two intersecting roadways have relatively equal volumes, speeds, and other characteristics, yield control should be installed on the approach that conflicts the most with established pedestrian crossing activity, school walking routes, or bicycle crossing activity.*

Standard:

05 **A YIELD sign shall be used to require road users to yield the right-of-way to other traffic at the entrance to a roundabout. YIELD signs at roundabouts shall be used to control the approach roadways and shall not be used to control the circulatory roadway.**

06 **YIELD signs shall not be placed in more than one of ~~on all of~~ the approaches to an intersection, except at roundabouts. Refer to CVC § 21356.**

Section 2B.11 Minor Road Stop Control

Guidance:

01 *Stop control on the minor-road approach or approaches to an intersection should be considered when engineering judgment indicates that one or more of the following conditions exist:*

- A. *A restricted view exists that requires road users to stop in order to adequately observe conflicting traffic on the through street or highway.*
- B. *Crash records indicate that:*
 - 1. *For a four-leg intersection, there are three or more reported crashes in a 12-month period or six or more reported crashes in a 36-month period. The crashes should be susceptible to correction by installation of minor-road stop control.*
 - 2. *For a three-leg intersection, there are three or more reported crashes in a 12-month period or five or more reported crashes in a 36-month period. The crashes should be susceptible to correction by installation of minor-road stop control.*
- C. *The intersection is of a lower functional classification road with a higher functional classification road.*
- D. *Conditions that previously supported the installation of all-way stop control no longer exist.*

02 *On low-volume rural roads, a STOP sign should be considered at an intersection where engineering judgment indicates that Item C in Paragraph 1 of this Section is applicable or where the intersection has inadequate sight distance for the operating vehicle speeds.*

Section 2B.12 All-Way Stop Control

Support:

- 01 The provisions in the following sections describe warrants for the recommended engineering study to determine all-way stop control. Warrants are not a substitute for engineering judgment. The fact that a warrant for a particular traffic control device is met is not conclusive justification to install or not install all-way stop control. Because each intersection will have unique characteristics that affect its operational performance or safety, it is the engineering study for a given intersection that is ultimately the basis for a decision to install or not install all-way stop control.
- 02 All-way stop controls at intersections with substantially differing approach volumes can reduce the effectiveness of these devices for all roadway users.

Guidance:

- 03 *The decision to establish all-way stop control at an unsignalized intersection should be based on an engineering study. The engineering study for all-way stop control should include an analysis of factors related to the existing operation and safety at the intersection, the potential to improve these conditions, and the applicable factors contained in the following all-way stop control warrants:*
- A. *All-Way Stop Control Warrant A: Crash Experience (see Section 2B.13)*
 - B. *All-Way Stop Control Warrant B: Sight Distance (see Section 2B.14)*
 - C. *All-Way Stop Control Warrant C: Transition to Signal Control or Transition to Yield Control at a Circular Intersection (see Section 2B.15)*
 - D. *All-Way Stop Control Warrant D: 8-Hour Volume (Vehicles, Pedestrians, Bicycles) (see Section 2B.16)*
 - E. *All-Way Stop Control Warrant E: Other Factors (see Section 2B.17)*

Option:

- 04 The decision to install all-way stop control on site roadways open to public travel may be based on engineering judgment.

Standard:

- 05 **The satisfaction of an all-way stop control warrant or warrants shall not in itself require the installation of all-way stop control at an unsignalized intersection.**

Section 2B.13 All-Way Stop Control Warrant A: Crash Experience

Option:

- 01 All-way stop control may be installed at an intersection where an engineering study indicates that:
- A. For a four-leg intersection, there are five or more reported crashes in a 12-month period or six or more reported crashes in a 36-month period that were of a type susceptible to correction by the installation of all-way stop control.
 - B. For a three-leg intersection, there are four or more reported crashes in a 12-month period or five or more reported crashes in a 36-month period that were of a type susceptible to correction by the installation of all-way stop control.

Section 2B.14 All-Way Stop Control Warrant B: Sight Distance

Option:

- 01 All-way stop control may be installed at an intersection where an engineering study indicates that sight distance on the minor-road approaches controlled by a STOP sign is not adequate for a vehicle to turn onto or cross the major (uncontrolled) road.

Support:

- 02 At such a location, a road user, after stopping, cannot see conflicting traffic and is not able to negotiate the intersection unless conflicting cross traffic is also required to stop.

Section 2B.15 All-Way Stop Control Warrant C: Transition to Signal Control or Transition to Yield Control at a Circular Intersection

Option:

- 01 All-way stop control may be installed at locations where all-way stop control is an interim measure that can be installed to control traffic while arrangements are being made for the installation of a traffic control signal (see Chapter 4C) at the intersection or for the installation of yield control at a circular intersection.

Section 2B.16 All-Way Stop Control Warrant D: 8-Hour Volume (Vehicles, Pedestrians, Bicycles)

Option:

- 01 All-way stop control may be installed at an intersection where an engineering study indicates:
 - A. The combined motor vehicle, bicycle, and pedestrian volume entering the intersection from the major- street approaches is at least 300 units per hour for each of any 8 hours of a typical day; and
 - B. The combined motor vehicle, bicycle, and pedestrian volume entering the intersection from the minor- street approaches is at least 200 units per hour for each of any of the same 8 hours.
- 02 If the 85th-percentile approach speed of the major-street traffic exceeds 40 mph, the minimum vehicular volume warrants may be reduced to 70 percent of the values given in Items A and B in Paragraph 1 of this Section.

Section 2B.17 All-Way Stop Control Warrant E: Other Factors

Option:

- 01 All-way stop control may be installed at an intersection where an engineering study indicates that all- way stop control is needed due to other factors not addressed in the other all-way stop control warrants. Such other factors may include, but are not limited to, the following:
 - A. The need to control left-turn conflicts,
 - B. An intersection of two residential neighborhood collector (through) streets of similar design and operating characteristics where all-way stop control would improve traffic operational characteristics of the intersection, or
 - C. Where pedestrian and/or bicyclist movements support the installation of all-way stop control.

Section 2B.18 STOP Sign or YIELD Sign Placement

Standard:

- 01 **The STOP or YIELD sign shall be installed on the near side of the intersection on the right- hand side of the approach to which it applies. When the STOP or YIELD sign is installed at this required location and the sign visibility is restricted, a Stop Ahead sign (see Section 2C.35) shall be installed in advance of the STOP sign or a Yield Ahead sign (see Section 2C.35) shall be installed in advance of the YIELD sign.**
- 02 **The STOP or YIELD sign shall be located as close as practicable to the intersection it regulates, while optimizing its visibility to the road user it is intended to regulate.**
- 03 **STOP signs and YIELD signs shall not be mounted on the same post.**
- 03a **If other signs are grouped with a STOP sign, except for ONE WAY (R6-1 & R6-2) signs and Street Name (D3-1) sign (refer to Sections 2B.49 & 2D.45), they shall be installed below the STOP sign.**

Support:

- 03b **When a Street Name sign and a ONE WAY sign are mounted on the same assembly as a STOP sign, the Street Name sign needs to be placed at the top, the ONE WAY sign directly below it, and the STOP sign at the bottom.**
- 04 Section 2A.05 contains information about mounting signs back-to-back with a STOP or YIELD sign.

Guidance:

- 05 *STOP or YIELD signs should not be placed farther than 50 feet from the edge of the pavement of the intersected roadway (see Drawing F in Figure 2A-3).*
- 06 *Supplemental plaques used in conjunction with a STOP or YIELD sign should be limited to those specified for such use in this Manual*

Option:

- 07 Where drivers proceeding straight ahead must yield to traffic approaching from the opposite direction, such as at a one-lane bridge, a TO ONCOMING TRAFFIC (R1-2aP) plaque (see Figure 2B-1) may be mounted below the YIELD sign.
- 08 Where drivers must yield to traffic in a multi-lane roundabout, a TO TRAFFIC IN CIRCLE (R1-2bP) or TO ALL LANES (R1-2cP) plaque (see Figure 2B-1) may be mounted below the YIELD sign.

Support:

- 09 Figure 2A-3 shows examples of some typical placements of STOP signs and YIELD signs.

Standard:

- 09a **The TO ONCOMING TRAFFIC (R1-2a) sign when used, shall be mounted on the same post and immediately below a YIELD (R1-2) sign.**

Guidance:

09b The width of the R1-2a sign should be equal to the width of the YIELD (R1-2) sign.

Support:

10 Section 2A.13 contains additional information about separate and combined mounting of other signs with STOP or YIELD signs.

Guidance:

11 Stop lines that are used to supplement a STOP sign should be located as described in Section 3B.19. Yield lines that are used to supplement a YIELD sign should be located as described in Section 3B.19.

12 Where there is a marked crosswalk at the intersection, the STOP sign should be installed in advance of the edge of the crosswalk that is nearest to the approaching traffic.

13 Except at roundabouts and channelized right-turn lanes, where there is a marked crosswalk at the intersection, the YIELD sign should be installed in advance of the edge of the crosswalk that is nearest to the approaching traffic.

14 Where two roads intersect at an acute angle, the STOP or YIELD sign should be positioned at an angle, or shielded, so that the legend is out of view of traffic to which it does not apply.

15 If a raised splitter island is available on the left-hand side of a multi-lane roundabout approach, an additional YIELD sign should be placed on the left-hand side of the approach.

Option:

16 If a raised splitter island is available on the left-hand side of a single-lane roundabout approach, an additional YIELD sign may be placed on the left-hand side of the approach.

17 At wide-throat intersections or where two or more approach lanes of traffic exist on the signed approach, an additional STOP or YIELD sign may be installed on the left-hand side of the road and/or a stop or yield line may be used to improve observance of the right-of-way control. At channelized intersections or at divided roadways separated by a median or divisional island, the additional STOP or YIELD sign may be placed on a channelizing island, or in the median or on the divisional island. An additional STOP or YIELD sign may also be placed overhead facing the approach at the intersection to improve observance of the right-of-way control.

Standard:

18 More than one STOP sign or more than one YIELD sign shall not be placed on the same support facing in the same direction.

Option:

19 For a yield-controlled channelized right-turn movement onto a roadway without an acceleration lane and for an entrance ramp onto a freeway or expressway without an acceleration lane, a NO MERGE AREA (W4-5aP) supplemental plaque (see Section 2C.45) may be mounted below a Yield Ahead (W3-2) sign and/or below a YIELD (R1-2) sign when engineering judgment indicates that road users would expect an acceleration lane to be present.

Section 2B.19 Yield Here To Pedestrians Signs and Stop Here For Pedestrians Signs (R1-5 Series)

Support:

01 The R1-5 series signs are intended to mitigate the scenario that can place pedestrians at risk by blocking other drivers' view of pedestrians and by blocking the pedestrians' view of the vehicles approaching in the adjacent lanes.

Standard:

02 Yield Here to ~~(Stop Here for)~~ Pedestrians (R1-5, R1-5a, ~~R1-5b, R1-5c, R1-5d, and R1-5e~~) signs (see Figure 2B-2) shall be used if yield ~~(stop)~~ lines are used in advance of a marked crosswalk only where it crosses an uncontrolled multi-lane approach. ~~The Stop Here for Pedestrians signs shall only be used where the law specifically requires that a driver must stop for a pedestrian in a crosswalk.~~ The legend STATE LAW shall not be displayed on the R1-5 series signs.

Support:

02a The Stop Here for Pedestrian signs (R1-5b, R1-5c and R1-5e) are deleted as a stop is not required in California per CVC § 21950.

Guidance:

03 If yield ~~(stop)~~ lines and Yield Here to ~~(Stop Here for)~~ Pedestrians signs are used in advance of a crosswalk that crosses an uncontrolled multi-lane approach, the signs should be placed 20 to 50 feet in advance of the nearest edge of the crosswalk (see Section 3B.19 and Figure 3B-16).

Standard:

04 When used with a School Crossing assembly within school zones (see Part 7), the R1-5a and R1-5b signs shall be used in place of the R1-5 and R1-5b signs in accordance with Paragraph 2 of this Section.

05 When used with a Trail Crossing assembly (see Section 2C.54), the R1-5d and R1-5e signs shall be used in place of the R1-5 and R1-5b signs in accordance with Paragraph 2 of this Section.

Guidance:

06 When Yield Here to ~~(Stop Here for)~~ Pedestrians signs are provided in advance of a crosswalk across an multi-lane approach, parking should be prohibited in the area between the yield (stop) line and the crosswalk.

07 Yield ~~(stop)~~ lines and Yield Here to ~~(Stop Here for)~~ Pedestrians signs should not be used in advance of crosswalks that cross an approach to or departure from a roundabout.

Option:

08 Yield Here to ~~(Stop Here for)~~ Pedestrians signs may be used in accordance with Paragraphs 2 through 4 of this Section even if yield ~~(stop)~~ lines are not used.

09 A Pedestrian Crossing (W11-2) warning sign may be placed overhead or may be post-mounted with a diagonal downward-pointing arrow (W16-7P) plaque at the crosswalk location where Yield Here to ~~(Stop Here for)~~ Pedestrians signs have been installed in advance of the crosswalk.

Standard:

10 If a W11-2 sign is post-mounted at the crosswalk location where a Yield Here to ~~(Stop Here for)~~ Pedestrians sign is used on the approach, the Yield Here to ~~(Stop Here for)~~ Pedestrians sign shall not be placed on the same post as the W11-2 sign.

Option:

11 An advance Pedestrian Crossing (W11-2) warning sign with an AHEAD or a distance supplemental plaque may be used in conjunction with a Yield Here to ~~(Stop Here for)~~ Pedestrians sign on the approach to the same crosswalk.

12 In-Street Pedestrian Crossing signs and Yield Here to ~~(Stop Here for)~~ Pedestrians signs may be used together at the same crosswalk.

Section 2B.20 In-Street and Overhead Pedestrian and Trail Crossing Signs (R1-6 and R1-9 Series)

Option:

01 The In-Street Pedestrian Crossing (R1-6 ~~or R1-6a~~) sign (see Figure 2B-2), In-Street Trail Crossing (R1-6d ~~or R1-6e~~) sign (see Figure 2B-2), the Overhead Pedestrian Crossing (R1-9 ~~or R1-9a~~) sign (see Figure 2B-2), or the Overhead Trail Crossing (R1-9d ~~or R1-9e~~) sign (see Figure 2B-2) may be used to remind road users of laws regarding right-of-way at an unsignalized crosswalk. The legend STATE LAW may be displayed at the top of the R1-6 series and R1-9 series signs if applicable. On the R1-6 series signs, the legends STOP ~~or~~ YIELD may be used instead of the appropriate STOP ~~sign or~~ YIELD sign symbol.

02 Highway agencies may develop and apply criteria for determining the applicability of In-Street Pedestrian Crossing signs.

Support:

02a The In-Street Pedestrian crossing (R1-6a), In-Street Trail Crossing (R1-6e), and Overhead Pedestrian Crossing (R1-9a), and Overhead Trail Crossing (R1-9e) signs are deleted as a stop is not required in California per CVC § 21950.

Standard:

03 ~~The STOP FOR legend shall only be used in States where the State law specifically requires that a driver must stop for a pedestrian or a bicyclist in a crosswalk.~~

04 If used, In-Street Pedestrian or Trail Crossing signs shall only be placed in the roadway at the crosswalk location on the center line, on a median island, on a lane line, or on an edge line.

05 The In-Street Pedestrian or Trail Crossing sign shall not be post-mounted on the left-hand or right-hand side of the roadway.

Support:

06 Section 3I.02 contains information about the use of tubular markers to provide additional emphasis for a pedestrian crossing.

Standard:

07 If used, the Overhead Pedestrian or Trail Crossing sign shall be placed over the roadway at the crosswalk location.

08 When used at an uncontrolled crossing, the In-Street or Overhead Pedestrian Crossing sign shall be used only

as a supplement to a Pedestrian Crossing (W11-2) warning sign with a diagonal downward-pointing arrow (W16-7P) plaque at the crosswalk location.

09 When used at an uncontrolled crossing, the In-Street or Overhead Trail Crossing sign shall be used only as a supplement to a Trail Crossing (W11-15) warning sign with a diagonal downward-pointing arrow (W16-7P) plaque at the crosswalk location.

10 An In-Street or Overhead Pedestrian or Trail Crossing sign shall not be placed in advance of the crosswalk to educate road users about the State law prior to reaching the crosswalk, nor shall it be installed as an educational display that is not near any crosswalk.

Guidance:

11 If an island (see Chapter 3J) is available, the In-Street Pedestrian or Trail Crossing sign, if used, should be placed on the island.

Option:

12 In-Street Pedestrian or Trail Crossing signs may be mounted back-to-back in the median or on the center line of an undivided roadway.

Standard:

13 The In-Street Pedestrian or Trail Crossing sign and the Overhead Pedestrian Crossing or Trail sign shall not be used at crosswalks on approaches controlled by a stop control, traffic control signal, pedestrian hybrid beacon, or an emergency-vehicle hybrid beacon.

14 Except where the In-Street Crossing sign is placed on a physical island, the sign support shall be designed to bend over and then bounce back to its normal vertical position when struck by a vehicle.

Option:

15 The In-Street and Overhead Pedestrian and Trail Crossing sign may be used at intersections or midblock pedestrian crossings with flashing beacons.

Support:

16 The provisions of Section 2A.15 concerning mounting height are not applicable for the In-Street Pedestrian Crossing sign. Section 2A.18 contains information about sign mounting methods.

Standard:

17 The top of an In-Street Pedestrian or Trail Crossing sign shall be a maximum of 4 feet above the pavement surface. The top of an In-Street Pedestrian or Trail Crossing sign placed in an island shall be a maximum of 4 feet above the island surface.

Option:

18 The In-Street Pedestrian Crossing or Trail Crossing signs may be used seasonally to prevent damage in winter because of plowing operations, and may be removed at night if the pedestrian activity at night is minimal.

19 Both sign mounting types, In-Street Crossing (R1-6 series) signs and Overhead Crossing (R1-9 series) signs, may be used together at the same crosswalk.

SPEED LIMIT SIGNS AND PLAQUES

Section 2B.21 Speed Limit Sign (R2-1)

Support:

- 01 In general, the maximum speed limits applicable to rural and urban roads are established:
- A. Statutorily – a maximum speed limit applicable to a particular class of road, such as freeways or city streets, that is established by State law; or
 - B. As speed zones – based on engineering studies.
- 02 State statutory limits might restrict the maximum speed limit that can be established on a particular road, notwithstanding what an engineering study might indicate.
- 03 Agencies with designated authorities to set speed limits, which include States, and sometimes local jurisdictions, can establish non-statutory speed limits or ~~designate reduced~~ speed zones using an engineering study. Setting appropriate speed limits is especially important to ensure safety for all road users in varying types of contexts, particularly on roadways where adjacent land use suggests that trips could be served by varied modes. These situations include urban and suburban non-freeway arterials or rural arterials that serve as main streets in smaller communities, consistent with the context classifications of urban core, urban, suburban, and rural towns found in “A Policy on Geometric Design of Highways and Streets,” 2018 Edition, AASHTO. When setting a speed limit, a range of factors such as land-use context, pedestrian and bicyclist activity, crash history, intersection spacing, driveway density, roadway geometry, roadside conditions, roadway functional classification, traffic volume, and observed speeds can influence the speed limit determined in the engineering study. The engineering study will determine which of the recommended factors will prevail in setting the speed limit.
- 04 Jurisdictions can use speed limit setting tools and methods such as expert systems and those consistent with the safe system approach as part of the required engineering study for a non-statutory speed limit. As speed limit setting tools vary, jurisdictions need to be aware of their limitations and advantages, possible variation between the tools and the need to explore gaps or weaknesses of tools, and weigh the output accordingly in consideration of setting speed limits.
- 04a The setting of speed limits can be controversial and requires a rational and defensible determination to maintain public confidence. Speed limits are normally set near the 85th-percentile speed that statistically represents one standard deviation above the average speed and establishes the upper limit of what is considered reasonable and prudent. As with most laws, speed limits need to depend on the voluntary compliance of the greater majority of motorists. Speed limits cannot be set arbitrarily low, as this would create violators of the majority of drivers and would not command the respect of the public. Artificially low speed limits can lead to poor compliance as well as large variations in speed within the traffic stream. Increased speed variance can also create more conflicts and passing maneuvers.
- 05 To achieve desired operating speeds, agencies often implement other speed management strategies concurrently with setting speed limits, such as traffic calming measures, geometric design features, speed safety cameras, and increased enforcement.
- 05a The most effective way to reduce speeds is through a combination of strategies using traffic control devices related to speed management, roadway design and engineering solutions, traffic calming techniques and measures, public education, and enforcement efforts. Effectively managing road user speed relies on numerous factors, which include enforcement, roadway characteristics, surrounding environment, adjacent land use, and traffic control devices. Many studies find that engineering changes, such as change a road's infrastructure, are one of the most important factors in reducing vehicle operating speeds. Engineering changes are also one of the most effective interventions at reducing pedestrian injury and fatality rates. Potential street engineering changes, such as curb extensions, median islands, raised crosswalks, roundabouts, and speed bumps or speed humps, naturally result in lower speeds. It is realized that these engineering changes can be costly and time-consuming to implement.

Standard:

- 06 **Speed zones (other than statutory speed limits) shall only be established on the basis of an engineering and traffic survey (E&TS), also noted as an engineering study that has been performed in accordance with traffic engineering practices. ~~The engineering study shall consider the roadway context.~~**

Guidance:

- 07 *The engineering study should consider the roadway context. Among the factors that should be considered when conducting an engineering study for establishing or reevaluating speed limits within speed zones are the following:*
- A. Roadway environment *not readily apparent to the driver (CVC § 627) (such as roadside development, number and frequency of driveways and access points, and land use), functional classification, public transit volume and*

- location or frequency of stops, parking practices, and pedestrian and bicycle facilities and activity;
- B. Roadway characteristics *not readily apparent to the driver* (CVC § 627) (such as lane widths, shoulder condition, grade, alignment, median type, and sight distance);
 - C. Geographic context (such as ~~an urban district, rural town center, non-urbanized rural area, or suburban area~~ residential district, business district, business activity district), ~~and multi-modal trip generation;~~
 - D. Reported crash experience for at least a ~~12~~ 36-month period;
 - E. Speed distribution of free-flowing vehicles including the pace, median (50th-percentile), and 85th- ~~percentile~~ percentile speeds; and
 - F. A review of past speed studies to identify any trends in operating speeds (CVC § 22358.8)

Support:

- 07a Refer to FHWA's List of Known Errors for error in Paragraph 7, Item E text. Refer to Section 1A.04 for more details.

Guidance:

- 08 When the 85th-percentile speed is appreciably greater than the posted speed limit, and the roadway context does not support setting a higher speed limit, the engineering (*not E&TS*) study should consider whether changes to geometric features, enforcement, and/or other speed-reduction countermeasures might improve compliance with the posted speed limit. A similar approach should be used if the results of past speed studies indicate that the 85th-percentile speed has consistently increased.
- 09 ~~On urban and suburban arterials, and on rural arterials that serve as main streets through developed areas of communities, the 85th percentile speed should not be used to set speed limits without consideration of all factors described in Paragraph 7 of this Section.~~

Standard:

- 10 ~~On a freeway, expressway, or rural highway (outside urbanized locations or conditions),~~ On a highway, the speed limit that is posted within a speed zone ~~should~~ **shall** be within ~~5 mph~~ **12.4 mph** of the 85th-percentile speed of free-flowing motor-vehicle traffic under the following conditions:
- A. All factors described in Paragraph 7 of this Section have been considered and determined to be non-mitigating.
 - B. ~~The measures described in Paragraph 8 of this Section have been considered to the extent practicable.~~

Guidance:

- 11 State and local agencies should conduct engineering studies to reevaluate non-statutory speed limits on segments of their roadways that have undergone significant changes since the last review (such as changes to roadway context, the addition or elimination of parking or driveways, changes in the number of travel lanes, changes in the configuration of bicycle lanes, changes to road geometrics, changes in traffic control signal coordination, or significant changes in traffic volumes).
- 12 Speed studies for signalized intersection approaches should be taken outside the influence area of the traffic control signal, which is generally considered to be approximately ½ mile, to avoid obtaining skewed results for the speed distribution. If the signal spacing is less than 1 mile, the speed study should be at approximately the middle of the segment.

Support:

- 12a Speed limits in California are governed by the CVC, §§ 22348 through 22413; also, pertinent sections are found in §§ 627 and 40802 and others referenced in this section. Refer to Section 1A.05 for information regarding this publication.
- 12b Refer to Part 6, Section 6B.01 for speed limit signs in temporary traffic control zones. Refer to Part 7 for speed limit signs in school areas.

Basic Speed Law and Prima Facie Speed Limits – Refer to CVC §§ 22350 & 22352

- 12c The basic speed law states “No person shall drive a vehicle upon a highway at a speed greater than is reasonable or prudent having due regard for weather, visibility, the traffic on, and the surface and width of, the highway, and in no event at a speed which endangers the safety of persons or property.”

Standard:

- 12d **Prima facie speed limits are specific limits and shall apply unless changed based upon an E&TS and signs are posted that display the new speed limit.**

Option:

- 12e Prima facie speed limits may be preempted by the basic speed law, when roadway, traffic or weather conditions warrant a lower speed.

Legal Authority for Establishing Speed Limits

Support:

- 12f Delegation of legal authority to set speed limits based on valid E&TS on State highways is given to Caltrans District Directors. The District Director of each transportation district is authorized to issue orders regulating the speed of traffic, up to 70 mph on State highways. The Director of Caltrans retains the authority to approve variable, and minimum speed limits on State freeways.

Standard:

- 12g **The speed limits shown in Table 2B-101(CA) shall apply, unless changed upon the basis of an E&TS.**

Option:

- 12h The speed limits shown in Table 2B-102(CA) may apply, unless changed upon E&TS.

Variable Speed Limits on Freeways - Refer to CVC § 22355

- 12i The following speed limits may apply:

- Whenever Caltrans determines based upon an E&TS that the safe and orderly movement of traffic upon any freeway segment will be facilitated by the establishment of variable speed limits
- Caltrans may erect, regulate, and control signs upon the state highway which is a freeway, or any portion thereof, which, if used, signs shall be designed to permit display of different speeds at various times of the day or night.
- Such signs need not conform to the standards & specifications per CVC § 21400, but if used, shall be of sufficient size and clarity to give adequate notice of the applicable speed limit.

Minimum Speed Limits on State Highways - Refer to CVC § 22400

- 12j The following speed limits may apply:

- Whenever Caltrans determines based upon an E&TS that slow speeds on any part of a state highway consistently impede the normal and reasonable movement of traffic, Caltrans may determine and declare a minimum speed limit. Appropriate signs giving notice shall then be installed on that segment.
- A motorist can be cited for stopping or impeding the normal and reasonable movement of traffic unless the stop is necessary for safe operation and in compliance with the law.

Engineering and Traffic Survey (E&TS)

Support:

- 12k CVC § 627 defines the term “Engineering and traffic survey” and lists its requirements.

Standard:

- 12l **An E&TS shall include, among other requirements deemed necessary by Caltrans, consideration of all of the following:**
- A. Prevailing speeds as determined by traffic engineering measurements.**
 - B. Collision records.**
 - C. Highway, traffic, and roadside conditions not readily apparent to the driver.**

Guidance:

- 12m *The E&TS should contain sufficient information to document that the required three items of CVC § 627 are provided and that other conditions not readily apparent to a driver are properly identified.*
- 12n *Prevailing speeds are determined by a speed zone survey. A speed zone survey should include:*
- A. The intent of the speed measurements is to determine the actual speed of unimpeded traffic. The speed of traffic should not be altered by concentrated law enforcement, or other means, just prior to, or while taking the speed measurements.*
 - B. Speeds should be read directly from a radar or other electronic speed measuring devices; or,*
 - C. Devices, other than radar, capable of accurately distinguishing and measuring the unimpeded speed of free flowing vehicles may be used.*
 - D. A location should be selected where prevailing speeds are representative of the entire speed zone section. If speeds vary on a given route, more than one speed zone section may be required, with separate measurements for each section. Locations for measurements should be chosen so as to minimize the effects of traffic signals or stop signs.*
 - E. Speed measurements should be taken during off-peak hours between peak traffic periods on weekdays. If there is difficulty in obtaining the desired quantity, speed measurements may be taken during any period with free flowing traffic.*
 - F. The weather should be fair (dry pavement) with no unusual conditions prevailing.*
 - G. The surveyor and equipment should not affect the traffic speeds. For this reason, an unmarked car is recommended, and the radar speed meter located as inconspicuously as possible.*

- H. In order for the sample to be representative of the actual traffic flow, the minimum sample should be 100 vehicles in each survey. In no case should the sample contain less than 50 vehicles.*
- I. Short speed zones of less than 0.5 miles should be avoided, except in transition areas.*
- J. Speed zone changes should be coordinated with changes in roadway conditions or roadside development.*
- K. Speed zoning should be coordinated with adjacent jurisdictions.*

Support:

- 12o Physical conditions such as width, curvature, grade and surface conditions, or any other condition readily apparent to the driver, in the absence of other factors, would not require special downward speed zoning. Refer to CVC § 22358.5.

Option:

- 12p When qualifying an appropriate speed limit, local authorities may also consider all of the following findings:
- A. Residential density, if any of the following conditions exist on the particular portion of highway and the property contiguous thereto, other than a business district:
 - 1. Upon one side of the highway, within 0.25 miles, the contiguous property fronting thereon is occupied by 13 or more separate dwelling houses or business structures.
 - 2. Upon both sides of the highway, collectively, within a distance of 0.25 miles the contiguous property fronting thereon is occupied by 16 or more separate dwelling houses or business structures.
 - 3. The portion of highway is larger than 0.25 miles but has the ratio of separate dwelling houses or business structures to the length of the highway described in either subparagraph 1 or 2 above.
 - B. Safety of bicyclists and pedestrians, with increased consideration for vulnerable pedestrian groups including children, seniors, persons with disabilities, users of personal assistive mobility devices, and the unhoused.
- 12q The following two forms may be used to document speed zoning based on an E&TS to establish speed limits:
- 1. State Highways - The E&TS for State highways is made under the direction of the Caltrans District traffic engineer. Long form should be used to document the data and reports including:
 - a. One copy of Speed Zone Survey Sheet (Refer to Figure 2B-101(CA)) showing:
 - A north arrow
 - Name and/or highway number of the route to be zoned
 - Post Mile or other distance measurement
 - Limits of the proposed zones for each direction of travel
 - Roads and crossroad names, number and width of lanes, indicate parking restrictions
 - Appropriate notations showing type of roadside development, such as "scattered business," "solid residential," etc. Schools adjacent to the highway are shown, but other buildings need not be plotted unless they are a factor in the speed recommendation or the point of termination of a speed zone.
 - Collision rates for the zones involved
 - Annual average daily traffic volume
 - Location of traffic signals, signs and markings
 - If the highway is divided, the limits of zones for each direction of travel
 - Plotted 85th percentile and pace speeds at location taken showing speed profile
 - b. A report to the District Director that includes:
 - The reason for the initiation of speed zone survey.
 - Recommendations and supporting reasons.
 - The enforcement jurisdictions involved and the recommendations and opinions of those officials.
 - The stationing or reference post in mileage at the beginning and ending of each proposed zone and any intermediate equations. Location ties must be given to readily identifiable physical features.
 - 2. Roadways under the jurisdiction of City or County:
 - a. Short form may be used for documenting speed zoning (Figure 2B-104(CA)).
 - b. Determination of Speed Limits - Figures 2B-103(CA) & 2B-104(CA) show examples of data sheets which may be used to record speed observations. Specific types of vehicles may be tallied by use of letter symbols in appropriate squares.
- 12r In most situations, the short form for local streets and roads will be adequate; however, the procedure or long form used on State highways may be used at the option of the local agency.

Guidance:

- 12s *The establishment of a speed limit of more than 5 mph below the 85th percentile speed should be done with great care as studies have shown that establishing a speed limit less than the 85th percentile generally results in an increase in collision rates; in addition, this may make violators of a disproportionate number of the reasonable majority of drivers.*

Support:

- 12t Generally, the most decisive evidence of conditions not readily apparent to the driver are identified in collision histories.
- 12u Speed limits are established at or near the 85th percentile speed, which is defined as that speed at or below which 85 percent of the traffic is moving. The 85th percentile speed is often referred to as the critical speed. Pace speed is defined as the 10 mph increment of speed containing the largest number of vehicles (Refer to Figure 2B-102(CA)). The lower limit of the pace is plotted on the Speed Zone Survey Sheets as an aid in determining the proper zone limits. Speed limits higher than the 85th percentile speed are not generally considered reasonable and prudent. Speed limits below the 85th percentile speed does not ordinarily facilitate the orderly movement of traffic and require constant enforcement to maintain compliance. Speed limits established on the basis of the 85th percentile speed conform to the consensus of those who drive highways as to what speed is reasonable and prudent, and are not dependent on the judgment of one or a few individuals.
- 12v The majority of drivers comply with the basic speed law. Speed limits set at or near the 85th percentile speed provide law enforcement officers with a limit to cite drivers who will not conform to what the majority considers reasonable and prudent. Further studies show that establishing a speed limit at less than the 85th percentile (Critical Speed) generally results in an increase in collision rates.

Option:

- 12w When roadside development results in traffic conflicts and unusual conditions which are not readily apparent to drivers, as indicated in collision records, speed limits somewhat below the 85th percentile may be justified. Concurrence and support of enforcement officials are necessary for the successful operation of a speed zone.

Guidance:

- 12x *Speed zones of less than 0.5 miles in rural locations, 0.25 miles for urban locations, and short transition zones should be avoided.*

Support:

- 12y Any existing E&TS that was performed before January 1, 2022 in accordance with previous traffic control device standards is not required to be updated until it is due for reevaluation per the 5, 7 or 14 year criteria. An E&TS can originally exist for 7 years and may be extended to 14 years if the conditions are met.

CVC § 22358.6 – 85th-Percentile speed, Rounding, 5 mph Increment, 5 mph speed reduction and Maximum Speed Reduction

Standard:

- 12z **When a speed limit is to be posted, it shall be established at the nearest 5 mph increment of the 85th-percentile speed of free-flowing traffic (CVC § 22358.6(a)), except as shown in the two Options described in paragraphs 12aa and 12ab, or if using additional 5 mph speed reduction for safety corridor designation (CVC § 22358.7(a)(1)) or adjacent to land or facility generating high concentrations of bicyclists and pedestrians (CVC § 22358.7(a)(2)).**

Option:

- 12aa For cases in which the nearest 5 mph increment of the 85th-percentile speed would require a rounding down, the speed limit may be reduced by 5 mph from the nearest 5 mph increment of the 85th-percentile speed, in compliance with CVC §§ 627 and 22358.5. CVC §§ 22353, 22353.2, 22353.3, 22353.4, and 22353.5, may also be considered, if applicable. Refer to Standard below for documentation requirements. Refer to CVC § 22358.6(b).
- 12ab For cases in which rounding the 85th-percentile speed to the nearest 5 mph increment would require a rounding up, the speed limit may be rounded down to the nearest 5 mph increment below the 85th percentile speed. Refer to CVC § 21400(b). Refer to CVC § 22358.6(c).

Standard:

- 12ac **If 5 mph reduction is applied to the 85th percentile speed after it is rounded to the nearest 5 mph increment and the required rounding is a rounding down, to establish posted speed limit, an E&TS shall document in writing the conditions and justification for the 5 mph reduction and be approved by a registered Civil or Traffic Engineer. The reasons for the lower speed limit shall be in compliance with CVC §§ 627 and 22358.5. Refer to § 22358.6(b).**
- 12ad **If the 85th percentile speed is rounded down to the lower 5 mph increment, in cases in which the 85th percentile speed**

needs to round up to the nearest 5 mph increment, to establish posted speed limit, the speed limit shall not be reduced any further pursuant to CVC § 22358.6(b).

12ae The total reduction from the 85th percentile speed shall not exceed 12.4 mph. Refer to CVC § 22358.6(e).

Support:

12af Refer to Table 2B-103(CA), which provides examples of 85th-percentile speed values and the application of the speed limit policies and criteria applicable per CVC §§ 22358.6 and 22358.7.

CVC § 22358.7 – Safety corridor and Land or Facilities Generating High Concentrations of Bicyclists and Pedestrians

Standard:

12ag Additional lowering of the speed limits from standards, as included in paragraph 12z and Options as described in paragraphs 12aa, and 12ab, is prohibited, except for the roadway segments designated as “safety corridor” or “land or facilities that generate high concentrations of bicyclists and pedestrians” in compliance with CVC §§ 22358.6(d) and 22358.7.

Option:

12ah Caltrans or local authority may additionally lower the speed limits by 5 mph from the final value determined based on paragraphs 12z, 12aa and 12ab if, after completing an E&TS, it finds that the speed limit is still more than is reasonable or safe, for either of the following reasons:

- 1. The portion of a highway has been designated as a safety corridor.**
- 2. The portion of highway meets the definition of land or facility that generates high concentrations of bicyclists or pedestrians.**

CVC § 22358.7(a)(1) – “Safety Corridor” Definition

Standard:

12ai A safety corridor shall be defined as a roadway segment within an overall roadway network where the highest number of serious injury and fatality crashes occur.

12aj One or more crash weighting factors as provided in paragraph 12ak of this section shall be used to prioritize the locations of fatal and serious injury crashes in developing the “Safety Corridor”.

Option:

12ak The crash weighting factors to prioritize the locations of fatal and serious injury crashes in developing the “Safety Corridor” may include, but are not limited to, the factors included in Table 2B-104(CA).

12al Data used to determine a safety corridor may be from the most recent E&TS performed. The crash data source may include, but is not limited to, California Highway Patrol’s (CHP) Statewide Integrated Traffic Records System (SWITRS).

Standard:

12am The prioritized subset of safety corridors shall:

- 1. Identify specific locations with high crash occurrences.**
- 2. Identify corridor-level segments with a pattern of crash reoccurrence.**
- 3. Be able to be stratified by mode.**

12an Safety corridors shall represent a prioritized subset of the overall roadway network within an authority’s responsibilities and shall not exceed one-fifth of the overall roadway network.

Guidance:

12ao A jurisdiction should use three to five years of the most recent crash data to determine a safety corridor based on Fatal and Serious Injury data.

Option:

12ap For crash coverage, safety corridors may identify the subset of the overall roadway network where a minimum of 25% of the Fatal + Serious Injury (F+SI) crashes occur.

12aq To identify logical termini, the geographic extent of a safety corridor may be determined by non-engineering staff.

Standard:

12ar A licensed professional engineer shall sign off on logical termini identified for a safety corridor using existing E&TS.

Option:

12as Crash/Volume rate may be used to provide additional locations to be included in the safety corridor. Local agencies may use proactive measures as indicators.

CVC § 22358.7(a)(2) – “Land or facility that generates high concentrations of bicyclists or pedestrians” definition

Standard:

12at **A land or facility that generates high concentrations of bicyclists or pedestrians shall be defined as the portion of the highway where one or more of any of the generators listed in Table 2B-105(CA) are present within a distance of 1320 feet longitudinally of highway, and meets condition specified in paragraph 12au.**

12au **Crash data demonstrates the highway segment is within the top twenty percent of pedestrian and/or bicyclist fatalities or serious injuries over a three-to-five-year.**

12av **A highway segment shall be defined as the portion of the highway where a location that meets the aforementioned criteria is present within a distance of 1320 feet longitudinally of highway.**

Option:

12aw A highway segment may be longer than 1320 feet longitudinally of highway provided that a minimum of one location within the top twenty percent of fatal and serious injury pedestrian and/or bicyclist crashes within a three-to-five-year period is present for every 1320 feet.

Standard:

12ax **The top twenty percent of pedestrian and/or bicyclist fatalities or serious injury crashes within a three to five year period shall be based on the geographic area within the jurisdiction.**

Option:

12ay A high concentration of pedestrians and bicyclists may be longer than 1320 feet longitudinally of highway provided that a minimum of one generator is present for every 1320 feet.

12az Data used to determine high concentration locations may be obtained from the most recently performed E&TS.

CVC § 22358.8 (Retain currently adopted or restore immediately prior speed limit)

12ba Caltrans or a local authority may retain the currently adopted speed limit without further reduction or restore the immediately prior adopted speed limit on a highway that is not a freeway without further reduction as provided in CVC § 22358.8.

Standard:

12bb **Currently adopted speed limit or immediately prior adopted speed limit shall only be retained, by Caltrans Director's Order for SHS or local ordinance for highways under local jurisdiction, if after completing an E&TS, Caltrans or a local authority finds that the speed limit is still more than reasonable or safe, and that speed limit was established with an E&TS and if a registered engineer has evaluated the section of highway and determined that no additional general purpose lanes have been added to the roadway since completion of the traffic survey that established the prior speed limit.**

12bc **If Caltrans or a local authority decides to use lower speed limit based on CVC § 22358.8, after completing an E&TS and finding that the speed limit is still more than is reasonable or safe, it shall not be reduced by any more than 5 mph from the currently adopted speed limit nor below the immediately prior speed limit. Refer to CVC § 22358.8(b).**

12bd **CVC § 22358.8 shall not be applicable to a roadway that is a freeway.**

CVC § 22358.9 – Business Activity District

Option:

12be Caltrans or a local authority may, by Caltrans Director's Order for SHS or local ordinance for highways under local jurisdiction, determine and declare a 25 or 20 mph prima facie speed limit on a highway that is not a freeway and that is contiguous to a business activity district when posted with a sign that indicates a speed limit of 25 or 20 mph if the highway segment meets all of the following conditions:

1. A maximum of four traffic lanes.
2. A maximum posted 30 mph prima facie speed limit immediately prior to and after the business activity district, if establishing a 25 mph speed limit.
3. A maximum posted 25 mph prima facie speed limit immediately prior to and after the business activity district, if establishing a 20 mph speed limit.

12bf A "business activity district" is that portion of a highway that is not a freeway and the property contiguous thereto that includes central or neighborhood downtowns, urban villages, or zoning designations that prioritize commercial land uses at the downtown or neighborhood scale and meets a least three of the following four requirements:

4. No less than 50 percent of the contiguous property fronting the highway consists of retail or dining commercial uses, including outdoor dining, that open directly onto sidewalks adjacent to the highway.
5. Parking, including parallel, diagonal, or perpendicular spaces located alongside the highway.

6. Traffic control signals or stop signs regulating traffic flow on the highway, located at intervals of no more than 600 feet.
7. Marked crosswalk(s) not controlled by a traffic control device.

Standard:

- 12bg **Caltrans or a local authority shall not declare a prima facie speed limit on a portion of a highway where it has already lowered the speed limit as permitted for designated safety corridors (CVC § 22358.7) or using the land or facility adjacent to high concentration of pedestrians and bicyclists (CVC § 22358.7) or retained the currently adopted speed limit (CVC § 22358.8) or have restored the immediately prior adopted speed limit (CVC § 22358.8). Refer to CVC § 22358.9(c).**
- 12bh **CVC § 22358.9 shall not be applicable to a roadway that is a freeway.**

Support:

- 12bi CVC §§ 22358.7, 22358.8 and 22358.9 and their related policies are also applicable on any privately owned and maintained roads or commercial establishments, if the private road or private property has been subjected to the CVC application by the private property owner or a particular city or county enacts an ordinance or resolution to this effect. Refer to CVC §§ 21100, 21100.1, 21107, 21107.5, 21107.6, and 21107.7.

Truck Speed Zone on Descending Grades

Guidance:

- 12bj *Highway descending grades, if used for posting TRUCK Speed Limit signs (R2-1 and M4-4P) for trucks travelling downhill, should have recorded incident history of runaway commercial vehicles. Descending grades shorter than 1 mile should be avoided for posting signs because deceleration of vehicles due to braking action can generally provide sufficient control on descending grades of less than 1 mile.*

Support:

- 12bk To establish a downhill truck speed limit, a physical profile showing length and gradient and a downhill speed profile for three or more axle commercial vehicles with a gross rating of 10,000 lbs. or more will be provided.

Standard:

- 12bl **Speed profiles for truck speed limits shall be prepared on the same form as other speed surveys and remain valid for up to 7 years and may be extended to 14 years if conditions are met. An analysis of collisions involving trucks shall be prepared.**

Speed Traps

Support:

- 12bm Refer to CVC § 40802 for Speed Traps.

Standard:

- 12bn **A speed trap shall not apply to a local street, road, school zone, senior zone, or business activity district.**

Support:

- 12bo Senior zone is an area approaching or passing a senior center building or other facility primarily used by senior citizens, or the grounds thereof that is contiguous to a highway and on which is posted a standard "SENIOR" warning sign pursuant to CVC § 22352.

- 12bp Business activity district is a section of highway described in CVC § 22358.9(b) in which a standard 25 mph or 20 mph speed limit sign has been posted pursuant to CVC § 22358.9(a)(1).

Standard:

- 12bq **A section of highway shall be defined as a speed trap if the prima facie speed limit is not justified by an E&TS within five years, and the enforcement of the speed limit involves the use of radar or any other electronic device that measures the speed of moving objects, or seven years when using radar and all of the criteria specified in Paragraph 12bn are met.**

- 12br **This time provision shall be extended to seven years if the existing speed limit is initially valid for 5 years, when using radar and all of the following criteria are met:**

- The arresting officer has successfully completed a minimum of 24 hours of radar operator course. Approved and certified by the Commission on Peace Officer Standards and Training.
- The radar used to measure the speed meets or exceeds the minimal operational standards of the National Traffic Highway Safety Administration, and has been calibrated within three years of the alleged violation.

- 12bs **This time provision shall be extended to seven years if the existing speed limit is initially valid for 5 years, when using laser or other electronic device (other than radar) and all of the following criteria are met:**

- The arresting officer has successfully completed a minimum of 24 hours of radar operator course. Approved and certified by the Commission on Peace Officer Standards and Training.
- The arresting officer has successfully completed a minimum of 2 hours of additional training. Course approved and certified by the Commission on Peace Officer Standards and Training .
- The laser or other electronic device used to measure the speed meets or exceeds the minimal operational standards of the National Traffic Highway Safety Administration, and has been calibrated within three years of the alleged violation.

Option:

12bt This time provision for an E&TS may be extended to fourteen years when all of the above conditions are met and no significant changes in roadway or traffic conditions have occurred, including changes in adjoining property or land use, roadway width, or traffic volume as determined by a registered engineer.

Standard:

13 **The Speed Limit (R2-1) sign (see Figure 2B-3) shall display the limit established by law, ordinance, resolution, regulation, or as adopted by the authorized agency based on an engineering study. The speed limits displayed shall be in multiples of 5 mph.**

14 **Speed Limit (R2-1) signs, indicating speed limits for which posting is required by law, shall be located at the points of change from one speed limit to another.**

Guidance:

14a *Sections 2A.13 and 2A.16 provide guidance provisions on the location and lateral offset for signs.*

Option:

14b Where speed zones are longer than 1-mile, intermediate signs may be placed at approximate 1 mile intervals.

14c For three or more lanes in each direction, dual installation on both the left-side and right-side of the roadway may be used.

Standard:

14d **Freeways with a speed limit, 65 mph or 70 mph, Speed Limit (R2-1) signs shall be posted as follows:**

- At the beginning of the segment, on the right-hand side of the roadway.
- Subsequently throughout the segment, at a maximum of 10-mile interval and immediately after locations where significant volumes of traffic enter the segment, on the right-hand side of the roadway.

Option:

- The 10-mile interval may be modified to include locations following entrance ramps.

Standard:

14e **Freeways segment where with a speed limit 55 mph, Speed Limit (R2-1) signs shall be posted as follows:**

- The beginning of the segment on the right-hand side of the roadway.
- Subsequently throughout the segment, at maximum 3-mile interval and immediately after locations where significant volumes of traffic enter the segment with no more than 3 interchanges between signs, on the right-hand side of the roadway.

14f **Expressways with a speed limit 55 mph or 65 mph, Speed Limit (R2-1) signs shall be posted as follows:**

- At the beginning of the segment, on the right-hand side of the roadway.
- Subsequently throughout the segment, at 3- to 5-mile intervals and immediately after locations where significant volumes of traffic enter the segment, on the right-hand side of the roadway.

14g **Conventional highways with a speed limit 55 mph or 65 mph, Speed Limit (R2-1) signs shall be posted as follows:**

- At the beginning of the segment, on the right-hand side of the roadway.
- Subsequently throughout the segment, at maximum 5- to 10-mile intervals and immediately after locations where significant volumes of traffic enter the segment, on the right-hand side of the roadway.

Option:

14h Pavement markings with appropriate numerals (refer to Section 3B.20) may be used to supplement speed limit signs.

Standard:

15 **At the downstream end of the section to which a particular speed limit applies, a Speed Limit sign showing the next speed limit shall be installed.**

16 **Speed Limit signs indicating the statutory speed limits shall be installed at entrances to the State and, where**

appropriate, at jurisdictional boundaries in urban areas.

Guidance:

- 17 *Additional Speed Limit signs should be installed beyond interchanges and major intersections and at other locations where it is necessary to remind road users of the speed limit that is applicable.*

Standard:

- 17a **The Speed Zone Ahead (R2-4(CA)) sign shall always be followed by a Speed Limit (R2-1) sign installed at the beginning of the zone where the speed limit applies.**
- 17b **The End Speed Limit (R3(CA)) signs, shall be placed at the end of the final speed zone, before the highway reverts to maximum statutory speed limit.**
- 17c **The End Speed Limit (R3(CA)) sign shall only be used to mark the end of a speed zone.**
- 17d **The End Speed Limit (R3(CA)) sign shall not be used at a transition into a change in speed limits within a reduced zone.**
- 17e **The End Speed Limit (R3(CA)) signs, shall be placed at the end of all speed zones and within a reasonable distance of no greater than 1000 ft from the next Speed Limit (R2-1) sign.**

Option:

- 17f **The Speed Zone Ahead (R2-4(CA)) sign (refer to Figure 2B-3(CA)) may be used to inform the motorist of a speed zone.**
- 17g **The End Truck Speed Limit (R2-14) sign or the R3(CA) sign (refer to Figure 2B-3(CA)) with the TRUCK (M4-4P) plaque may be used to mark the end of truck speed zones on descending grades.**
- 17h **The SLOWER TRAFFIC KEEP RIGHT (R4-3) signs may be installed at locations where there is a tendency of the motorists to drive in the left-hand lane(s) below the normal speed of traffic.**

Truck and Bus Speed Limit Signs

Standard

- 17i **The TRUCKS, 3 AXLES OR MORE 55 (R6-3B(CA)) sign, the ALL VEHICLES WHEN TOWING 55 (R6-4B(CA)) sign, or the Speed Limit (R2-1) sign and the TRUCK SPEED LIMIT(R2-2P) plaque, shall be placed to indicate the truck speed limit in all truck speed zones.**
- 17j **The Speed Limit (R2-1) sign and the BUS SPEED LIMIT (R2-2aP(CA)) plaque shall be placed to indicate bus speed limit in all bus speed zones.**

Support:

- 17k **Refer to Section 2B.22 for TRUCK and BUS speed zone signs.**

Support:

- 18 **The “Traffic Control Devices Handbook” contains suggested criteria on the spacing of speed limit signs.**
- 18a **Refer to FHWA's List of Known Errors for error in Paragraph 18 text. Refer to Section 1A.04 for more details.**

Guidance:

- 18b *The Speed Limit (R2-1) signs and R6-3B(CA) and R6-4B(CA) signs should be placed in a location to be most effectively viewed by the approaching motorists.*

Standard:

- 18c **When used, the TRUCKS, 3 AXLES OR MORE 55 (R6-3B(CA)) sign shall be installed approximately 750 feet following each R2-1 sign, both at the beginning and throughout each 60, 65 or 70 mph segment.**
- 18d **The ALL VEHICLES WHEN TOWING 55 (R6-4B(CA)) sign shall be installed approximately 750 feet following the R6-3B(CA) sign.**

Guidance:

- 18e *The R6-3B(CA) and R6-4B(CA) signs should be placed on highway segments where speeds in excess of 55 mph are permitted.*

Option:

- 18f **The existing AUTOS WITH TRAILERS, TRUCKS 55 MAXIMUM (R6-1(CA)) sign may remain in place until it is knocked down, damaged, stolen, vandalized, or otherwise reaches the end of its useful life.**
- 18g **The local California Highway Patrol office may be consulted to identify highway segments where enforcement is an issue. On these segments early replacement of existing R6-1(CA) signs may be necessary.**

Support:

- 18h **Refer to CVC § 22406 for types of vehicles subject to the 55 mph maximum speed limit.**

Option:

- 19 ~~If a jurisdiction has a policy of installing Speed Limit signs in accordance with statutory requirements only on the~~

~~streets that enter a city, neighborhood, or residential area to indicate the speed limit that is applicable to the entire city, neighborhood, or residential area unless otherwise posted, a CITYWIDE (R2-5aP), NEIGHBORHOOD (R2-5bP), or RESIDENTIAL (R2-5cP) plaque may be mounted above the Speed Limit sign and an UNLESS OTHERWISE POSTED (R2-5P) plaque may be mounted below the Speed Limit sign (see Figure 2B-3).~~

Support:

- 20 Section 2C.40 contains information about the use of speed zone signs to inform road users of a reduced or variable speed zone to provide advance notice to comply with the posted speed limit ahead.

Option:

- 21 If a W3-5b sign is posted to provide notice of a variable speed zone, an END VARIABLE SPEED LIMIT (R2-13) sign (see Figure 2B-3) may be installed at the downstream end of the zone to provide notice to road users of the termination of the speed zone.

Standard:

- 22 **If a W3-5c sign is posted to provide notice of a truck speed zone, an END TRUCK SPEED LIMIT (R2-14) sign (see Figure 2B-3) shall be installed at the downstream end of the zone to provide notice to road users of the termination of the speed zone.**

Guidance:

- 23 *An advisory speed plaque (see Section 2C.59) mounted below a warning sign should be used to warn road users of an advisory speed for a roadway condition. A Speed Limit sign should not be used for this purpose.*
- 24 *Advance traffic control warning signs (see Section 2C.35), intersection warning signs (see Section 2C.41), and/or other traffic control devices are appropriate warning prior to a signalized intersection. A Speed Limit sign should not be used for this purpose.*

Option:

- 25 Two types of Speed Limit signs may be used: one to designate passenger car speeds, including any nighttime information or maximum or minimum speed limit that might apply; and the other to show any special speed limits for trucks and other vehicles.

Guidance:

- 26 *No more than three speed limits should be displayed on any one Speed Limit sign or assembly.*

Speed Enforced Signs

Option:

- 26a The SPEED ENFORCED BY RADAR (R48(CA)) sign (refer to Figure 2B-3(CA)) may be used where the California Highway Patrol has received authority to use radar and requests such signs.

Guidance:

- 26b *One sign should be used in each direction at the beginning of the segment of roadway, and at intervening major route intersections, where radar enforcement is in effect.*

Support:

- 26c The R48(CA) sign is a stand-alone sign intended to alert motorists that speed is enforced by radar on a particular segment of roadway.

Option:

- 26d The RADAR ENFORCED (R48-1P(CA)) sign (refer to Figure 2B-3(CA)) may be used in combination with the Speed Limit (R2-1) sign on any roadway where law enforcement has the authority to use radar.

Guidance:

- 26e *When used, the R48-1P(CA) sign should be placed below the R2-1 sign, at the beginning of the segment of roadway and at intervening major intersections, where radar enforcement is in effect.*

Option:

- 26f The SPEED ENFORCED BY AIRCRAFT (R48-2(CA)) sign (refer to Figure 2B-3(CA)) may be placed, when requested by the California Highway Patrol, on sections of highway regularly patrolled by aircraft.

Standard:

- 26g **The R48-2(CA) sign shall be used for both directions of travel.**

Guidance:

- 26h *The R48-2(CA) sign should be placed at the beginning of the section and spaced at 25-mile intervals.*

Speed Zones in Temporary Traffic Control Areas

Support:

26i For signing and establishing speed zones in temporary traffic control areas, refer to Section 6B.01 in Part 6.

Traffic Signals within Speed Zones

Standard:

26j **An agency changing the speed limits within its jurisdiction shall report the speed limit change to the agency operating and maintaining traffic signals within the speed zone no later than 30 days before changing the posted speed limit.**

Support:

26k Changing the signal timing and adjusting the advance detector loops based on the revised speed limits can enhance the operations of the traffic signal.

Use of Metric System Designations – Refer to CVC § 21351.3

Option:

26l Dual units for speed limits on signs may be placed on local streets and roads in both Metric and English units.

Guidance:

26m *If used, dual unit speed limits should be rounded to the nearest 10 km/h for Metric and 5 mph for English units for posting on signs on local streets and roads.*

Support:

26n Refer to AASHTO's Traffic Engineering Metric Conversion Factors. Refer to Section 1A.05 for information regarding this publication.

Standard:

26o **Metric speed limits shall not be placed on State highways.**

Option:

27 A variable speed limit sign that changes the speed limit for traffic and ambient conditions may be installed provided that the appropriate speed limit is displayed at the proper times and locations in accordance with Paragraphs 9 and 10 of this Section.

Standard:

28 **The variable speed limit sign legend “SPEED LIMIT” shall be a black legend on a white retroreflective background. The variable speed limit legend shall be displayed in white LEDs on an opaque black background.**

Support:

29 Section 2C.13 contains information about the use of a Vehicle Speed Feedback plaque mounted below a Speed Limit sign that displays to approaching drivers the speed at which they are traveling.

30 Advisory speed signs and plaques are discussed in Sections 2C.12 and 2C.59. Temporary traffic control zone speed signs are discussed in Part 6. The WORK ZONE (G20-5aP) plaque intended for installation above a Speed Limit sign is discussed in Section 6G.08. School Speed Limit signs are discussed in Section 7B.05.

Section 2B.22 Vehicle Speed Limit Plaques (R2-2P Series)

Standard:

01 **Where a special speed limit applies to certain classes of vehicles, the Truck Speed Limit (R2-2P) plaque, Bus Speed Limit (R2-2aP) plaque, Truck-Bus Speed Limit (R2-2bP) plaque, or Vehicles over X Tons Speed Limit (R2-2cP) plaque (see Figure 2B-3) shall be displayed below the Speed Limit (R2-1) sign, except as provided in Paragraph 2 of this Section.**

Option:

01a **Where a special speed limit applies to certain classes of vehicles, the TRUCKS, 3 AXLES OR MORE 55 (R6-3B(CA)) sign followed by the ALL VEHICLES WHEN TOWING 55 (R6-4B(CA)) sign may be used. Refer to Section 2B.21 and CVC § 22406.**

02 The legend of a Vehicle Speed Limit (R2-2P series) plaque may be combined in a single sign and displayed below the SPEED LIMIT XX legend, similar to the Combined Maximum and Minimum Speed Limits (R2-4a) sign (see Section 2B.24).

A different vehicle class legend may be substituted on the R2-2P series plaque for other classes of vehicles not included in Paragraph 1 of this Section.

Section 2B.23 Night Speed Limit Plaque (R2-3P)

Standard:

- 01 **Where different speed limits are prescribed for day and night, both limits shall be posted.**

Guidance:

- 02 *A Night Speed Limit (R2-3P) plaque (see Figure 2B-3) should be reversed using a white retroreflective legend and border on a black background.*

Option:

- 03 A Night Speed Limit plaque may be combined with or installed below the standard Speed Limit (R2- 1) sign.

Support:

- 04 Refer to CVC § 22355.

Section 2B.24 Minimum Speed Limit Plaque (R2-4P) and Combined Maximum and Minimum Speed Limits Sign (R2-4a)

Standard:

- 01 **A Minimum Speed Limit (R2-4P) plaque (see Figure 2B-3) shall be displayed only in combination with a Speed Limit sign. Where used, the R2-4P plaque shall be mounted below a Speed Limit (R2-1) sign.**

Option:

- 02 Where engineering judgment determines that slow speeds on a highway might impede the normal and reasonable movement of traffic, the Minimum Speed Limit (R2-4P) plaque may be installed below a Speed Limit (R2-1) sign to indicate the minimum legal speed. In lieu of a sign assembly with the R2-1 sign and R2- 4P plaque, the Combined Maximum and Minimum Speed Limits (R2-4a) sign may be used.

Support:

- 03 Refer to CVC § 22400.

Section 2B.25 Higher Fines Signs and Plaque (R2-6P, R2-10, and R2-11)

Standard:

- 01 **Except as provided in Paragraph 3 of this Section, if increased fines are imposed for traffic violations within a designated zone of a roadway, a BEGIN ~~HIGHER~~ **DOUBLE** FINES ZONE (R2-10) sign (see Figure 2B-3) or a FINES ~~HIGHER~~ **DOUBLE** (R2-6aP) plaque (see Figure 2B-3) shall be used to provide notice to road users.**

- 02 **If an R2-10 sign or an R2-6P plaque is posted to provide notice of increased fines for traffic violations, an END ~~HIGHER~~ **DOUBLE** FINES ZONE (R2-11) sign (see Figure 2B-3) shall be installed at the downstream end of the zone to provide notice to road users of the termination of the increased fines zone.**

Option:

- 03 The BEGIN ~~HIGHER~~ **DOUBLE** FINES ZONE (R2-10) sign or FINES ~~HIGHER~~ **DOUBLE** (R2-6aP) plaque may be omitted where the ~~higher~~ **double** fines zone is established by statute.

Guidance:

- 04 *The BEGIN ~~HIGHER~~ **DOUBLE** FINES ZONE sign or FINES ~~HIGHER~~ **DOUBLE** plaque should be located at the beginning of the temporary traffic control zone, school zone, or other applicable designated zone and just beyond any interchanges, major intersections, or other major traffic generators.*

- 05 *Agencies should limit the use of the ~~Higher~~ **Double** Fines signs and plaque to locations where work is actually underway, or to locations where the roadway, shoulder, or other conditions, including the presence of a school zone and/or a reduced school speed limit zone, require a speed reduction or extra caution on the part of the road user.*

Standard:

- 06 **The ~~Higher~~ **Double** Fines signs and plaque shall have a black legend and border on a white rectangular background. All supplemental plaques mounted below the ~~Higher~~ **Double** Fines signs and plaque shall have a black legend and border on a white rectangular background.**

- 07 **The FINES ~~HIGHER~~ **DOUBLE** plaque shall be mounted below an applicable regulatory or warning sign in a temporary traffic control zone (see Section 6G.08), a school zone (see Section 7B.06), or other applicable designated zone.**

Option:

- 08 Alternate legends such as BEGIN (or END) DOUBLE FINES ZONE may also be used for the R2-10 and R2-11 signs.

- 09 The legend FINES HIGHER on the R2-6P plaque may be replaced by FINES DOUBLE (R2-6aP), \$XX FINE (R2-

6bP), or another legend appropriate to the specific regulation (see Figure 2B-3).

- 10 The following may be mounted below an R2-10 sign or R2-6P plaque:
- A. A supplemental plaque specifying the times that the higher fines are in effect (similar to the S4-1P plaque shown in Figure 7B-1),
 - B. A supplemental plaque WHEN CHILDREN (WORKERS) ARE PRESENT, or
 - C. A supplemental plaque WHEN FLASHING (similar to the S4-4P plaque shown in Figure 7B-1) if used in conjunction with a Speed Limit Sign Beacon (see Section 4S.04).

Support:

- 11 In California, as per CVC only doubling of the fines is allowed, not higher fines of other denominations. Refer to CVC § 42010 for Safety Enhancement-Double Fine Zone and Section 6G.08 and CVC § 42009 for fines for offenses committed in highway construction or maintenance area.

Standard:

- 12 **The SPECIAL DRIVING ZONE BEGINS HERE – DOUBLE FINE ZONE (SR53(CA)) sign (refer to Figure 2B-3(CA)) shall be placed at the beginning of those portions of highways designated and identified as Safety Enhancement – Double Fine Zones per CVC § 42010.**
- 13 **The SPECIAL DRIVING ZONE ENDS HERE (SR55(CA)) sign (refer to Figure 2B-3(CA)) shall be placed at the end of those portions of highways designated and identified as Safety Enhancement – Double Fine Zones per CVC § 42010.**

Guidance:

- 14 *The DOUBLE FINE ZONE (SR54(CA)) sign (refer to Figure 2B-3(CA)) should be placed at major intersections to those portions of highways designated and identified as Safety Enhancement – Double Fine Zone, per CVC § 42010, to advise motorists upon entering the highway that they are in a double fine zone.*

MOVEMENT AND LANE CONTROL SIGNS AND PLAQUES

Section 2B.26 Movement Prohibition Signs (R3-1 through R3-4, R3-18, and R3-27)

Support:

00 Motorists can make a semicircular or U-turn on a green signal or green arrow except where such turn is prohibited by signs. Refer to CVC 21451 and 21454.

00a Local authorities, by ordinance, may prohibit the making of any turning movement by any vehicle at any intersection or between any designated intersections. Refer to CVC 22113.

00b Refer to Section 2B.01 for information on ordinances and resolutions by local authorities that affect State highways.

Option:

00c Caltrans may restrict turning movements on State highways. Refer to CVC 21352.

Support:

00d A thorough investigation is necessary to determine whether or not the prohibited movements can be satisfactorily made at other locations without undue circuitry of travel.

00e Refer to CVC 22101 for Turn Prohibition signs.

Standard:

01 **Movement Prohibition signs (see Figure 2B-4) shall be installed where specific movements are prohibited at an intersection approach except as provided in Paragraphs ~~13~~ and 17 of this Section.**

Guidance:

02 *Movement Prohibition signs should only be used to prohibit a turn or through movement from an entire approach and should not be used to designate movements that are required or permitted from a specific lane or lanes on a multi-lane approach.*

03 *Movement Prohibition signs should be placed where they will be most easily seen by road users who might be intending to make the movement.*

04 *If a No Right Turn (R3-1) sign (see Figure 2B-4) is used, at least one should be placed either over the roadway or at a right-hand corner of the intersection.*

Standard:

05 **If a No Left Turn (R3-2) sign (see Figure 2B-4) is used, at least one ~~should~~ shall be placed over the roadway, at the far left corner of the intersection, on a median, or in conjunction with the STOP sign or YIELD sign located on the near right corner.**

Guidance:

06 *Except as provided in Item C in Paragraph 11 of this Section for signalized locations, if a NO TURNS (R3-3) sign (see Figure 2B-4) is used, two signs should be used, one at a location specified for a No Right Turn sign and one at a location specified for a No Left Turn sign.*

Standard:

06a **The NO TURNS (R3-3) sign shall be used in advance of an intersection to indicate that turns are prohibited.**

Guidance:

07 *If a No U-Turn (R3-4) sign (see Figure 2B-4) or a combination No U or Left Turn (R3-18) sign (see Figure 2B-4) is used, at least one should be used at a location specified for a No Left Turn sign.*

07a *The appropriate R3-4 or R3-18 sign should be placed as follows:*

- A. *On undivided roads without traffic signals, place on the near right and far left corners of the intersection.*
- B. *On undivided roads with traffic signals, place on the far right and far left corners of the intersection, or on the signal mast arm.*
- C. *On divided roads at both signalized and unsignalized intersections, place in the median on the near and far side of the intersection, and on the signal mast arm at signalized intersections.*

Standard:

08 **If both left turns and U-turns are prohibited, the combination No U or Left Turn (R3-18) sign ~~should~~ shall be used instead of separate R3-2 and R3-4 signs.**

08a **The No U-Turn (R3-4) sign shall be used where U turns are prohibited except when Intersection Lane Control signs (R73(CA) Series) signs are used at signalized intersections with separate left turn phases.**

08b **The R73(CA) series signs shall be installed adjacent to a signal face viewed by road users of the projection of the lane to which it applies.**

Support:

- 09 Sections 2B.27 through 2B.30 contain information regarding lane control signs that indicate the required or permitted movements from individual lanes.

Guidance:

- 10 *If a No Straight Through (R3-27) sign (see Figure 2B-4) is used, at least one should be placed either over the roadway or at a location where it can be seen by road users who might be intending to travel straight through the intersection.*
- 11 *If turn prohibition signs are installed in conjunction with traffic control signals:*
- A. *The No Right Turn sign should be installed adjacent to a signal face viewed by road users in the right-hand lane.*
 - B. *The No Left Turn (or No U-Turn or combination No U or Left Turn) sign should be installed adjacent to a signal face viewed by road users in the left-hand lane.*
 - C. *A NO TURNS sign should be placed adjacent to a signal face viewed by all road users on that approach, or two signs should be used.*

Option:

- 12 If turn prohibition signs are installed in conjunction with traffic control signals, an additional turn prohibition sign may be post-mounted to supplement the sign mounted overhead.
- 13 ~~Where ONE WAY signs are used (see Section 2B.49), No Left Turn and No Right Turn signs may be omitted.~~

Standard:

- 13a **On one-way roads, the No Right/Left Turn (R3-1/R3-2) sign shall be placed at the near right/left corner facing traffic approaching the intersection.**

Option:

- 14 Where the movement restriction applies to certain vehicle classes, signs incorporating a supplementary legend, modified as appropriate, may be used to indicate the specific vehicle class restriction (R3-1b through R3-1d) or exception (R3-1e and R3-1f) (see Figure 2B-4). When the movement restriction applies during certain time periods only, the following Movement Prohibition signing alternatives may be used and are listed in order of preference:
- A. A blank-out or changeable message sign (see Chapter 2L) that displays the prohibited movement only during the time that the movement prohibition is applicable, especially at signalized intersections.
 - B. Permanently-mounted signs incorporating a supplementary legend showing the hours and days during which the prohibition is applicable (R3-1g and R3-1h) (see Figure 2B-4).
 - C. Portable signs, installed by proper authority, located off the roadway at each corner of the intersection. The portable signs are only to be used during the time that the movement prohibition is applicable.

Standard:

- 15 **The blank-out part-time electronic-display Movement Prohibition sign shall consist of a red circle and diagonal with a white prohibited movement on an opaque black background.**

Option:

- 16 Movement Prohibition signs may be omitted at a ramp entrance to an expressway or a channelized intersection where the design is such as to indicate clearly the one-way traffic movement on the ramp or turning lane.

Standard:

- 17 **The No Left Turn (R3-2) sign, the No U-Turn (R3-4) sign, and the combination No U or Left Turn (R3-18) sign shall not be used at approaches to roundabouts to prohibit drivers from turning left onto the circulatory roadway of a roundabout.**

Support:

- 18 At roundabouts, the use of R3-2, R3-4, or R3-18 signs to prohibit left turns onto the circulatory roadway might confuse drivers about the possible legal turning movements around the roundabout. Roundabout Circulation (R6-5P) plaques (see Section 2B.51) and/or ONE WAY (R6-1 or R6-2) signs are appropriate to indicate the travel direction within a roundabout.

Section 2B.27 Intersection Lane Control Signs (R3-5 through R3-8)

Standard:

- 01 **Intersection Lane Control signs (see Figure 2B-4), if used, shall require road users in certain lanes to turn, shall permit turns from a lane where such turns would otherwise not be permitted, shall require a road user to**

stay in the same lane and proceed straight through an intersection, or shall indicate permitted movements from a lane.

Support:

- 02 Intersection Lane Control signs have three applications:
- A. Mandatory Movement Lane Control (R3-5 series and R3-7 series) signs,
 - B. Optional Movement Lane Control (R3-6 series) signs, and
 - C. Advance Intersection Lane Control (R3-8 series) signs.

Guidance:

- 03 *When Intersection Lane Control signs are mounted overhead, each sign used should be placed over the lane or a projection of the lane to which it applies.*
- 04 *On signalized approaches where through lanes that become mandatory turn lanes, multiple-lane turns that include shared lanes for through and turning movements, or other lane-use regulations are present that would be unexpected by unfamiliar road users, overhead Intersection Lane Control signs should be installed at the signalized location over the appropriate lanes or projections thereof and in advance of the intersection over the appropriate lanes.*
- 05 *Where overhead mounting on the approach is impracticable for the Advance and/or Intersection lane Control signs, one of the following alternatives should be employed:*
- A. *At locations where through lanes become mandatory turn lanes, a Mandatory Movement Lane Control (R3-7) sign should be post-mounted on the left-hand side of the roadway where a through lane is becoming a mandatory left-turn lane on a one-way street or where a median of sufficient width for the signs is available, or on the right-hand side of the roadway where a through lane is becoming a mandatory right-turn lane.*
 - B. *At locations where a through lane is becoming a mandatory left-turn lane on a two-way street where a median of sufficient width for the signs is not available, and at locations where multiple-lane turns that include shared lanes for through and turning movements are present, an Advance Intersection Lane Control (R3-8 series) sign should be post-mounted in a prominent location in advance of the intersection, and consideration should be given to the use of an oversized version in accordance with Table 2B-1 and 2B-1(CA).*

Support:

- 05a Refer to FHWA's List of Known Errors for error in Paragraph 5 text. Refer to Section 1A.04 for more details.

Guidance:

- 06 *Use of an overhead sign for one approach lane should not require installation of overhead signs for the other lanes of that approach.*

Option:

- 07 Intersection Lane Control signs may be omitted where:
- A. A turn bay has been provided by physical construction or pavement markings, and
 - B. Only the road users using such turn bays are permitted to make a turn in that direction.
- 08 At roundabouts, Intersection Lane Control (R3-5, R3-6, and R3-8 series) signs may display ~~any of~~ the arrow symbol options shown in Figure 2B-5.
- 09 The Intersection Lane Control (R61(CA) Series and R73(CA) Series) signs (refer to Figure 2B-4(CA)) may be used to indicate the types of movements permitted at intersections.

Support:

- 10 Refer to Section 2B.26 for use of the R73(CA) series signs when a NO U-TURN is required.

Section 2B.28 Mandatory Movement Lane Control Signs (R3-5, R3-5a, R3-7, R3-19 Series, and R3-20) and Plaques

Standard:

- 01 **Mandatory Movement Lane Control (R3-5, R3-5a, and R3-7) signs (see Figure 2B-4), if used, shall indicate only the single vehicle movement that is required from the lane.**
- 02 **The Mandatory Movement Lane Control (R3-5 and R3-5a) symbol signs shall include the legend ONLY and shall be mounted overhead over the specific lanes or projections thereof to which they apply (see Section 2B.27). The R3-7 sign shall be for post-mounting only. The R3-7 sign shall not be mounted at the far side of the intersection.**
- 03 **When the mandatory movement applies to lanes exclusively designated for HOV traffic, the HOV 2+ (R3-5cP) supplemental plaque shall be used. When the mandatory movement applies to lanes that are not HOV**

facilities, but are lanes exclusively designated for buses and/or taxis, the TAXI LANE (R3-5dP) and/or BUS LANE (R3-5gP) supplemental plaques shall be used.

- 04 If used, the Mandatory Movement Lane Control (R3-7) sign shall be located in advance of the intersection, such as near the upstream end of the mandatory movement lane, and/or at the near side of the intersection where the regulation applies.

Guidance:

- 05 The use of the Mandatory Movement Lane Control (R3-7) word message sign should be limited to only locations that are adjacent to the full-width portion of a mandatory turn lane. The R3-7 sign should not be installed adjacent to a through lane in advance of a turn bay taper or adjacent to a turn bay taper.

- 06 Mandatory Movement Lane Control signs should be accompanied by lane-use arrow markings, especially where traffic volumes are high, where there is a high percentage of commercial vehicles, or where other distractions exist.

- 07 Where the restriction does not apply to buses or bicycles an EXCEPT BUSES (R3-7aP) or EXCEPT BICYCLES (R3-7bP) plaque should be used.

Option:

- 08 The Through Only (R3-5a) sign may be used to require a road user in a particular lane to proceed straight through an intersection.

- 09 The diamond symbol may be used instead of the word message HOV on the R3-5cP supplemental plaque.

- 10 Where a mandatory left or U-turn lane is added at a median location, a LANE FOR LEFT TURN ONLY (R3-19) or LANE FOR U TURN ONLY (R3-19a) sign may be post-mounted on the median at the beginning of the taper. Where a U turn and a left turn are both allowed, a LANE FOR U AND LEFT TURNS ONLY (R3-19b) sign may be used. Where a R3-19 series sign is used, Mandatory Movement Lane Control signs along the turn lane in the median may be omitted.

- 11 The R3-19 series signs may be used where the added median turn lane is separated from the through lanes by a channelizing or divisional island.

- 12 On an approach to a mandatory turn lane where traffic regularly enters the shoulder to access the turn lane inappropriately, creating safety or operational issues, a DO NOT DRIVE ON SHOULDER (R4-17) sign (see Section 2B.43) may be used to supplement the standard Mandatory Movement Lane Control (R3-5 and/or R3-7 series) signs.

Support:

- 13 Refer to CVC 22101 for Mandatory Movement Lane Control signs.

Guidance:

- 14 Signs or markings should be repeated in advance of mandatory turn lanes when necessary to prevent entrapment and to help motorists select the appropriate lane before reaching the end of the line of waiting vehicles.

Support:

- 15 Refer to Section 2C.50 for warning signs used in advance of the R3-7 sign.

Guidance:

- 16 The RIGHT (LEFT) LANE FREEWAY ONLY (R18B(CA)) sign (refer to Figure 2B-4(CA)) should be used on non-freeway facilities to indicate that a particular lane only leads to a freeway entrance and on to the freeway. The sign should be used in conjunction with, and at the beginning of, the 8 inch solid white lines indicating that traffic in that lane has a mandatory movement leading to a freeway

Section 2B.29 Optional Movement Lane Control Signs (R3-6 Series)

Standard:

- 01 Optional Movement Lane Control (R3-6, R3-6a and R3-6b) signs (see Figure 2B-4), if used, shall be used for two or more movements from a specific lane or to emphasize permitted movements. The Optional Movement Lane Control sign shall be mounted overhead over the specific lane or projections thereof to which it applies.

- 02 If used, the Optional Movement Lane Control signs shall indicate all permissible movements from specific lanes.

- 03 Because more than one movement is permitted from the lane, the word message ONLY shall not be used on an Optional Movement Lane Control sign.

- 04 Optional Movement Lane Control signs shall be used for two or more movements from a specific lane where a movement, not allowed by State statute or local ordinance, is permitted.

- 05 The Optional Movement Lane Control signs shall not be used alone to effect a turn prohibition.

Guidance:

- 06 If used, the *Optional Movement Lane Control* sign should be located overhead in advance of the intersection, such as near the upstream end of an adjacent mandatory movement lane, and/or overhead at the intersection where the regulation applies.

Section 2B.30 Advance Intersection Lane Control Signs (R3-8 Series)

Option:

Guidance:

- 01 Advance Intersection Lane Control (R3-8, R3-8a, and R3-8b) signs (see Figure 2B-4) ~~may~~ *should* be used to indicate the configuration of all lanes ahead *where there are optional lanes, mandatory turn lanes without turning bays or un-shadowed turn lanes.*

Option:

- 02 The word messages ONLY, THRU, HOV 2+, TAXI, **FWY, TRUCKS OK**, BUS, or BIKE, or the bicycle symbol, may be used within the border in combination with the arrow symbols of the R3-8 sign series. The R3-5cP, R3-5dP, and R3-5gP supplemental plaques may be installed at the top outside border of the R3-8 sign over the applicable lane designation on the sign. The diamond symbol may be used instead of the word message HOV. The minimum allowable vehicle occupancy requirement may vary based on the level established for a particular facility.
- 03 Where a bicycle lane is between two general-purpose lanes the R3-8 series signs may be modified to show the bicycle lane with a white legend on a black background in accordance with designs of the R3-8x series signs (see Figure 2B-4).

Guidance:

- 04 When used, an *Advance Intersection Lane Control* sign should be placed at an adequate distance in advance of the intersection, either along the lane tapers or at the beginning of the turn lane so that road users can select the appropriate lane (see Figure 2A-4).

Option:

- 04a *Advance Intersection Lane Control (R3-8, R3-8a, and R3-8b) signs may be installed at the intersection of short storage capacity.*
- 05 An Advance Intersection Lane Control sign may be repeated closer to the intersection along the approach for additional emphasis.

Standard:

- 06 **An Advance Intersection Lane Control (R3-8 series) sign shall not be mounted at the far side of an intersection to which it applies.**
- 07 **Where three or more approach lanes are available to traffic, Advance Intersection Lane Control (R3-8 series) signs, if used, shall be post-mounted in advance of the intersection and shall not be mounted overhead.**
- 08 **When only the two outermost lanes of the roadway are shown on a R3-8 sign, the R3-5bP or R3-5fP plaque shall be mounted above the R3-8 sign.**

Section 2B.31 RIGHT (LEFT) LANE MUST EXIT Signs (R3-33, R3-33a)

Option:

- 01 ~~A RIGHT (LEFT) LANE MUST EXIT (R3-33) sign (see Figure 2B-4) may be used to supplement an overhead EXIT ONLY guide sign to inform road users that traffic in the right hand (left hand) lane of a roadway that is approaching a grade-separated interchange is required to depart the roadway on the exit ramp at the next interchange.~~

Standard:

- 01a **The RIGHT (LEFT) LANE MUST EXIT (R3-33) sign (refer to Figure 2B-4) shall be used to indicate a freeway lane drop. The R3-33 sign shall be placed at the beginning of the 8 inch solid white line approaching the exit ramp.**

Option:

- 02 The R3-33a sign (see Figure 2B-4) may be used in place of the R3-33 sign where the roadside width is limited and will not accommodate the R3-33 sign.
- 02a The R18C(CA) or R18D(CA) sign (refer to Figure 2B-4(CA)) may be used in place of the R3-33 or R3-33a sign where there are multiple lanes required to depart the roadway on the exit ramp at the next interchange.

Support:

- 03 Section 2C.50 contains information regarding a warning sign that can be used in advance of lane drops at grade-

separated interchanges.

Section 2B.32 Two-Way Left-Turn-Only Signs (R3-9a and R3-9b) and Plaques

Guidance:

- 01 A Two-Way Left-Turn-Only (R3-9a or R3-9b) sign (see Figure 2B-6) should be used in conjunction with the required pavement markings where a non-reversible lane is reserved for the exclusive use of left-turning vehicles in either direction and is not used for passing, overtaking, or through travel.

Option:

- 02 The post-mounted R3-9b sign may be used as an alternate to or a supplement to the overhead R3-9a sign. The legend BEGIN or END may be used within the border of the main sign itself, or on an R3-9cP or R3-9dP plaque (see Figure 2B-6) mounted immediately above it.

Support:

- 03 Signing is especially helpful to drivers in areas where the two-way left-turn-only maneuver is new, in areas subject to environmental conditions that frequently obscure the pavement markings, and on peripheral streets with two-way left-turn-only lanes leading to an extensive system of routes with two-way left-turn-only lanes.
- 04 Refer to Figure 3A-108(CA) and Figure 3B-7(CA) for pavement marking applications for Two-Way Left Turn Lanes.

Section 2B.33 BEGIN and END Plaques (R3-9cP and R3-9dP)

Option:

- 01 The BEGIN (R3-9cP) or END (R3-9dP) plaque (see Figure 2B-6), mounted directly above a regulatory sign, may be used to inform road users of the location where a regulatory condition begins or ends.

Section 2B.34 Reversible Lane Control Signs (R3-9e through R3-9i)

Option:

- 01 A reversible lane may be used for through traffic (with left turns either permitted or prohibited) in alternating directions during different periods of the day, and the lane may be used for exclusive left turns in one or both directions during other periods of the day as well. Reversible Lane Control (R3-9e through R3-9i) signs (see Figure 2B-6) may be either static type or changeable message type. These signs may be either post-mounted or overhead. Lane-use control signals (see Chapter 4T) may also be used for reversible lanes.

Standard:

- 02 Where it is determined by an engineering study that lane-use control signals or physical barriers are not necessary, the lane shall be controlled by overhead Reversible Lane Control signs (see Figure 2B-7).
- 03 Post-mounted Reversible Lane Control signs shall be used only as a supplement to overhead signs or signals. Post-mounted signs shall be identical in design to the overhead signs and an additional legend such as CENTER LANE shall be added to the top of the sign (R3-9f) to indicate which lane is controlled.

Option:

- 04 Reversing traffic flow may be controlled with pavement markings and Reversible Lane Control signs (without the use of lane-use control signals), when all of the following conditions are met:
- A. Only one lane is being reversed,
 - B. An engineering study indicates that the use of Reversible Lane Control signs alone would result in an acceptable level of safety and efficiency, and
 - C. There are no unusual or complex operations in the reversible lane pattern.

Standard:

- 05 Reversible Lane Control signs shall contain the legend or symbols designating the allowable uses of the lane and the time periods such uses are allowed. Where symbols and legends are used, their meanings shall be as shown in Table 2B-2.
- 06 Reversible Lane Control signs shall consist of a white background with a black legend and border, except for the R3-9e sign, where the color red is used for the X symbol.
- 07 Symbol signs, such as the R3-9e sign, shall consist of the appropriate symbol in the upper portion of the sign with the appropriate times of the day and days of the week below it. All times of the day and days of the week shall be accounted for on the sign to eliminate confusion to the road user.
- 08 In situations where more than one message is conveyed to the road user, such as on the R3-9e sign, the sign

legend shall be arranged as follows:

- A. The prohibition or restriction message is the primary legend and shall be on the top for word message signs and to the far left for symbol signs,
- B. The permissive use message shall be displayed as the second legend, and
- C. The OTHER TIMES message shall be displayed at the bottom for word message signs and to the far right for symbol signs.

Option:

- 09 The symbol signs may also include a downward-pointing arrow with the legend THIS LANE. The term OTHER TIMES may be used for either the symbol or word message sign.

Standard:

- 10 A Reversible Lane Control sign shall be mounted over the approximate center of the lane that is being reversed.
- 11 If the vertical or horizontal alignment is curved to the degree that a driver would be unable to see at least one sign, and preferably two signs, then additional overhead signs shall be installed. The placement of the signs shall be such that the driver will have a definite indication of the lanes specifically reserved for use at any given time. Special consideration shall be given to major generators introducing traffic between the normal sign placement.
- 12 Transitions at the entry to and exit from a section of roadway with reversible lanes shall include advance signs to notify or warn drivers of the boundaries of the reversible lane controls. The R3-9g or R3-9h signs (see Figure 2B-6) shall be used for this purpose.

Option:

- 13 More than one End Reverse Lane (R3-9i) sign (see Figure 2B-6) may be used at the termination of the reversible lane to emphasize the importance of the message.
- 14 Where longitudinal barriers separate opposing directions of traffic, the R3-9g or R3-9h signs may be omitted.

Standard:

- 15 Flashing beacons, if used to supplement the overhead Reversible Lane Control signs, shall comply with the applicable requirements for flashing beacons in Chapter 4S.
- 16 When used in conjunction with Reversible Lane Control signs, the Turn Prohibition (R3-1 through R3-4, and R3-18) signs shall be mounted overhead and separate from the Reversible Lane Control signs. The Turn Prohibition signs shall be designed and installed in accordance with Section 2B.26.

Guidance:

- 17 For additional emphasis, a supplemental plaque stating the distance of the prohibition, such as NEXT 1 MILE, should be added to the Turn Prohibition signs that are used in conjunction with Reversible Lane Control signs.
- 18 If used, overhead signs should be located at intervals not greater than ¼ mile. The bottom of the overhead Reversible Lane Control signs should not be more than 19 feet above the pavement grade.
- 19 Where more than one sign is used at the termination of a reversible lane, they should be at least 250 feet apart. Longer distances between signs are appropriate for streets with speeds over 35 mph, but the separation should not exceed 1,000 feet.
- 20 Because left-turning vehicles have a significant impact on the safety and efficiency of a reversible lane operation, if a mandatory left-turn lane or two-way left-turn lane cannot be incorporated into the lane-use pattern for a particular peak or off-peak period, consideration should be given to prohibiting left turns and U-turns during that time period.
- 21 Reversible Lane Control signs and parking signs should be consistent in message during the same operational periods.

Section 2B.35 Jughandle Signs (R3-23, R3-24, R3-25, and R3-26 Series)

Support:

- 01 A jughandle turn is a left turn or U-turn that because of special geometry is made by initially making a right turn. This type of turn can increase the operational efficiency of a roadway by eliminating the need for mandatory left-turn lanes and can increase the operational efficiency of a traffic control signal by eliminating the need for protected left-turn phases. A jughandle turn can also provide an opportunity for trucks and commercial vehicles to make a U-turn where the median and roadway are not of sufficient width to accommodate a traditional U-turn by these vehicles.
- 02 Figure 2B-8 shows the various signs that can be used for signing jughandle turns. Figure 2B-9 shows examples of regulatory and destination guide signing for various types of jughandle turns.

Standard:

- 03 **On multi-lane roadways, since road users generally anticipate that they need to be in the left-hand lane when approaching a location where they desire to turn left or make a U-turn, an ALL TURNS FROM RIGHT LANE (R3-23) or a U TURN FROM RIGHT LANE (R3-23a) sign (see Figure 2B-8) shall be installed in advance of the location to inform drivers that left turns and/or U-turns will be made from the right-hand lane.**

Option:

- 04 Where a median of sufficient width is available, supplemental regulatory or guide signs may also be placed on the left-hand side of the roadway.

Standard:

- 05 **The R3-24 series sign with an upward diagonal arrow pointing to the right if the jughandle entrance is designed as an exit ramp (see Drawings A and B in Figure 2B-9), or the R3-25 series sign with a horizontal arrow pointing to the right if the jughandle entrance is designed as an intersection, shall be installed on the right-hand side of the roadway at the entrance to the jughandle. The legend on the sign shall be ALL TURNS, U TURN, or U AND LEFT TURNS, as appropriate.**
- 06 **If the jughandle is designed such that the jughandle entrance is downstream of the location where the turn would normally have been made (see Drawing C in Figure 2B-9), the R3-26 series sign with an arrow pointing straight upward shall be installed on the right-hand side of the roadway at the intersection to inform road users that they need to proceed straight through the intersection in order to make a left turn or U-turn. The legend on the sign shall be U TURN or U AND LEFT TURNS, as appropriate.**

Support:

- 07 The R3-24, R3-25, and R3-26 series of signs are designed to be mounted below conventional guide signs.
- 08 Section 2C.12 contains information regarding the use of advisory exit and ramp speed signs for exit ramps.
- 09 Section 2D.40 contains information regarding the use of guide signs for jughandles.

PASSING, KEEP RIGHT, AND SLOW TRAFFIC SIGNS

Section 2B.36 DO NOT PASS Sign (R4-1)

Option:

- 01 The DO NOT PASS (R4-1) sign (see Figure 2B-10) may be used in addition to pavement markings (see Section 3B.03) to emphasize the restriction on passing.

Standard:

- 01a **When used, the Do Not Pass sign ~~may~~ shall be used at the beginning of, and at intervals within, a zone through which sight distance is restricted or where other conditions make overtaking and passing inappropriate.**
- 01b **The R4-1 sign shall not be used in the freeway or express way, etc., where two or more lanes remain after a lane dropped or was reduced. Refer to Section 2B.36.**

Option:

- 02 If signing is needed on the left-hand side of the roadway for additional emphasis, NO PASSING ZONE (W14-3) signs may be used (see Section 2C.53).

Support:

- 03 Standards for determining the location and extent of no-passing zone pavement markings are set forth in Section 3B.03.

- 04 Typical examples of where the R4-1 sign could be applied are shown in Figures 3B-14(CA) and 3B-104(CA).

Option:

- 05 The R4-1 sign may be used in conjunction with temporary traffic control signs.

Section 2B.37 PASS WITH CARE Sign (R4-2)

Guidance:

- 01 *The PASS WITH CARE (R4-2) sign (see Figure 2B-10) should be installed at the downstream end of a no-passing zone if a DO NOT PASS sign has been installed at the upstream end of the zone.*

Section 2B.38 KEEP RIGHT EXCEPT TO PASS Sign (R4-16), SLOWER TRAFFIC KEEP RIGHT Sign (R4-3), and TRUCKS USE RIGHT LANE Sign (R4-5)

Option:

- 01 The KEEP RIGHT EXCEPT TO PASS (R4-16) sign (see Figure 2B-10) may be used on roadways where there are two lanes in one direction of travel to direct drivers to stay in the right-hand lane except when they are passing another vehicle. Refer to CVC 21659.

Guidance:

- 02 *If used, the KEEP RIGHT EXCEPT TO PASS sign should be installed at or just beyond the beginning of a two-lane section of roadway and at selected locations along two-lane roadways where additional emphasis is needed.*

Option:

- 03 The SLOWER TRAFFIC KEEP RIGHT (R4-3) or the TRUCKS USE RIGHT LANE (R4-5) sign (see Figure 2B-10) may be used on multi-lane through roadways to improve capacity or reduce unnecessary lane changing due to the presence of slower vehicles that impede the normal flow of traffic.

Standard:

- 03a **The SLOWER TRAFFIC KEEP RIGHT (R4-3) sign shall be used at the beginning of passing lanes. Refer to CVC 21654.**

Guidance:

- 04 *If used, the SLOWER TRAFFIC KEEP RIGHT sign or the TRUCKS USE RIGHT LANE sign should be installed at or just beyond the beginning of a multi-lane roadway section or at the beginning of an extra lane provided for trucks and/or other slow-moving traffic, and at selected locations where there is a tendency on the part of some road users to drive in the left-hand lane(or lanes) below the normal speed of traffic. These signs should not be used on the approach to an interchange or through an interchange area where traffic is entering or exiting, or along deceleration or acceleration lanes.*

Standard:

- 04a **The TRUCKS USE RIGHT LANE (R4-5) sign (refer to Figure 2B-10) shall be used when a climbing lane is provided and it is necessary to prohibit trucks from passing slower moving vehicles. Signs shall be placed at the beginning of the**

restriction and at approximately 0.25 mile intervals. When the restriction is necessary during certain hours, the Specific Hours/Day (R82aP(CA)) Plaque (refer to Figure 2B-10(CA)) shall be placed below the R53B(CA) sign.

Option:

04b The TRUCKS USE RIGHT LANE (R4-5) sign may be placed to advise trucks that they must use the right lane except to pass slow moving vehicles as provided in CVC 21654.

05 The TRUCKS USE RIGHT LANE sign may be used as a supplement to the SLOWER TRAFFIC KEEP RIGHT sign.

05a The TRUCKS OK (R70(CA)) sign (refer to Figure 2B-10(CA)) may be used to allow trucks to legally use a lane other than the right lane or lanes to facilitate the safe and orderly movement of traffic, such as in advance of freeway branch connections, lane drops, etc. If the TRUCKS OK (R70(CA)) sign cannot fit on an overhead sign structure, the TRUCKS (R70A(CA)) and OK (R70B(CA)) sign panels may be used in place of the TRUCKS OK (R70(CA)) sign. Refer to CVC 21655.

Standard:

05b The TRUCKS OK (R70(CA)) sign shall be placed directly over the appropriate lane. The TRUCKS (R70A(CA)) and OK (R70B(CA)) sign panels shall be placed on either side of and adjacent to the lower end of the appropriate white arrow. See Figures 2B-10(CA) and 2E-36(CA).

Support:

05c Refer to CVC 21655.

Guidance:

06 If an extra lane has been provided for trucks and other slow-moving traffic, a Lane Ends sign (see Section 2C.47) should be installed in advance of the point where the extra lane ends. Appropriate pavement markings should be installed at both the upstream and downstream ends of the extra lane (see Section 3B.12 and Figure 3B-14).

Option:

07 The TRUCKS 3 AXLES OR MORE RIGHT 2 LANES ONLY (R6-3A(CA)) sign (refer to Figure 2B-10(CA)) may be used on divided highways having four or more lanes for traffic in one direction where this type of vehicle, unless designated, is restricted to the two right lanes. Refer to CVC 21655 and 22348(c).

08 The ALL VEHICLES WHEN TOWING RIGHT 2 LANES ONLY (R6-4A(CA)) sign (refer to Figure 2B-10(CA)) may be used on divided highways having four or more lanes for traffic in one direction where this type of vehicle, unless designated, is restricted to the two right lanes. Refer to CVC 21655 and 22348(c).

Standard:

09 The END TRUCK LANE CONTROL (R53E(CA)) sign (refer to Figure 2B-10(CA)) shall be placed at the end of a segment of roadway in which trucks are restricted to a particular lane.

10 The YIELD TO UPHILL TRAFFIC (R55(CA)) sign (refer to Figure 2B-10(CA)) shall be used facing downhill traffic where a climbing lane has been provided and where a one-direction no passing marking has been placed to allow downhill traffic to pass. Refer to CVC 21661. Refer to Section 3B.01 for further details.

Section 2B.39 Keep Right and Keep Left Signs (R4-7 Series and R4-8 Series)

Option:

01 The Keep Right (R4-7) sign (see Figure 2B-10) may be used at locations where it is necessary for traffic to pass only to the right-hand side of a roadway feature or obstruction. The Keep Left (R4-8) sign (see Figure 2B-10) may be used at locations where it is necessary for traffic to pass only to the left-hand side of a roadway feature or obstruction.

Guidance:

02 At locations where it is not readily apparent that traffic is required to keep to the right, a Keep Right sign should be used.

Standard:

03 If Keep Right signs are installed at the start of a median or at a median opening, they shall be placed as close as practicable to the approach ends of the medians, and shall be visible to traffic on the divided highway and angled toward the applicable crossroad approach as shown in Figure 2B-20.

Guidance:

04 If used, the Keep Right sign should be mounted on the face of or just in front of a pier or other obstruction separating opposite directions of traffic in the center of the highway such that traffic will have to pass to the right-hand side of the sign.

05 Where the approach end of the island channelizes traffic away from the approach direction, the word legend (R4-7a,

R4-7b, R4-8a, or R4-8b) signs (see Figure 2B-10) should be used instead of the symbol (R4-7 or R4-8) signs to emphasize the degree of curvature away from the approach direction (see Figure 2B-11).

- 06 *Where a regulatory sign is used within the central island of a neighborhood traffic circle to direct traffic counter-clockwise around the central island, the Keep Right with diagonal arrow (R4-7b) sign should be used (see Figure 2B-24). The mounting height of the sign should be at least 4 feet, measured vertically from the bottom of the sign to the elevation of the near edge of the traveled way.*

Standard:

- 07 **The Keep Right (Left) sign shall not be installed on the right-hand (left-hand) side of the roadway in a position where traffic must pass to the left-hand (right-hand) side of the sign.**

Option:

- 08 The Keep Right sign may be omitted at intermediate ends of divisional islands and medians.
- 09 Word message KEEP RIGHT (LEFT) with an arrow (R4-7a or R4-7b) signs (see Figure 2B-10) may be used instead of the R4-7 or R4-8 symbol signs.
- 10 A narrow Keep Right (R4-7c) sign (see Figure 2B-10) may be installed on the approach end of a median island that is less than 4 feet wide at the point where the sign is to be located.

Standard:

- 11 **A narrow Keep Right (R4-7c) sign shall not be installed on a median island that has a width of 4 feet or more at the point where the sign is to be located.**

Option:

Standard:

- 12 **The Keep Right sign ~~may~~ shall be installed in the median of a divided highway crossing that functions as a single intersection such that it is visible to traffic on the divided highway and angled as needed toward the applicable crossroad approach as shown in Figure 2B-20.**

Option:

- 12a *If the median is not wide enough to accommodate the KEEP RIGHT or narrow Keep Right sign, the sign may be omitted if all other applicable standards are met.*

Support:

- 13 Section 2B.49 provides more information about the use of the Keep Right sign in combination with or in lieu of ONE-WAY signs at divided highway crossings.

Section 2B.40 STAY IN LANE Sign (R4-9)

Option:

- 01 A STAY IN LANE (R4-9) sign (see Figure 2B-10) may be used on multi-lane highways to direct road users to stay in their lane until conditions permit shifting to another lane.

Guidance:

- 02 *If a STAY IN LANE sign is used, it should be accompanied by a solid double white lane line(s) to prohibit lane changing.*

Section 2B.41 RUNAWAY VEHICLES ONLY Sign (R4-10)

~~**Guidance:**~~

Standard:

- 01 **A RUNAWAY VEHICLES ONLY (R4-10) sign (see Figure 2B-10) ~~should~~ shall be installed near a truck escape (or runaway truck) ramp entrance to discourage other road users from entering the ramp.**

- 02 **The NO STOPPING ANY TIME (R26A(S)(CA)) signs (refer to Figure 2B-25(CA)) shall be placed as required to keep motorists from stopping in the path of runaway trucks.**

Support:

- 03 Refer to Figure 3G-103(CA) for runaway truck signing.

Section 2B.42 Slow Vehicle Turn-Out Signs (R4-12, R4-13, and R4-14)

Support:

- 01 On two-lane highways in areas where traffic volumes and/or vertical or horizontal curvature make passing difficult, turn-out areas are sometimes provided for the purpose of giving a group of faster vehicles an opportunity to pass a slow-

moving vehicle.

Option:

Standard:

- 02 **A SLOW VEHICLES WITH ~~XX~~ 5 OR MORE FOLLOWING VEHICLES MUST USE TURN-OUT (R4-12) sign (see Figure 2B-10) ~~may~~ shall be installed in advance of a the first turn-out area to inform drivers who are driving so slow that they have accumulated a specific number of vehicles behind them that they are required by the traffic laws of that State to use the turn-out to allow the vehicles following them to pass. Refer to CVC 21656.**

Support:

- 03 The specific number of vehicles displayed on the R4-12 sign provides law enforcement personnel with the information they need to enforce this regulation.

03a Refer to CVC 21656 for Turning out of Slow-Moving Vehicles.

03b The R4-12 sign is not intended to be used in advance of each individual turnout.

03c Refer to Section 3B.101(CA) for more details.

Option:

- 04 If an R4-12 sign has been installed in advance of a turn-out area, a SLOW VEHICLES MUST USE TURN-OUT AHEAD (R4-13) sign (see Figure 2B-10) may also be installed downstream from the R4-12 sign, but upstream from the turn-out area, to remind slow drivers that they are required to use a turn-out that is a short distance ahead.

Standard:

- 05 **If an R4-12 sign has been installed in advance of a turn-out area, a SLOW VEHICLES MUST TURN OUT (with arrow) (R4-14) sign (see Figure 2B-10) shall be installed at the entry point of the turn-out area.**

Support:

- 06 Section 2D.54 contains information regarding advance information signs for slow vehicle turn-out areas.

Section 2B.43 DO NOT DRIVE ON SHOULDER Sign (R4-17) and DO NOT PASS ON SHOULDER Sign (R4-18)

Option:

- 01 The DO NOT DRIVE ON SHOULDER (R4-17) sign (see Figure 2B-10) may be installed to inform road users that using the shoulder of a roadway as a travel lane is prohibited.
- 02 The DO NOT PASS ON SHOULDER (R4-18) sign (see Figure 2B-10) may be installed to inform road users that using the shoulder of a roadway to pass other vehicles is prohibited.

Section 2B.44 ALL TRAFFIC Sign (R4-20) and RIGHT (LEFT) TURN ONLY Sign (R4-21)

Option:

- 01 The ALL TRAFFIC (R4-20) sign may be used at an intersection where all traffic on the approach to the intersection must turn in the direction indicated and the Movement Prohibition (see Section 2B.26) and/or ONE WAY (see Section 2B.49) signs do not adequately convey the allowable direction of travel.
- 02 The RIGHT (LEFT) TURN ONLY (R4-21) sign may be used at or on an approach to an intersection where all traffic on that approach must turn in the direction indicated.

Guidance:

- 03 *The RIGHT (LEFT) TURN ONLY sign should not be used for a channelized turn lane separated from the adjacent travel lanes by an island.*

Standard:

- 04 **The ALL TRAFFIC sign shall not be used to substitute for the Keep Right (R4-7 series) or Keep Left (R4-8 series) signs.**
- 05 **The RIGHT (LEFT) TURN ONLY sign shall not be used to substitute for the Mandatory Movement Lane Control signs (see Sections 2B.27 and 2B.28).**

SELECTIVE EXCLUSION SIGNS AND PLAQUES

Section 2B.45 Selective Exclusion Signs and Plaques

Option:

- 01 Selective Exclusion signs (see Figure 2B-12) may be used to provide notice to road users that State or local statutes or ordinances exclude designated types of traffic from using particular roadways or facilities.

Standard:

- 02 **Selective Exclusion signs shall clearly indicate the type of traffic that is excluded.**

Support:

- 03 Typical exclusion messages include:
- A. No Trucks (R5-2),
 - B. NO MOTOR VEHICLES (R5-3),
 - C. NO COMMERCIAL VEHICLES (R5-4),
 - D. NO VEHICLES WITH LUGS (R5-5),
 - E. No Bicycles (R5-6),
 - F. NO NON-MOTORIZED TRAFFIC (R5-7),
 - G. NO MOTOR-DRIVEN CYCLES (R5-8),
 - H. No Pedestrian Crossing (R9-3),
 - I. No Skaters (R9-13),
 - J. No Equestrians (R9-14),
 - K. No Snowmobiles (R9-15),
 - L. No All-Terrain Vehicles (R9-16),
 - M. Hazardous Material (R14-3) (see Section 2B.67),
 - N. NO THRU TRAFFIC (R5-12),
 - O. NO THRU TRUCKS (R5-2b),
 - P. EXCEPT ON SHOULDER (R9-19P) plaque, and
 - Q. EXCEPT LOCAL DELIVERY (R5-2aP) plaque.

Option:

- 04 Appropriate combinations or groupings of these legends into a single sign, such as NO PEDESTRIANS BICYCLES MOTOR-DRIVEN CYCLES (R5-10 and R5-10a) or NO PEDESTRIANS OR BICYCLES (R5-10b), may be used.

Guidance:

- 05 *If an exclusion is governed by vehicle weight, a Weight Limit sign (see Section 2B.64) should be used instead of a Selective Exclusion sign.*
- 06 *If used on a ramp to a freeway or expressway where pedestrian and bicyclist travel are prohibited by law or regulation, the ~~NO PEDESTRIANS OR BICYCLES (R5-10b)~~ NO PEDESTRIANS BICYCLES MOTOR-DRIVEN CYCLES (R5-10) sign should be installed in a location where it is clearly visible to any pedestrian or bicyclist attempting to enter the limited access facility from a street intersecting the ramp. In locations where a freeway or expressway is accessed from a ramp from a roadway parallel to the freeway or expressway, the sign should be placed in a location that clearly indicates the prohibition applies only to the freeway or expressway or to the ramp.*
- 07 *The Selective Exclusion sign should be placed on the right-hand side of the roadway at an appropriate distance from the intersection so as to be clearly visible to all road users turning into the roadway that has the exclusion. The NO PEDESTRIANS (R5-10c) or No Pedestrian Crossing (R9-3) sign (see Section 2B.57) should be installed so as to be clearly visible to pedestrians who are at a location where an alternative route is available.*

Option:

- 08 The NO PEDESTRIANS (R5-10c) or No Pedestrian Crossing (R9-3) sign may also be used at underpasses or elsewhere where pedestrian facilities are not provided.
- 09 The NO THRU TRAFFIC (R5-12) or NO THRU TRUCKS (R5-2b) signs may be used at locations to prohibit through traffic from using a particular roadway or facility.
- 10 The EXCEPT LOCAL DELIVERY (R5-2aP) plaque may be mounted below the R5-2 or R5-2b sign.
- 11 The EXCEPT ON SHOULDER (R9-19P) plaque may be used where such modes are allowed on a shoulder but not on the traveled way and placed at intersections with other roads and established paths or trails, where such vehicles or

modes are expected to enter the highway.

- 12 The AUTHORIZED VEHICLES ONLY (R5-11) sign may be used at median openings and other locations to prohibit vehicles from using the median opening or facility unless they have special permission (such as law enforcement vehicles or emergency vehicles) or are performing official business (such as highway agency vehicles).

Restrictions on Use of Freeways

Support:

- 13 CVC Section 21960 authorizes Caltrans and local authorities, with respect to freeways under their respective jurisdictions, to prohibit or restrict the use of freeways by pedestrians, bicycles or other non-motorized traffic or by any person operating a motor-driven cycle or a motorized bicycle.

Standard:

- 14 **Restrictions on use of a freeway shall be by the order of Caltrans, District Director.**
15 **No ordinance or resolution of local authorities shall apply to any State highway until the proposed ordinance or resolution has been presented to, and approved in writing by, Caltrans.**

Support:

- 16 The District Directors have been delegated the authority to issue orders restricting the use of freeways. They are also authorized to approve orders, ordinances or resolutions of local authorities, which would restrict the use of State highways.
17 It is Caltrans' policy to restrict the use of freeways when a satisfactory alternate route is available.

Standard:

- 18 **The NO PEDESTRIANS BICYCLES MOTOR-DRIVEN CYCLES (R5-10) sign shall be used on a freeway at or near the beginning of the section of freeway to which the prohibition applies and on the right side of freeway entrance ramps.**

Guidance:

- 19 *Prior to placement of the R5-10 sign on State highways, an order signed by the Caltrans District Director should be on file.*
20 *At the end of freeway sections where both bicycles and pedestrians have been allowed, and on the continuing freeway where such traffic is prohibited, the R5-10 sign should be placed beyond the exit ramp gore.*

Option:

- 21 The R5-10 sign may be modified by deleting the word BICYCLES at locations where bicycles are permitted on freeway shoulders.

Standard:

- 22 **The NO PEDESTRIANS (R5-10c) sign shall be used at all freeways exit ramps to inform the public that pedestrians are prohibited.**

Guidance:

- 23 *The R5-10c sign should be placed on the left facing pedestrian traffic, which might enter a freeway exit ramp. The sign should be placed up the ramp to avoid conflict with the ramp terminal signs.*

Option:

- 24 Where pedestrian problems exist, a second identical sign on the right-hand side of the offramp at the same location may be installed.

Support:

- 25 Refer to Section 2E.59 for additional details.

Support:

- 26 Refer to CVC 21101 through 21104, 22402 through 22405 and 35650 through 35755 for Truck Exclusion signs.
27 The No Trucks (R5-2) sign is used together with a Truck Exclusion (R20DP(CA) Series) plaque (refer to Figure 2B-12(CA)) to specify the maximum width or other restrictions in effect.

Guidance:

- 28 *An alternative route should be evaluated for height, weight and size restrictions. Appropriate signs should be posted along the route to advise motorists of any restrictions.*

Option:

- 29 Advance signs may be necessary to give trucks an opportunity to turn around and retrace their path or select another route.

Standard:

- 30 **The R5-2 signs shall be placed at each end of the affected portion of a highway section. They shall be placed at a distance of not more than 500 feet from the ends of an affected bridge or structure.**
31 **The Bridge Speed and Weight Limit (R21(CA)) sign (refer to Figure 2B-12(CA)) shall be used to specify the maximum speed permitted on a bridge or structure for vehicles over a specified weight. The R21(CA) sign shall not be erected more**

than 500 feet in advance of the bridge or structure.

Option:

- 32 The R21(CA) sign, when used with the Weight Limit (R12-5) sign, may be placed on the same post.
- 33 The Truck Length Limit (R20H(CA)) sign may be used at locations where a semi-truck over 65 feet in length and a semi-truck with trailer over 75 feet in length is prohibited.
- 34 The No Trucks Variable Message (R20-1(CA)) sign (refer to Figure 2B-12(CA)) may be used with an advance guide sign where there is a truck restriction.

Standard:

- 35 **The NEXT RIGHT (R20-1aP(CA)) Plaque (refer to Figure 2B-12(CA)) shall be used below the R20-1(CA) sign when no advance guide sign is available.**
- Option:
- 36 The AUTOS WITH TRAILERS -TRUCKS – PROHIBITED (R53D(CA)) sign (refer to Figure 2B-12(CA)) may be used at locations where these vehicles are prohibited from using the roadway.

DO NOT ENTER, WRONG WAY, ONE WAY, AND RELATED SIGNS AND PLAQUES

Section 2B.46 **DO NOT ENTER Sign (R5-1)**

Support:

- 00 The DO NOT ENTER package is a DO NOT ENTER (R5-1) sign with a WRONG WAY (R5-1a) sign directly beneath it on the same sign assembly.

Standard:

- 01 The DO NOT ENTER **package (R5-1) sign** (see Figure 2B-13) shall be used at the following locations:
- A. Where a two-way roadway becomes a one-way roadway (see Figure 2B-18);
 - B. The intersection of an interchange exit ramp with a crossroad as specified in Section 2B.48 (see Figure 2B-15);
 - C. The intersection of a channelized or turning roadway with a two-way undivided crossroad; and
 - D. ~~Except as provided in Paragraph 4 of this Section, a~~ An intersection with a divided highway where the crossing functions as **a single (refer to Figure 2B-14(CA)) or two separate intersections (see Figure 2B-14).**

Support:

- 01a Refer to Section 2B.48 for DO NOT ENTER package requirements at interchange exit ramp terminals.

Guidance:

- 02 A DO NOT ENTER **package sign** should be installed at other locations where additional emphasis is needed where wrong-way movements are prominent or where the intersecting angle of roadways is such that the visibility of ONE WAY signs alone does not sufficiently convey the restriction.

Option:

- 02a The DO NOT ENTER (R5-1) and WRONG WAY (R5-1a) signs (refer to Figure 2B-13), may be used as Activated Blank-Out signs (refer to Figure 2B-13(CA)) for controlling reversible lanes and for prohibiting turns into reversible lanes.

Standard:

- 02b **If used for controlling reversible lanes and for prohibiting turns into reversible lanes, the R5-1 and R5-1a Activated Blank-Out signs shall be used in two sets.**

Option:

- 02c The R5-1 and R5-1a Activated Blank-Out signs may also be used to supplement static R5-1 and R5-1a signs.

Option:

- 03 ~~A DO NOT ENTER sign may be installed at an intersection with a divided highway where the crossing functions as a single intersection as shown in Figure 2B-20.~~

- 04 ~~A DO NOT ENTER sign may be omitted on a low speed urban street that is a divided highway at a crossing that functions as two separate intersections.~~

- 05 An EXCEPT BICYCLES (R3-7bP) plaque (see Figure 2B-4) may be used **below** with a DO NOT ENTER **package sign** when counter-flow bicycle traffic is allowed.

Guidance:

- 06 The DO NOT ENTER **package sign**, if used, should be placed directly in view of a road user at the point where a road user could wrongly enter a divided highway, one-way roadway, or ramp. The sign should be mounted facing traffic that might enter the roadway or ramp in the wrong direction.

- 07 At a crossing with a divided highway that functions as a single intersection; the ~~sign, if used,~~ **package** should be placed on the outside edge side of the roadway facing traffic that might enter the roadway in the wrong direction.

- 08 If the DO NOT ENTER **package sign** would be visible to traffic to which it does not apply, the sign should be turned away from, or shielded from, the view of that traffic.

- 08a **At least one set of the DO NOT ENTER package should be visible from each decision point on each likely wrong-way approach.**

Option:

Standard:

- 09 **A second DO NOT ENTER package sign may shall be used, particularly where traffic approaches from an intersecting roadway (see Figure 2B-14).**

Support:

- 10 Section **2A.15 and** 2B.48 contains information regarding an optional lower mounting height for DO NOT ENTER **package signs** that are located along an exit ramp facing a road user who is traveling in the wrong direction.

- 11 Section 2A.12 contains the provisions for the use of continuously-operated or actuated LEDs to enhance the

conspicuity of signs.

Section 2B.47 WRONG WAY Sign (R5-1a)

Option:

- 01 The WRONG WAY (R5-1a) sign (see Figure 2B-13) may be used as a supplement to the DO NOT ENTER ~~package sign~~ where a crossroad intersects a one-way roadway in a manner that does not physically discourage or prevent wrong-way entry (see Figures 2B-14 and 2B-20).

~~Guidance:~~

Standard:

- 02 ~~If used, the A~~ WRONG WAY sign ~~should~~ **shall** be placed at a location along the one-way roadway farther from the crossroad than the DO NOT ENTER ~~package sign~~ (see Section 2B.46).

~~Guidance:~~

- 03 ~~The WRONG WAY sign should be placed on the same side of the road as the DO NOT ENTER package sign.~~

Support:

- 04 Section 2A.15 and 2B.48 contains information regarding an optional lower mounting height for WRONG WAY signs that are located along an exit ramp facing a road user who is traveling in the wrong direction.

- 05 Section 2A.12 contains the provisions for the use of continuously-operated or actuated LEDs to enhance the conspicuity of signs.

- 06 For additional information for the WRONG WAY (R5-1a) sign, refer to Section 2B.46 and 2B.48.

Section 2B.48 Wrong-Way Traffic Control at Interchange Ramps

Standard:

- 01 At interchange exit ramp terminals where the ramp intersects a crossroad in such a manner that wrong-way entry could inadvertently be made, the following signs shall be used (see Figure 2B-15):
- A. At least one ONE WAY sign for each direction of travel on the crossroad shall be placed where the exit ramp intersects the crossroad.
 - B. At least one DO NOT ENTER ~~package sign~~ shall be conspicuously placed near the downstream end of the exit ramp in positions appropriate for full view of a road user starting to enter wrongly from the crossroad.
 - C. At least one ~~stand-alone~~ WRONG WAY sign shall be placed ~~upstream~~ on the exit ramp facing a road user traveling in the wrong direction.

Option:

- 01a The WRONG WAY sign may be mounted to the backside of an existing sign upstream the exit ramp facing a road user traveling in the wrong direction.

~~Guidance:~~

- 02 ~~In addition, the following pavement markings should be used (see Figure 2B-15):~~

- A. ~~On two-lane paved crossroads at interchanges, solid double yellow lines should be used as a center line for an adequate distance on both sides approaching the ramp intersections.~~
- B. ~~Where crossroad channelization or ramp geometrics do not make wrong-way movements difficult, a lane-use arrow should be placed in each lane of an exit ramp near the crossroad terminal where it will be clearly visible to a potential wrong-way road user.~~

Option:

- 03 The following traffic control devices may be used to supplement the signs and pavement markings described in Paragraphs 1 and 2 of this Section:

- A. Additional ONE WAY signs may be placed, especially on two-lane rural crossroads, appropriately in advance of the ramp intersection to supplement the required ONE WAY sign(s).
- B. Additional WRONG WAY signs may be used.
- C. Slender, elongated wrong-way arrow pavement markings (see Figure 3B-21 and 3B-21(CA)) intended primarily to warn wrong-way road users that they are traveling in the wrong direction may be placed upstream from the ramp terminus (see Figure 2B-15) to indicate the correct direction of traffic flow. Wrong-way arrow pavement markings may also be placed on the exit ramp at appropriate locations near the crossroad junction to indicate wrong-way movement. The wrong-way arrow markings may consist of pavement markings or bidirectional red-

and-white raised pavement markers or other units that show red to wrong-way road users and white to other road users.

- D. Lane-use arrow pavement markings may be placed on the exit ramp and crossroad near their intersection to indicate the permissive direction of flow.
- E. Freeway entrance signs (see Section 2D.50) may be used.
- F. Lane control signs or movement prohibition signs may be used on the approaches to the exit ramp.
- G. A Keep Right (R4-7 or R4-7c) may be used on a ramp median nose for wrong-way traffic control.

Guidance:

- 04 *On interchange entrance ramps where the ramp merges with the through roadway and the design of the interchange does not clearly make evident the direction of traffic on the separate roadways or ramps, a ONE WAY sign visible to traffic on the entrance ramp and through roadway should be placed on each side of the through roadway near the entrance ramp merging point as illustrated in Figure 2B-16.*

Option:

- 05 On interchange entrance ramps where the ramp merges with the through roadway and the design of the interchange does not clearly make evident the direction of traffic on the separate roadways or ramps a No Left Turn (R3-2) sign may be located on the left-hand side of the entrance ramp at the gore (see Figure 2B- 16). If a No Left Turn (R3-2) sign is located on the left-hand side, a supplemental R3-2 sign may be installed on the right-hand side of the entrance ramp.
- 06 On interchange entrance ramps where the ramp merges with the through roadway and the design clearly indicates the direction of flow, a ONE WAY sign may be placed visible to traffic on the entrance ramp and/or a NO TURNS (R3-3) sign may be placed visible to traffic on the entrance ramp and through roadway at the gore area as illustrated in Figure 2B-16.

- 07 Where there are no parked cars, pedestrian activity, or other obstructions such as snow or vegetation, and if an engineering study indicates that a lower mounting height would address wrong-way movements on freeway or expressway exit ramps, ~~a DO NOT ENTER sign(s) and/or a WRONG WAY sign(s) that is located along the exit ramp at a location downstream~~ **upstream** from the intersection with the crossroad facing a road user who is traveling in the wrong direction may be installed at a minimum mounting height of 3 feet, measured vertically from the bottom of the sign to the elevation of the near edge of the pavement. ~~At the intersection with the crossroad, a WRONG WAY sign may be mounted at a minimum height of 3 feet on the same support on which a DO NOT ENTER sign is mounted at a height that complies with the provisions of Section 2A.15 (see Figure 2B-17).~~

Support:

- 07a Refer to Section 2A.15 for mounting heights of the DO NOT ENTER package.
- 07b In locations subject to deep snow, sign heights may be adjusted in accordance with engineering judgment.
- 08 Sections 2B.46, 2B.47, and 2B.49 contain further information on signing to avoid wrong-way movements at at-grade intersections on expressways.

Support:

- 09 The sign locations shown in Figure 2B-15(CA) are approximate.

Guidance:

- 10 *All ramp terminals should be reviewed under both day and night conditions by experienced signing personnel to determine exact locations.*

On-Ramp Terminal Signing

Support:

- 11 Lead-in signing directing motorists to on-ramps is important. Care should be taken to ensure that arrows on direction signs couldn't be interpreted as pointing into inappropriate roadways, especially off-ramp terminals.
- 12 Partial interchanges may need special attention with respect to lead-in signing. Trailblazing a route from a partial interchange to another interchange may be necessary to ensure proper traffic movements.

Guidance:

- 13 *Freeway Entrance packages should be placed as near the diverge point between the on-ramp and the intersecting roadway as practicable. The down diagonal arrow should always point toward the onramp pavement.*
- 14 *Large Freeway Entrance signs should be used with the Freeway Entrance package unless proper placement requires the smaller Freeway Entrance signs.*

Off-Ramp Terminal Signing

Standard:

- 15 **The Turn Prohibition signs (Refer to Section 2B.26) shall be placed in suitable locations on the crossing street in advance of the off-ramp.**

Guidance:

- 16 *The Do Not Enter packages should be placed at off-ramp terminals to meet the following criteria:*
- A. *At least one package should be visible to a road user (within the scope of his headlights) at his decision point on each potential approach.*
 - B. *At least one package should be in the head-on position for the road user turning into the off-ramp from each potential approach.*
- 17 *A field decision should be made on whether to use three Do Not Enter packages or four if the off-ramp is split by a traffic island.*
- 18 *The ONE WAY (R6-1) signs should be placed as close to the crossing street as possible. If there are sidewalks immediately adjacent to the cross street, these signs should be located behind the sidewalk to avoid conflicting with pedestrians.*
- 19 *At skewed ramp intersections, where the angle approaches 90°, a second ONE WAY (R6-1) sign should be added on the obtuse side when it would be visible to approaching traffic. Refer to Figure 2B-15(CA) Sheet 1.*

Section 2B.49 ONE WAY Signs (R6-1 and R6-2)

Standard:

- 01 ~~Except as provided in Paragraph 6 of this Section,~~ **The ONE WAY (R6-1 or R6-2) sign (see Figure 2B-13) shall be used to indicate streets, ramp terminals, or roadways upon which vehicular traffic is allowed to travel in one direction only.**

Option:

- 01a **The ONE WAY (R6-2) sign may be used as an alternative to the R6-1 sign where space is limited and the R6-2 sign is more appropriate.**

Standard:

- 02 **ONE WAY signs shall be placed parallel to the one-way street at all alleys and roadways that intersect one-way roadways as shown in Figure 2B-18.**
- 03 **At the crossing of a roadway with a divided highway that functions as two separate intersections, ONE WAY signs shall be placed, visible to each crossroad approach, on the near right and far left corners of each intersection with the directional roadways (see Figure 2B-19).**
- 04 **At the crossing of a roadway with a divided highway that functions as a single intersection Keep Right (R4-7) signs (see Section 2B.39) and ONE WAY signs shall be installed (see Figure 2B-20). If Keep Right signs are installed, they shall be placed as close as practicable to the approach ends of the medians and shall be visible to traffic on the divided highway and angled (as needed) toward the applicable crossroad approach as shown in Figure 2B-20. If ONE WAY signs are installed, they shall be placed on the near right and far left corners of the intersection and shall be visible to each crossroad approach.**

Support:

- 04b **Refer to Section 2B.18 when a ONE WAY sign is proposed on the same sign assembly as a STOP sign.**

Option:

- 05 **At the crossing of a roadway with a divided highway, regardless of function as a single or separate intersections, ONE WAY signs may also be placed on the far right corner of the intersection as shown in Figures 2B-19 and 2B-20.**
- 06 ~~ONE WAY signs may be omitted on the one-way roadways of divided highways, where the design of interchanges indicates the direction of traffic on the separate roadways.~~
- 07 **An EXCEPT BICYCLES (R3-7bP) plaque (see Figure 2B-4) may be used with a ONE WAY sign when counter-flow bicycle traffic is allowed.**

Support:

- 08 **Section 2B.48 contains information for the placement of ONE WAY signs at a crossroad with an interchange.**

Standard:

- 09 **If used at unsignalized intersections with one-way streets, ONE WAY signs shall be placed on the near right and the far left corners of the intersection facing traffic entering or crossing the one-way street (see Figure 2B-18).**
- 10 **If used at signalized intersections with one-way streets, ONE WAY signs shall be placed near the appropriate**

signal faces, on the poles holding the traffic signals, on the mast arm or span wire holding the signals, or at the locations specified for unsignalized intersections.

- 11 **At unsignalized T-intersections where the roadway at the top of the T-intersection is a one-way roadway, ONE WAY signs shall be placed on the near-right and the far side of the intersection facing traffic on the stem approach (see Figure 2B-18).**

Option:

- 12 Where the central island of a roundabout allows for the installation of signs, ONE WAY signs may be used to direct traffic counter-clockwise around the central island (see Figures 2B-22 and 2B-23).

Guidance:

- 13 *Where used on the central island of a roundabout, the mounting height of a ONE WAY sign should be at least 4 feet, measured vertically from the bottom of the sign to the elevation of the near edge of the traveled way.*

Option:

- 14 The BEGIN ONE WAY (R6-6) sign (see Figure 2B-13) may be used to notify road users of the beginning point of a one direction of travel restriction on the street or roadway. The END ONE WAY (R6-7) sign (see Figure 2B-13) may be used to notify road users of the ending point of a one direction of travel restriction on the street or roadway.

- 15 *On streets and highways under local jurisdiction where medians are less than 30 feet wide, raised or unpaved, the R6-1 signs may be placed in the median.*

Guidance:

- 16 *The appropriate height of the R6-1 signs when placed in the median should be 1.5 feet.*

- 17 *The R6-1 signs should also be placed parallel to the one-way street at the appropriate far corner to a wrong-way turn. They should also be placed opposite the exits from alleys and other public ways.*

Support:

- 18 Authorities in charge of any highway may designate, by ordinance or resolution, any roadway, part of a roadway, or specific lanes for one-way traffic. Refer to CVC 21657.

- 19 No such ordinance is to be effective with respect to a State highway until approved by Caltrans.

- 20 If, by local ordinance, a State highway through a city has been made one of a pair of one-way streets, the Commission may adopt the additional street into the State Highway System. Refer to SHC § 111.5. Refer to Section 1A.05 for information regarding this publication.

Section 2B.50 Divided Highway Crossing Signs (R6-3 and R6-3a)

Standard:

- 01 **On unsignalized minor-street approaches from which both left turns and right turns are permitted onto a divided highway at a crossing that functions as two separate intersections (see Section 2A.23), except as provided in Paragraph 2 of this Section, a Divided Highway Crossing (R6-3 or R6-3a) sign (see Figure 2B-13) shall be used to advise road users that they are approaching an intersection with a divided highway (see Figure 2B-19).**

Option:

- 02 If the divided highway has a traffic volume of less than 400 AADT and a speed limit of 25 mph or less, at a crossing that functions as two separate intersections, the Divided Highway Crossing signs facing the unsignalized minor-street approaches may be omitted.

- 03 A Divided Highway Crossing sign may be used on signalized minor-street approaches from which both left turns and right turns are permitted onto a divided highway to advise road users that they are approaching an intersection with a divided highway.

Standard:

- 04 **If a Divided Highway Crossing sign is used at a four-leg intersection, the R6-3 sign shall be used. If used at a T-intersection, the R6-3a sign shall be used.**

- 05 **The Divided Highway Crossing sign shall be located on the near right corner of the intersection, mounted beneath a STOP or YIELD sign or on a separate support.**

Option:

- 06 An additional Divided Highway Crossing sign may be installed on the left-hand side of the approach to supplement the Divided Highway Crossing sign on the near right corner of the intersection.

Section 2B.51 Roundabout Circulation Plaque (R6-5P)

Guidance:

- 01 *Where the central island of a roundabout or neighborhood traffic circle does not provide a reasonable place to install a sign as provided elsewhere in this Chapter, Roundabout Circulation (R6-5P) plaques (see Figure 2B-13) should be placed below the YIELD signs on each approach.*

Support:

- 02 Paragraph 6 of Section 2B.39 contains information about the use of a Keep Right (R4-7b) sign in the central island of a neighborhood traffic circle.

- 03 Paragraph 12 of Section 2B.49 contains information about the use of a One Way (R6-1 or R6-2) sign in the central island of a roundabout.

Option:

- 04 At roundabouts where ONE WAY signs have been installed in the central island, Roundabout Circulation plaques may be placed below the YIELD signs on approaches to roundabouts to supplement the central island signs.

- 05 The Roundabout Circulation plaque may be used at any type of circular intersection.

Support:

- 06 Examples of regulatory and warning signs for roundabouts and neighborhood traffic circles are shown in Figures 2B-21 through 2B-24.

PARKING, STANDING, STOPPING, AND EMERGENCY RESTRICTION SIGNS

Section 2B.52 Parking, Standing, and Stopping Signs (R7 and R8 Series)

Support:

- 01 Parking signs pertain to the parking, standing, and stopping of vehicles along the roadway and in designated parking areas. They cover a wide variety of regulations, and only general guidance can be provided here. ~~The word “standing” when used on the R7 and R8 series of signs refers to the practice of a driver keeping the vehicle in a stationary position while continuing to occupy the vehicle.~~ The word “stopping” ~~when used on the R7 and R8 series signs~~ refers to any vehicle, occupied by a driver or not, that stops other than to avoid conflict with other traffic or to comply with official direction. Other types of activities such as active loading, active passenger loading, and/or waiting might be established in State or local codes for use on ~~R7 and R8 series~~ parking, standing, and stopping signs.
- 01a CVC Section 463 defines “parking”, which involves the standing of a vehicle, whether occupied or not. However, the temporary loading or unloading of merchandise or passengers is not considered parking. CVC Section 587 defines “stopping”, which involves the cessation of vehicle movement.
- 01b Refer to CVC 21112 through 22658 regarding the authorities for the various parking, stopping and loading signs.
- 02 Parking signs are categorized as either (1) prohibiting parking or (2) permitting parking with restrictions on how parking is allowed.
- 03 The types of parking, standing, or stopping prohibitions that might be encountered include, but are not limited to:
- A. Prohibited at all times;
 - B. Prohibited only at certain times of the day and/or days of the week;
 - C. Prohibited with exceptions, such as for bus stops, loading/unloading zones, persons with disabilities, or electric vehicle charging stations; or
 - D. Prohibited under certain conditions, such as Snow Emergency Routes.
- 04 Permissive parking signs allowing parking with restrictions include, but are not limited to:
- A. Parking only allowed for limited time duration (such as 30 minutes or for 1 hour);
 - B. Metered parking requiring payment at an individual or a multi-space parking meter, or through electronic means such as by telephone or mobile application.;
 - C. Parking only for specific persons (such as those with disabilities or patrons or employees of a business) or specific vehicle types (such as electric vehicles, police/government vehicles, motorcycles, bicycles, or taxis);
 - D. Angled or back-in angled parking when it is not commonly used in the area;
 - E. Parking programs such as neighborhood/residential permits, school areas, or special events; and
 - F. Emergency parking or stopping only.
- 04a Refer to FHWA's List of Known Errors for error in Paragraph 4, Item B text. Refer to Section 1A.04 for more details.

Parking Regulations

Option:

- 05 Parking on freeways which have full control of access and no crossing at grade may be prohibited under CVC § 21960.
- 06 Parking on other State highways may be restricted or prohibited under CVC §§ 22505 and 22506.

Support:

- 07 The Caltrans District Director is authorized to issue orders prohibiting or restricting the parking of vehicles on State highways. The District Director is also authorized to approve ordinances or resolutions of local authorities prohibiting or restricting parking on State highways.
- 08 The delegation of maintenance activities to local authorities is usually exercised under the authority of SHC § 130. Under a proposal to delegate maintenance and parking regulation authority under CVC § 22506, Caltrans retains the authority to regulate parking under the three conditions specified in CVC § 22505(a). The District Director of Transportation is authorized to make this delegation of authority.

Policy on Parking Restrictions

Guidance:

- 09 *No Stopping Any Time – Stopping should be prohibited at locations where the prohibition would reduce the risk of collisions or where parking would unduly interfere with the movement of traffic.*
- 10 *No Parking Anytime – Parking should be prohibited at locations where the prohibition is necessary to accommodate other activities and objectives, such as street sweeping, snow removal, public safety or preferential parking.*

Option:

- 11 Major factors that may be considered for No Stopping Anytime include:
- Narrow roadway width.
 - Restricted visibility at intersections for pedestrian and vehicular traffic.
 - Narrow shoulder width.
 - Conversion of a parking lane to a through lane or right-turn lane.

Support:

- 12 Limited Time Parking -Caltrans does not issue orders for limited time parking.

Option:

- 13 On State highways, limited time parking restrictions may be initiated by local authorities and approved by Caltrans. Parking prohibitions between certain hours may also be initiated by local authorities.

Standard:

- 14 **Before time limit parking regulations are approved in rural areas, law enforcement agency shall be consulted.**

Special Signs

Option:

- 15 The OK TO PARK ON BRIDGE (R22(CA)) sign may be used to inform motorists that parking is permitted on a bridge. Refer to CVC 22500(k).

Guidance:

- 16 *The PARK PARALLEL (R24(CA)) sign should only be used where diagonal parking is prevalent, in violation of CVC 22502.*
- 17 *If supported by local ordinance, the BACK-IN ANGLE PARKING ONLY (R24F(CA)) sign should be used.*

Standard:

- 18 **The SCHOOL BUS ONLY w/ Double Arrow (R24A(CA)), TAXICAB ONLY w/ Double Arrow (R24B(CA)) and TOUR BUS ONLY w/ Double Arrow (R24C(CA)) signs shall be used to inform motorists of location of stands for use by school buses, taxicabs and tour buses, respectively. Refer to CVC 21112.**
- 19 **The MAIL DEPOSIT ONLY w/ Double Arrow (R24D(CA)) sign shall be used to inform motorists of curb restrictions at locations for depositing mail in an adjacent mailbox. Refer to CVC 21458(a)(3)(B).**
- 20 **The BLOCK WHEELS TO CURB (R24E(CA)) sign shall be used to inform motorists when parking on a hill to block the wheels of the vehicle by turning them against the curb, or by other means, when leaving it to stand unattended upon any grade exceeding 3 percent. Refer to CVC 22509.**

Option:

- 21 The PARK OFF PAVEMENT (R25(CA)) sign may be used where it is likely that vehicles may stop on the traveled way and interfere with through traffic. It may also be used as a temporary sign in snow areas where parking is permitted.

Standard:

- 22 **The LOADING ONLY 7AM TO 6PM EXCEPT SUNDAY 30 MINUTE LIMIT w/ Double Arrow (R25A-1(CA)) sign shall be used to inform motorists of curb restrictions at locations for loading or unloading passengers or freight for the time as specified by local ordinance. Refer to CVC 21458(a)(2).**
- 23 **The following signs shall be used to inform motorists of curb restrictions at locations for loading or unloading of passengers for the time as specified by local ordinance. Refer to CVC 21458(a)(3)(A).**
- **PASSENGER LOADING ONLY 5 MINUTE LIMIT w/ Double Arrow (R25C(CA)) sign**
 - **School Passenger Loading ONLY 7AM TO 4PM SCHOOL DAYS 5 MINUTE LIMIT w/ Double Arrow (R25D-1(CA)) sign**
 - **PASSENGER LOADING ONLY 7AM TO 4PM SCHOOL DAYS 5 MINUTE LIMIT w/ Double Arrow (R25E(CA)) sign**
 - **School Bus Passenger Loading ONLY w/ Double Arrow (R25F-1(CA)) sign**
 - **Tour Bus Passenger Loading ONLY w/ Double Arrow (R25H-1(CA)) sign**
- 24 **The CAR SHARE PARKING ONLY PERMIT REQUIRED w/ Double Arrow (R25J(CA)) sign shall be used to designate certain streets or portions of streets for the exclusive parking privilege of vehicles participating in a car share vehicle program or ridesharing program. Refer to CVC 22507.1.**

Option:

- 25 The NO PARKING ANY TIME with arrow (R28(CA)) or without arrow (R26(CA)) signs may be used to inform motorists of a parking prohibition at a specific location. The NO PARKING ANY TIME with arrow (R28A(CA)) or without arrow (R26A(CA)) signs may be used where a larger size is desirable.

26 CVC Section 21718 prohibits the stopping, parking or leaving of any vehicle upon a freeway. Large NO PARKING ANY TIME (R26(CA)) or EMERGENCY PARKING ONLY (R8-4) signs may be installed on freeways which have full control of access and no crossing at grade to inform traffic that stopping, parking or leaving of any vehicle upon a freeway is prohibited.

27 The Tow-Away No Parking (R26K(CA)) sign may be used to inform motorists of a parking prohibition and tow-away zone at a specific location.

28 The NO STOPPING FIRE LANE (R26F(CA)) sign may be used to inform motorists of a designated fire lane. Refer to CVC 22500.1.

Standard:

29 The NO STOPPING ANY TIME (R26(S)(CA)) sign or Tow-Away NO STOPPING ANY TIME (R26L(CA)) sign shall be used to inform motorists of a No Stopping Zone at a specific location where red curb marking is not used.

30 The NO PARKING HERE TO CORNER (R26M(CA)) sign shall be installed to inform motorists that parking is prohibited within 20 feet of the vehicle approach side of a marked or unmarked crosswalk at a corner or within 15 feet of any marked or unmarked crosswalk at a corner where a curb extension is present. Refer to CVC Section 22500.

31 For midblock crosswalk configurations, the NO PARKING HERE TO X-ING (R26M-1(CA)) sign shall be used in place of the standard R26M(CA) sign.

32 The Tow-Away NO STOPPING 4 TO 6 PM (R107(CA)) sign in a tow-away zone shall be used to inform motorists of a stopping restriction at a specific location during specific hours.

33 In zones where vehicles can be towed for violating the posted prohibition restriction, the "Tow-Away" message or symbol shall be used. Where the "Tow-Away" symbol is used in a 12-inch width format, it shall be as shown in the R26K(CA) sign. When it is used in an 18-inch width format, it shall be shown in the R107(CA) sign.

Option:

34 The NO STOPPING ANY TIME (R26A(S) (CA)) sign may be used where a larger size is desirable.

35 The NO PARKING ON BRIDGE (R27(CA)) sign may be used only where parking is prevalent in violation of CVC 22500(k).

36 The NO PARKING ON BRIDGE (R27A(CA)) sign may be used where a larger size is desirable.

37 The NO STOPPING ANY TIME with arrow (R28(S)(CA)) sign may be used to inform motorists of no stopping zones. Use only where the beginning and ending points of the prohibition are not otherwise indicated. The NO STOPPING ANY TIME with arrow (R28A(S)(CA)) sign may be used where a larger size is desirable.

Standard:

38 The NO STOPPING BUS ONLY w/ Arrow (R28C(CA)) sign shall be used to inform motorists of no stopping zones at bus stops.

39 On State highways, the NO PARKING VEHICLES OVER 6' HIGH w/ Double Arrow (R28D(CA)) or NO STOPPING VEHICLES OVER 6' HIGH w/ Double Arrow (R28D(S)(CA)) sign shall be used to inform motorists of a parking or stopping prohibition, which applies only to vehicles 6 feet or more in height. Refer to CVC 22505.

Option:

40 The R28D(CA) or R28D(S)(CA)) sign may be installed within 100 feet of an intersection to improve the visibility of the motorists in accordance with CVC 22507, except where parking would obstruct the applicable sight distance as determined by a qualified engineer.

Standard:

41 The NO PUBLIC PARKING SUBJECT TO CITATION AND REMOVAL AT OWNER'S EXPENSE (R28E(CA)) sign shall be used to inform motorists of a parking prohibition on private property. Refer to CVC 22658.

42 The No Parking VEHICLES OVER 5 TONS (R28F(CA)) sign shall be used to inform motorists of a parking prohibition in a residential district for commercial vehicles having a manufacturer's gross vehicle weight rating of 5 tons or more. Refer to CVC 22507.5.

43 The No Stopping/No Parking Specific Hours (R29(CA)) sign shall be used to inform motorists of a stopping and parking prohibition during certain hours at a specific location.

44 The No Parking Specific Hours (R30(CA) and R30A(CA)) signs shall be used to inform motorists of a parking restriction during certain hours at a specific location.

45 The No Parking 10AM TO 12 PM WEDNESDAY STREET SWEEPING (R30B(CA)) sign shall be used to inform motorists of a parking prohibition for the purpose of street sweeping. Refer to CVC 22507.6.

46 The No Parking 2AM TO 6AM EXCEPT BY PERMIT (R30C(CA)) or No Parking 2AM TO 6 AM CITYWIDE EXCEPT BY PERMIT (R30D(CA)) sign shall be used to inform motorists of a parking prohibition between the hours of 2 a.m. and 6 a.m.

Refer to CVC 22507.5.

Guidance:

- 47 When used, the R30D(CA) sign should be posted below the City Limit (G9-5(CA)) sign or downstream from a freeway off-ramp. Refer to CVC 22507.5.

Standard:

- 46 The No Parking w/Double Arrow (R30E(CA)) sign shall be used to inform motorists of a parking restriction at a specific location.
- 47 The No Stopping Specific Hours School Days (R30F(CA)) sign shall be used to inform motorists of a stopping prohibition during certain hours at a specific location in a school zone area.

Option:

- 48 The No Parking/Parking Specific Hours (R31(CA) and R32B(CA)) and No Stopping/Parking Specific Hours (R31(S)(CA)) signs may be used to inform motorists of a stopping/parking prohibition during certain hours and a parking time limit during other hours at a specific location. The R31(S)(CA) sign is used for stopping prohibitions, generally during peak traffic hours.
- 49 The Limited Hour/Minute Parking Specific Hours (R32(CA)) sign may be used to inform motorists of a parking time limit with specific hours and/or minutes during certain hours at a specific location.

Standard:

- 50 The 2 HOUR PARKING 8AM TO 6 PM DISTRICT 7 PERMITS EXEMPT (R32C(CA)) sign or 30 MINUTE PARKING 2AM TO 6 AM DISTRICT 3 PERMITS EXEMPT (R32D(CA)) sign shall be used to inform motorists of a parking time limit designation of certain streets upon which preferential parking privileges are given to residents and merchants adjacent to the streets for their use, under which the residents and merchants can be issued a permit or permits that exempt them from the prohibition or restriction. Refer to CVC 22507.
- 51 A combined 2 HOUR PARKING 8AM TO 4 PM – PASSENGER LOADING ONLY 4PM TO MIDNIGHT 5 MINUTE LIMIT w/ Double Arrow (R32E(CA)) sign shall be used to inform motorists of a parking time limit with specific hours and of curb restrictions at locations for loading or unloading of passengers for the time as specified by local ordinance. Refer to CVC 21458(a)(3)(A).
- 52 The 2 HOUR PARKING 8AM TO 6 PM MOTORCYCLE PARKING ONLY w/ Double Arrow (R32F(CA)) sign shall be used to inform motorists of a parking time limit with specific hours for motorcycles. Refer to CVC 22503.5.

Option:

- 53 The Tow-Away No Stopping/No Parking Specific Hours (R37(CA)) sign may be used to inform motorists of no stopping and parking prohibitions and tow-away zone at a specific location.
- 54 The Tow-Away No Parking/Limited Hour Parking Specific Hours (R38(CA)) sign may be used to inform motorists of a parking restriction and tow-away zone at a specific location.
- 55 The Tow-Away No Stopping/Limited Hour Parking Specific Hours (R38(S)(CA)) sign may be used for stopping prohibitions, generally during peak hours.

Support:

- 56 Local agencies are allowed to adopt, by resolution or ordinance, the restriction of parking and the impounding of vehicles for sale, subject to the requirements of CVC Section 22651.9. Under these requirements, a vehicle can be impounded if a parking violation was received within the last 30 days and a warning was issued.

Option:

- 57 The No Parking of Vehicles for Sale (R108(CA)) signs may be posted to inform motorists that the parking of vehicles for sale is prohibited and that vehicles may be impounded, as prescribed in CVC Section 22651.9, and as authorized by a local ordinance or resolution.

Guidance:

- 58 If used, the applicable municipal code or county code should be shown on the R108(CA) signs to assist enforcement personnel in identifying the appropriate parking infraction, due to the special requirements prescribed in CVC Section 22651.9.

Standard:

- 59 The combined TOW-AWAY NO STOPPING 7AM TO 9 AM - PASSENGER LOADING ONLY ALL OTHER TIMES 5 MINUTE LIMIT w/ Double Arrow (R38A(CA)) sign shall be used to inform motorists of no stopping and parking prohibitions and tow-away zone at a specific location during specific hours and of curb restrictions at locations for loading or unloading of

passengers for the time as specified by local ordinance. Refer to CVC 21458(a)(3)(A).

Option:

- 60 The NO PARKING OF COMMERCIAL VEHICLES EXCEPT BY PERMIT (R39(CA)) sign may be used on any roadway in which local ordinance or resolution per CVC Section 22505 and 22507 has been established to prohibit parking of commercial vehicles.

Standard:

- 61 **If used, the R39(CA) sign shall be used to identify only those street or highway locations, either State or local, upon which parking of commercial vehicles is prohibited, except by permit, as established by the local ordinance or resolution.**

- 62 **The NO DOUBLE PARKING ANYTIME COMMERCIAL VEHICLES INCLUDED (R39-1(CA) or R39-2(CA)) sign shall be used to inform motorists of a parking prohibition in a business district for commercial vehicles where a local agency has adopted an ordinance per CVC 22502(c).**

Option:

- 63 The NO IDLING COMMERCIAL VEHICLES AND ALL BUSES SR62(CA) or NO IDLING All Buses and Commercial Vehicles SR63(CA) symbol sign may be placed to remind commercial vehicle operators that idling is prohibited for commercial vehicles and all buses for a duration greater than 5 minutes.

Support:

- 64 Refer to the CCR, Title 13, Division 3, Chapter 10, Article 1, §§ 2480 and 2485 which prohibits unnecessary idling of commercial vehicles and all buses.

Standard:

- 65 **If used, the NO IDLING COMMERCIAL VEHICLES AND ALL BUSES (SR62(CA)) sign or NO IDLING All Buses and Commercial Vehicles (SR63(CA)) symbol sign or NO IDLING All Buses and Commercial Vehicles REPORT VIOLATIONS (SR63A(CA)) sign shall be placed in areas where idling commonly occurs.**

Option:

- 66 The NO IDLING All Buses and Commercial Vehicles REPORT VIOLATIONS (SR63A(CA)) sign may be used in areas with idling concern for heavy-duty diesel trucks and buses to report violators directly to California Air Resources Board (CARB) or local law enforcement agencies.

Standard:

- 67 **The phone number used on the SR63A(CA) sign shall be either 1-800-CUT-SMOG or 1-800-END-SMOG, or another local law enforcement agency's number for signs located in the South Coast Mair Quality Management District. SR63A(CA) signs located elsewhere in the State shall use the 1-800-END-SMOG or another local law enforcement agency's number.**

Support:

- 68 Refer to Health and Safety Code, Division 26, Part 4, Chapter 5, Section 42705.5 and Health and Safety Code, Division 26, Part 6, Chapter 6, Section 44391.2.

Guidance:

- 69 *If using the SR63A(CA) sign, these signs should be placed within 100 feet of sensitive receptors, like daycares, school, senior care facilities, hospitals, and residential neighborhoods.*

Support:

- 70 CCR Title 13, Sections 2480 and 2485, of the CCR prohibit unnecessary idling of commercial vehicles and all buses for a duration greater than 5 minutes. The sign locations will be determined by Air Resources Board representatives and officials of the law enforcement agency responsible for enforcement and the jurisdiction who owns the roadway will install the signs.

Standard:

- 71 **The Accessible Parking Only (R99(CA)) sign in combination with MINIMUM FINE \$250 (R99B(CA)) plaque; or, Accessible Parking Only Minimum Fine \$250 (R99C(CA)) sign shall be used in on-street and off-street parking facilities to designate stalls for vehicles with a special identification license plate or a distinguishing placard for persons with disabilities.**

Support:

- 72 The R99(CA) sign in combination with the R99B(CA) plaque; or, R99C(CA) sign, blue pavement markings and International Symbol of Accessibility Marking, are required for enforcement of these parking areas. Refer to CVC 22511.7 and 22511.8.

Standard:

- 73 The VAN ACCESSIBLE (R7-8b) sign shall be mounted below the Accessible Parking Only (R99(CA)) sign in combination with MINIMUM FINE \$250 (R99B(CA)) plaque; or, Accessible Parking Only Minimum Fine \$250 (R99C(CA)) sign of the parking space for persons with disabilities designated as the van accessible space as provided in the Title 24, Part 2 California Building Code (CBC) Section 1129B.

Option:

- 74 The TOW-AWAY SPECIAL PLACARD OR LICENSE PLATE REQUIRED (R100A(CA)) sign may be used with the R99(CA) sign in combination with the R99B(CA) plaque; or, R99C(CA) sign to inform motorists that their vehicle will be towed away if they do not have a special identification license plate or a distinguishing placard for persons with disabilities.

Standard:

- 75 The Disabled Tow-Away (R100B(CA)) sign shall be placed immediately adjacent to, and visible from, the stall or space, or at each entrance to an off street parking facility to inform motorists that their vehicle will be towed away if they park in designated stalls or spaces without a special identification license plate or a distinguishing placard for persons with disabilities. The sign shall include the address where the towed vehicle can be reclaimed and the telephone number of the local traffic law enforcement agency. Refer to CVC 22511.8 and 22511.9.

Option:

- 76 The DISPLAY OF VEHICLES FOR SALE PROHIBITED (SR26(CA)) sign may be used on any roadway in which local ordinance or resolution per SHC, § 731 has been established to prohibit the display of vehicles for sale.

Standard:

- 77 If used, the SR26 (CA) sign shall be used to identify only those street or highway locations, either State or local, upon which display of vehicles for sale is prohibited, as established by the local ordinance or resolution.

Option:

- 78 The TOW-AWAY NO PARKING WHEN SNOW REMOVAL CONDITIONS EXIST (SR49(CA)) sign may be used to prohibit or restrict the parking or standing of vehicles on designated streets or highways, or portions thereof, for the purpose of snow removal. Refer to CVC 22510.

Guidance:

- 79 The SNOW NOT REMOVED BEYOND HERE (SR20-1(CA)) sign should be erected at the beginning of the snow season and removed in the spring when the road is opened. The SR20-1(CA) sign should be placed at a location that will provide a motorist the opportunity to turn around.

Option:

- 80 The CHAIN INSTALLATION ONLY (R74(CA)) sign may be erected where parked vehicles interfere with normal winter operations.

Guidance:

- 81 The R74(CA) sign should be turned or covered at the end of the chain requirement season.

Standard:

- 82 The CHAINS REQUIRED (X MILE (X MILES)) AHEAD (R75(CA)) sign shall be used to give advance notice that chains are required ahead.

- 83 The CHAINS REQUIRED (R76(CA)) sign shall be used at the beginning of chain control areas and intermittently as needed.

Support:

- 84 The R76(CA) sign is installed in combination with the Speed Limit (R2-1), R79(CA) and R80-1(CA) signs.

Option:

- 85 The ON SINGLE AXLE DRIVE VEHICLE WITH TRAILER (R76-1(CA)) sign may be used when road conditions are such that only single drive vehicles with trailers need chains.

Standard:

- 86 When used, the R76-1(CA) sign shall be mounted below the CHAINS REQUIRED (R76(CA)) sign.

- 87 The NO EXCEPTIONS (R77(CA)) sign shall be used with the Speed Limit (R2-1) and CHAINS REQUIRED (R76(CA)) signs when chains are required with no exceptions.

- 88 The END CHAIN CONTROL (R78(CA)) sign shall be used to advise the motorist that the chain control area has ended.

89 The AUTOS & PICKUPS SNOW TIRES OK – CARRY CHAINS (R79(CA)) sign shall be used with the Speed Limit (R2-1) and CHAINS REQUIRED (R76(CA)) signs when chains are required but autos and pickups with snow tires are excepted from using chains.

90 The 4-W DRIVE WITH SNOW TIRES OK – CARRY CHAINS (R80-1(CA)) sign shall be used with the Speed Limit (R2-1) and CHAINS REQUIRED (R76(CA)) signs when chains are required.

Support:

91 Vehicles with four wheel drive and snow tires on all four wheels are exempt from using chains.

Electric Vehicle Charging Station Signs

Standard:

92 If used, the Electric Vehicle Charging Station Tow-Away (R112(CA)) sign (refer to Figure 2B-25(CA)) shall be placed immediately adjacent to, and visible from, the charging station stall or space, or at each entrance to an off-street parking facility to inform motorists that their vehicles will be towed away if parked in designated stalls or spaces without being connected for electric charging purposes. The sign shall include the address where the towed vehicle can be reclaimed and the telephone number of the local traffic law enforcement agency. Refer to CVC 22511.

Option:

93 Local agencies may, at their discretion, include CVC Section 22511 or local municipal code section, or ordinance number on the Electric Vehicle Charging Station Tow-Away R112(CA) sign.

Standard:

94 If used, the No Parking (symbol) EXCEPT FOR EV CHARGING (R113(CA)), or the No Parking (symbol) EXCEPT FOR ELECTRIC VEHICLE CHARGING (R113A(CA)) sign (refer to Figure 2B-25(CA)) shall be placed immediately adjacent to, and visible from, each charging station stall or space.

95 If used, the __ HOUR EV CHARGING __AM TO __ PM (R114(CA)), or the __ HOUR ELECTRIC VEHICLE CHARGING __AM TO __PM (R114A(CA)) sign (refer to Figure 2B-25(CA)) shall be placed immediately adjacent to, and visible from, each charging station stall or space to identify the allowable time limit where electric vehicles may be connected, depending upon what time limitations for charging apply to each charging station.

96 Identification signs and surface markings shall be placed for Van Accessible, Standard Accessible and Ambulatory electric vehicle charging stations, as required by Chapter 11B of the Title 24, Part 2 California Building Code (CBC) Section 1129B. The International Symbol of Accessibility for the Handicapped (D9-6) sign in combination with the VAN ACCESSIBLE (R7-8b) sub plaque shall be placed at Van Accessible electric vehicle charging stations, or, the D9-6 sign shall be placed at standard accessible electric vehicle charging stations (refer to CBC 11B-812.8; and, Section 3B.20 for surface markings).

Option:

97 The Rest Area/Vista Point 8 HOUR PARKING (S23(CA)) sign may be used to discourage extended stays in roadside rests or vista points for noncommercial vehicles. The 10 HOUR PARKING COMMERCIAL MOTOR VEHICLES (R39-3(CA)) may be used to allow ten total hours of parking for commercial vehicles. Refer to CVC 22651(s)1 and CVC 22651(s)2.

Section 2B.53 Design of Parking, Standing, and Stopping Signs

Standard:

01 ~~Parking, standing~~ loading, or stopping signs (see Figure 2B-25) shall be rectangular or square.

02 Public agencies shall follow established law (State law, local ordinance, or regulation) as adopted by the authorized agency regarding what messages are allowed on parking signs.

03 The legend on parking signs shall state applicable regulations. Parking signs shall comply with the standards of shape, color, and location.

04 The colors in parking signs shall conform to their associated curb zone colors. Prohibitive parking signs (see Drawing A in Figure 2B-25 for some commonly used examples) shall be used where parking is prohibited at all times or at specific times. Except as otherwise provided in this Section, parking signs shall have a red legend and border on a white background and, when the parking prohibition symbol is used, the symbol “P” shall be black. Where an exclusive zone is established for freight or passenger loading or mail deposit, the signs shall have a black legend on a white background. Where an exclusive zone is established for disabled persons, the signs shall have a white legend on a blue background, as shown on the R99(CA).

- 05 **Permissive parking signs (see Drawing B in Figure 2B-25) shall be used where only time-limited parking or parking in a particular manner is allowed. Permissive parking signs shall have a green legend and border on a white background.**

Guidance:

- 06 *Parking information, should be displayed from top to bottom of the sign, as applicable, in the following order:*
- A0. Any tow-away message or symbol.*
 - A. The restriction or prohibition;*
 - B. The times of the day that it is applicable, if not all hours;*
 - C. The days of the week that it is applicable, if not every day;*
 - D. Qualifying or supplementary information;*
 - E. Exemptions to the restriction or prohibition; and*
 - F. ~~Any tow-away message or symbol.~~*
 - G. The appropriate municipal or county code on selected signs, when deemed necessary in order to aid enforcement personnel in identifying the appropriate infraction.*
 - H. The phone number to call to recover an impounded or towed vehicle.*
- 07 *If the parking regulation applies to a limited area or zone, the limits of the regulation should be shown by arrows ~~or supplemental plaques~~. If ~~arrows are used and~~ if the sign is at the end of a parking zone, there should be ~~either no arrows~~ or a single-headed arrow pointing in the direction that the regulation is in effect. If the sign is at an intermediate point in a zone, there should be a double-headed arrow pointing both ways. When a single sign is used at the transition point between two parking zones, it should display a right arrow and a left arrow pointing in the direction that the respective regulations apply.*

Standard:

- 08 **The times and days for which the parking regulations are in effect shall be posted if they are not in effect at all times of day or all days of the week.**

Option:

- 09 ~~As an alternate to the use of arrows to show designated restriction zones, the following word messages may be used: BEGIN, END, HERE TO CORNER, HERE TO ALLEY, and THIS SIDE OF SIGN.~~
- 10 ~~The R8 series signs (see Drawing A in Figure 2B-25) may be used where sufficient notice of a parking prohibition is satisfied by the use of single signs and are not needed to designate the beginning and end of a zone in which parking is prohibited or restricted. In rural and certain other areas the legends NO PARKING ON PAVEMENT (R8-1) or NO STOPPING ON PAVEMENT (R8-5) are generally suitable and may be used where parking or stopping is allowed on an unpaved shoulder or border adjacent to the paved portion of the road. If a roadway has an adjacent paved shoulder on which parking or stopping is allowed, the legend NO PARKING EXCEPT ON SHOULDER (R8-2) or NO STOPPING EXCEPT ON SHOULDER (R8-6) may be used. The R8-3 symbol sign or the word message NO PARKING may be used to prohibit any parking along a roadway. Word legend supplemental plaques may be mounted below the NO PARKING signs or the word legend may be incorporated within signs whose sizes are increased accordingly. The R8-3 series signs may include word legends such as ON PAVEMENT (R8-3e), ON BRIDGE (R8-3d), ON TRACKS (R8-3e), and EXCEPT ON SHOULDERS (R8-3f).~~

Guidance:

- 11 *Where special parking restrictions are imposed during heavy snowfall or a declared snow emergency, a Snow Emergency Route (R7-203) sign (see Drawing A in Figure 2B-25) should be installed. The legend should be modified to display the specific regulations. The upper section of the sign should display the designation as a snow emergency route in a white legend and border on a red background.*
- 12 *If a fee is charged for on-street parking and payments are made at a multi-space parking meter, instead of individual parking meters for each parking space, Metered Parking (R7-21 and R7-22) signs and **PAY AT STATION (R109P(CA)) Plaque** (see Drawing B in Figure 2B-25) should be used to define the area where the multi-space parking meter applies. The Multi-Space Parking Meter (R7-20) sign (see Drawing B in Figure 2B-25) should be used at the meter location to direct road users to the meter.*

Option:

- 13 *Where payments can be made electronically, such as by telephone or mobile application, the Mobile Parking Payment (R7-21aP) plaque (see Drawing B in Figure 2B-25) may be installed below or as part of the legend of a Metered Parking sign.*

Standard:

- 14 If the metered parking is subject to a maximum time limit, the appropriate time limit (number of hours or minutes) shall be displayed on the Metered Parking (R7-21 and R7-22) signs and, except as provided in Paragraph 15 of this Section, on the Multi-space Parking Meter (R7-20) signs.

Option:

- 15 Where the maximum time limit varies by the time of the day or by the day of the week, the display of the time limits may be omitted from the R7-20 sign and, instead, be displayed on the multi-space parking meter so that they are visible to pedestrians as they make payments.

Standard:

- 16 Where parking spaces are reserved for persons with disabilities, the Accessible Parking (~~R7-8~~ R99(CA)) sign (see ~~Drawing D~~ in Figure 2B-25(CA)) shall be used to designate the space and shall display the official International Symbol of Accessibility.

- 17 Where parking spaces that are reserved for persons with disabilities are designed to accommodate wheelchair vans, a VAN ACCESSIBLE (~~R7-8aP~~ R7-8bP(CA)) plaque (see Drawing D in Figure 2B-25) shall be mounted below the ~~R7-8~~ R99(CA) sign. Refer to CCR Title 24, § 1129B.4.

Support:

- 17a Refer to Section 2B.52 for the R99(CA) sign and R7-8bP(CA) plaque.

Guidance:

- 18 Where parking spaces are designated for parking of electric vehicles, an Electric Vehicle Parking (R7-111 series, R7-112 series, and R7-113) sign (see Drawing E of Figure 2B-25) should be installed adjacent to the designated spaces. Where there is no time limit, the R7-111 series sign should be used. Where parking is subject to a time limit, the R7-112 series sign should be used.

- 19 Where parking spaces are only designated for charging of electric vehicles, an R7-113 sign or R7-114 series sign (see Drawing E in Figure 2B-25) should be installed adjacent to the designated spaces.

- 20 Where additional restrictions apply while a vehicle occupies the designated space, the R7-113P series plaques should be installed below the R7-113 sign or the R7-114 series signs.

Option:

- 21 Where parking is prohibited during certain hours and time-limited parking or parking in a particular manner is allowed during certain other time periods, the red Parking Prohibition and green Permissive Parking signs may be designed as follows (see Drawing C in Figure 2B-25):

A. Two 12 x 18-inch parking signs may be used with the red Parking Prohibition (~~R7-1~~) sign installed above or to the left of the green Permissive Parking (R7-108) sign; or

~~B. A single sign (R7-200 or R7-200a) may be used.~~

- 22 At the transition point between two parking zones, a single sign (R7-200 or R7-200a) or two signs mounted side-by-side may be used.

- 22a On any sign, the words "Tow-Away" may be used interchangeably with the Tow-Away symbol.

- 23 On any sign, the words NO PARKING may be used as an alternative to the No Parking symbol (~~see the R7-2a sign in Drawing A in Figure 2B-25).~~

- 24 Alternate designs for the R7-107 sign may be developed such as the R7-107a sign (see Drawing A in Figure 2B-25). Alternate designs may include, on a single sign, a transit logo, an approved bus symbol, a parking prohibition, the words BUS STOP, and an arrow. The reverse side of the R7-107 series signs may display bus routing information for pedestrians.

- 25 ~~A Tow Away Zone (R7-201P or R7-201aP) plaque (see Drawing A in Figure 2B-25) may be mounted below any parking prohibition sign. The word legend TOW AWAY ZONE may be incorporated into the parking prohibition sign in lieu of using a separate plaque.~~

- 26 ~~The R7-201P plaque may have a black or red symbol and border on a white background.~~

Guidance:

- 27 When a legend other than that on the standard parking signs is necessary, letter height, symbol size, and basic sign layout should be consistent with the those shown on the standard parking signs as detailed in the "Standard Highway Signs" publication (see Section 1A.05.)

Support:

- 27a Refer to FHWA's List of Known Errors for errors in Paragraph 27 text. Refer to Section 1A.04 for more details.

Guidance:

- 28 *In general, the letter height of the principal legend on parking signs sized for urbanized applications should be at least 2 inches.*

Section 2B.54 Placement of Parking, Standing, and Stopping Signs

Support:

- 01 The efficacy of parking, standing, and stopping signs, when used on conventional roads in urbanized or developed environments, depends on their visibility and consistent placement along a street or within a particular block. It is often impracticable for the entire legend to be legible from similar distances as for other types of signs. Therefore, it is important that their conventional form be recognizable from an adequate distance such that the road user can obtain the information upon closer inspection.

Guidance:

- 02 *When signs with arrows are used to indicate the extent of the restricted zones, the signs should be set at an angle of not less than 30 degrees nor more than 45 degrees with the line of traffic flow in order to be visible to approaching traffic.*
- 03 *When signs are placed at the head of perpendicular parking stalls, the signs should be parallel to the roadway facing the parking stall.*
- 04 *Spacing of signs should be based on legibility(refer to Section 2A.08), conspicuity, and sign orientation(refer to Section 2A.17).*
- 05 *If the zone is long, signs should be used at intermediate points within the zone.*
- 06 *If the signs are mounted at an angle of 90 degrees to the curb line, two signs should be mounted back to back at the transition point between two parking zones, ~~each with an appended THIS SIDE OF SIGN (R7-202P) supplemental plaque (see Drawing A in Figure 2B-25).~~*
- 07 *If the signs are mounted at an angle of 90 degrees to the curb line, signs without any arrows or appended plaques should be used at intermediate points within a parking zone, facing in the direction of approaching traffic. Otherwise, the standards of placement should be the same as for signs using directional arrows.*

Option:

- 08 Blanket parking regulations that apply to an entire jurisdiction may, if legal, be posted in the vicinity of the jurisdictional boundary lines. Blanket parking regulations that apply to a posted zone or district may, if legal, be posted at the entry points to the zone or district.

Section 2B.55 Emergency Restriction Signs (R8-4 and R8-7)

Standard:

- 01 **Emergency Restriction signs (see Figure 2B-26) shall be rectangular and shall have a black legend and border on a white background.**

Option:

- 02 The EMERGENCY PARKING ONLY (R8-4) sign or the EMERGENCY STOPPING ONLY (R8-7)sign may be used to discourage or prohibit shoulder parking, particularly where scenic or other attractions create a tendency for road users to desire to stop temporarily.

Support:

- 03 Section 8B.07 contains information for the use of the DO NOT STOP ON TRACKS (R8-8) sign (see Figure 8B-1) to discourage or prohibit parking or stopping on railroad or light rail transit tracks.

- 04 **The EMERGENCY PARKING ONLY (R8-4) sign shall be used at the beginning of freeways below the BEGIN FREEWAY (R57(CA)) sign. Refer to CVC 21960.**

Support:

- 05 See Section 2B.109(CA) for the BEGIN/END FREEWAY (R57(CA) and R58(CA)) sign.

PEDESTRIAN SIGNS

Section 2B.56 WALK ON LEFT FACING TRAFFIC and No Hitchhiking Signs (R9-1, R9-4, and R9-4a)

Option:

- 01 The WALK ON LEFT FACING TRAFFIC (R9-1) sign (see Figure 2B-27) may be used on highways where no sidewalks are provided.

Guidance:

- 02 *If used, the WALK ON LEFT FACING TRAFFIC sign should be installed on the right-hand side of the road where pedestrians walk on the pavement or shoulder in the absence of pedestrian pathways or sidewalks.*

Option:

- 03 The No Hitchhiking (R9-4) sign (see Figure 2B-27) may be used to prohibit standing in or adjacent to the roadway for the purpose of soliciting a ride. The R9-4a word message sign (see Figure 2B-27) may be used as an alternate to the R9-4 symbol sign.

Section 2B.57 Pedestrian Crossing Signs (R9-2 and R9-3)

Option:

- 01 Pedestrian Crossing signs (see Figure 2B-27) may be used to limit pedestrian crossing to specific locations.

Standard:

- 02 **If used, Pedestrian Crossing signs shall be installed to face pedestrian approaches.**

Option:

- 03 Where crosswalks are clearly defined, the CROSS ONLY AT CROSSWALKS (R9-2) sign may be used to prohibit pedestrians from crossing at locations away from crosswalks.

- 04 The No Pedestrian Crossing (R9-3) sign may be used to prohibit pedestrians from crossing a roadway at an undesirable location or in front of a school or other public building where a crossing is not designated.

- 05 The NO PEDESTRIAN CROSSING (R9-3a) word message sign may be used as an alternate to the R9-3 symbol sign. The USE CROSSWALK (R9-3bP) supplemental plaque, along with an arrow, may be installed below either sign to designate the direction of the crossing.

- 05a The NO PED CROSSING - USE CROSSWALK (R49(CA)) Sign may be used as an alternate to the combined R9-3 and R9-3bP signs.

Standard:

- 05b **The NO PED CROSSING - USE CROSSWALK (R49(CA)) Sign shall only be mounted on a Pedestrian Barricade.**

Support:

- 06 Pedestrians with vision disabilities might need features other than traffic control devices to provide effective communication of the prohibition of pedestrian crossing.

Guidance:

- 07 *The R9-3bP plaque should not be installed in combination with educational plaques.*

Support:

- 08 Refer to CVC 21106.

Section 2B.58 Traffic Signal Pedestrian and Bicyclist Actuation Signs (R10-1 through R10-4 and R10-24 through R10-26)

Standard:

- 01 **Where manual actuation of a traffic signal is required for pedestrians or bicyclists to call a signal phase to cross the roadway, traffic signal signs applicable to pedestrian actuation (see Figure 2B- 27) or bicyclist actuation (see Figure 9B-1) shall be mounted immediately above or incorporated into the push button detector units (see Section 4I.05).**

Support:

- 02 Traffic signal signs applicable to pedestrians include:
- A. CROSS ONLY ON GREEN (symbolic circular green) (R10-1),
 - ~~B. CROSS ONLY ON (symbolic walk indication) SIGNAL (R10-2),~~
 - C. Push Button for Walk Signal (R10-3 series), and
 - ~~D. Push Button for Green Signal (R10-4 series).~~

Option:

- 03 The following signs may be used as an alternate for the R10-3 ~~and R10-4~~ signs:
A. Push Button to Cross Street Wait for Walk Signal (R10-3a); or
~~B. Push Button to Cross Street Wait for Green Signal (R10-4a).~~
- 04 The name of the street to be crossed may be substituted for the word STREET in the legends on the R10-3a ~~and R10-4a~~ signs.

Guidance:

- 05 *The finger in the push button symbol on the R10-3, ~~and R10-3a~~, ~~R10-4~~, and ~~R10-4a~~ signs should point in the same direction as the arrow on the sign.*

Option:

- 06 ~~Where symbolic pedestrian signal indications are used, an educational sign (R10-3b) may be used instead of the R10-3 sign to improve pedestrian understanding of pedestrian indications at signalized intersections. Where word legend pedestrian signal indications are being retained for the remainder of their useful service life, the legends WALK/DONT WALK may be substituted for the symbols on the educational sign R10-3b, thus creating educational sign R10-3e. The R10-3d educational sign may be used to inform pedestrians that the pedestrian clearance time is sufficient only for the pedestrian to cross to the median at locations where pedestrians cross in two stages using a median refuge island. The R10-3e educational sign may be used where countdown pedestrian signals have been provided. In order to assist the pedestrian in understanding which push button to push, the R10-3f through R10-3i educational signs that provide the name of the street to be crossed may be used instead of the R10-3b through R10-3e educational signs.~~
- 06a The R10-3e(CA) or R10-3i(CA) educational sign may be used where countdown pedestrian signals have been provided.

Support

- 06b Pedestrian pushbuttons or touch-free detectors may be used to actuate pedestrian signal timing, to activate accessible pedestrian signals, or both. Refer to Chapter 4K regarding the application of accessible pedestrian signals and detectors.

Option:

- 06c The R10-3j(CA) sign may be used where the pedestrian signal can be activated by pushing the button or waving at the button.
- 06d The R10-3k(CA) sign may be used where warning lights or rapid flashing beacons can be activated by pushing the button or waving at the button.

Standard

- 06e **The bottom panels of signs R10-3e(CA) and R10-3i(CA) shall not be used where the pedestrian signal timing is non-actuated and the pedestrian push button is used solely to activate accessible pedestrian signals.**

Option:

- 07 The R10-24 or R10-26 sign (see Section 9B.20) may be used where a push button detector has been installed exclusively to actuate a green phase for bicyclists.
- 08 The R10-25 sign (see Figure 2B-27) may be used where a push button detector has been installed for pedestrians to activate In-Roadway Warning Lights (see Chapter 4U) or flashing beacons that have been added to the pedestrian warning signs.

Support:

- 08a Refer to Section 4U.02 for standards related to the R10-25 sign.
- 09 Section 4I.05 contains information regarding the application of the R10-32P plaque.

TRAFFIC SIGNAL SIGNS AND PLAQUES

Section 2B.59 Traffic Signal Signs and Plaques (R10-5 through R10-30)

Option:

- 01 To supplement traffic signal control, traffic signal (R10-5 through R10-30) signs (see Figure 2B-28) may be used to regulate road users.
- 02 Traffic signal signs may be installed at certain locations to clarify signal control. Among the legends that may be used for this purpose are:
- A. LEFT (RIGHT) ON GREEN ARROW ONLY (R10-5),
 - B. STOP HERE ON RED (R10-6 or R10-6a) for observance of stop lines,
 - C. DO NOT BLOCK INTERSECTION (R10-7) for avoidance of traffic obstructions,
 - D. USE LANE(S) WITH GREEN ARROW (R10-8) for obedience to lane-use control signals (see Chapter 4T),
 - E. LEFT (RIGHT) TURN SIGNAL (R10-10),
 - F. U TURN SIGNAL (R10-10a) for exclusive control of a U-turn movement,
 - G. ~~U TURN YIELD TO RIGHT TURN (R10-16),~~
 - H. LEFT (RIGHT) TURN YIELD ON GREEN (symbolic circular green) (R10-12),
 - I. LEFT (RIGHT) TURN YIELD ON FLASHING YELLOW ARROW (R10-12a), and
 - J. ~~LEFT (RIGHT) TURN YIELD ON FLASHING RED ARROW AFTER STOP (R10-27).~~

Support:

- 02a Refer to CVC 22526 for the DO NOT BLOCK INTERSECTION (R10-7) sign.
- 02b The LEFT (RIGHT) TURN YIELD ON FLASHING RED ARROW AFTER STOP (R10-27) is deleted. Refer to CVC 21457 for the rules governing driver behavior at a flashing red indication at traffic signals.

Guidance:

- 03 *If used, the LEFT ON GREEN ARROW ONLY sign, the LEFT TURN SIGNAL sign, the LEFT TURN YIELD ON GREEN (symbolic circular green) sign, the LEFT TURN YIELD ON FLASHING YELLOW ARROW sign, ~~or the LEFT TURN YIELD ON FLASHING RED ARROW AFTER STOP sign~~ should be located adjacent to the left-turn signal face.*

Support:

- 03a Refer to FHWA's List of Known Errors for errors in Paragraph 3 text. Refer to Section 1A.04 for more details.

Guidance:

- 04 *If used, the RIGHT ON GREEN ARROW ONLY sign, the RIGHT TURN SIGNAL sign, the RIGHT TURN YIELD ON FLASHING YELLOW ARROW sign, ~~or the RIGHT TURN YIELD ON FLASHING RED ARROW AFTER STOP sign~~ should be located adjacent to the right-turn signal face.*
- 05 ~~*A U TURN YIELD TO RIGHT TURN (R10-16) sign should be installed near the left turn signal face if U turns are allowed on a protected left turn movement on an approach from which a right turn GREEN ARROW signal indication is simultaneously being displayed to drivers making a right turn from the conflicting approach to their left.*~~

- 5a *The U-TURN YIELD TO RIGHT TURN (R10-16) sign is deleted as this condition should not be practiced. The actual movement conflict should be eliminated rather than try to correct it with this sign.*

Option:

- 06 If used, a U TURN SIGNAL (R10-10a) sign may be installed adjacent to the signal face that exclusively controls a U-turn movement.
- 07 If needed for additional emphasis, an additional LEFT TURN YIELD ON GREEN (symbolic circular green) (R10-12) sign with an AT SIGNAL (R10-31P) supplemental plaque (see Figure 2B-28) may be installed in advance of the intersection.

Guidance:

- 07a *If used, the location of this additional R10-12 sign should be in the raised median at the beginning of the left-turn lane, or be based upon Table 2C-3, or as per engineering judgment.*

Option:

- 07b The LEFT TURN ON GREEN ARROW ONLY – NO U TURN (SR39B(CA)) sign (refer to Figure 2B-28(CA)) may be used at signalized intersections with separate left turn phases to inform traffic that left turns can only be made on a green arrow in accordance with CVC 21454 and "U" turns are prohibited.

07b The LEFT OR U TURN ON GREEN ARROW ONLY (SR39A(U)(CA)) sign (refer to Figure 2B-28(CA)) may be used at signalized intersections with separate left turn phases to inform traffic that left turns and "U" turns can only be made on a green arrow in accordance with CVC 21454.

08 In situations where traffic control signals are coordinated for progressive timing, the Traffic Signal Speed (I1-1) sign may be used (see Section 2H.04).

Standard:

09 The CROSSWALK—STOP ON RED (symbolic circular red) (R10-23) ~~and~~ **or** STOP ON STEADY RED-YIELD ON FLASHING RED AFTER STOP (R10-23a) signs (see Figure 2B-28) shall only be used in conjunction with pedestrian hybrid beacons (see Section 4J.02).

Support:

09a Refer to FHWA's List of Known Errors for errors in Paragraph 9 text. Refer to Section 1A.04 for more details.

Standard:

10 The EMERGENCY SIGNAL (R10-13) sign (see Figure 2B-28) shall be used in conjunction with emergency-vehicle traffic control signals (see Section 4M.02).

11 The EMERGENCY SIGNAL—STOP ON FLASHING RED (R10-14 or R10-14a) sign (see Figure 2B-28) shall be used in conjunction with emergency-vehicle hybrid beacons (see Section 4N.02).

Option:

12 If needed for extra emphasis, a STOP HERE ON FLASHING RED (R10-14b) sign may be installed with an emergency-vehicle hybrid beacon.

Standard:

13 The Left Turn Yield to Bicycles (R10-12b) sign shall be limited to applications where the conflicting bicyclist movement would be unexpected in direction, location, or similar condition that would tend to violate the expectation of a turning motorist.

Guidance:

14 The Left Turn Yield to Bicycles sign should be located adjacent to the left-turn signal face.

Option:

15 If needed for additional emphasis, an additional Left Turn Yield to Bicycles sign with an AT SIGNAL (R10-31P) supplemental plaque (see Figure 2B-28) may be installed in advance of the intersection for motor vehicles.

Guidance:

15a If used, the location of this additional R10-12b sign should be in the raised median at the beginning of the left-turn lane, or be based upon Table 2C-3, or as per engineering judgment.

Option:

16 Where conditions might warrant additional emphasis to drivers turning at a signalized intersection where potential pedestrian conflicts might not be readily apparent, a Turning Vehicles Yield to ~~(Stop for)~~ Pedestrians (R10-15, ~~R10-15a~~) sign (see Figure 2B-28) may be used.

Standard:

17 ~~The Turning Vehicles Stop for Pedestrians (R10-15a) sign shall only be used in jurisdictions where laws, ordinances or resolutions specifically require that a driver must stop for a pedestrian.~~

Support:

17a The Turning Vehicles Stop for Pedestrians (R10-15a) is deleted as a stop is not required in California per CVC 21950.

Guidance:

18 The R10-15 series signs, where used, should be placed as follows:

- A. On the near right corner of the signalized intersection for right-turning vehicles.
- B. On the far left corner of the signalized intersection for the left-turning vehicles onto a two-way street.
- C. On the near left corner of the signalized intersection for left-turning vehicles from a one-way street onto a one-way street.

Section 2B.60 No Turn on Red Signs (R10-11 Series, R10-17a, and R10-30)

Standard:

01 Where a right turn on a circular red signal indication (or a left turn on a circular red signal indication from a one-way street to a one-way street) is to be prohibited, a NO TURN ON RED (R10-11, R10-11b) word message

sign (see Figure 2B-28) shall be used. A NO TURN ON RED (symbolic circular red) (R10-11a) sign (see Figure 2B-28) shall be used when the approach is controlled by both circular red and red arrow indications.

Support:

01a Refer to CVC 22101 for the No Turn on Red signs.

Guidance:

02 If used, the No Turn on Red sign should be installed near the appropriate signal head.

Option:

02a No Right Turn on Red sign may be used on the near right of skewed intersections where the adjacent approach leg to the left intersects the road user's approach leg at an angle of less than 75 degrees.

02b A No Turn on Red sign or may be used on the near right of extremely wide intersections.

Guidance:

02c When used, the No Turn on Red sign should be placed where it will most easily be seen by the road user intending to turn. At least one should be placed overhead, or at a right/left-hand corner facing approaching traffic.

03 A No Turn on Red sign should be considered when an engineering study finds that one or more of the following conditions exists:

- A. Inadequate sight distance to vehicles approaching from the left (or right, if applicable);
- B. Geometrics or operational characteristics of the intersection that might result in unexpected conflicts;
- C. An exclusive pedestrian or bicycle phase;
- D. An unacceptable number of conflicting pedestrian movements with right-turn-on-red maneuvers, especially involving children, older pedestrians, or persons with disabilities;
- E. More than three right-turn-on-red crashes reported in a 12-month period for the particular approach; or
- F. The skew angle of the intersecting roadways creates difficulty for drivers to see traffic approaching from their left (or right, if applicable).

Standard:

04 If an R10-11, R10-11a, R10-11b, ~~or R10-17a~~ sign with conventional road size as shown in Table 2B-1 is used on an approach on the far side of the intersection and the distance between the stop line and the sign is greater than 120 feet, then a duplicate sign shall be located on the near side of the intersection to supplement the sign on the far side of the intersection.

Option:

- 05 When a no-turn-on-red restriction applies during certain time periods only, the following alternatives may be used:
- A. Movement Prohibition (R3-1, R3-2, R3-4, R3-18, and R3-27) signs or NO TURN ON RED signs displayed by using an **Activated** blank-out sign for the time period or one or more portion(s) of a particular cycle of the traffic control signal during which the prohibition is applicable; or
 - B. Static signs incorporating a supplemental legend or with a supplemental R10-20aP plaque (see Figure 2B-28) showing the hours and days during which the prohibition is applicable.

06 White LEDs may be used in the border and activated during periods of turn prohibition to enhance the sign conspicuity.

07 On signalized approaches with more than one right-turn lane, a NO TURN ON RED EXCEPT FROM RIGHT LANE (R10-11c) sign (see Figure 2B-28) may be post-mounted at the intersection or a NO TURN ON RED FROM THIS LANE (with down arrow) (R10-11d) sign (see Figure 2B-28) may be mounted over the approximate center of the lane from which turns on red are prohibited.

Guidance:

08 ~~Where turns on red are permitted and the signal indication is a steady RED ARROW, the RIGHT (LEFT) ON RED ARROW AFTER STOP (R10-17a) sign (see Figure 2B-28) should be installed adjacent to the RED ARROW signal indication. A circular red signal face should be used, instead of correcting the condition with this sign.~~

Support:

08a The RIGHT (LEFT) ON RED ARROW AFTER STOP (R10-17a) sign is deleted as it compromises the meaning of the right red arrow.

Option:

09 A RIGHT TURN ON RED MUST YIELD TO U-TURN (R10-30) sign (see Figure 2B-28) may be installed to remind road users that they must yield to conflicting U-turn traffic on the street or highway onto which they are turning

right on a red signal after stopping.

Section 2B.61 Ramp Metering Signs (R10-28 and R10-29)

Support:

- 00a For State highways, refer to Caltrans' Ramp Metering Design Manual. Refer to Section 1A.05 for information regarding this publication.
- 00b Refer to Section 2G.102(CA) for regulatory signs for HOV lanes at metered ramps.

Option:

- 01 When ramp control signals (see Chapter 4P) are used to meter traffic on a freeway or expressway entrance ramp, regulatory signs with legends appropriate to the control may be installed adjacent to the ramp control signal faces.
- 02 For entrance ramps with only one controlled lane, an XX VEHICLE(S) PER GREEN (~~R10-28~~) **R89A(CA)** sign (see Figure 2B-29(CA)) may be used to inform road users of the number of vehicles that are permitted to proceed during each short display of the green signal indication. For entrance ramps with more than one controlled lane, an XX VEHICLE(S) PER GREEN EACH LANE (R10-29) (see Figure 2B-29) sign may be used to inform road users of the number of vehicles that are permitted to proceed from each lane during each short display of the green signal indication.

Support:

- 03 Chapter 2L contains provisions for the use of blank-out or changeable message signs when the metering is limited by time, day, or condition.

Guidance:

- 04 *The STOP HERE ON RED (R10-6) sign should be placed on Type 1 standards near the limit line at metered entrance ramps with three or more lanes.*

Support:

- 05 The R10-6 sign is used to emphasize the required observance of the signal limit line, such as the metering signal controlling traffic on metered freeway entrance ramps.

Guidance:

- 06 *The ALL VEHICLES STOP ON RED (R90-1(CA)) sign should be placed when converting a non-metered HOV preferential lane to a metered one.*

Option:

- 07 The R90-1(CA) sign may also be used on new installations where potential for confusion exists.

ROAD CLOSED AND WEIGHT LIMIT SIGNS

Section 2B.62 **KEEP OFF MEDIAN Sign (R11-1)**

Option:

- 01 The KEEP OFF MEDIAN (R11-1) sign (see Figure 2B-30) may be used to prohibit driving into or parking on the median.

Guidance:

- 02 *The KEEP OFF MEDIAN sign should be installed on the left-hand side of the roadway within the median at random intervals as needed wherever there is a tendency for encroachment.*

Section 2B.63 **ROAD CLOSED Sign (R11-2) and LOCAL TRAFFIC ONLY Signs (R11-3 Series, R11-4)**

Guidance:

- 01 *The ROAD CLOSED (R11-2) sign should be installed where roads have been closed to all traffic (except authorized vehicles).*
- 02 *ROAD CLOSED—LOCAL TRAFFIC ONLY (R11-3) or ROAD CLOSED TO THRU TRAFFIC (R11-4) signs should be used where through traffic is not permitted, or for a closure some distance beyond the sign, but where the highway is open for local traffic up to the point of closure.*

Standard:

- 03 **The Road Closed (R11-2, R11-3 series, and R11-4) signs (see Figure 2B-30) shall be designed as horizontal rectangles. These signs shall be preceded by the applicable Advance Road Closed warning sign with the secondary distance legend or AHEAD and, if applicable, an Advance Detour warning sign (see Section 6H.04).**

Option:

- 04 An intersecting street name or a well-known destination may be substituted for the XX MILES AHEAD legend in urban areas.
- 05 The word message BRIDGE OUT or CLOSED may be substituted for the ROAD CLOSED legend where applicable.

Support:

- 05a "Bridge Out" refers to conditions where the bridge is destroyed, washed out, or submerged.
- 05b "Bridge Closed" refers to situations where the bridge is closed temporarily for maintenance, construction, or other activities but remains structurally intact.

Option:

- 06 Where conditions allow for bicycle travel on the road beyond the point of closure to motor vehicles, an EXCEPT BICYCLES (R3-7bP) plaque (see Figure 2B-4) may be used with the ROAD CLOSED sign.

Guidance:

- 07 *RAMP CLOSED (C2(CA)) sign should be installed where ramps or bridges have been closed to all traffic (except authorized vehicles).*

Support:

- 08 The word BRIDGE may be substituted for RAMP where applicable.

Section 2B.64 **Weight Limit Signs (R12-1 through R12-7)**

Standard:

- 01 **Weight limit signs (see Figure 2B-30) shall be used to indicate a section of highway or structure that has a vehicle weight restriction.**

- 01a **The weight limit signs shall be placed at each end of the affected portion of a highway section.**

Guidance:

- 01b *They should be placed at a distance of not more than 500 feet from the ends of an affected bridge or structure.*

- 02 *The units shown on any weight limit sign should be consistent within a State or region with respect to pounds or tons.*

Option:

- 03 Where the restriction applies to axle weight rather than gross load, the legend AXLE WEIGHT LIMIT XX TONS or AXLE WEIGHT LIMIT XX LBS (R12-2) may be used.
- 04 In areas where multiple regulations are applicable, such as limiting both axle weight and gross vehicle weight, a WEIGHT LIMIT XX TONS PER AXLE, XX TONS GROSS (R12-4) sign combining the necessary messages on a single

sign may be used.

- 05 Posting of specific load limits may be accomplished by use of the Weight Limit (R12-5) symbol sign. A sign containing the legend WEIGHT LIMIT on the top two lines, and showing up to three different truck symbols and their respective weight limits for which restrictions apply may be used, with the weight limits displayed to the right of each symbol as XX T. A bottom line of legend stating GROSS WT may be included if needed for enforcement purposes.
Support:

- 06 A specialized hauling vehicle is a single unit truck with multiple closely-spaced axles. Examples include dump trucks, construction vehicles, solid waste trucks and other hauling trucks. Specialized hauling vehicles typically have 4 to 7 axles.

Option:

- 07 The Weight Limit (R12-6) sign may be used to indicate vehicle weight restrictions for specialized hauling vehicles.

- 07a The Commercial Vehicle Weight Exclusion (R36(CA)) sign (refer to Figure 2B-30(CA)) may be used to indicate vehicles over ___ tons are prohibited from certain streets and highways.

Standard:

- 08 The symbols shown on the R12-5 and R12-6 Weight Limit sign shall apply to all trucks of that configuration (single-unit, single-trailer or multi-trailer) regardless of the shape of the vehicle. Symbolic representations of other vehicle shapes or modifications of standard symbols shall not be used.

Option:

- 09 The facility type (such as "BRIDGE") may be added to the beginning of the legend of the sign to clarify the specific applicability of the weight limit.

Standard:

- 10 If the R12-5 sign depicts only one single-unit vehicle symbol, the weight limit associated with that single-unit vehicle symbol shall apply to all single-unit vehicles, regardless of number of axles.

- 11 The weight limit associated with the single-trailer vehicle symbol shall apply to all single-trailer vehicles, regardless of number of axles or vehicle shape.

- 12 The weight limit associated with the multi-trailer vehicle symbol shall apply to all multi-trailer vehicles with two or more trailers, regardless of number of axles or vehicle shape.

- 13 A weight limit sign (see Figure 2B-30) shall be located at the applicable section of highway or structure.

- 14 An additional weight limit sign, with an advisory distance or directional legend, shall be located in advance of the applicable section of highway or structure so that prohibited vehicles can detour or turn around prior to the limit zone.

Support:

- 14a Refer to Section 2C.102(CA) for warning Weight Limit signs used to select an alternate route.

- 15 An emergency vehicle is designed to be used under emergency conditions to transport personnel and equipment to support the suppression of fires and mitigation of other hazardous situations. Emergency vehicles are typically operated by fire departments and are primarily equipped for firefighting, but are also used to respond to and mitigate other hazardous situations in an emergency. They can create higher load effects compared to non-emergency vehicles of similar weight.

Option:

- 16 The Emergency Vehicle Weight Limit (R12-7) sign carrying the legend EMERGENCY VEHICLE WEIGHT LIMIT SINGLE AXLE XX TONS, TANDEM XX TONS, and GROSS XX TONS may be used to indicate vehicle weight restrictions for emergency vehicles.

Standard:

- 17 When the emergency-vehicle weight limit is displayed in the same assembly as the primary weight limit sign, the Emergency Vehicle Weight Limit (R12-7aP) plaque shall be mounted below.

Support:

- 18 Refer to CVC 21101 through 21104 and 35650 through 35755 for Weight Limit signs.

- 19 The No Trucks (R5-2) sign is used together with a Truck Exclusion plaque (R20D(CA) Series) (refer to Figure 2B-12 and Figure 2B-12(CA)) to specify the maximum weight limit in effect.

Section 2B.65 Weigh Station Sign (R13-1)

Guidance:

- 01 ~~An R13-1 sign with the legend TRUCKS OVER XX TONS MUST ENTER WEIGH STATION NEXT RIGHT (see Figure 2B-31) should be used to direct appropriate traffic into an inspection station.~~
- 02 ~~The R13-1 sign should be supplemented by the D8 series of guide signs (see Section 2D.51).~~
- 03 An SR57-1(CA) sign with the legend ALL TRUCKS STOP AT SCALES with NO PICKUPS SR57-1P(CA) mounted below (refer to Figure 2B-31(CA)) should be used to direct appropriate traffic into a weigh station.
- 04 The SR57-1(CA) and SR57-1P(CA) sign combination should be supplemented by the D8 series of guide signs (refer to Section 2D.51).

Support:

- 05 Refer to Figure 2B-31(CA) and Figure 2E-59 for Weigh Station Signs.

Guidance:

- 06 The TRUCKS NOT GIVEN BYPASS SIGNAL MUST ENTER OPEN SCALES (SR17(CA)) sign should be used in advance of a truck weigh station that is equipped with a mainline bypass system and weigh-in-motion scales to electronically weigh and verify compliance of commercial trucks as they approach the weigh station.
- 07 The Width Limit (SR40(CA)) sign (refer to Figure 2B-30(CA)) should be placed at truck weigh stations to direct over width vehicles around the station, if the weigh station lacks adequate width. The California Highway Patrol should be contacted to determine where these signs are needed. Refer to CVC 35790.

Standard:

- 08 The ALL BUSES STOP AT SCALES (SR41(CA)) and ALL BUSES with Arrow (SR42(CA)) signs shall be used as a temporary sign for Critical Item Bus Inspections on state highways.

Option:

- 09 The Weigh Station Repair Service (S21P(CA)) plaque may be installed at commercial vehicle inspection facilities on State highways where needed at the request of the California Highway Patrol.

Option:

- 10 The WAIT HERE UNTIL SCALE CLEAR (SR6-1(CA)) sign may be used at Weigh Stations to provide guidance to trucks entering the scales.
- 11 The RELEASE BRAKES WHILE ON SCALE (SR7-1(CA)) sign may be used at Weigh Stations to provide guidance to trucks when they are on the scales.
- 12 The SET PARKING BRAKES (SR8-1(CA)) sign may be used at Weigh Stations to provide guidance to trucks when they are on the scales.
- 13 The LOADED (SR9-1(CA)) sign may be used at Weigh Stations to designate the lane loaded trucks are to use when passing through the scales.
- 14 The EMPTY (SR10-1(CA)) sign may be used at Weigh Stations to designate the lane empty trucks are to use when passing through the scales.
- 15 The EMPTY 5 MPH (SR11-1(CA)) sign may be used at Weigh Stations to control the speed of empty trucks when passing through scales.
- 16 The LOADED 3 MPH (SR12-1(CA)) sign may be used at Weigh Stations to control the speed of loaded trucks when passing through scales.
- 17 The Theft CHP Plaque (SR13-1P(CA)) may be used at Weigh Stations to advise scale users that removing any property from the Weigh Station without authorization from the California Highway Patrol is a violation of the Penal Code.

Section 2B.66 TRUCK ROUTE Sign (R14-1)

Guidance:

- 01 The TRUCK ROUTE (R14-1) sign (see Figure 2B-31) should be used to mark a route that has been designated to allow truck traffic.

Support:

- 02 Section 2D.20 contains information regarding the use of the TRUCK (M4-4P) auxiliary plaque (see Figure 2D-5) on a designated numbered alternative route.

Support:

03 Refer to CVC §§ 21101 through 21104 and 35701 through 35715.

04 Generally, Caltrans is not unilaterally authorized to prohibit truck travel on State highways. Various sections in the CVC allow cities and counties to restrict, by ordinance, commercial vehicles subject to the specific conditions in those sections.

05 Generally, no such local ordinance is be effective with respect to any State highway until the ordinance has been approved by Caltrans. This approval shall be made by the Caltrans Director.

Standard:

06 **The proposed local ordinance shall designate an unrestricted alternate route, or routes, for use by the prohibited vehicles. Such proposed local ordinances shall not be approved unless the alternate route, or routes, are considered suitable by Caltrans.**

07 **An investigation of designated alternate routes shall be made with special attention being given to the following features:**

1. **Geometrics.**
2. **Increase in distance of travel and comparisons in time of travel.**
3. **Railroad grade crossings.**
4. **Present traffic and practical capacity of proposed alternates.**
5. **Structural adequacy of pavement for heavy truck traffic.**
6. **Heavy grades.**
7. **Proximity to schools or school routes.**
8. **Developed residential areas.**

Section 2B.67 Hazardous Material Signs (R14-2 and R14-3)

Option:

Standard:

01 **The Hazardous Material Route (R14-2) sign (see Figure 2B-31) ~~may~~ shall be used to identify routes that have been designated by proper authority for vehicles transporting hazardous material and/or waste.**

Support:

01a The R14-2 sign may be used to guide road users around routes where the transportation of Hazardous Material and/or waste is permitted.

Standard:

01b **The HAZARDOUS WASTE PERMITTED (R103aP(CA)) or the HAZARDOUS MATERIAL PERMITTED (R105aP(CA)) sign shall be positioned below the R14-3 symbol sign.**

Support:

01d Refer to CVC §§ 31303 and 31304.

Standard:

02 **On routes where the transporting of hazardous material and/or waste is prohibited, the Hazardous Material Prohibition (R14-3) sign (see Figure 2B-31) ~~may~~ shall be used.**

02a **The HAZARDOUS WASTE PROHIBITED (R102aP(CA)) or the HAZARDOUS MATERIAL PROHIBITED (R104aP(CA)) sign shall be positioned below the R14-2 sign.**

Support:

02b Refer to CVC §§ 31303 and 31304.

Guidance:

03 *If used, the Hazardous Material Prohibition sign should be installed on a street or roadway at a point where vehicles transporting hazardous material have the opportunity to take an alternate route.*

Support:

04 Refer to Figure 2B-31(CA) for Hazardous Waste/Material signs.

Guidance:

05 *The NO EXPLOSIVES OR FLAMMABLES (SR18(CA)) sign should be placed on highways, structures, tunnels, etc. where vehicles transporting explosives or flammable materials are prohibited. The SR18(CA) sign should be placed at a location that will provide a motorist the opportunity to turn around.*

06 The *EXPLOSIVES AND CORROSIVES PROHIBITED WITHOUT PERMIT (SR19-1(CA))* sign should be placed on highways, structures, tunnels, etc. where vehicles transporting explosives or corrosive materials are prohibited without a permit. The *SR18(CA)* sign should be placed at a location that will provide a motorist the opportunity to turn around.

Option:

07 The *TRANSPORTING ILLEGAL FIREWORKS PROHIBITED (SR25(CA))* sign may be used on any roadway upon which the transportation of illegal fireworks have been prohibited by a local ordinance or resolution per California Health & Safety Code Division 11, Part 2, Sections 12500 through 12726.

Standard:

08 **If used, the *SR25(CA)* sign shall be used to identify only those street or highway locations, either State or local, upon which the transportation of illegal fireworks is prohibited, as established by the local ordinance or resolution.**

Section 2B.68 National Network Signs (R14-4 and R14-5)

Support:

01 The signing of the National Network routes for trucking is optional. [Refer to Chapter 21.](#)

Standard:

02 **When a National Network route is signed, the National Network (R14-4) sign (see Figure 2B-31) shall be used.**

Option:

03 The National Network Prohibition (R14-5) sign (see Figure 2B-31) may be used to identify routes, portions of routes, and ramps where trucks are prohibited. The R14-5 sign may also be used to mark the ends of designated routes.

OTHER REGULATORY SIGNS AND PLAQUES

Section 2B.69 Photo Enforced Signs and Plaques (R10-18, R10-18a, R10-19P, R10-19aP)

Option:

- 01 A Traffic Laws Photo Enforced (R10-18) sign (see Figure 2B-32) may be installed at a jurisdictional boundary to advise road users that some of the traffic regulations within that jurisdiction are being enforced by photographic equipment.

Standard:

- 02 A Traffic Signal Photo Enforced (R10-18a) sign (see Figure 2B-32) ~~may~~ **shall** be installed **within 200 feet** in advance of or at a traffic signal to advise road users that compliance with the signal is enforced by photographic equipment. **Refer to CVC § 21455.5.**

Option:

- 02a A Signal Ahead (W3-3) sign and a Traffic Signal Photo Enforced (R10-18a) sign may be used on the same approach provided that they are on separate supports.

- 02b The RED LIGHT VIOLATION \$ ____ FINE (SR58(CA)) sign (refer to Figure 2B-3(CA)) may be used in advance of signalized intersections where a local agency has adopted an ordinance setting a specific fine amount for red light violations within its jurisdiction. The SR58(CA) sign may be placed on State highways when requested by the local agency.

- 03 A Photo Enforced (R10-19P) plaque or a PHOTO ENFORCED (R10-19aP) word message plaque (see Figure 2B-32) may be mounted below a regulatory sign to advise road users that the regulation is being enforced by photographic equipment.

Standard:

- 04 The Traffic Signal Photo Enforced (R10-18a) sign shall not be installed on approaches to signalized locations where red-light cameras are not present on any of the approaches to the signalized location.

- 05 A Traffic Signal Photo Enforced (R10-18a) sign shall not be installed on the same support in combination with a Signal Ahead (W3-3) sign.

- 06 If used below a regulatory sign, the Photo Enforced (R10-19P or R10-19aP) plaque shall be a rectangle with a black legend and border on a white background.

Support:

- 07 Refer to CVC § 21455.5 for Traffic Signal Automated Enforcement: Photographic Records.

Section 2B.70 Move Vehicles from Travel Lanes Sign (R16-4)

Option:

- 01 A ~~STATE LAW MINOR CRASHES MOVE VEHICLES FROM TRAVEL LANES (R16-4)~~ **STATE LAW MINOR CRASH NO INJURIES – SAFELY MOVE VEHICLES FROM TRAVEL LANES (SR61-1(CA))** sign (see Figure ~~2B-33~~ **2B-33(CA)**) may be installed in accordance with the provisions of Section 2A.01 to require motorists to move their vehicle out of the travel lanes if they have been involved in a **non-injury** crash.

- 02 If the specific requirements of a State law vary, the word legend of the R16-4 sign may be modified to reflect the appropriate law.

Section 2B.71 Move Over or Reduce Speed Sign (R16-3)

Option:

- 01 A ~~STATE LAW MOVE OVER OR REDUCE SPEED FOR VEHICLES STOPPED ON SHOULDER (R16-3)~~ **STATE LAW MOVE OVER OR SLOW FOR STOPPED EMERGENCY AND MAINTENANCE VEHICLES (R110-1(CA))** sign (see Figure ~~2B-33~~ **2B-33(CA)**) may be installed in accordance with the provisions of Section 2A.01 to require motorists to change lanes and/or reduce speed when passing stopped emergency vehicles on the shoulder. **Refer to CVC 21809.**

- 02 If the specific requirements of a State law vary, the word legend of the R16-3 sign may be modified to reflect the appropriate law.

Standard:

- 03 The R110(CA) sign shall only be used within freeway facilities.

Section 2B.72 No Hand-Held Phone Use by Driver Signs (R16-15 and R16-15a)

Option:

- 01 A STATE LAW NO HAND-HELD PHONE USE BY DRIVER (R16-15 or R16-15a) sign (see Figure 2B-33) may be installed in accordance with the provisions of Section 2A.01 to notify drivers that they are prohibited from using hand-held telephones while driving.
- 02 If the specific requirements of a State law vary, the word legend of the R16-15 series signs may be modified to reflect the appropriate law.

Section 2B.73 Headlight Use Signs (R16-5 through R16-11)

Support:

- 01 Some States require road users to turn on their vehicle headlights under certain weather conditions, as a safety improvement measure on roadways experiencing high crash rates, or in special situations such as when driving through a tunnel.

01a Refer to CVC § 24400.

- 02 Figure 2B-34 shows the various signs that can be used for informing motorists of these requirements. Option:

- 03 A LIGHTS ON WHEN USING WIPERS (R16-5) sign or a LIGHTS ON WHEN RAINING (R16-6) sign may be installed in accordance with the provisions of Section 2A.01 to inform road users of State laws regarding headlight use. Although these signs are typically installed facing traffic entering the State just inside the State border, they also may be installed at other locations within the State.

Guidance:

- 04 *If a particular section of roadway has been designated as a safety improvement zone within which headlight use is required, a TURN ON HEADLIGHTS NEXT XX MILES (R16-7) sign or a BEGIN DAYTIME HEADLIGHT SECTION (R16-10) sign should be installed at the upstream end of the section, and an END DAYTIME HEADLIGHT SECTION (R16-11) sign should be installed at the downstream end of the section.*

Option:

- 05 A TURN ON HEADLIGHTS (R16-8) sign may be installed to require road users to turn on their headlights in special situations such as when driving through a tunnel or at the entrances from major side roads to a daytime headlight section. A CHECK HEADLIGHTS (R16-9) sign may be installed downstream from the special situation to inform drivers that using their headlights is no longer required.

Guidance:

- 06 *A CHECK HEADLIGHTS (R16-9) should be placed approximately 500 feet beyond the end of a daytime headlight section.*

Option:

- 07 Daytime Headlight (S30(CA)) sign (refer to Figure 2B-34(CA)) may be used after a traffic investigation and consultation with the local CHP office and/or law enforcement as a traffic safety improvement measure in high accident locations on two lane highways where there is a potential for head-on collisions.

Support:

- 08 Refer to CVC § 21461 for enforcement of S30(CA) Series and R16-5 through R16-11 signs.

Section 2B.74 Seat Belt Symbol

Guidance:

- 01 *The seat belt symbol should not be used alone. If used, the seat belt symbol should be incorporated into regulatory sign messages for mandatory seat belt use.*

- 01a *The Seat Belt (SR15(CA)) sign (refer to Figure 2B-33(CA)) should be placed in each direction on all freeways and other major state routes at approximate 50 mile intervals.*

Standard:

- 01b **The SAFETY BELT LAW ENFORCED (SR15aP(CA)) sign (refer to Figure 2B-33(CA)) shall be placed below each installation of the Seat Belt (SR15(CA)) sign.**

Option:

- 01c The Seat Belt (SR15(CA)) and SAFETY BELT LAW ENFORCED (SR15A(CA)) sign combination may also be used on local arterials.

Support:

- 02 The seat belt symbol is illustrated in the “Standard Highway Signs” publication (see Section 1A.05).

BARRICADES AND GATES

Section 2B.75 Barricades

Option:

- 01 Barricades may be used to mark any of the following conditions:
- A. The end of a roadway,
 - B. A ramp or lane that is closed for operational purposes, or
 - C. The permanent or semi-permanent closure or termination of a roadway.

Standard:

- 02 **When used to warn and alert road users of the terminus of a roadway, other than in temporary traffic control zones, barricades shall meet the design criteria of Section 6K.07 for a Type 3 Barricade, except that the colors of the stripes shall be retroreflective white and retroreflective red.**

Option:

- 03 An end-of-roadway marker or markers may be used as described in Section 2C.73.

Guidance:

- 04 *Appropriate advance warning signs (see Chapter 2C) should be used.*

Section 2B.76 Gates

Support:

- 01 Gates described in this section used for weather or other emergency conditions are typically permanently installed to enable the gate to be immediately deployed as needed to prohibit the entry of traffic to the highway segment(s).
- 02 A gate typically features a gate arm that is moved from a vertical to a horizontal position or is rotated in a horizontal plane from parallel to traffic to perpendicular to traffic. Traffic is obstructed and required to stop when the gate arm is placed in a horizontal position perpendicular to traffic. Another type of gate consists of a segment of fence (usually on rollers) that swings open and closed, or that is retracted to open and then extended to close.
- 03 Gates are sometimes used to enforce a required stop. Some examples of such uses are the following:
- A. Parking facility entrances and exits,
 - B. Private community entrances and exits,
 - C. Military base entrances and exits,
 - D. Toll plaza lanes,
 - E. Movable bridges (see Chapter 4Q),
 - F. Automated Flagging Assistance Devices (see Chapter 6L), and
 - G. Grade crossings (see Part 8).
- 04 Gates are sometimes used to periodically close a roadway or a ramp. Some examples of such uses are the following:
- A. Closing ramps to implement counter-flow operations for evacuations,
 - B. Closing ramps that lead to reversible lanes, and
 - C. Closing roadways for weather events such as snow, ice, or flooding, or for other emergencies.

Standard:

- 05 **Except as provided in Paragraph 6 of this Section, gate arms, if used, shall be fully retroreflective on both sides, have vertical stripes alternately red and white at 16-inch intervals measured horizontally as shown in Figure 8D-1. The width (which becomes the height of the retroreflective sheeting when the gate is in the down position) of the retroreflective sheeting on the front of the gate arm shall be at least 4 inches. [Refer to Section 8D.03 Paragraph 5 if the Gate arm extends beyond 32 feet.](#)**

Option:

- 06 If used on a one-way roadway or ramp, the retroreflective sheeting may be omitted on the side of the gate (or rolling fence) facing away from approaching traffic.
- 07 Where gate arms are used to block off ramps into reversible lanes or to redirect approaching traffic, the red and white striping may be angled such that the stripes slope downward at an angle of 45 degrees toward the side of the gate arm on which traffic is to pass.

Standard:

- 08 **The gate arm shall extend across the approaching lane or lanes of traffic to effectively block motor vehicle, bicycle, and/or pedestrian travel as appropriate.**

Guidance:

- 09 When a gate that is rotated in a horizontal plane is in the position where it is parallel to traffic (indicating that the roadway is open), the outer end of the gate arm should be rotated to the downstream direction (from the perspective of traffic in the lane adjacent to the gate support) to prevent spearing if the gate is struck by an errant vehicle.

Standard:

- 10 If red lights are attached to a traffic gate, the red lights shall be steadily illuminated or flashed only during the period when the gate is in the horizontal or closed position and when the gate is in the process of being opened or closed.
- 11 Except as provided in Paragraph 6 of this Section, rolling sections of fence, if used, shall include either a horizontal strip of retroreflective sheeting on both sides of the fence with vertical stripes alternately red and white at 16-inch intervals measured horizontally to simulate the appearance of a gate arm in the horizontal position, or one or more Type 4 object markers (see Section 2C.73), or both. If a horizontal strip of retroreflective sheeting is used, the bottom of the sheeting shall be located 3.5 to 4.5 feet above the roadway surface.

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

Option:

- 01 The NO FISHING (JUMPING) FROM BRIDGE sign (R23(CA)) (refer to Figure 2B-106(CA)) may be used when fishing or jumping from a bridge is prevalent and where investigation has shown that fishing or jumping is unsafe or interferes with the orderly movement of traffic.

Section 2B.102(CA) \$1000 Fine Signs (R47(CA) and R47A(CA))

Option:

- 01 The \$1000 FINE FOR LITTERING (R47(CA)) sign (refer to Figure 2B-106(CA)) may be used to inform the public that it is unlawful to dispose of litter on the highway.

Support:

- 02 Refer to Streets and Highway Code Section 101.6 and CVC 23111 through 23113 and 42001.7.
- 03 The \$1000 FINE FOR ANIMAL ABANDONMENT (R47A(CA)) sign (refer to Figure 2B-106(CA)) is used to inform the public that the abandonment or dumping of any animal is a criminal offense.

Guidance:

- 04 The R47A(CA) sign should be placed on all major state highways, as close as practicable, following the Welcome to California (G10B(CA)) sign.

Section 2B.103(CA) PRIVATE ROAD (PRIVATE PROPERTY) VEHICLE CODE ENFORCED Sign (R101(CA))

Standard:

- 01 The PRIVATE ROAD VEHICLE CODE ENFORCED (R101(CA)) sign (refer to Figure 2B-106(CA)) shall be used at the entrance to a privately owned and maintained road when enforcement of vehicle provisions apply, as provided in CVC § 21107.7.
- 02 The alternate message PRIVATE PROPERTY shall be used at each entrance to a privately owned and maintained off-street parking facility when enforcement of vehicle code provisions apply, as provided in CVC § 21107.8.

Section 2B.104(CA) GOLF CARTS OK DAYLIGHT HOURS Sign (SR43(CA))

Standard:

- 01 The GOLF CARTS OK DAYLIGHT HOURS (SR43(CA)) sign (refer to Figure 2B-106(CA)) shall be placed on roadways which local authorities have designated for combined use in accordance with CVC § 21115.

Option:

- 02 The ordinance number may be included on the sign.

Section 2B.105(CA) Bus and Truck Registration Sign (SR44(CA))

Guidance:

- 01 *The Bus and Truck Registration (SR44(CA)) sign (refer to Figure 2B-106(CA)) should be placed at all Border Inspections Stations to relay this information to Interstate carriers.*

Section 2B.106(CA) EMERGENCY ACCESS KEEP CLEAR Sign (SR46(CA))

Option:

- 01 The EMERGENCY ACCESS KEEP CLEAR (SR46(CA)) sign (refer to Figure 2B-106(CA)) may be used where there is traffic back up due to a controlled intersection or cross street that affects access to the driveway of any emergency service facility such as fire, police or ambulance. Refer to CVC § 22500(d) and 22526.

Standard:

- 02 **The SR46(CA) sign shall be used in conjunction with KEEP CLEAR pavement markings (refer to Section 3B.26) that delineate the limits of the keep clear area.**

Option:

- 03 The SR46(CA) signs may be placed on both ends of the keep clear area.

Guidance:

- 04 *However, if only one sign is used, it should be placed on the upstream side.*

Section 2B.107(CA) Off Highway Vehicle Signs (SR47(CA) and SR48(CA))

Guidance:

- 01 *The OFF HIGHWAY VEHICLE COMBINED USE NEXT (X MILES) (SR47(CA)) sign (refer to Figure 2B-106(CA)) should be used to inform motorists of the length of an Off Highway Vehicle Combined Use segment of the highway.*
- 02 *The NO OFF HIGHWAY VEHICLES BEYOND THIS POINT (SR48(CA)) sign (refer to Figure 2B-106(CA)) should be placed at the end of an Off Highway Vehicle Combined Use segment of the highway.*

Section 2B.108(CA) NO CAMPING OR SLEEPING IN VEHICLE Sign (R119(CA))

Guidance:

- 01 *The NO CAMPING OR SLEEPING IN VEHICLE (R119(CA)) sign (refer to Figure 2B-106) may be used to inform the public that it is unlawful to camp or sleep in the vehicle in the right of way of a state highway or local roadway where there is an adopted resolution or ordinance that prohibits camping or sleeping in vehicle and allows use of the sign. The resolution or ordinance number and adopting agency shall be included on the bottom of the sign.*

Option:

- 02 The NO CAMPING OR SLEEPING IN VEHICLE (R119(CA)) sign may have a supplemental plaque (R2-6bP) installed below the sign for the applicable fine amount per the adopted resolution or ordinance (e.g., \$XXXX FINE).

Support:

- 03 Do not use the NO CAMPING OR SLEEPING IN VEHICLE (R119(CA)) sign when there is no adopted resolution or ordinance to support its use or enforcement of the sign.

Section 2B.109(CA) BEGIN/END FREEWAY Sign (R57(CA) and R58(CA))

Standard:

- 01 **The BEGIN FREEWAY (R57(CA)) sign (refer to Figure 2B-25(CA)) shall be used to mark the beginning of freeway.**
- 02 **The R57(CA) sign shall be placed above the EMERGENCY PARKING ONLY (R8-4) sign. Refer to CVC 21960.**

Standard:

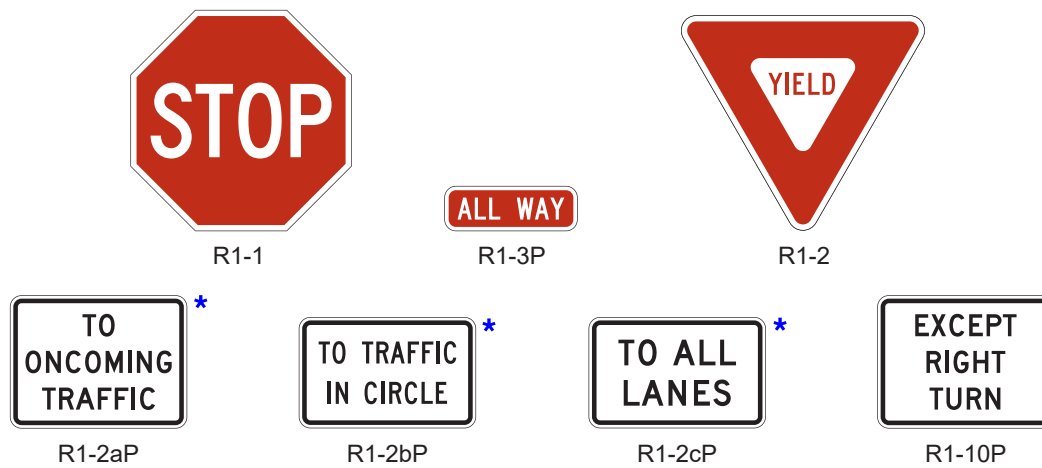
- 03 **The END FREEWAY (R58(CA)) sign (refer to Figure 2B-25(CA)) shall be used to mark the end of a freeway.**

Section 2B.110(CA) No Loitering, Camping, Vending or Parking of Vehicles 30 Feet or Longer Sign (S22(CA))

Option:

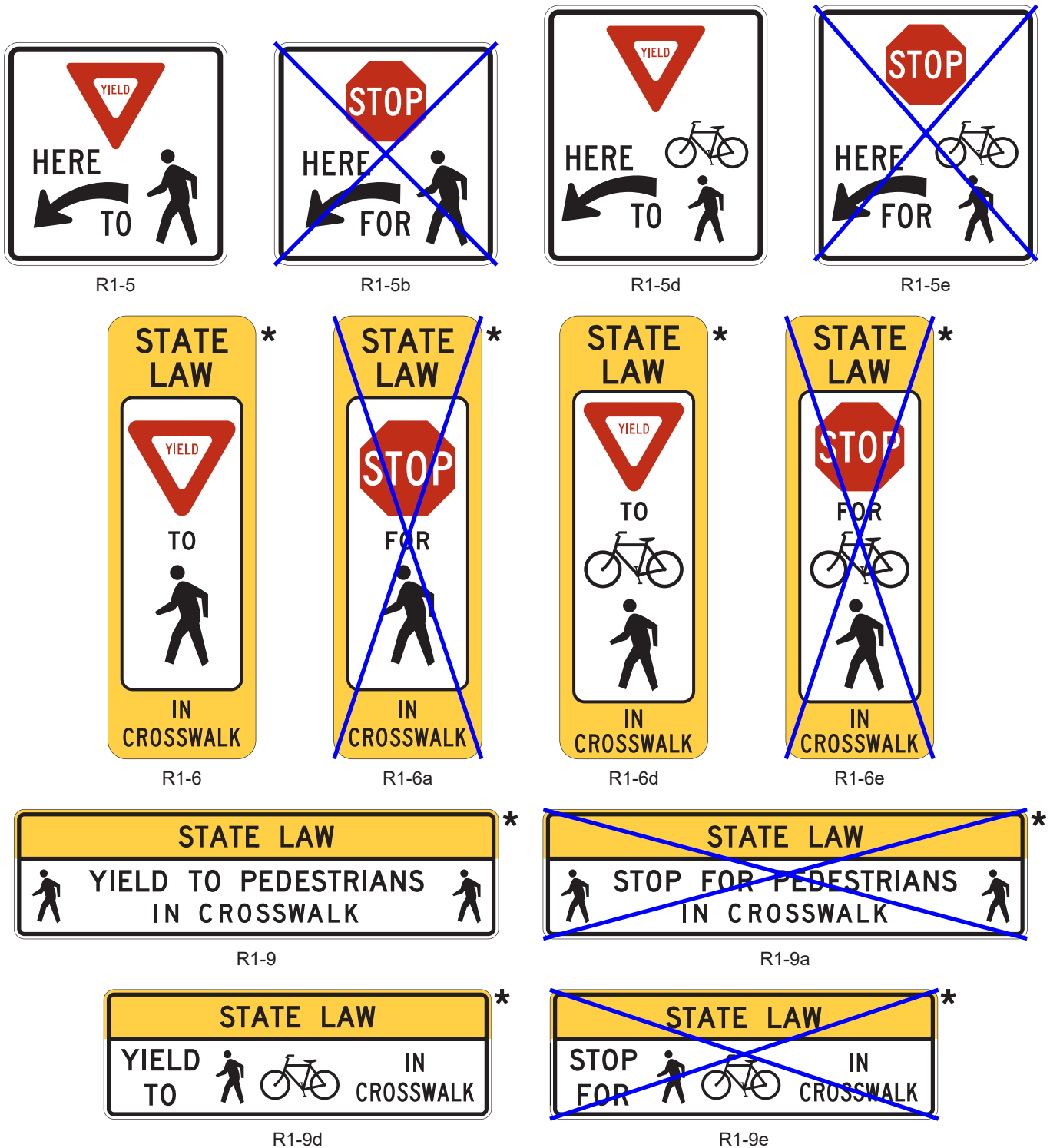
- 01 The NO LOITERING, CAMPING, VENDING OR PARKING OF VEHICLES 30 FEET OR LONGER (S22(CA)) sign (refer to Figure 2B-106(CA)) may be placed at fringe and transportation corridor parking facilities constructed, maintained, or operated by Caltrans for the purpose of ridesharing. Refer to CVC Section 22518.

Figure 2B-1. STOP and YIELD Signs and Plaques



* May be mounted below the YIELD sign.

Figure 2B-2. Unsignalized Pedestrian Crosswalk Signs



★ The legend STATE LAW is optional. A fluorescent yellow-green background color may be used instead of yellow for this sign.

Signs are not shown in proportion to their designated sizes.

Figure 2B-3. Speed Limit Signs and Plaques

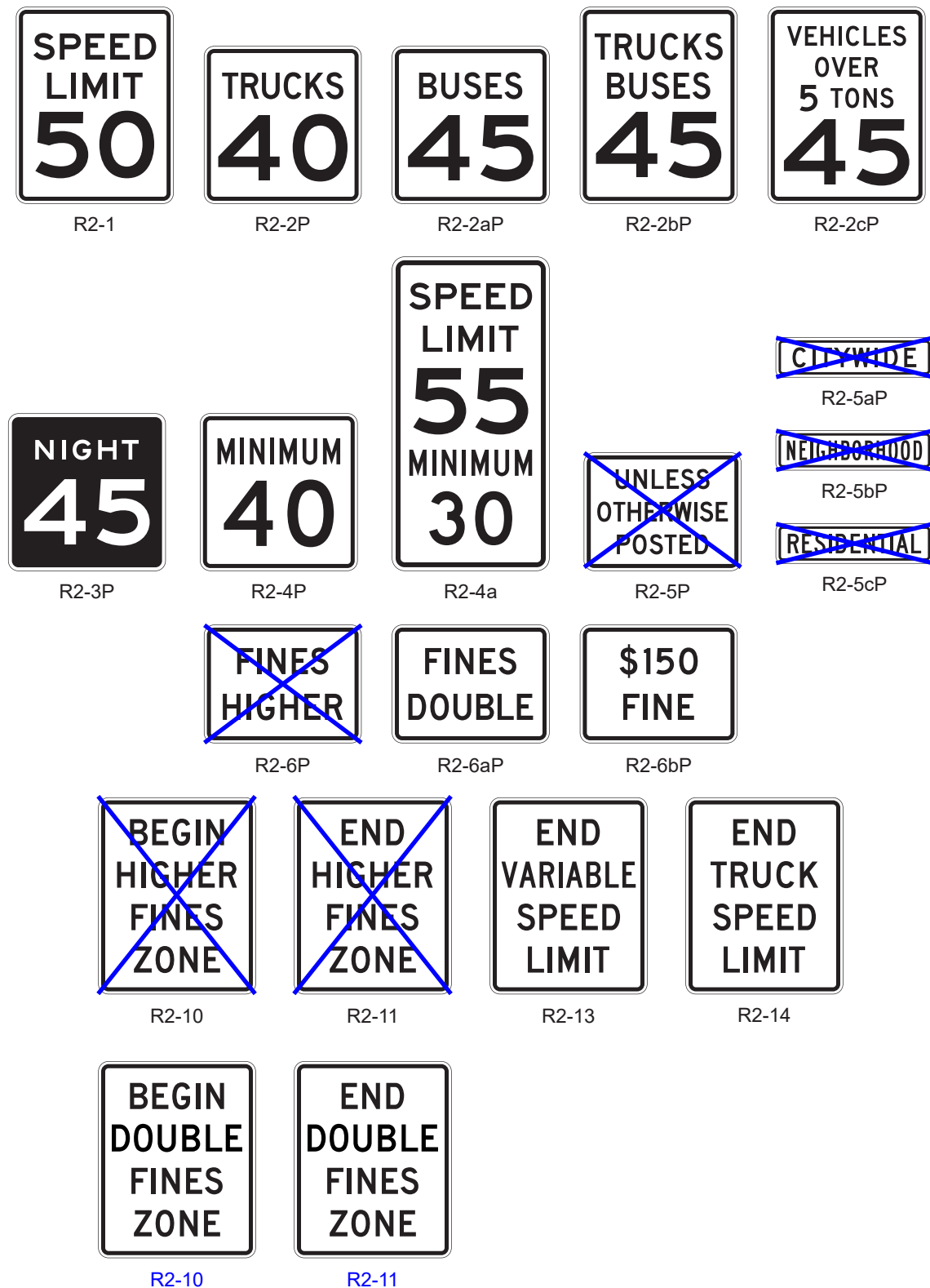


Figure 2B-3(CA). California Speed Limit and Photo Enforcement Signs and Plaques



R2-4(CA)



R3(CA)



R6-3B(CA)



R6-4B(CA)



R48(CA)



R48-1P(CA)



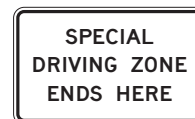
R48-2(CA)



SR53(CA)



SR54(CA)



SR55(CA)



SR58(CA)

Figure 2B-4. Movement Prohibition and Lane Control Signs and Plaques (Sheet 1 of 2)



★ The diamond symbol may be used instead of the "HOV" word message. The minimum vehicle occupancy level may vary, such as 2+, 3+, 4+. The words "LANE" or "ONLY" may be used with this sign when appropriate.

Figure 2B-4. Movement Prohibition and Lane Control Signs and Plaques (Sheet 2 of 2)

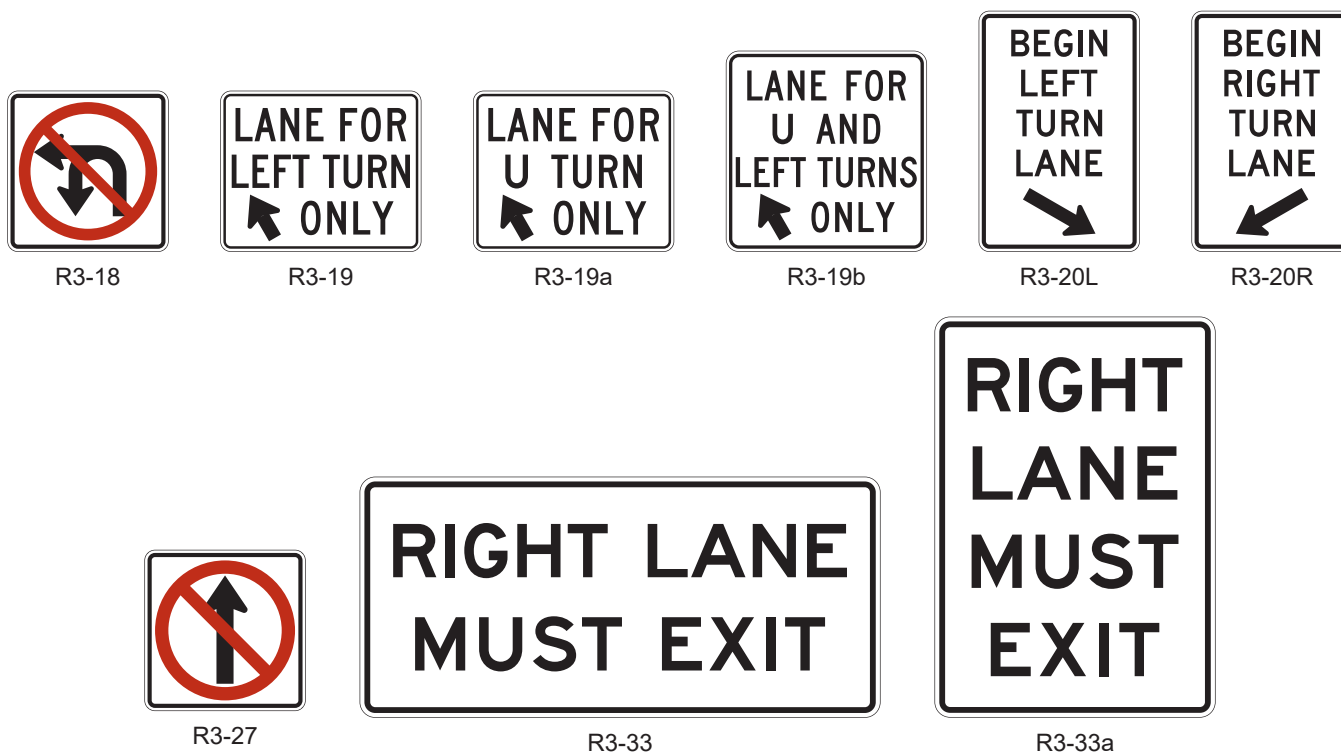


Figure 2B-4(CA). California Movement Prohibition and Lane Control Signs and Plaques

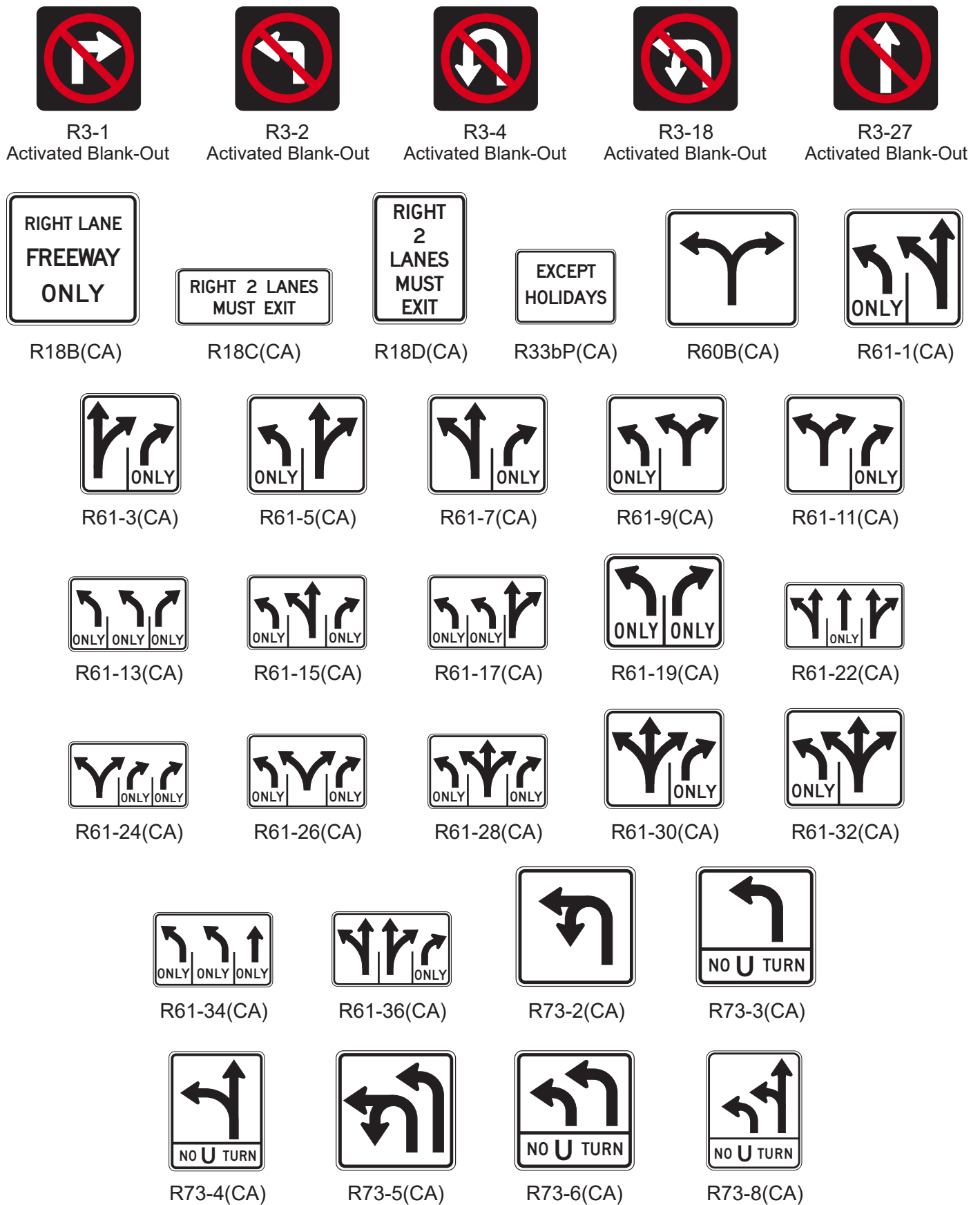


Figure 2B-5. Intersection Lane Control Sign Arrow Options for Roundabouts

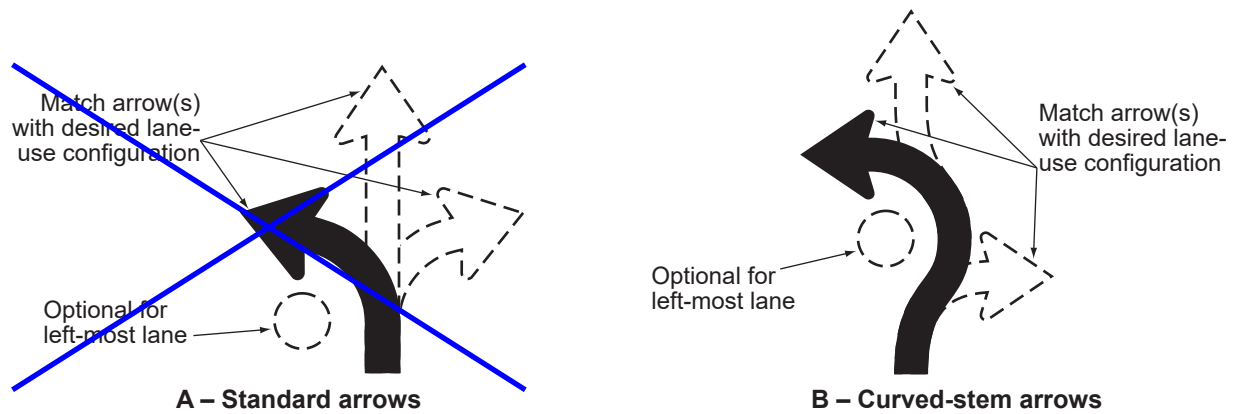


Figure 2B-6. Center and Reversible Lane Control Signs and Plaques

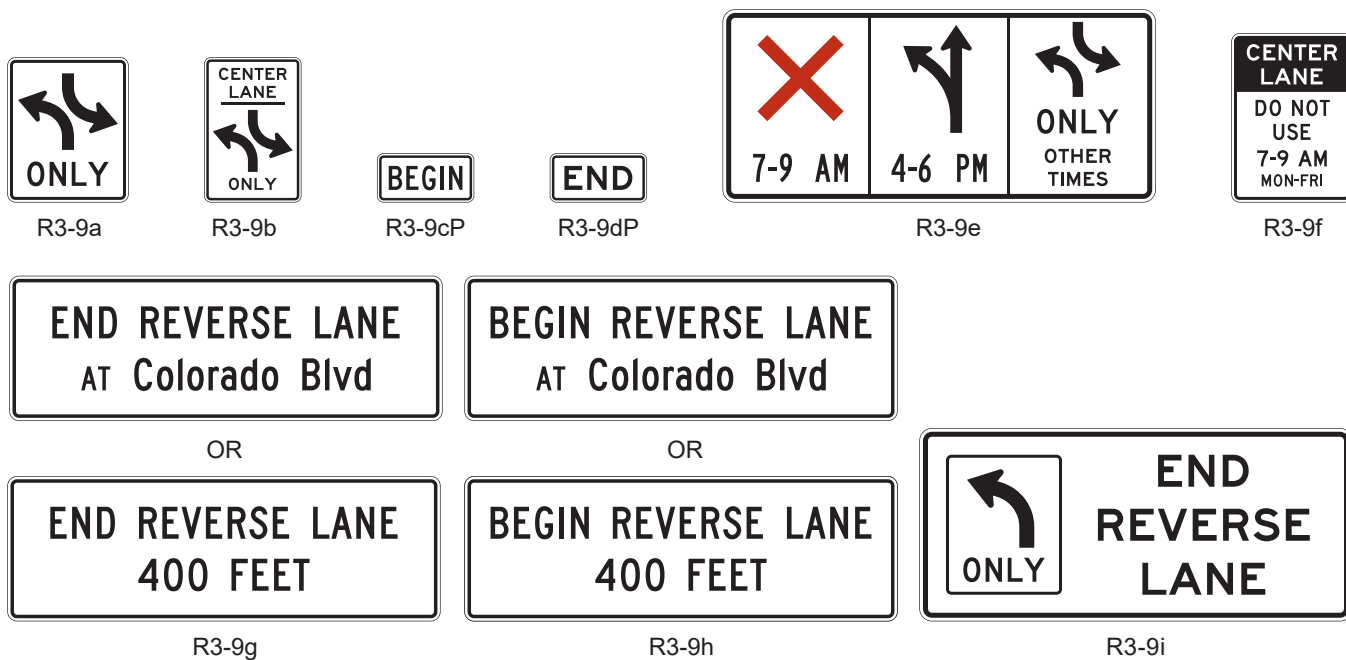


Figure 2B-7. Location of Reversible Two-Way Left-Turn Signs

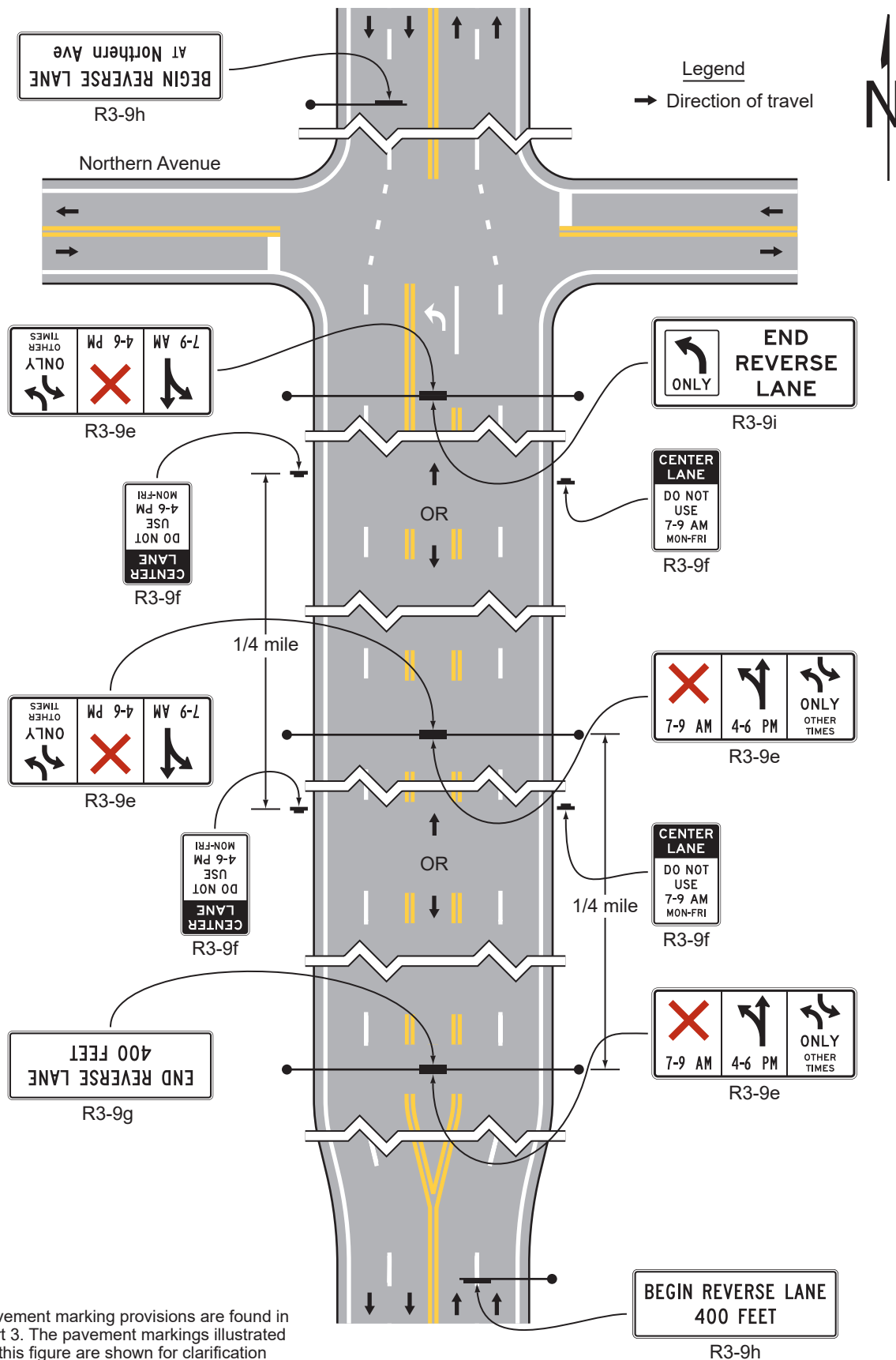


Figure 2B-8. Jughandle Regulatory Signs

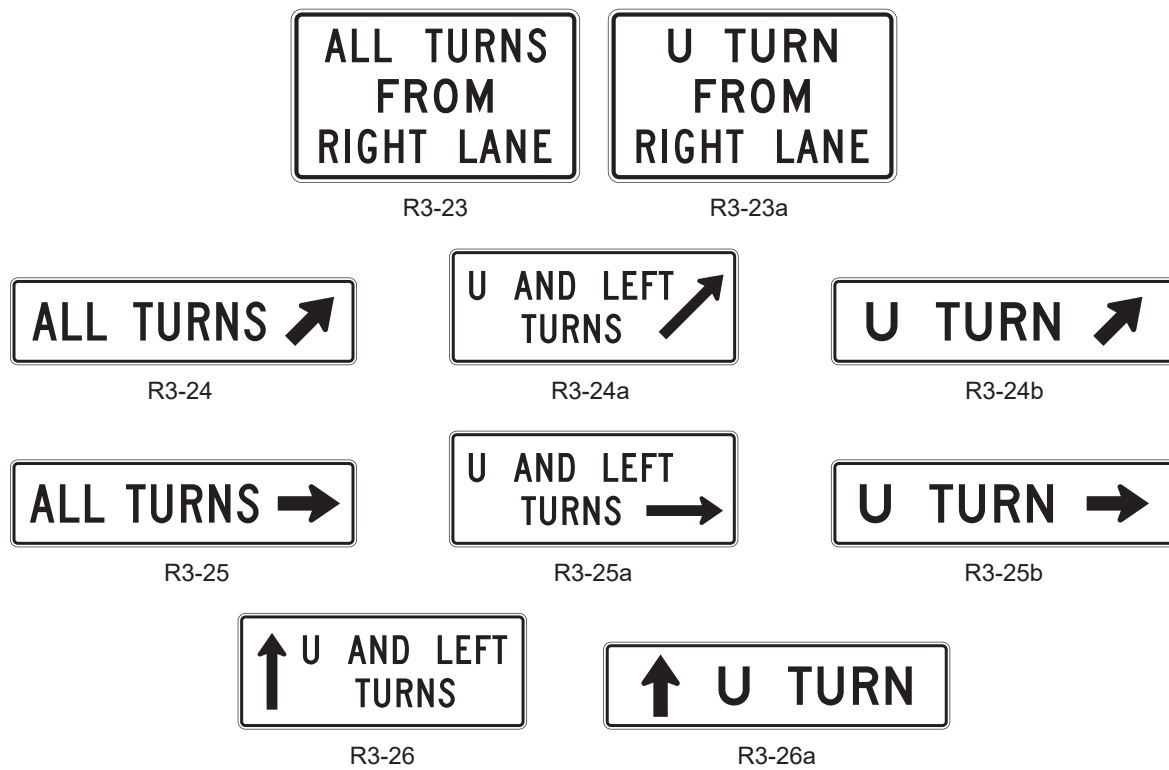


Figure 2B-9. Examples of Applications of Jughandle Regulatory and Guide Signing
(Sheet 1 of 3)

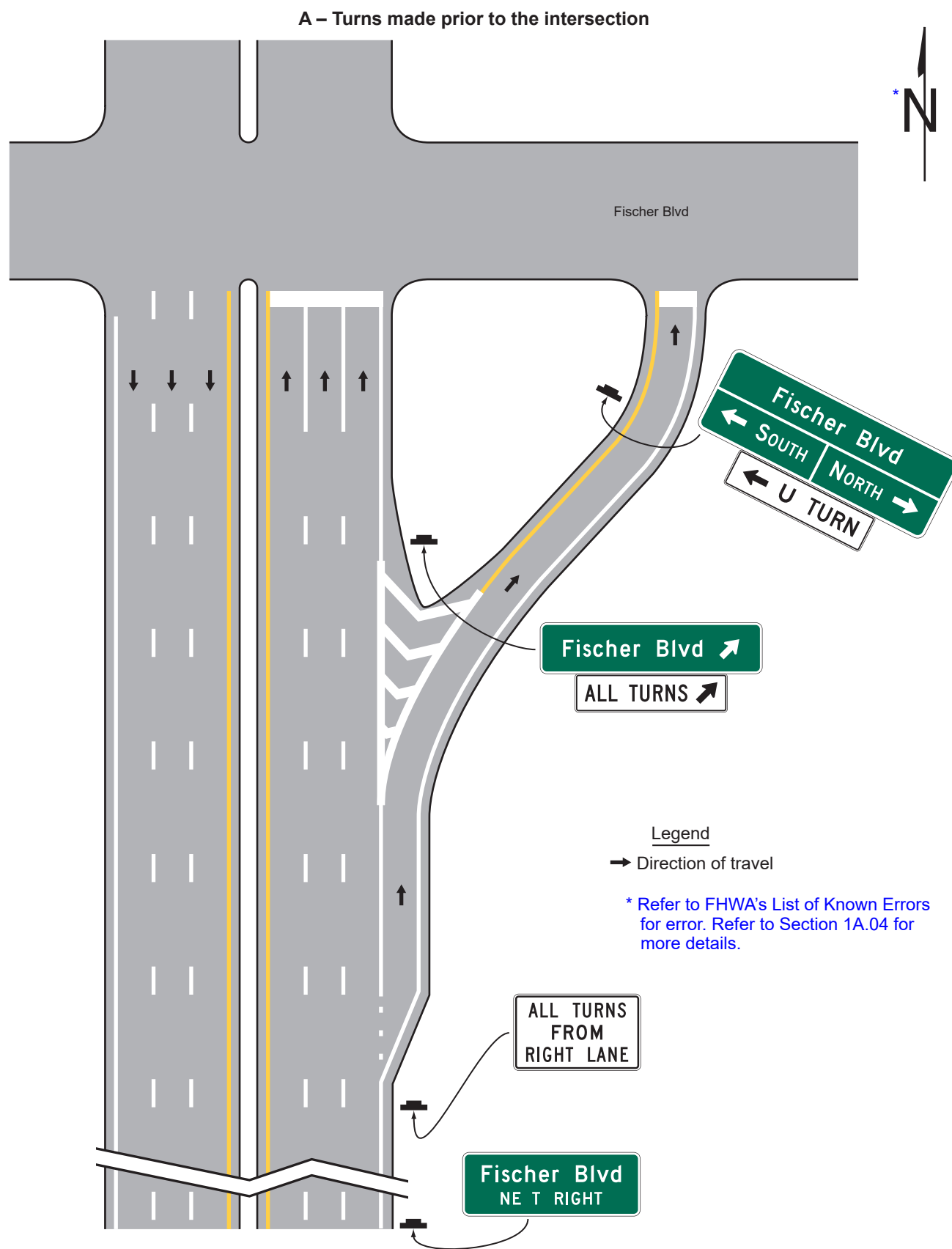


Figure 2B-9. Examples of Applications of Jughandle Regulatory and Guide Signing
(Sheet 2 of 3)

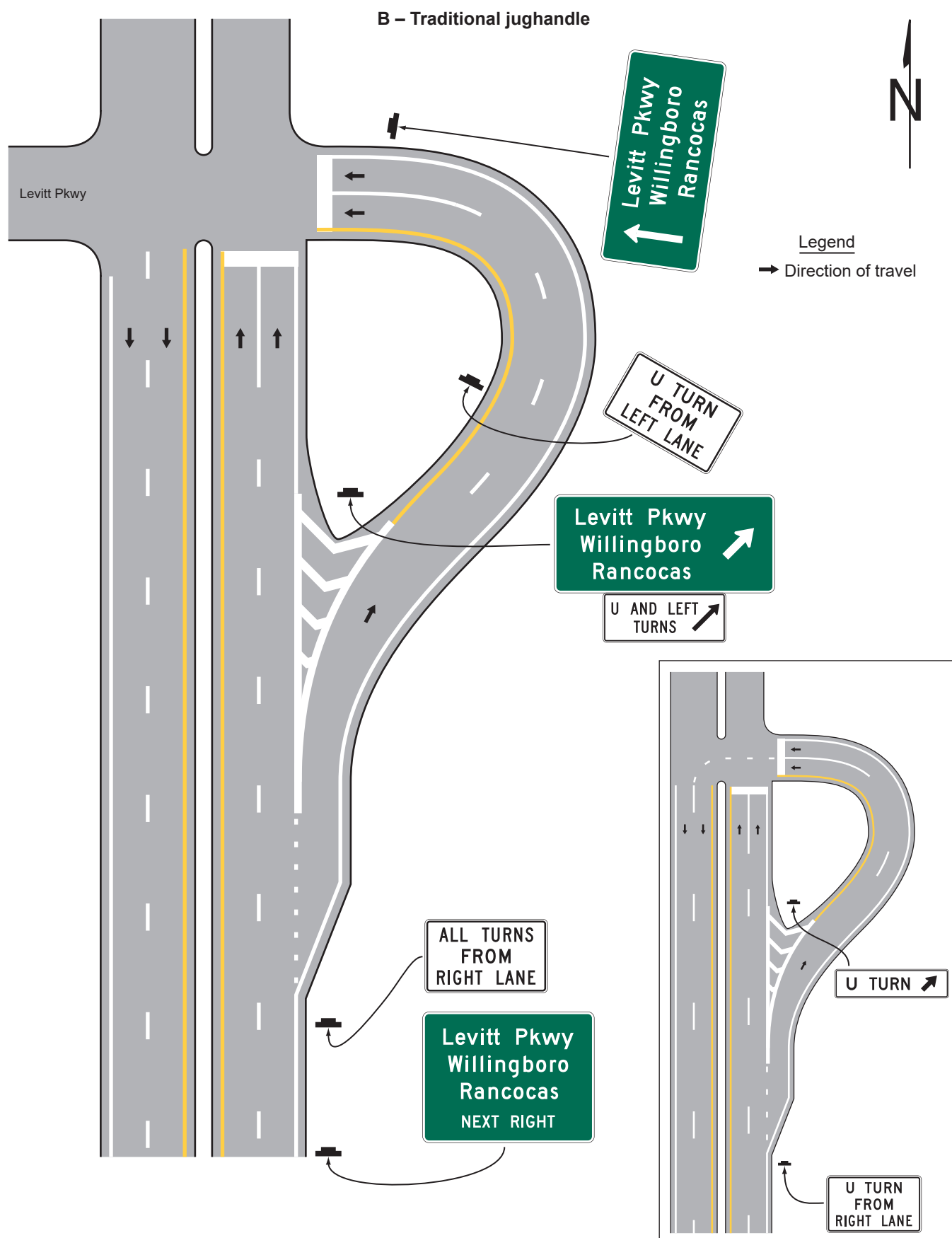


Figure 2B-9. Examples of Applications of Jughandle Regulatory and Guide Signing
(Sheet 3 of 3)

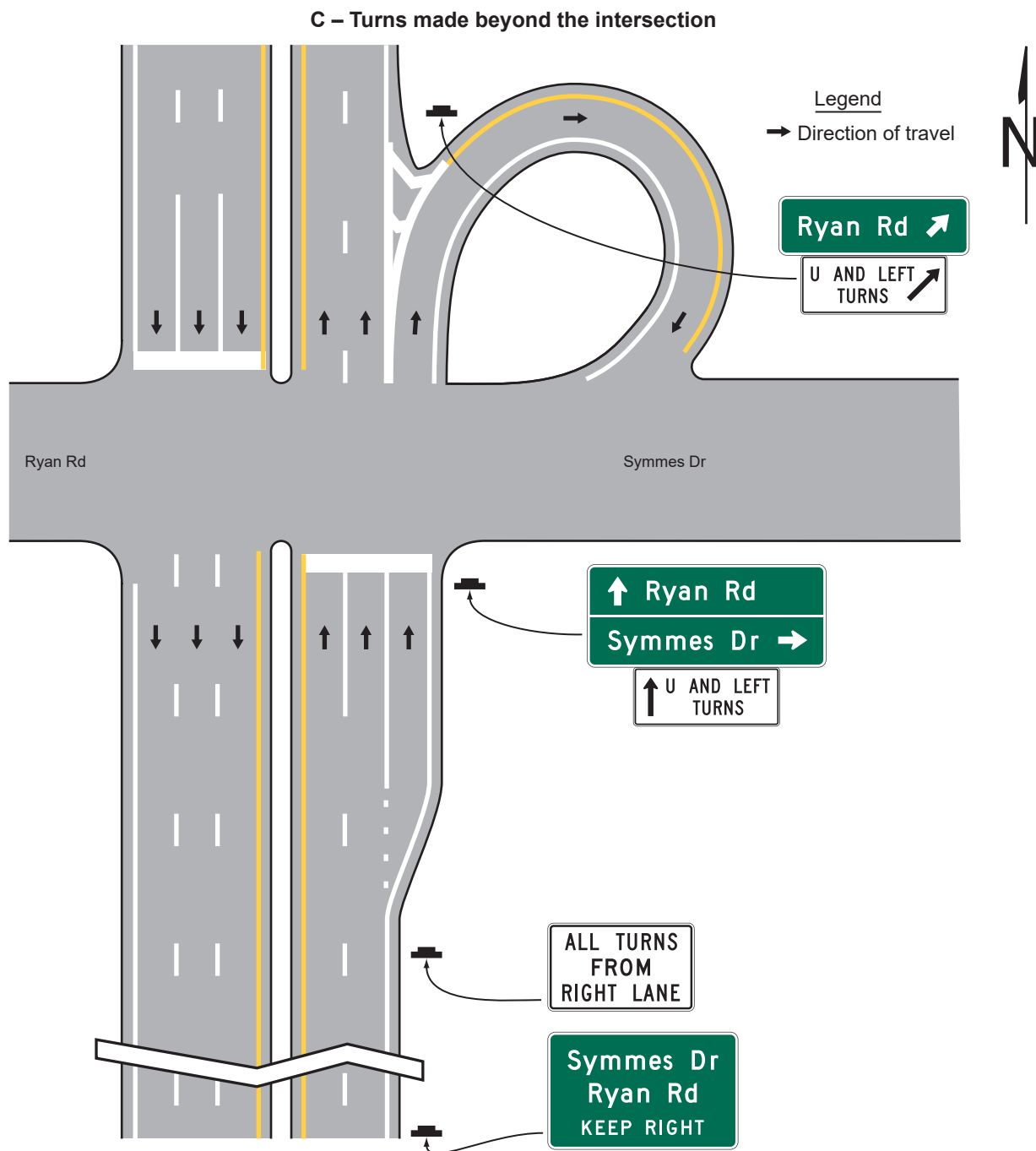


Figure 2B-10. Passing, Keep Right, and Slow Traffic Signs

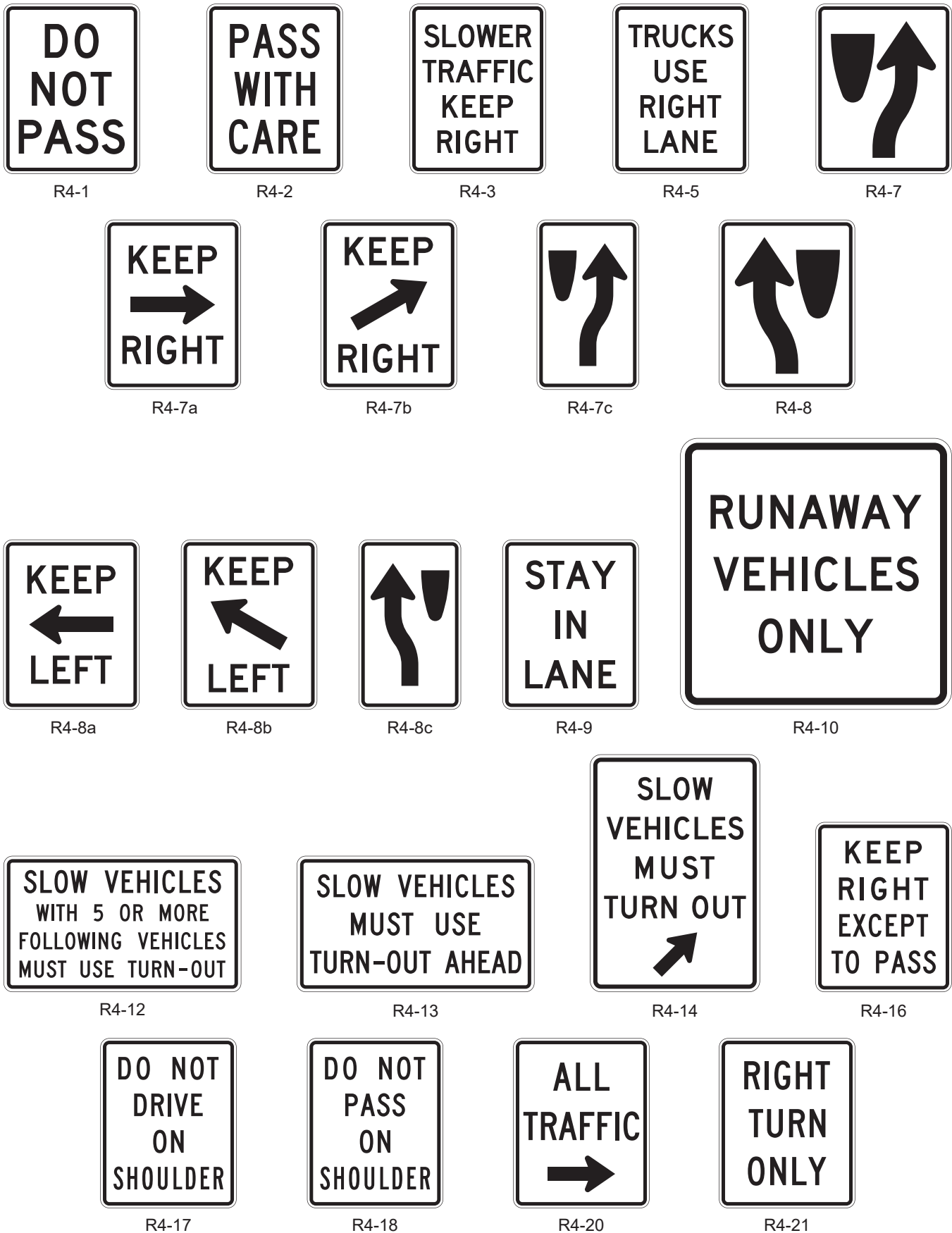


Figure 2B-10(CA). California Passing, Keep Right, and Slow Traffic Signs



R6-3A(CA)



R6-4A(CA)



R53B(CA)



R53E(CA)



R55(CA)



R70(CA)



R70A(CA)

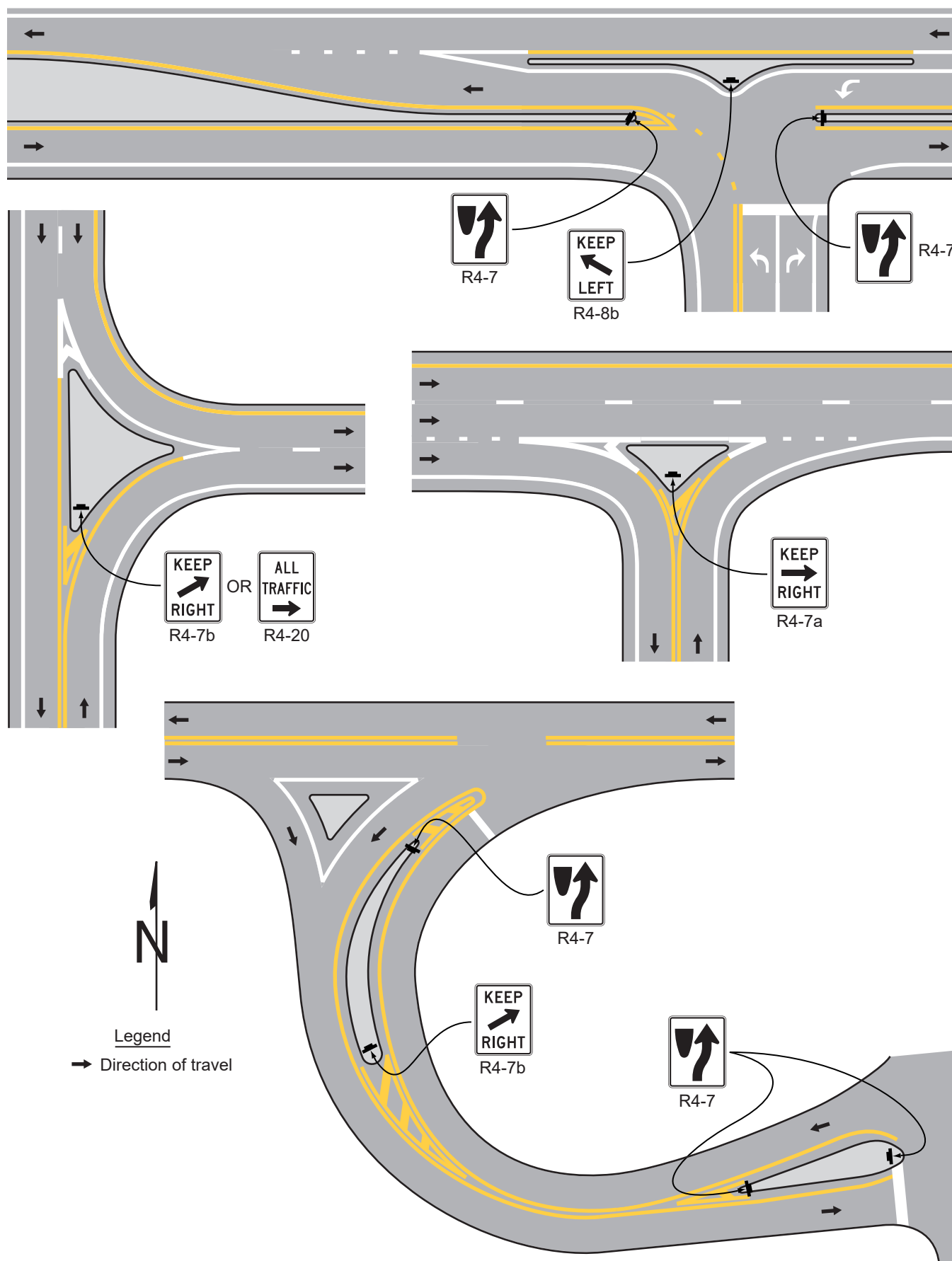


R70B(CA)



R82aP(CA)

Figure 2B-11. Examples of Keep Right and Keep Left Sign Placement



R5-2

R5-2aP

R5-2b

R5-3

R5-4

R5-5

R5-6

R5-7

R5-8

R5-10

R5-10a

R5-10b

R5-10c

R5-11

R5-12

R9-3

R9-13

R9-14

R9-15

R9-16

R9-19P

Figure 2B-12(CA). California Selective Exclusion Signs and Plaques



R20-1(CA)



R20-1aP(CA)



R20D-1P(CA)



R20D-2P(CA)



R20D-3P(CA)



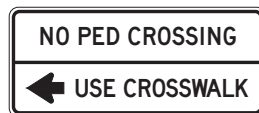
R20D-4P(CA)



R20H(CA)



R21(CA)



R49(CA)



R53D(CA)

Figure 2B-13. DO NOT ENTER, WRONG WAY, ONE WAY, and Related Signs and Plaques

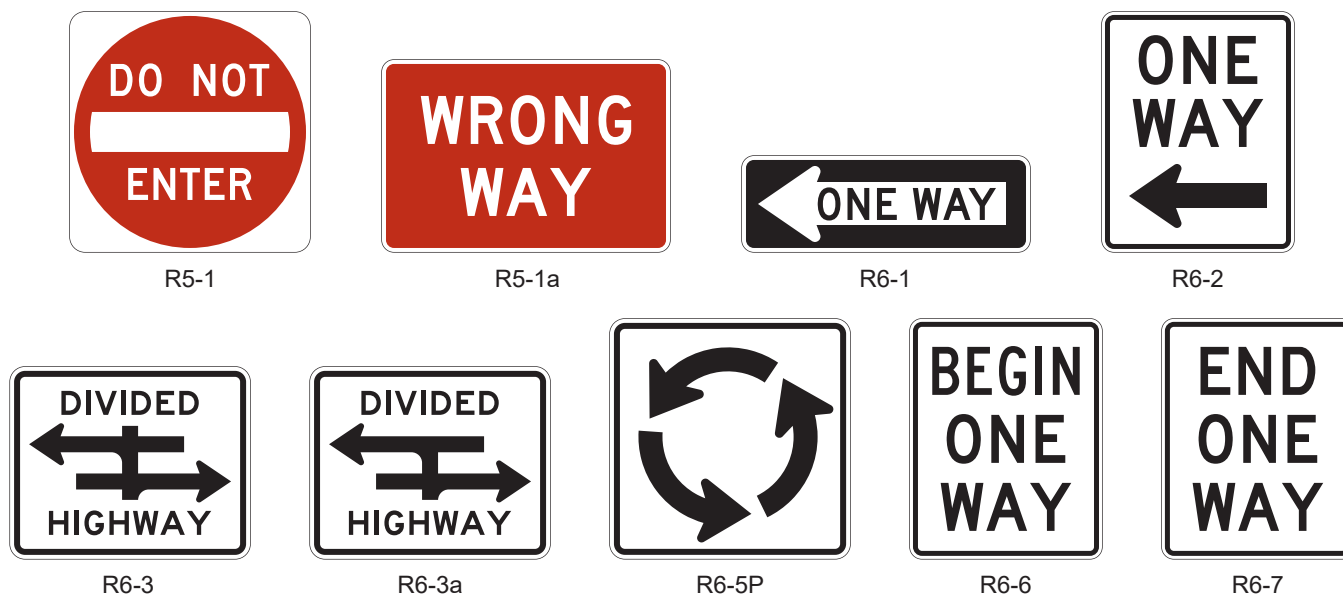


Figure 2B-13(CA). California DO NOT ENTER, WRONG WAY, ONE WAY, and Related Signs and Plaques

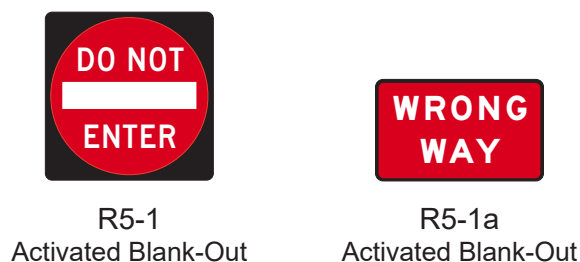


Figure 2B-14. Locations of DO NOT ENTER and WRONG WAY Signing for Divided Highway Crossings that Function as Two Separate Intersections

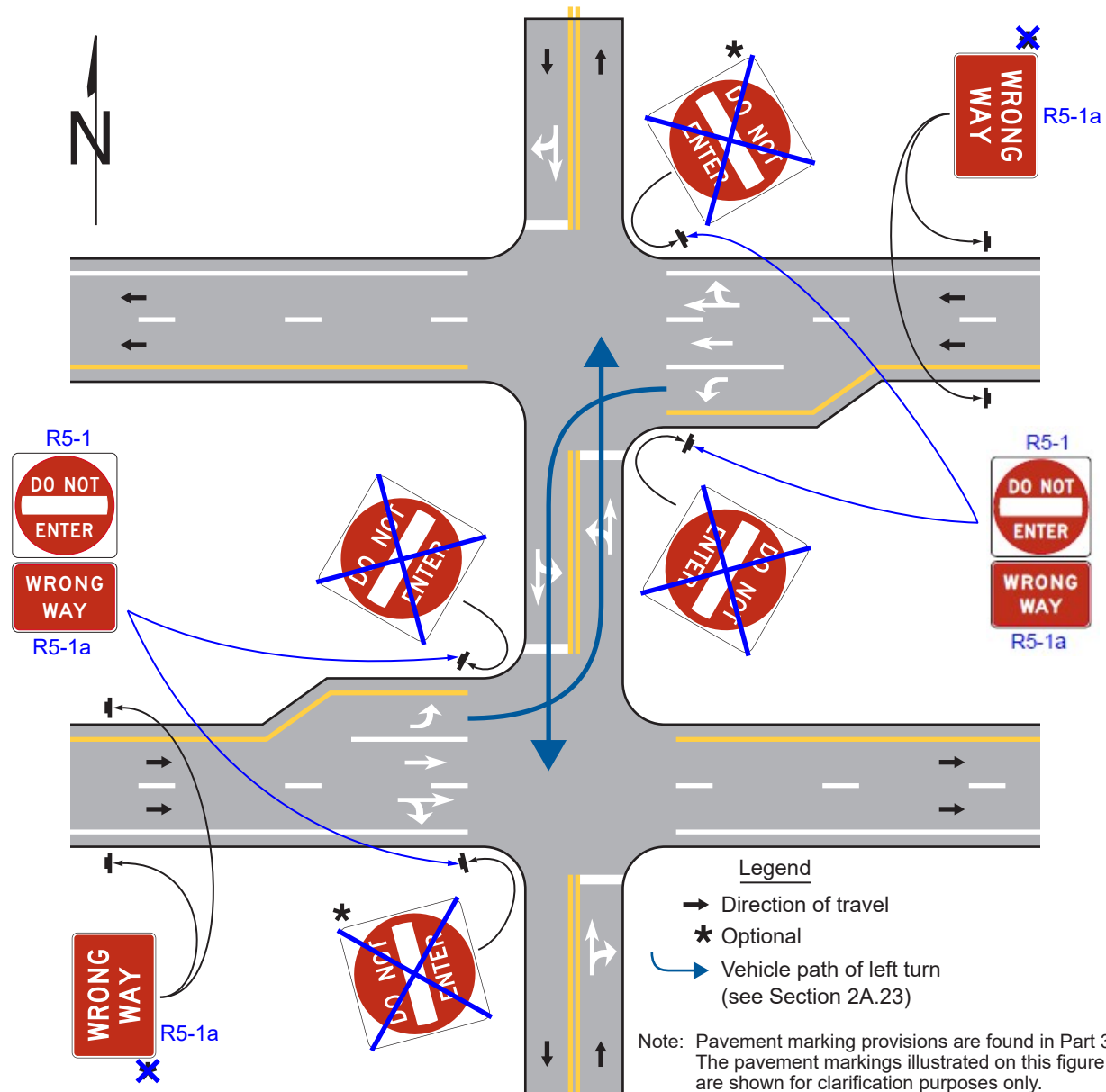


Figure 2B-14(CA). Locations of DO NOT ENTER and WRONG WAY Signing for Divided Highway Crossings that Function as a Single Intersection

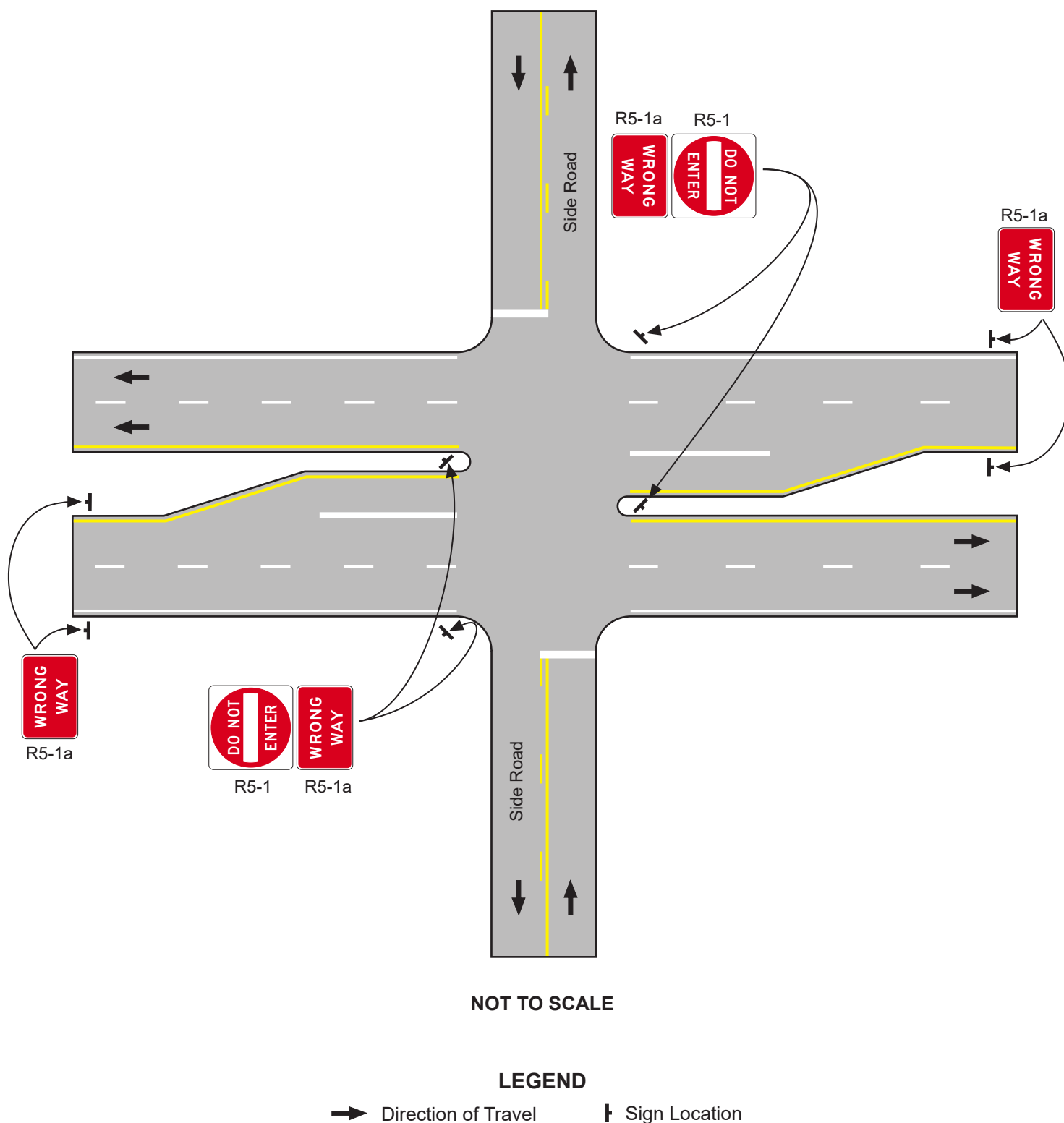


Figure 2B-15. Example of Application of Regulatory Signing and Pavement Markings at an Exit Ramp Termination to Deter Wrong-Way Entry

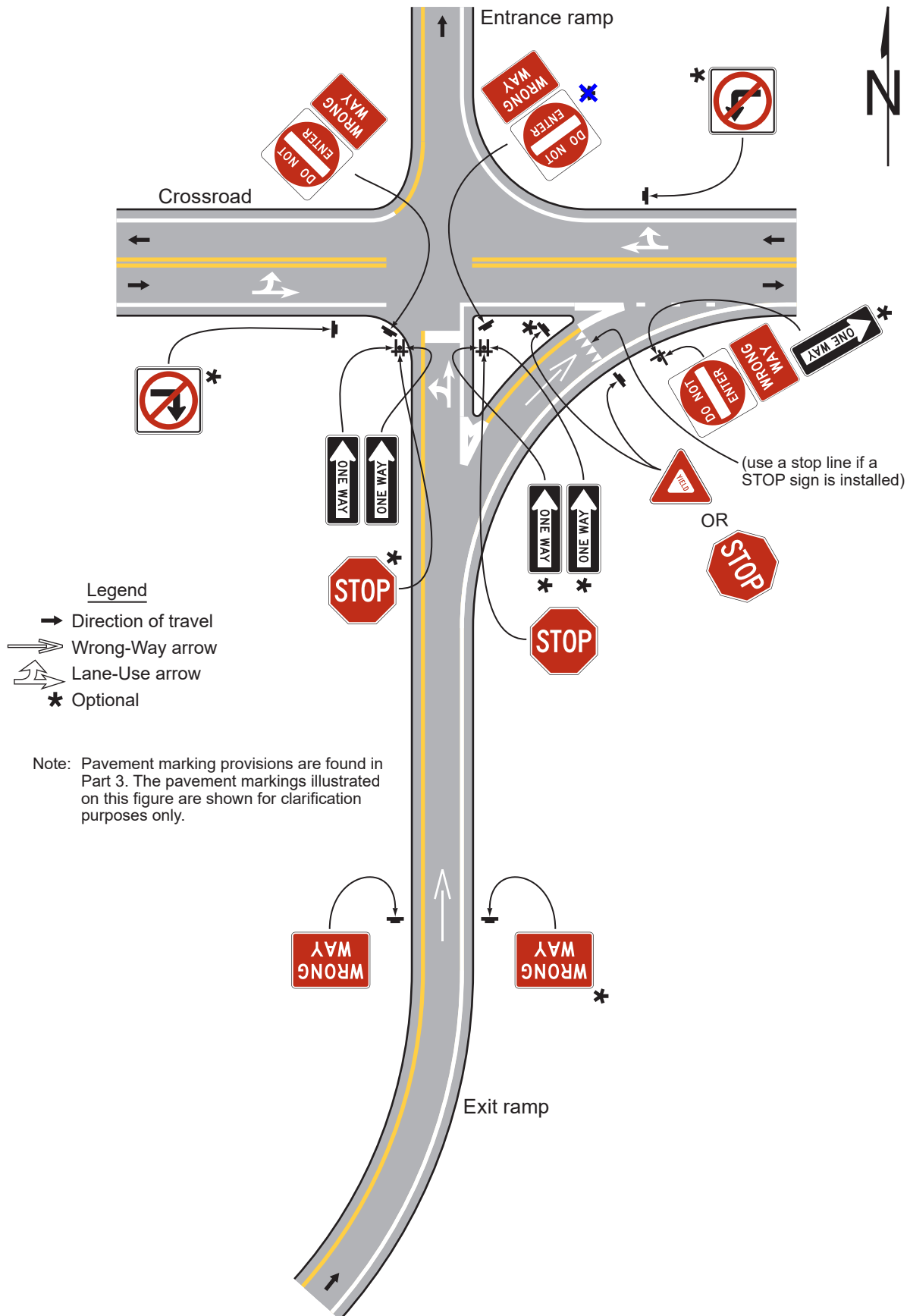


Figure 2B-15(CA). California Example of Application of Regulatory Signing and Pavement Markings at an Exit Ramp Termination to Deter Wrong-Way Entry (Sheet 1 of 5)

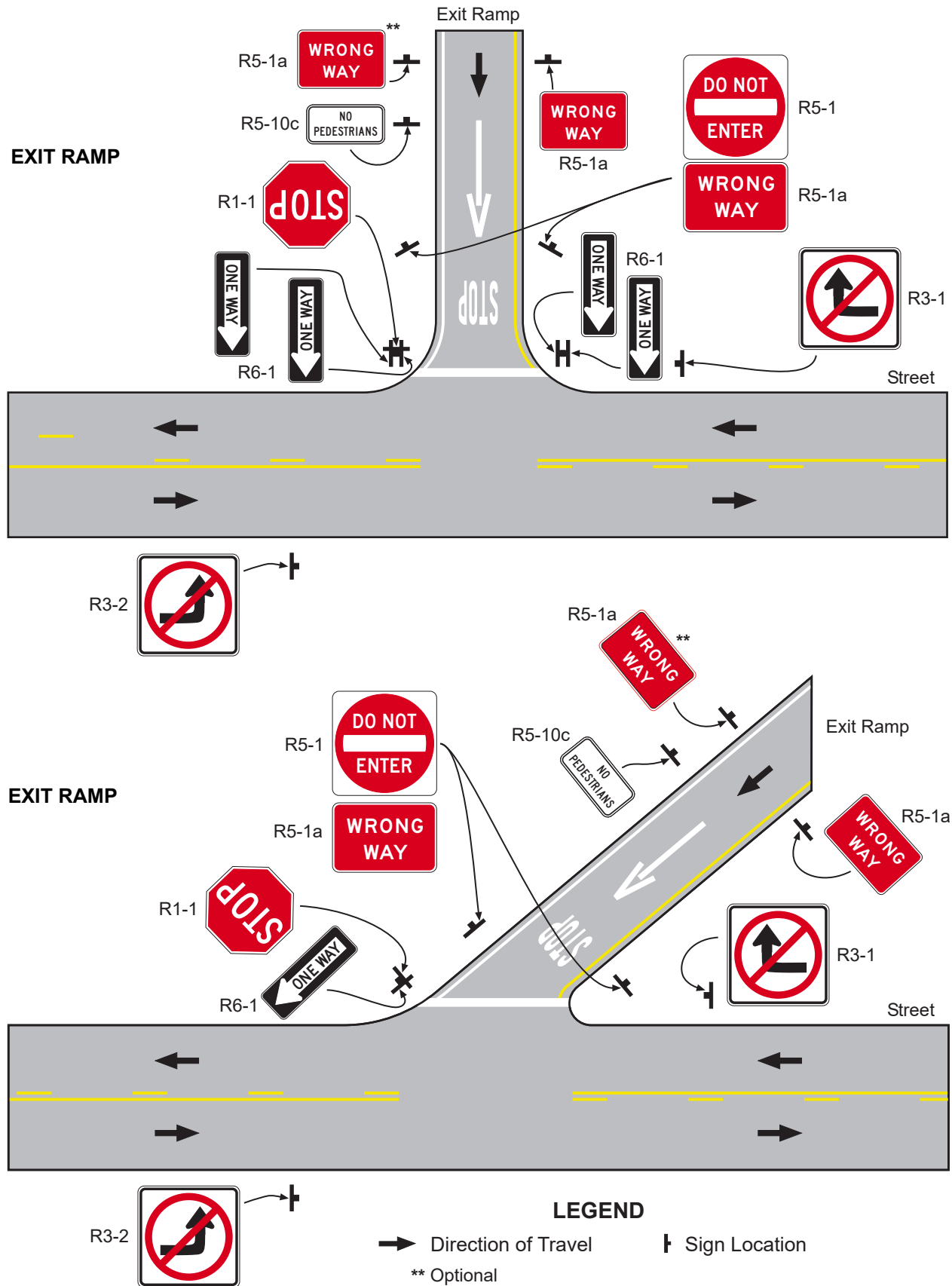


Figure 2B-15(CA). California Example of Application of Regulatory Signing and Pavement Markings at an Exit Ramp Termination to Deter Wrong-Way Entry (Sheet 2 of 5)

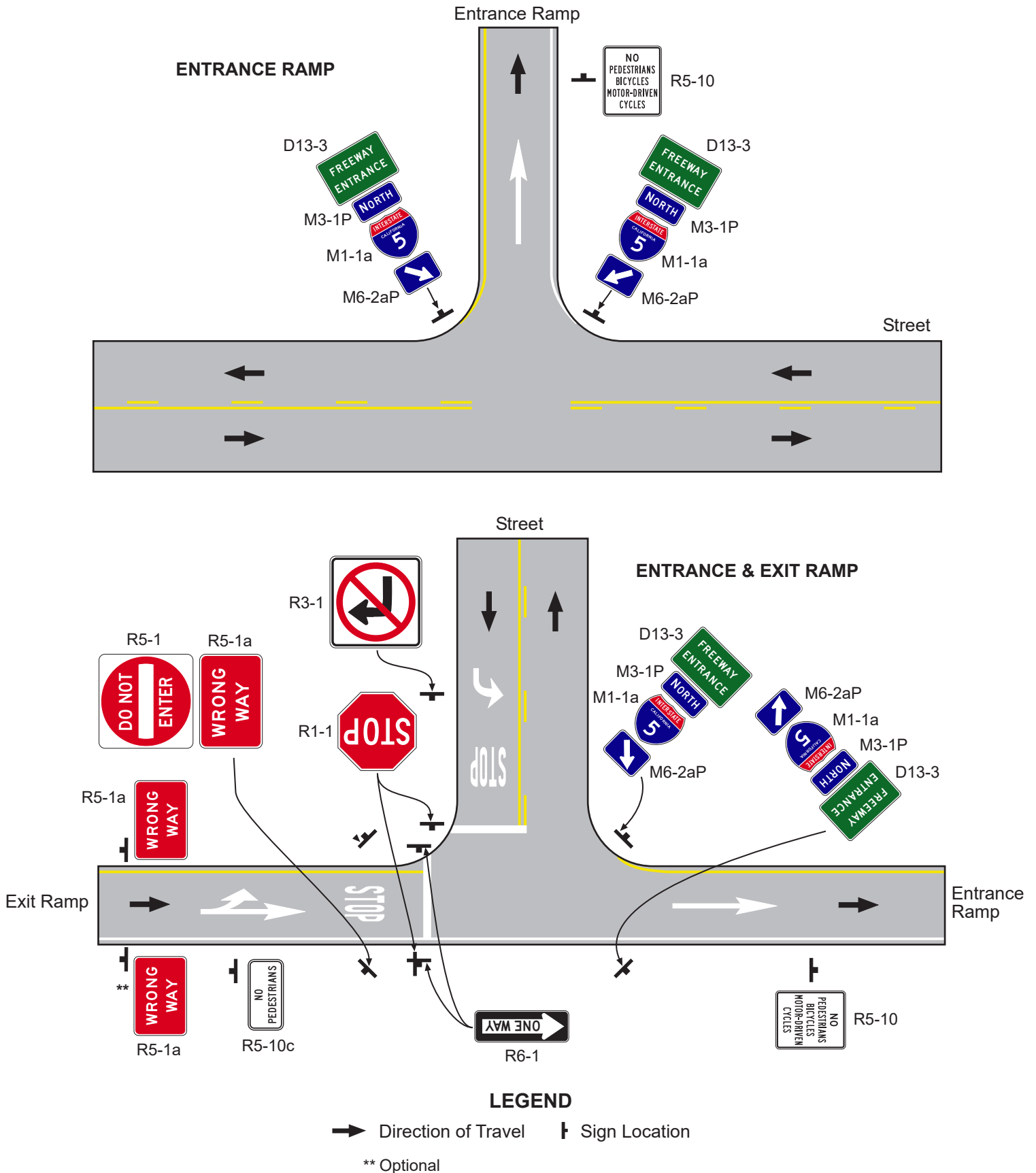


Figure 2B-15(CA). California Example of Application of Regulatory Signing and Pavement Markings at an Exit Ramp Termination to Deter Wrong-Way Entry (Sheet 3 of 5)

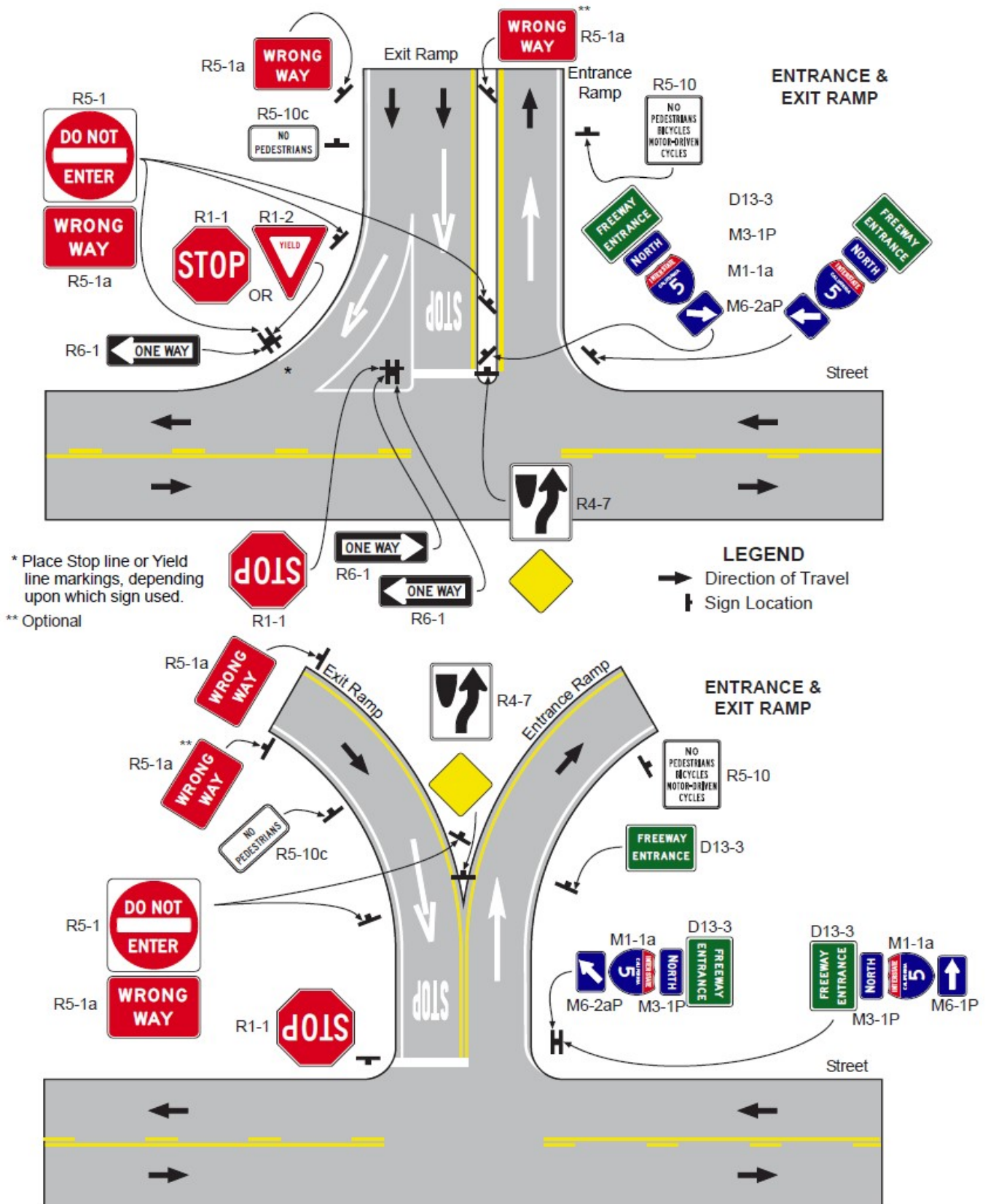


Figure 2B-15(CA). California Example of Application of Regulatory Signing and Pavement Markings at an Exit Ramp Termination to Deter Wrong-Way Entry (Sheet 4 of 5)

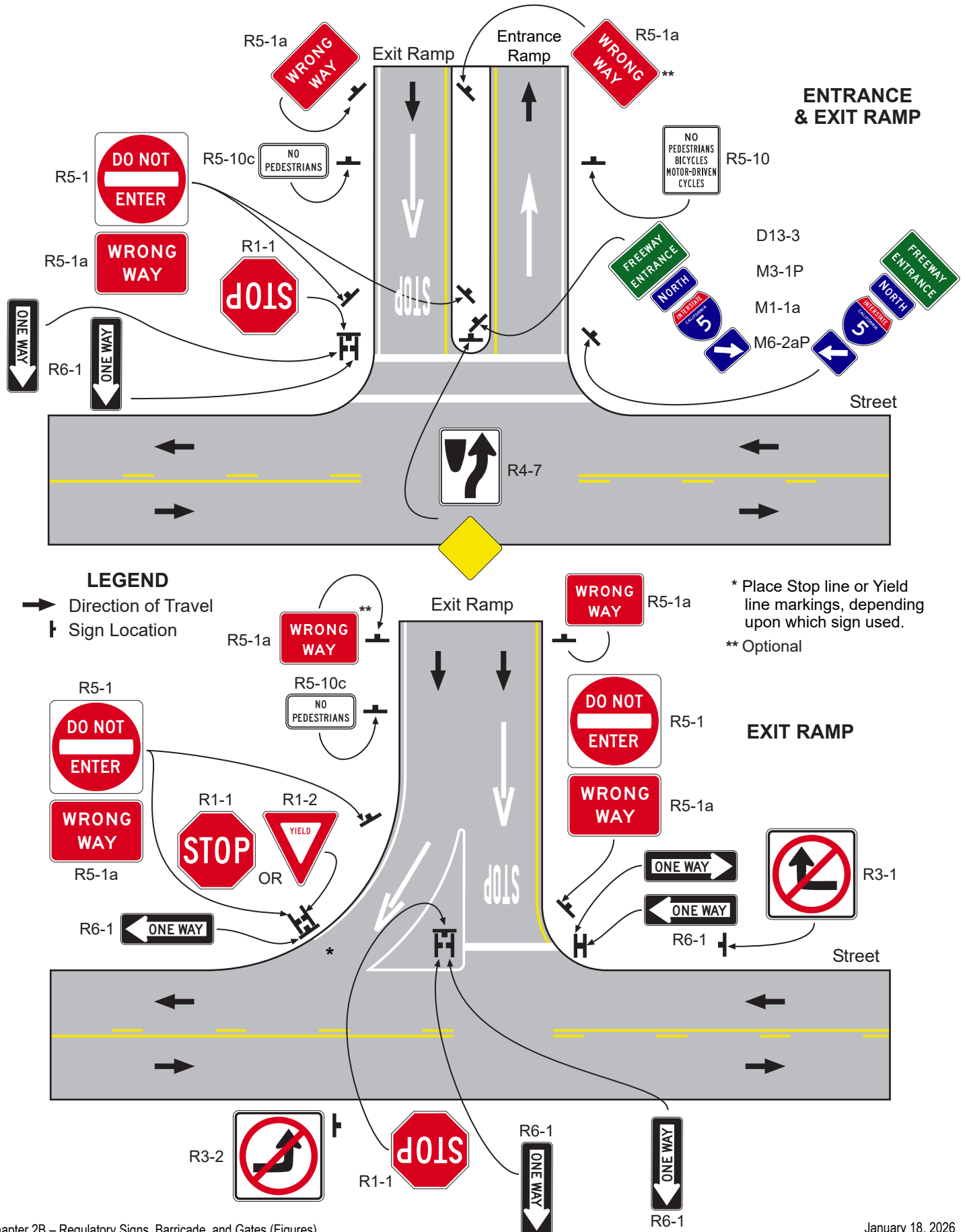


Figure 2B-15(CA). California Example of Application of Regulatory Signing and Pavement Markings at an Exit Ramp Termination to Deter Wrong-Way Entry (Sheet 5 of 5)

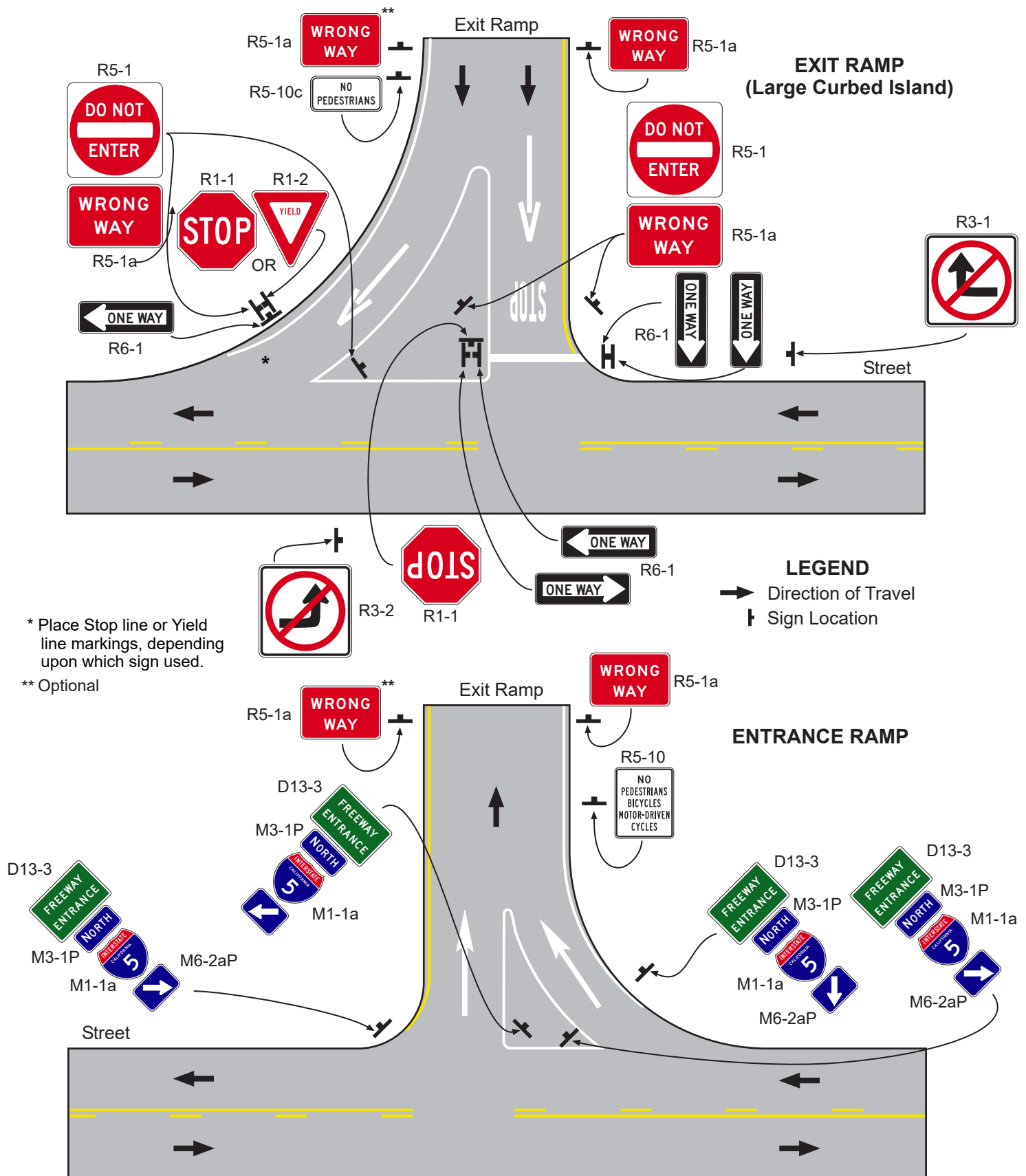


Figure 2B-16. Example of Application of Regulatory Signing and Pavement Markings at an Entrance Ramp Terminal

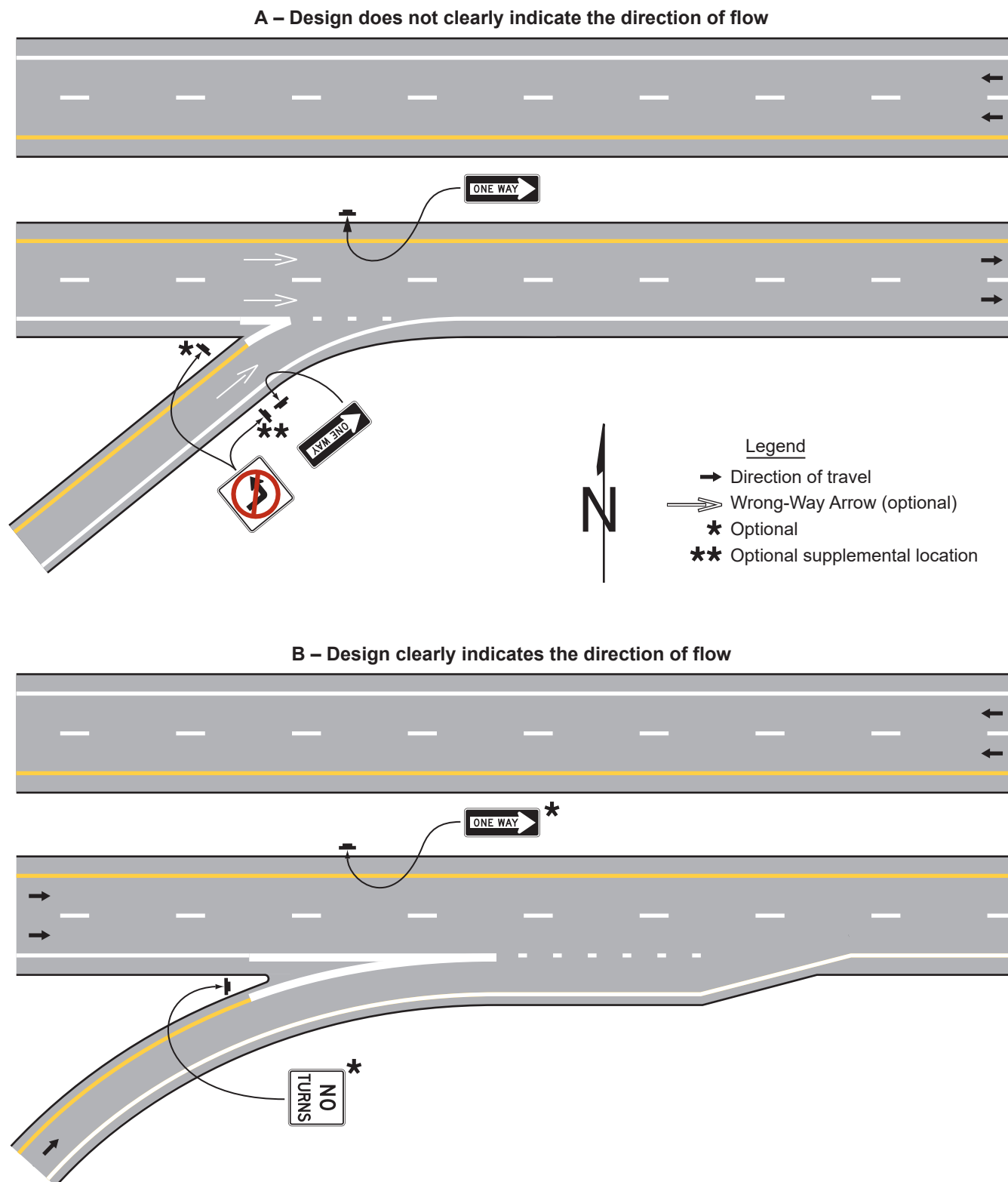
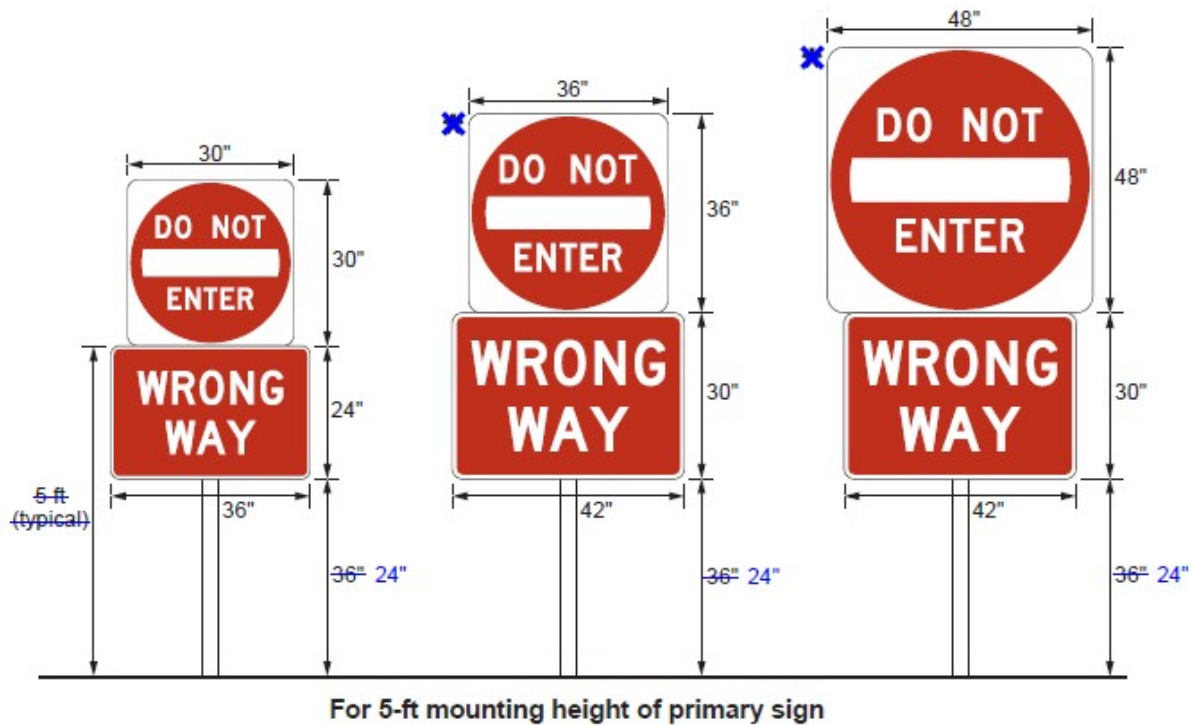
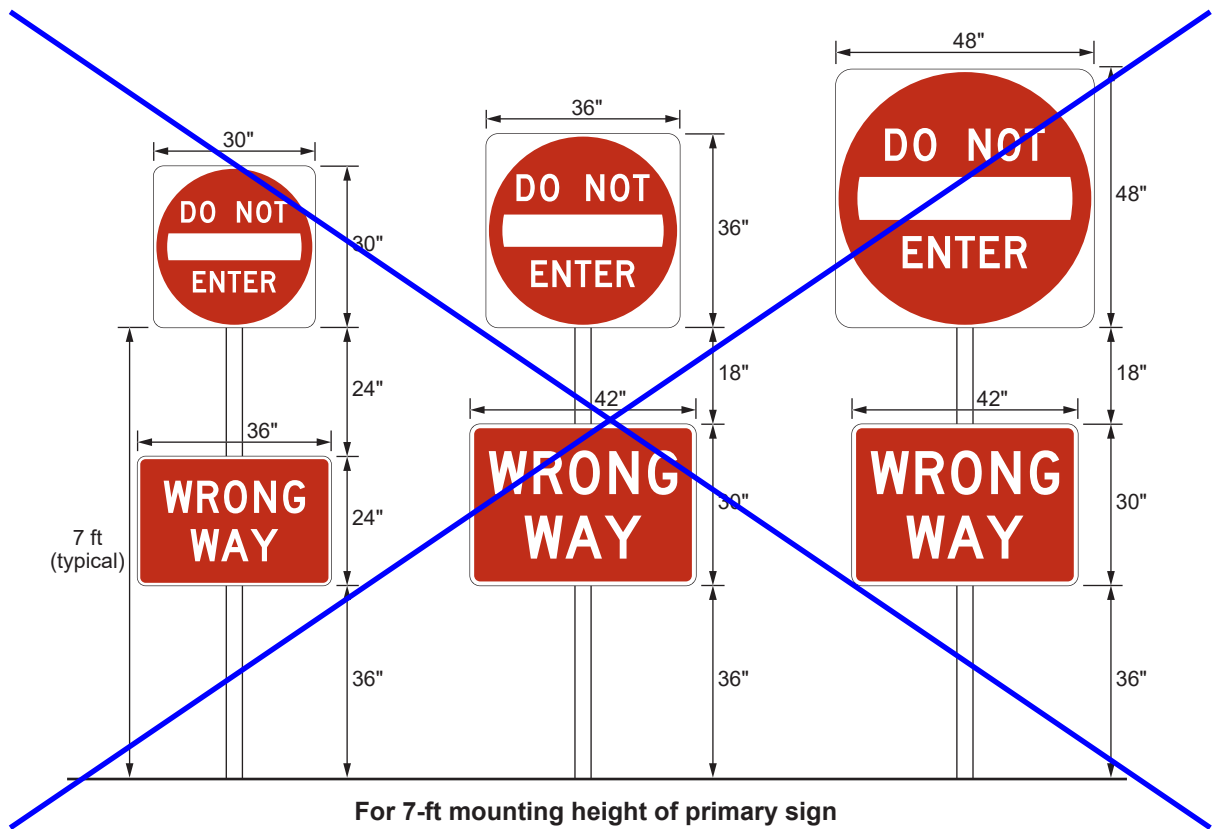


Figure 2B-17. Examples of Low-Mounted WRONG WAY Signs with DO NOT ENTER Signs for Wrong-Way Traffic Control



* Sign is higher than the 5-ft mounting height as the size of the 42" x 30" WRONG WAY sign is controlling.

Note: Pavement markings are shown for clarity only. See Part 3 for pavement marking provisions.

Legend

- * Optional
- Direction of travel

Figure 2B-19. ONE WAY Signing for Divided Highway Crossings that Function as Two Separate Intersections

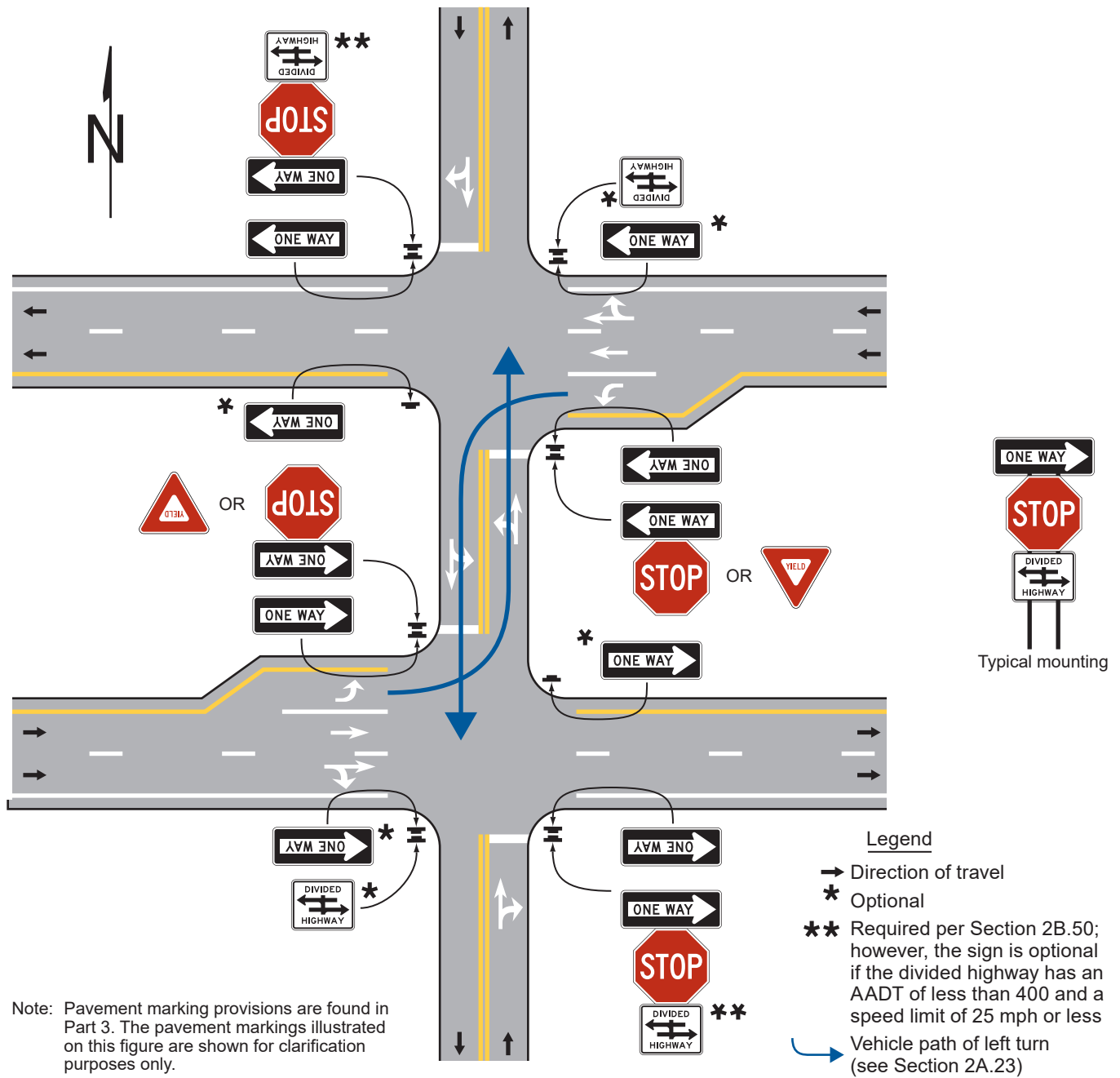


Figure 2B-20. ONE WAY, DO NOT ENTER, and WRONG WAY Signing for Divided Highway Crossings that Function as a Single Intersection

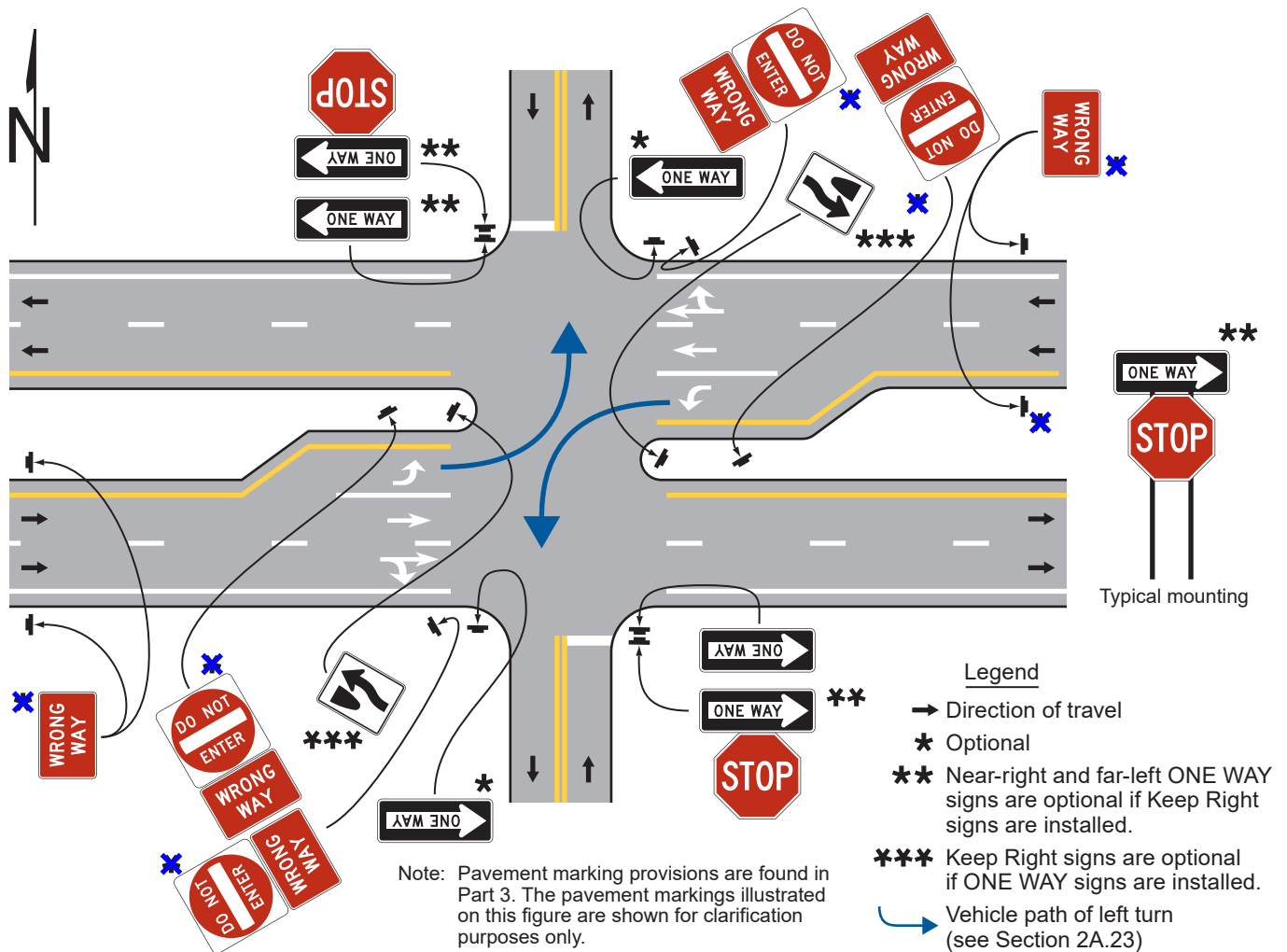


Figure 2B-21. Example of Regulatory and Warning Signs for a Mini-Roundabout

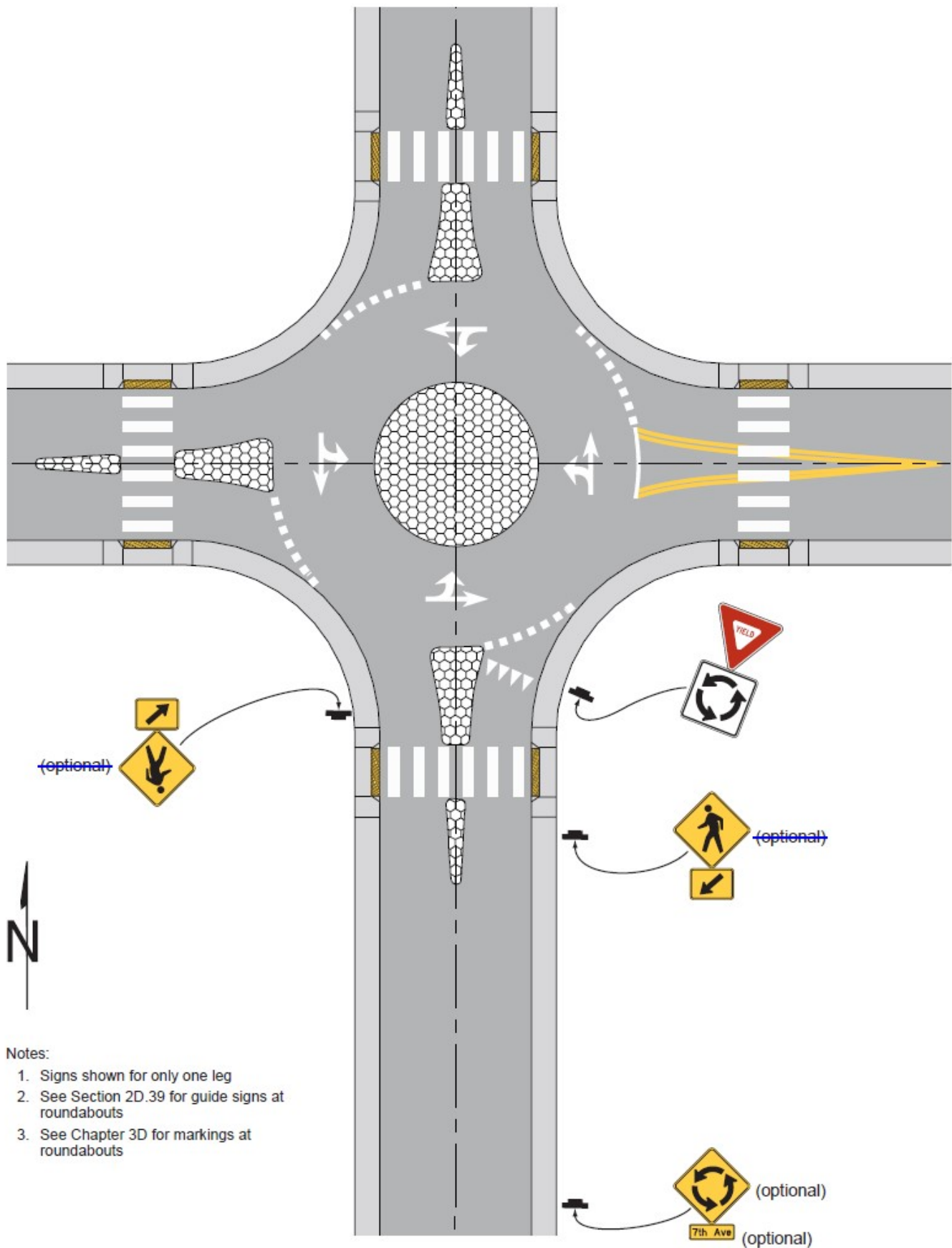


Figure 2B-22. Example of Regulatory and Warning Signs for a One-Lane Roundabout

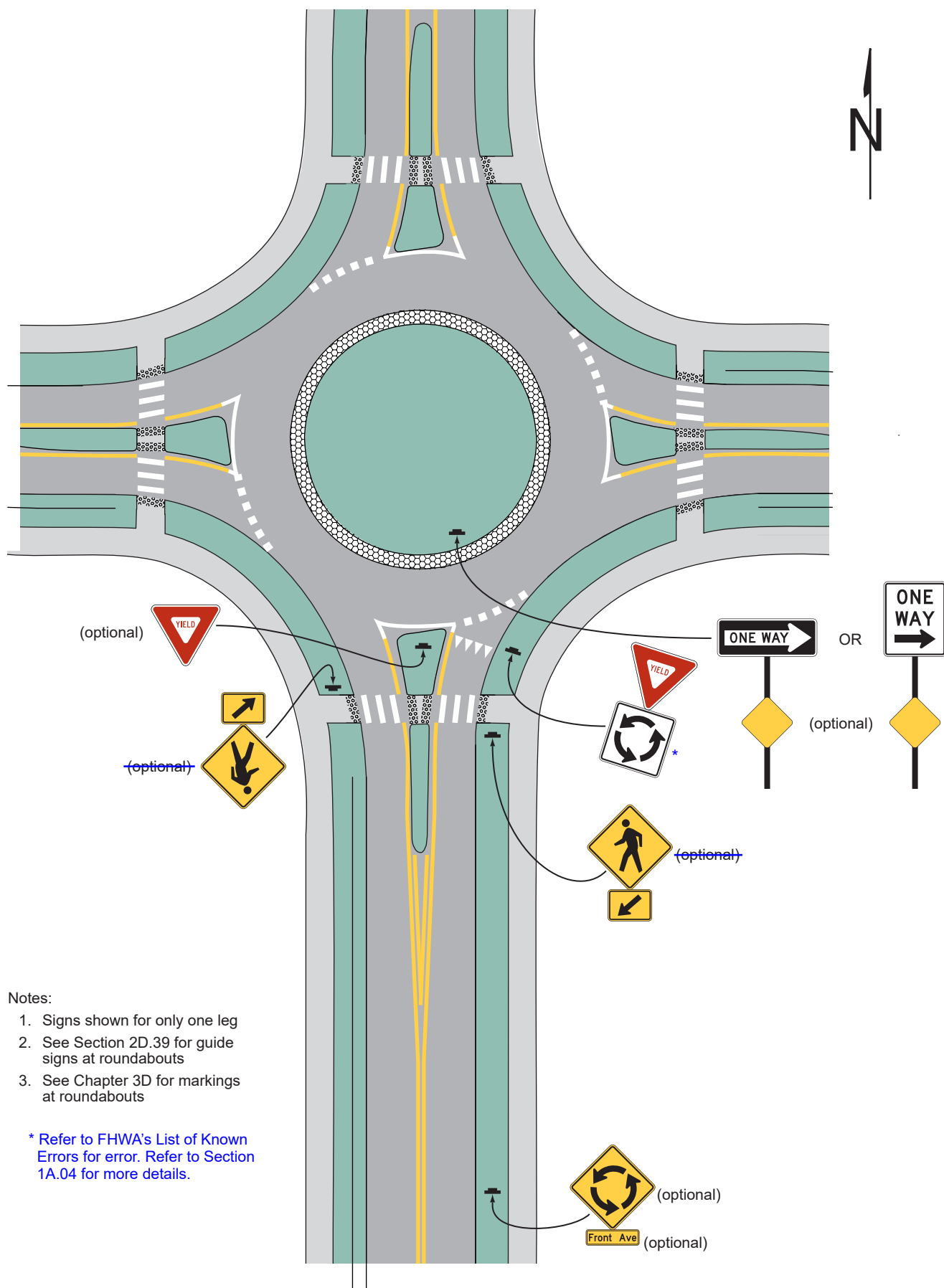


Figure 2B-23. Example of Regulatory and Warning Signs for a Two-Lane Roundabout with Consecutive Double Lefts

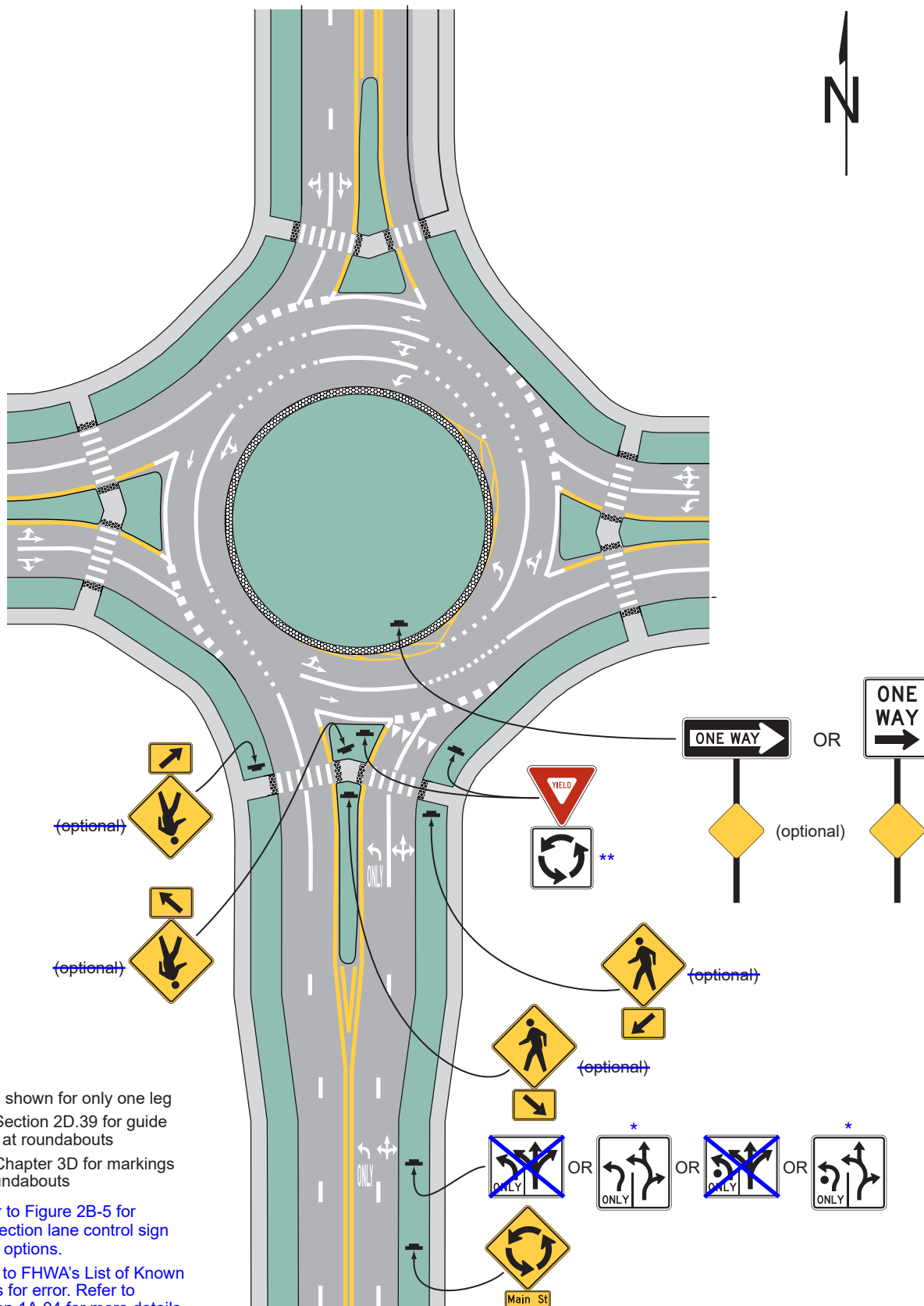
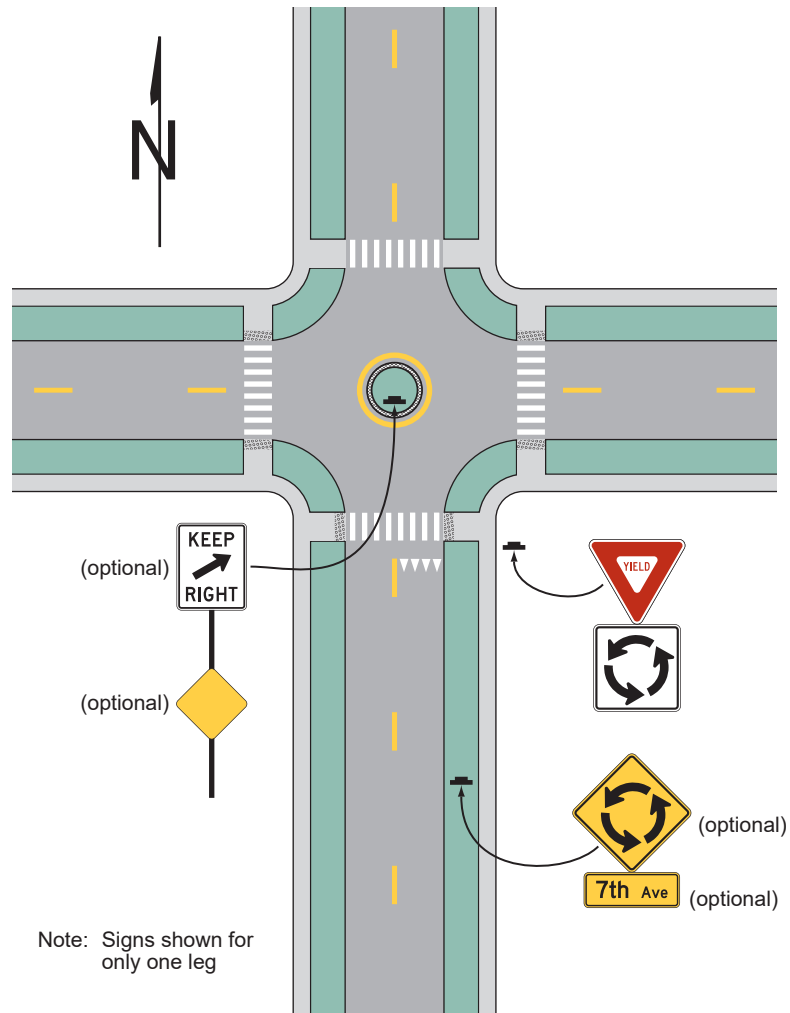
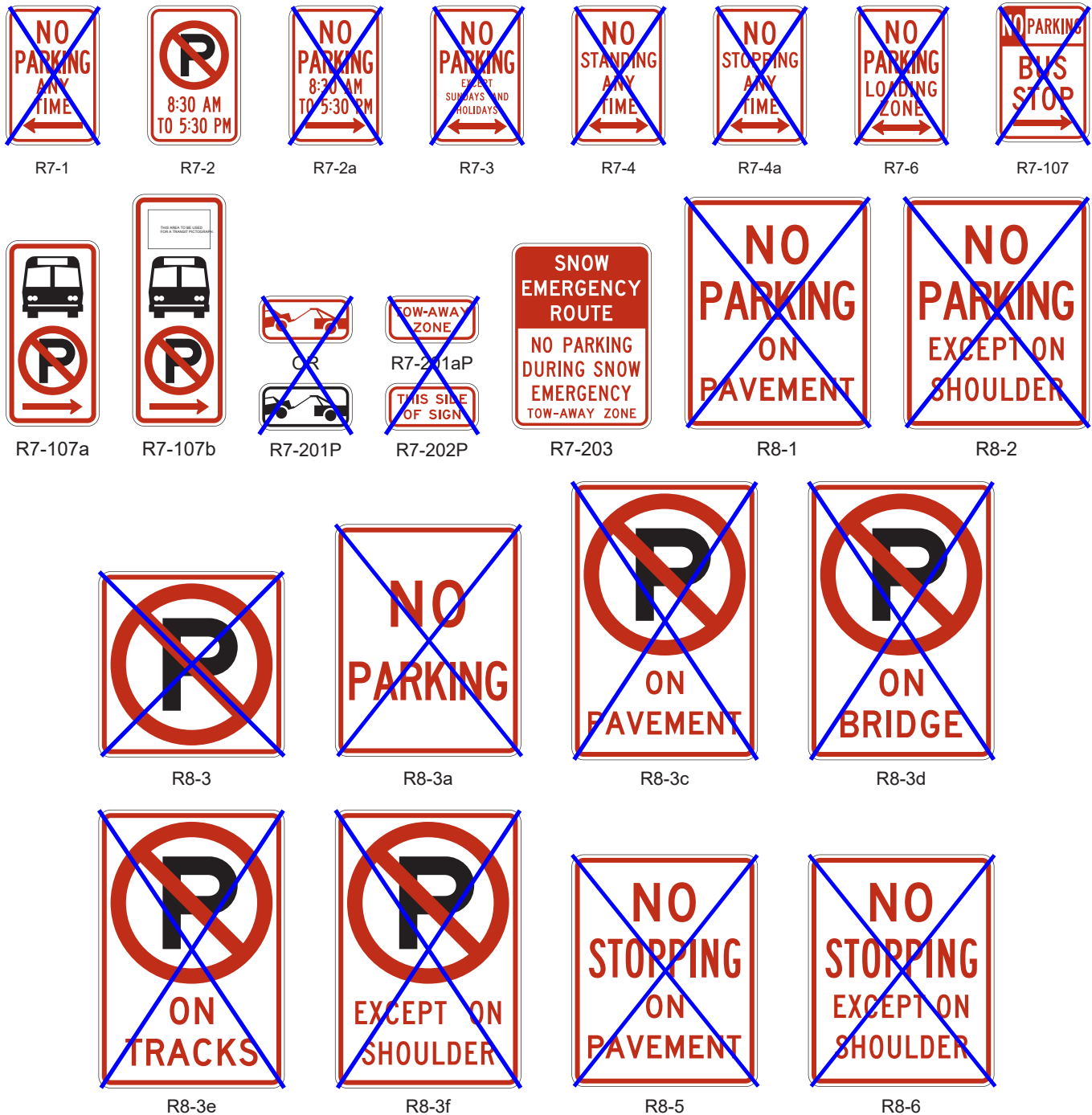


Figure 2B-24. Example of Regulatory and Warning Signs for a Neighborhood Traffic Circle



**Figure 2B-25. Parking, Standing, and Stopping Signs and Plaques
(R7 and R8 Series) (Sheet 1 of 2)**

A – Prohibited parking, standing, and stopping signs and plaques

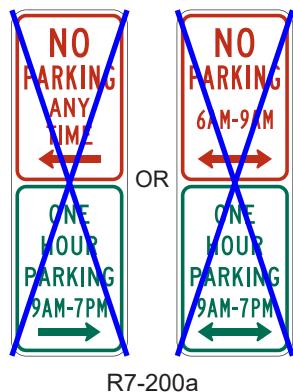


B – Permissive parking signs and plaques

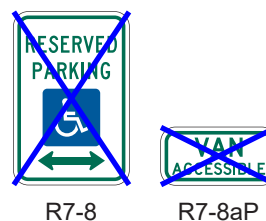


**Figure 2B-25. Parking, Standing, and Stopping Signs and Plaques
(R7 and R8 Series) (Sheet 2 of 2)**

C – Combination parking signs



D – Accessible parking signs and plaques



E – Electric vehicle parking and charging signs and plaques

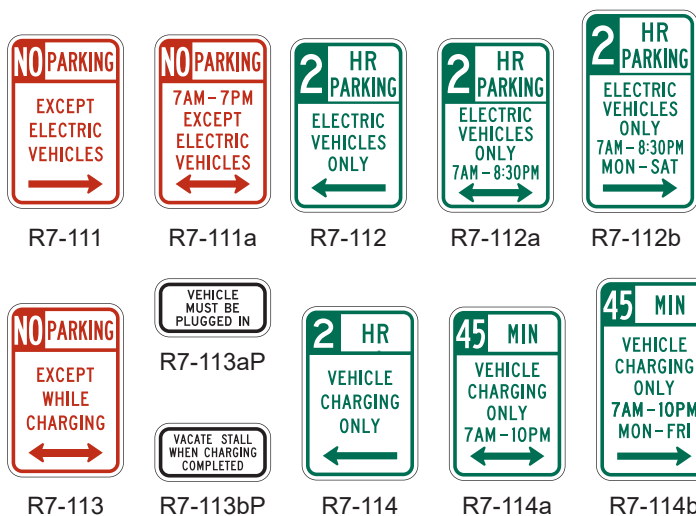


Figure 2B-25(CA). California Parking, Standing, and Stopping Signs and Plaques (Sheet 1 of 3)



R22(CA)



R24(CA)



R24A(CA)



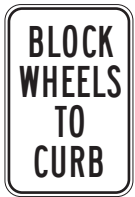
R24B(CA)



R24C(CA)



R24D(CA)



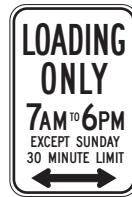
R24E(CA)



R24F(CA)



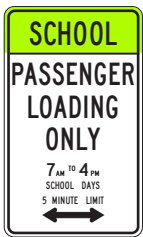
R25(CA)



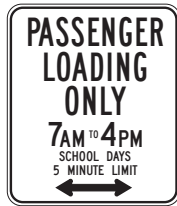
R25A-1(CA)



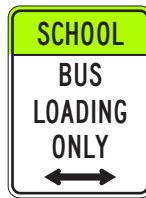
R25C(CA)



R25D-1(CA)



R25E(CA)



R25F-1(CA)



R25H-1(CA)



R25J(CA)



R26(CA)



R26(S)(CA)



R26A(CA)



R26A(S)(CA)



R26F(CA)



R26K(CA)



R26L(CA)



R26M(CA)



R26M-1(CA)



R27(CA)



R27A(CA)

Figure 2B-25(CA). California Parking, Standing, and Stopping Signs and Plaques (Sheet 2 of 3)



R28(CA)



R28(S)(CA)



R28A(CA)



R28A(S)(CA)



R28C(CA)



R28D(CA)



R28D(S)(CA)



R28E(CA)



R28F(CA)



R29(CA)



R30(CA)



R30A(CA)



R30B(CA)



R30C(CA)



R30D(CA)



R30E(CA)



R30F(CA)



R31(CA)



R31(S)(CA)



R32(CA)



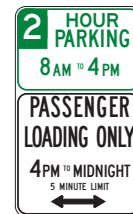
R32B(CA)



R32C(CA)



R32D(CA)



R32E(CA)



R32F(CA)

The image displays 30 California traffic signs, organized in a grid. Each sign is shown with its corresponding alphanumeric code in parentheses below it.

- Row 1:**
 - R37(CA): TOW AWAY NO STOPPING 7 TO 9 AM 4 TO 6 PM NO PARKING 9 AM TO 4 PM
 - R38(CA): TOW AWAY NO PARKING 4 AM TO 5 AM 2 HOUR PARKING 9 AM TO 6 PM
 - R38(S)(CA): TOW AWAY NO STOPPING 7 TO 9 AM 4 TO 6 PM 1 HOUR PARKING 9 AM TO 4 PM
 - R38A(CA): TOW-AWAY NO STOPPING 7AM-9AM PASSENGER LOADING ONLY ALL OTHER TIMES 5 MINUTE LIMIT
 - R39(CA): NO PARKING OF COMMERCIAL VEHICLES EXCEPT BY PERMIT
 - R39-1(CA): NO DOUBLE PARKING ANYTIME COMMERCIAL VEHICLES INCLUDED
- Row 2:**
 - R39-2(CA): NO DOUBLE PARKING ANYTIME COMMERCIAL VEHICLES INCLUDED
 - R39-3(CA): 10 HOUR PARKING COMMERCIAL MOTOR VEHICLES CVC 22651(s)2
 - R74(CA): CHAIN INSTALLATION ONLY
 - R75(CA): CHAINS REQUIRED 1 MILE AHEAD
 - R76(CA): CHAINS REQUIRED
 - R76-1(CA): ON SINGLE AXLE DRIVE VEHICLE WITH TRAILER
 - R77(CA): NO EXCEPTIONS
 - R78(CA): END CHAIN CONTROL
- Row 3:**
 - R79(CA): AUTOS & PICKUPS SNOW TIRES OK CARRY CHAINS
 - R80-1(CA): 4 W DRIVE WITH SNOW TIRES OK CARRY CHAINS
 - R99(CA): PARKING ONLY
 - R99B(CA): MINIMUM FINE \$250
 - R99C(CA): PARKING ONLY MINIMUM FINE \$250
 - R7-8bP(CA): VAN ACCESSIBLE
 - R100A(CA): TOW-AWAY SPECIAL PLACARD OR LICENSE PLATE REQUIRED
- Row 4:**
 - R100B(CA): UNAUTHORIZED VEHICLES PARKED IN DESIGNATED ACCESSIBLE SPACES NOT DISPLAYING DISTINGUISHING PLACARDS OR SPECIAL LICENSE PLATES ISSUED FOR PERSONS WITH DISABILITIES WILL BE TOWED AWAY AT THE OWNER'S EXPENSE TOWED VEHICLES MAY BE RECLAIMED AT (Insert Address) OR BY TELEPHONING (Insert Telephone Number)
 - R107(CA): NO STOPPING 4 TO 6 PM EXCEPT SATURDAY & SUNDAY TO RECOVER IMPOUNDED VEHICLE CALL 3-1-1
 - R108(CA): NO PARKING OF VEHICLES FOR SALE
 - R109(CA): PAY AT STATION
 - R112(CA): UNAUTHORIZED VEHICLES NOT CONNECTED FOR ELECTRIC CHARGING PURPOSES WILL BE TOWED AWAY AT THE OWNER'S EXPENSE RECLAIM TOWED VEHICLES AT (Insert Address) OR BY TELEPHONING (Insert Telephone Number) CVC 22511
 - R113(CA): NO PARKING EXCEPT FOR EV CHARGING
 - R113A(CA): NO PARKING EXCEPT FOR ELECTRIC VEHICLE CHARGING
- Row 5:**
 - R114(CA): 4 HOUR EV CHARGING 8AM TO 6PM
 - R114A(CA): 4 HOUR ELECTRIC VEHICLE CHARGING 8AM TO 6PM
 - SR20-1(CA): SNOW NOT REMOVED BEYOND HERE
 - SR26(CA): DISPLAY OF VEHICLES FOR SALE PROHIBITED
 - SR49(CA): TOW AWAY NO PARKING WHEN SNOW REMOVAL CONDITIONS EXIST COUNTY ORD. NO. 00-000
 - SR62(CA): NO IDLING COMMERCIAL VEHICLES AND ALL BUSES 13 CCR 2480 & 2485 PENALTIES APPLY
 - SR63(CA): NO IDLING 13 CCR 2480 & 2485 PENALTIES APPLY
 - SR63A(CA): NO IDLING 13 CCR 2480 & 2485 PENALTIES APPLY REPORT VIOLATIONS 1-800-XXX-XXXX

Figure 2B-26. Emergency Restriction Signs



Figure 2B-27. Pedestrian Signs and Plaques (Sheet 1 of 2)



Figure 2B-27. Pedestrian Signs and Plaques (Sheet 2 of 2)

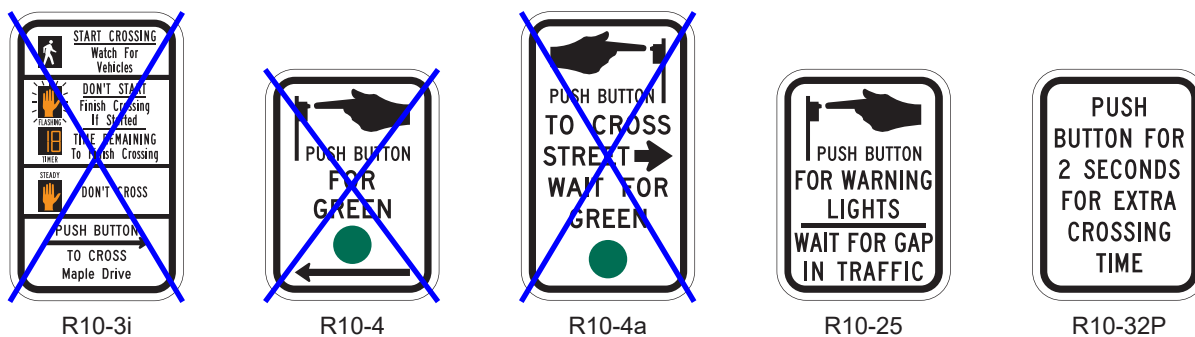
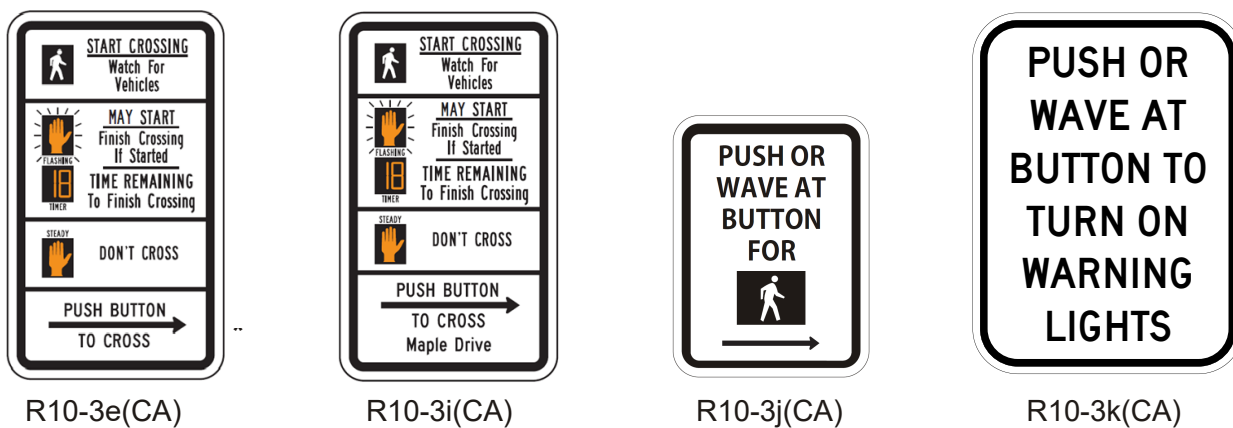


Figure 2B-27(CA). California Pedestrian Signs and Plaques



* The bottom portion of the panel shall not be used where the pedestrian signal timing is non-actuated and the pedestrian push button is used solely to activate accessible pedestrian signals.

Figure 2B-28. Traffic Signal Signs and Plaques (Sheet 1 of 2)

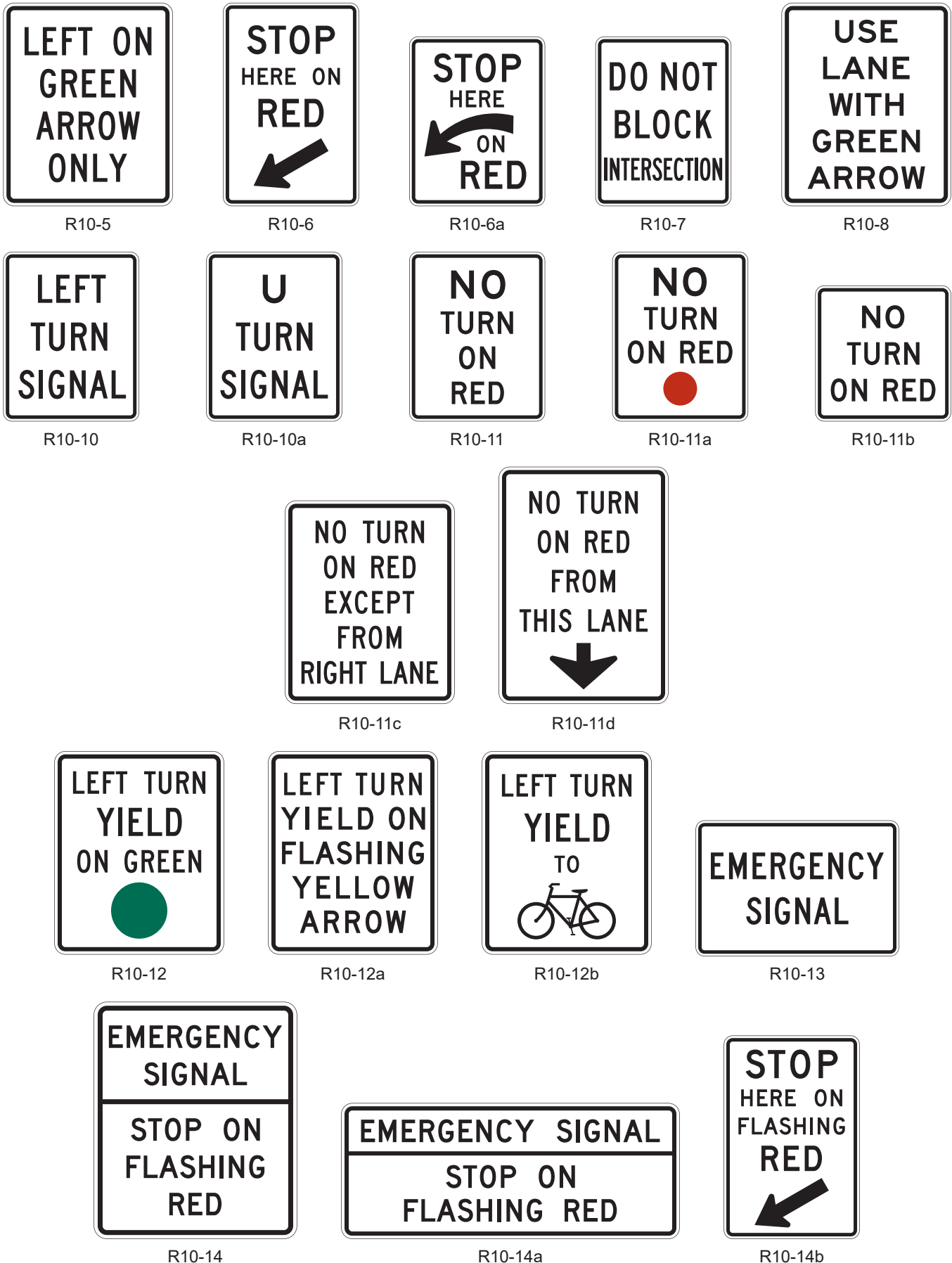


Figure 2B-28. Traffic Signal Signs and Plaques (Sheet 2 of 2)

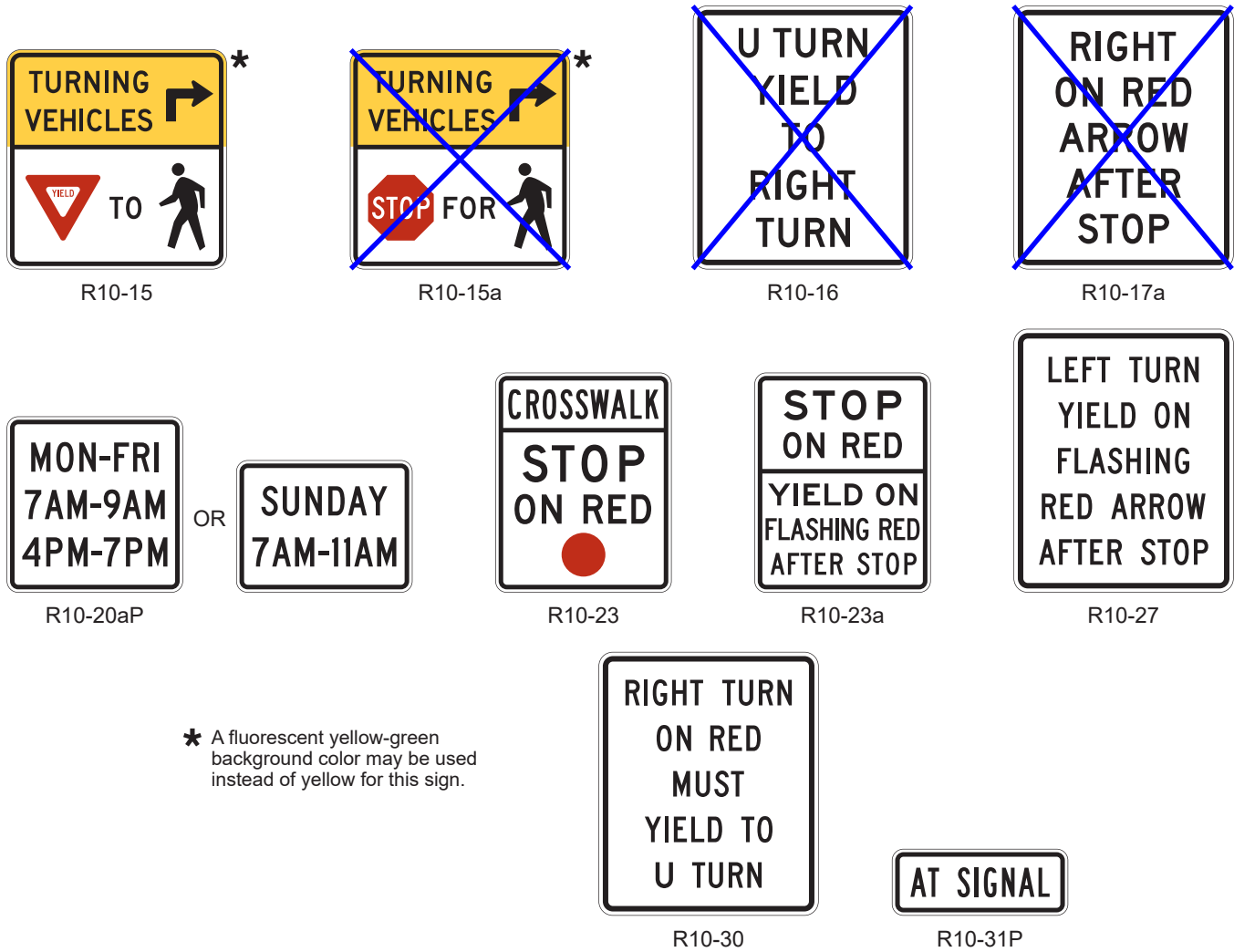


Figure 2B-28(CA). California Traffic Signal Signs and Plaques



Figure 2B-29. Ramp Metering Signs



R10-28



R10-29

Figure 2B-29(CA). California Ramp Metering Signs



R89A(CA)

Figure 2B-30. Road Closed and Weight Limit Signs

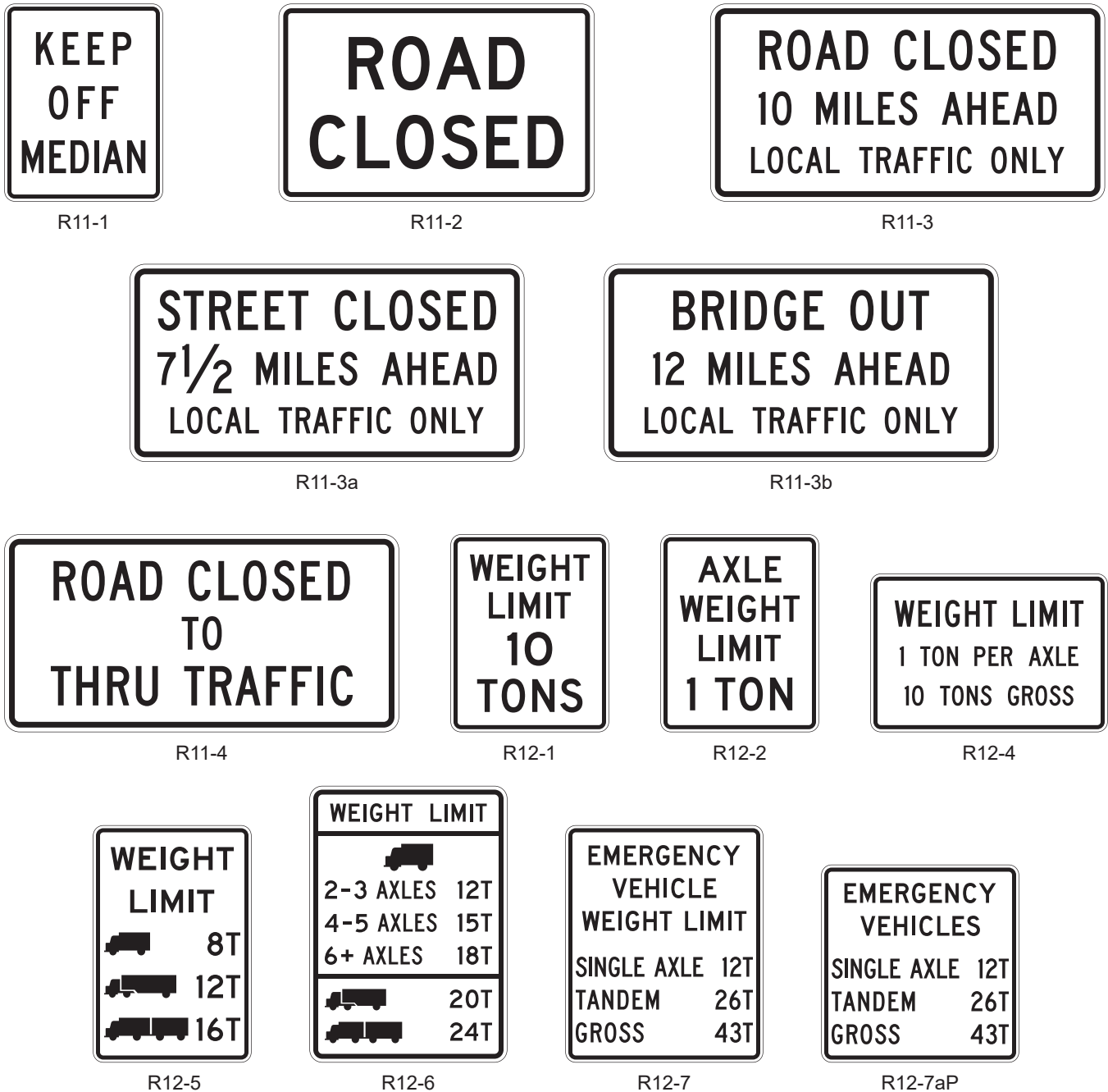


Figure 2B-30(CA). California Road Closed and Weight Limit Signs

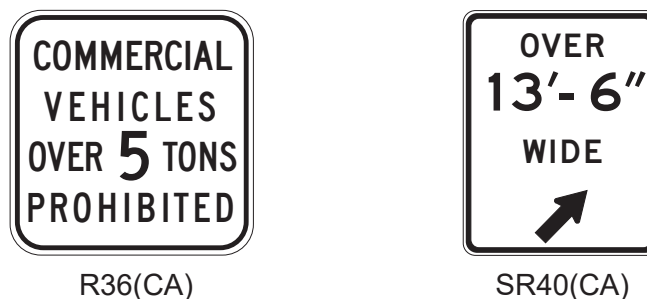


Figure 2B-31. Truck Signs

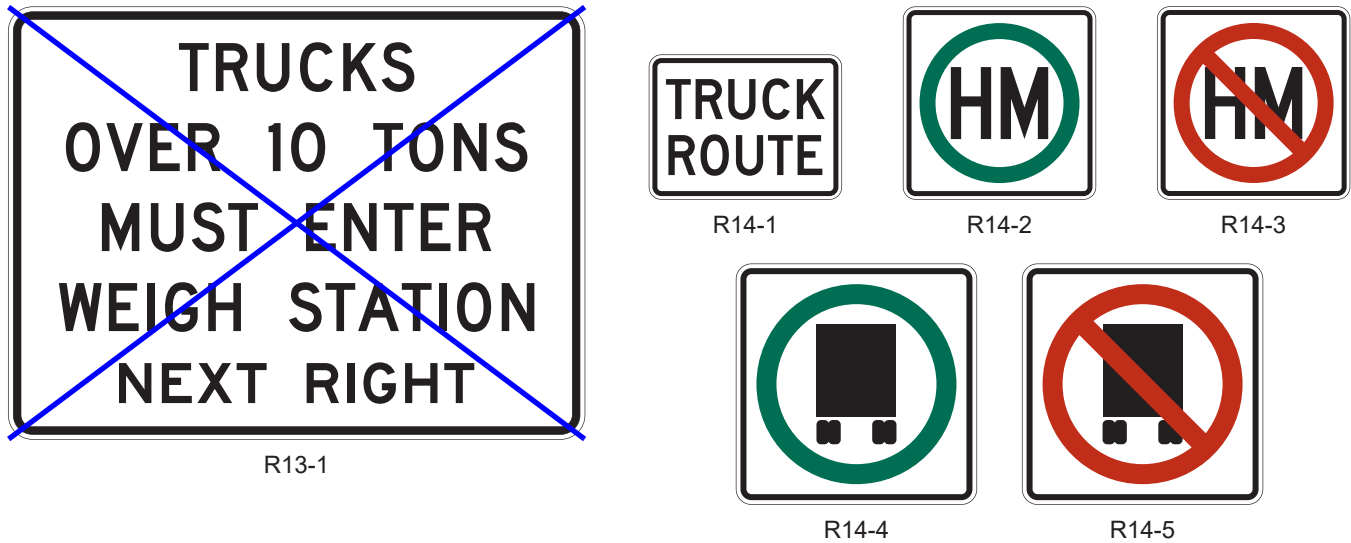


Figure 2B-31(CA). California Truck Signs

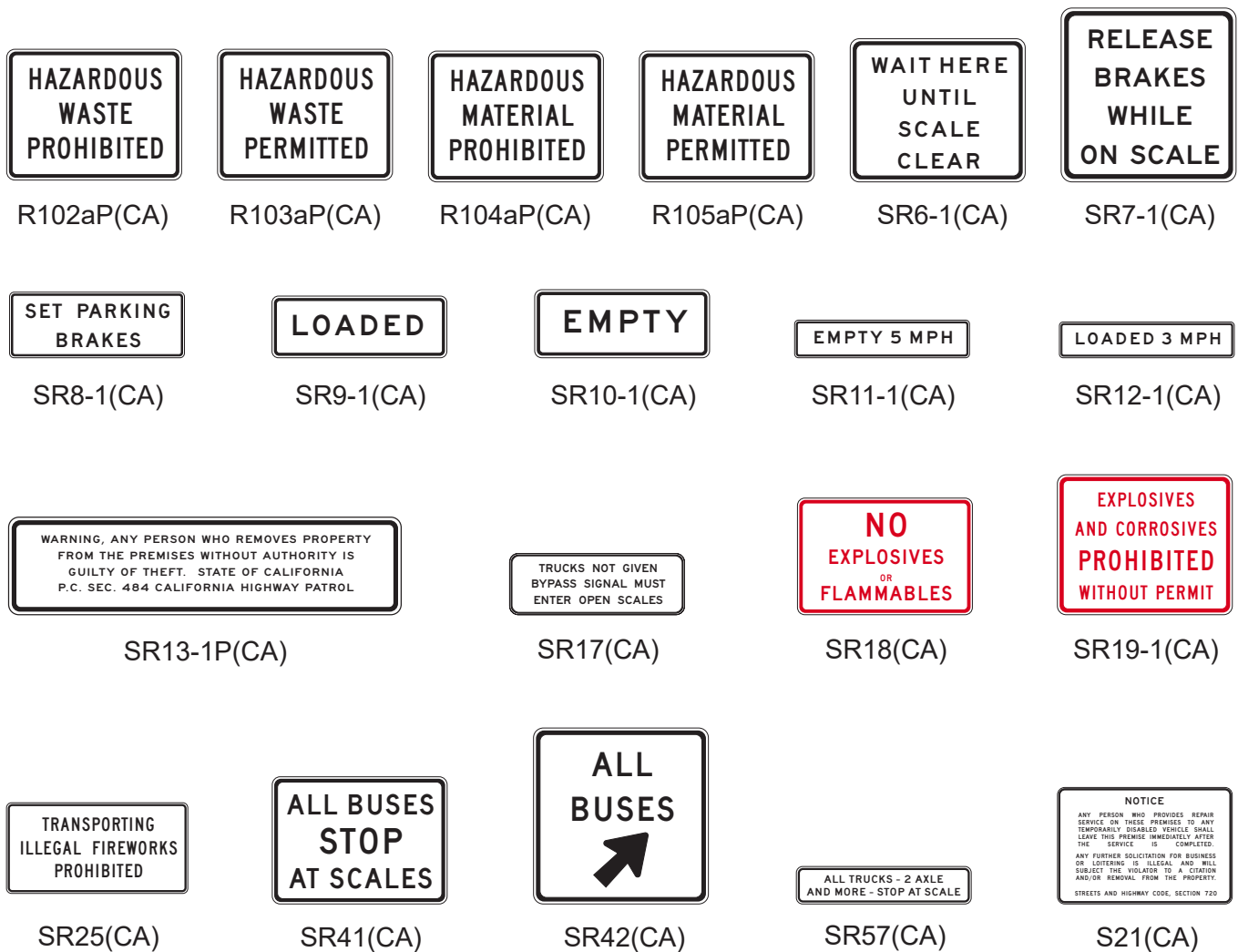


Figure 2B-32. Photo Enforcement Signs and Plaques

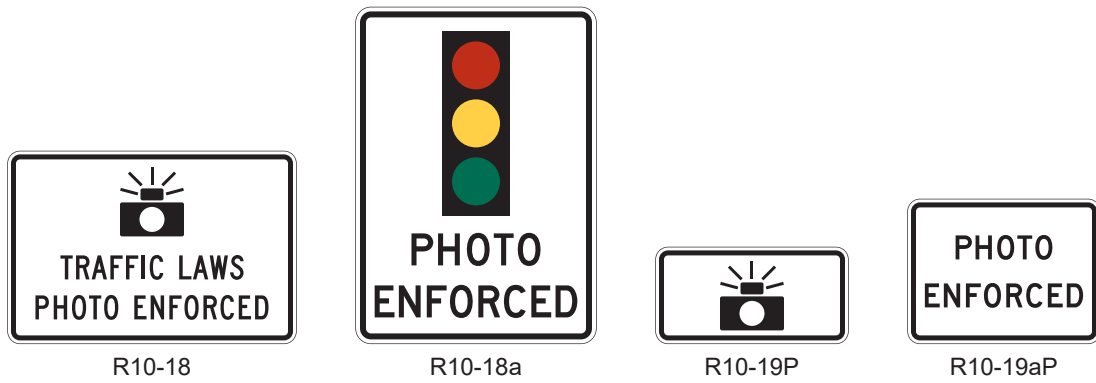


Figure 2B-33. Other Regulatory Signs

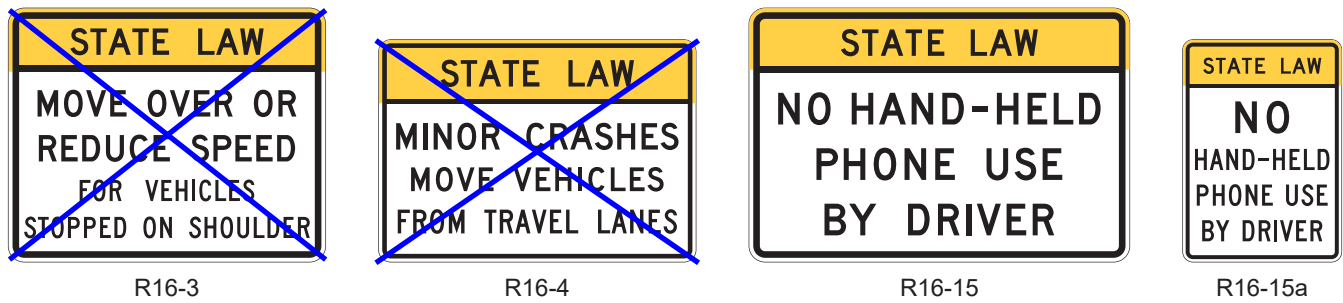


Figure 2B-33(CA). California Other Regulatory Signs



Figure 2B-34. Headlight Use Signs

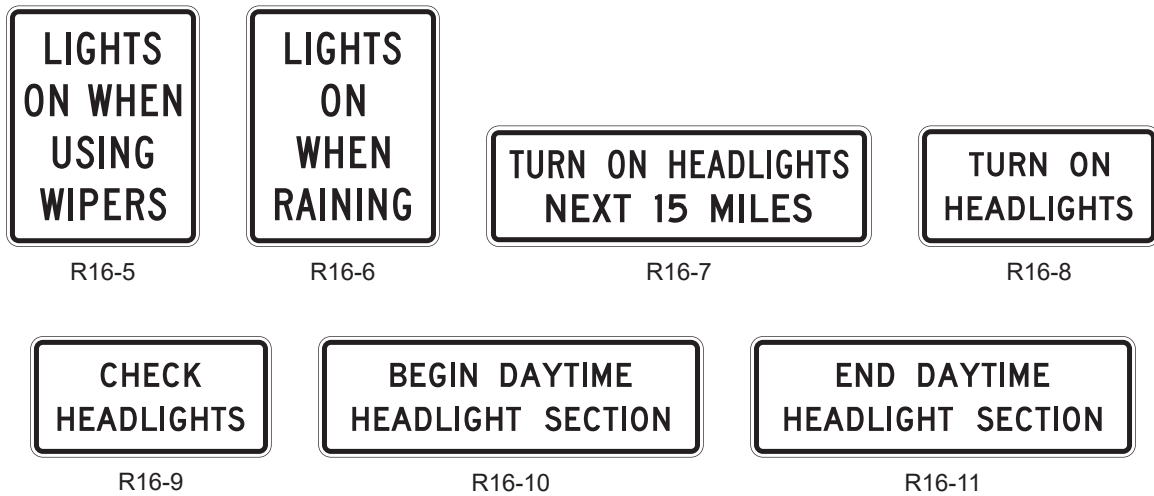
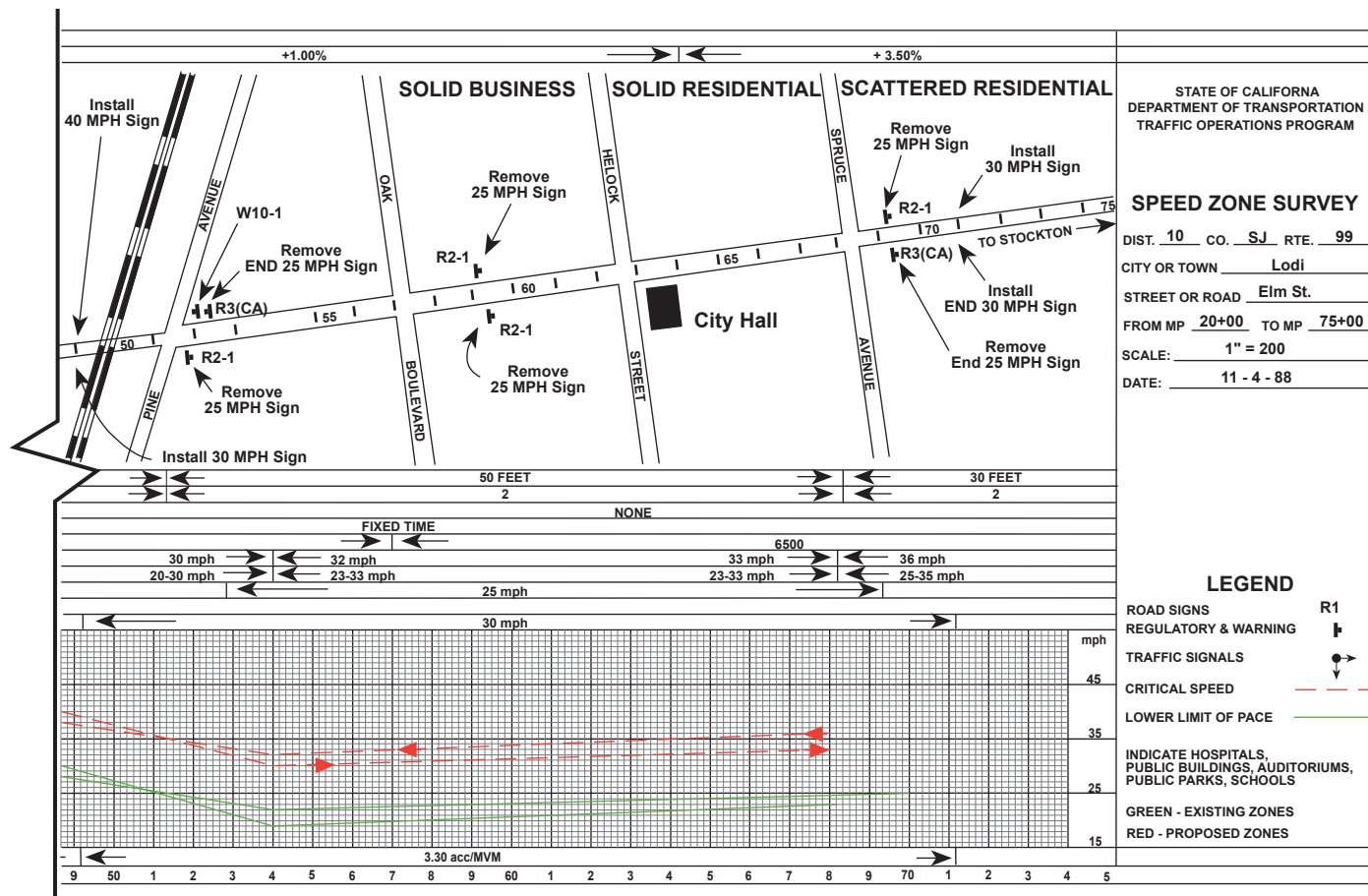


Figure 2B-34(CA). California Headlight Use Signs



ALIGNMENT GRADIENT	← R2000 P.T. → ← R1000 L.T. →	
REMARKS		
ROADWAY WIDTH	50 FEET	
NO. OF STRIPED LANES	2	
TYPE OF DIVISION STRIP	NONE	
TRAFFIC SIGNAL DATA		
AVERAGE DAILY TRAFFIC	5000	
OBSERVED SPEED-CRITICAL	44 mph	
OBSERVED SPEED-PAVE	34-44 mph	
EXISTING SIGNED ZONE		
PROPOSED SPEED LIMIT	40 mph	
ACCIDENT RATE	3.46 acc/MVM	
DISTANCE IN METERS	20 1 2 3 4 5 6 7 8 9 30 1 2 3 4 5 6 7 8 40 1 2 3 4 5 6 7 8	



Chapter 2B – Regulatory Signs, Barricade, and Gates (Figures)

Part 2 Signs

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

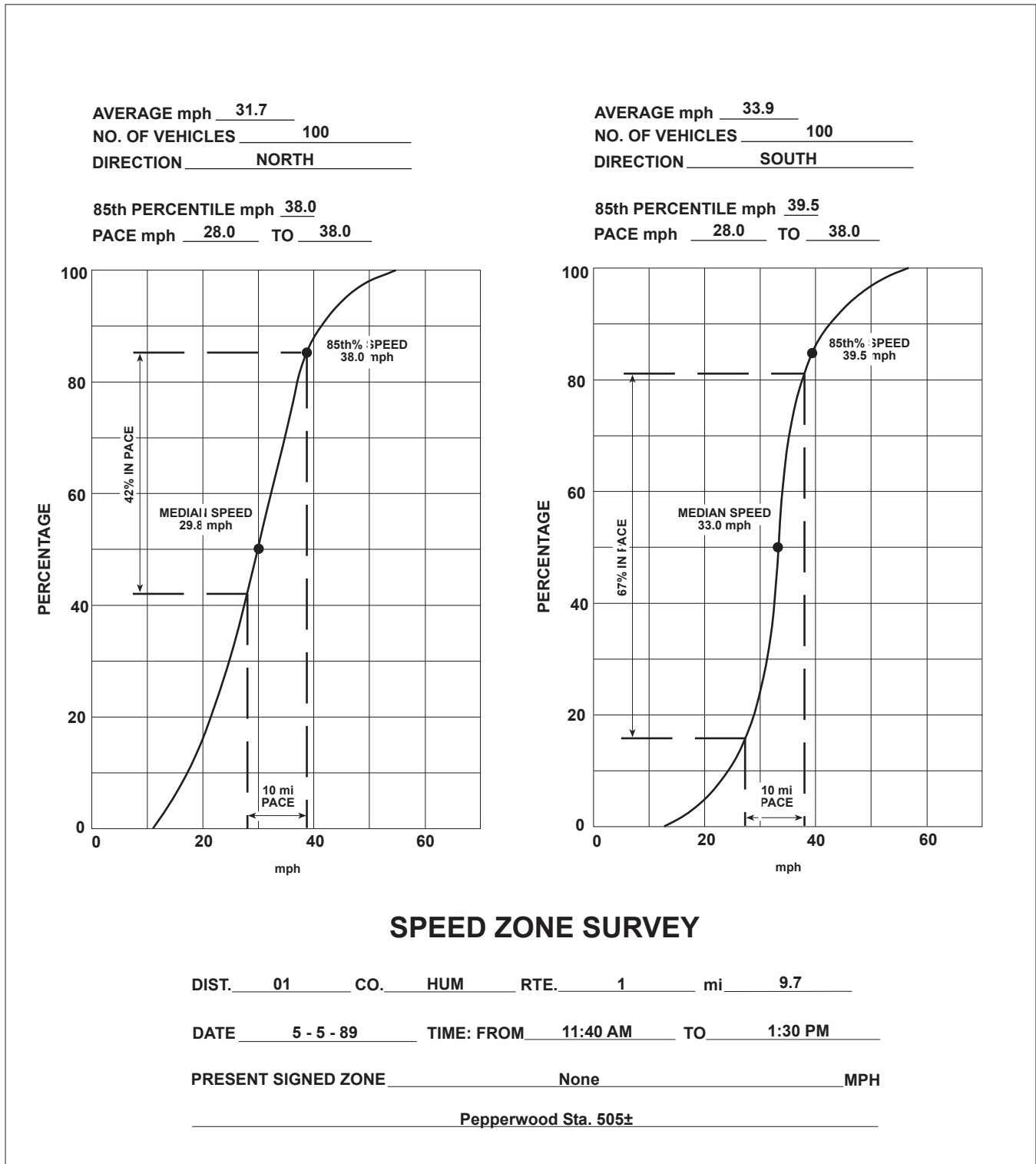


Figure 2B-103(CA). Example of Vehicle Speed Survey Sheet for City and County Through Highways, Arterials, and Collector Roads

Jurisdiction _____ Date _____

Location _____ Weather _____

Recorder _____ Begin Time _____ End Time _____

mph	NUMBER OF VEHICLES						PERCENT OF TOTAL	CUMULATIVE PERCENTAGE
	5	10	15	20	25	30		
65								
60								
55								
50								
45								
40								
35								
30	X						1	100
	X						5	99
	X						4	94
	X						7	91
	X						7	83
	X						12	76
25	X						8	64
	X						8	55
	X						13	47
	X						10	34
	X						7	23
20	X						8	17
	X						1	8
	X						5	7
	X						1	3
	X						1	2
15	X						1	1
TOTAL NUMBER OF VEHICLES = 107							100 %	

Other Coniderations

Accident History :

Unusual Conditions :

Signed _____

Date _____

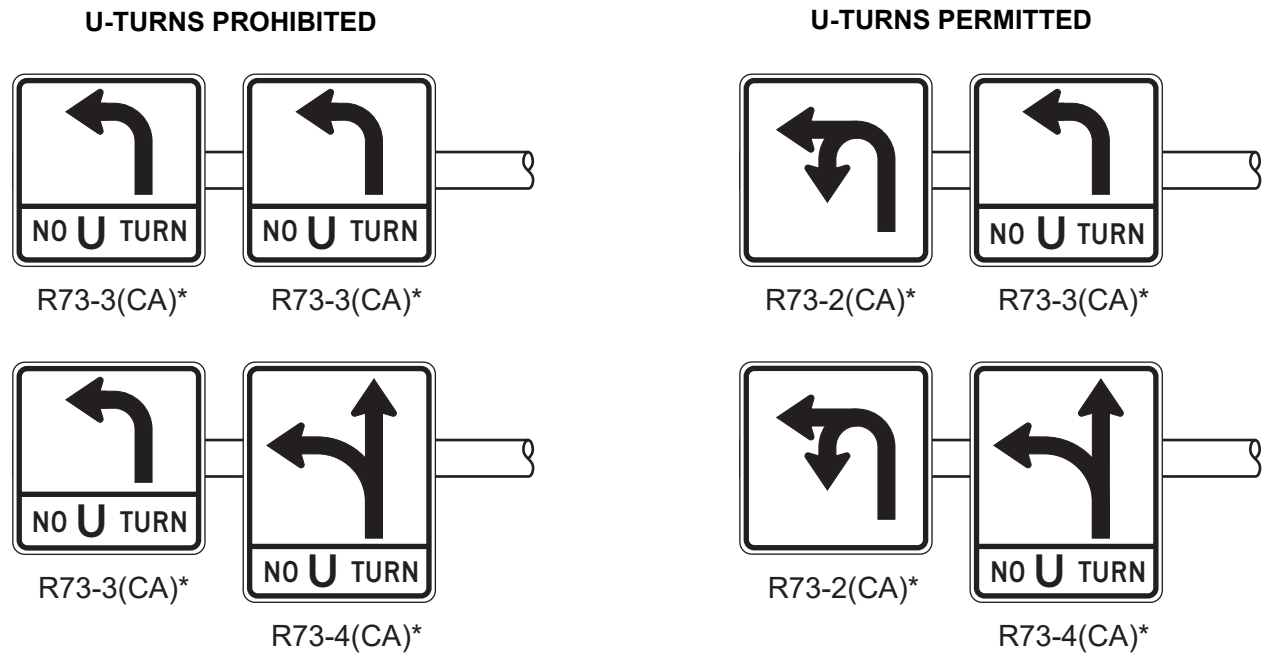
Title _____

Residential Area or Subdivision : _____

Date : _____ Signed : _____ Title : _____

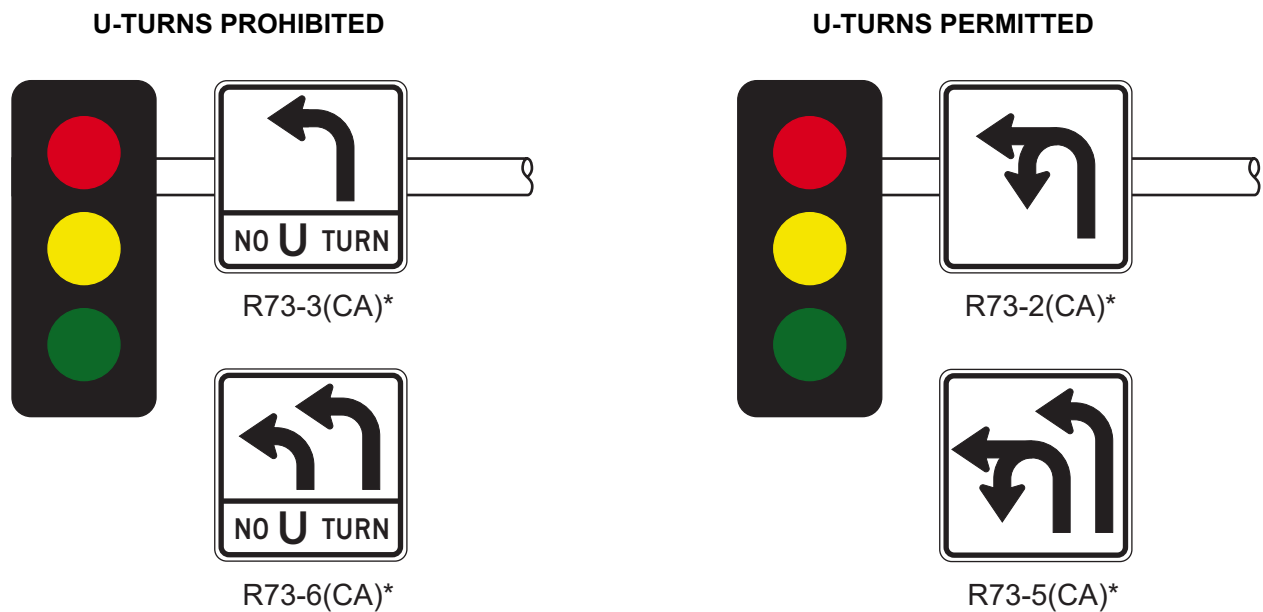
Figure 2B-105(CA). U-Turn Signs for Signalized Intersections with Separate Turn Phase

Two Left-Turn Lanes with Overhead U-Turn Signs



See Department of Transportation's Standard Plans for Mounting Details

Signal Mastarm Mounted U-Turn Signs



See Department of Transportation's Standard Plans for Mounting Details

* R73(CA) Series Signs

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



R23(CA)



R47(CA)



R47A(CA)



R101(CA)



R119(CA)



SR43(CA)



SR44(CA)



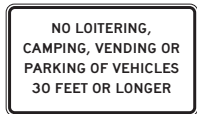
SR46(CA)



SR47(CA)



SR48(CA)



S22(CA)

Table 2B-1. Regulatory Sign and Plaque Sizes (Sheet 1 of 6)

Sign or Plaque	Sign Designation	Section	Conventional Road		Expressway	Freeway	Minimum	Oversized
			Single Lane	Multi-Lane				
Stop	R1-1	2B.04	30 x 30	36 x 36	36 x 36	—	30 x 30*	48 x 48
Yield	R1-2	2B.05	36 x 36 x 36	48 x 48 x 48	48 x 48 x 48	60 x 60 x 60	30 x 30 x 30*	—
To Oncoming Traffic (plaque)	R1-2aP	2B.18	24 x 18	24 x 18	36 x 30	48 x 36	24 x 18	—
To Traffic in Circle (plaque)	R1-2bP	2B.18	24 x 15	24 x 15	—	—	24 x 15	36 x 24
To All Lanes (plaque)	R1-2cP	2B.18	24 x 15	24 x 15	—	—	24 x 15	36 x 24
All Way (plaque)	R1-3P	2B.04	18 x 6	18 x 6	—	—	—	30 x 12
Yield Here to Pedestrians	R1-5	2B.19	—	36 x 36	—	—	—	36 x 36
Stop Here for Pedestrians	R1-5b	2B.19	—	36 x 36	—	—	—	36 x 36
Yield Here to (Stop Here for) Trail Crossing	R1-5d, 5e	2B.19	—	36 x 42	—	—	—	—
In-Street Pedestrian Crossing - Yield (Stop)	R1-6, 6a	2B.20	12 x 36	12 x 36	—	—	—	—
In-Street Trail Crossing - Yield (Stop)	R1-6d, 6e	2B.20	12 x 36	12 x 36	—	—	—	—
Overhead Pedestrian Crossing - Yield (Stop)	R1-9, 9a	2B.20	90 x 24	90 x 24	—	—	—	—
Overhead Trail Crossing	R1-9d, 9e	2B.20	72 x 24	72 x 24	—	—	—	—
Except Right Turn (plaque)	R1-10P	2B.04	24 x 18	24 x 18	—	—	—	—
Speed Limit	R2-1	2B.21	24 x 30	30 x 36	36 x 48	48 x 60	18 x 24	30 x 36
Truck Speed Limit (plaque)	R2-2P	2B.22	24 x 24	24 x 24	36 x 36	48 x 48	—	36 x 36
Bus Speed Limit (plaque)	R2-2aP	2B.22	24 x 24	24 x 24	36 x 36	48 x 48	—	36 x 36
Truck-Bus Speed Limit (plaque)	R2-2bP	2B.22	24 x 30	24 x 30	36 x 42	48 x 54	—	36 x 42
Vehicles Over X Tons Speed Limit (plaque)	R2-2cP	2B.22	24 x 30	24 x 30	36 x 42	48 x 54	—	36 x 42
Night Speed Limit (plaque)	R2-3P	2B.23	24 x 24	24 x 24	36 x 36	48 x 48	—	36 x 36
Minimum Speed Limit (plaque)	R2-4P	2B.24	24 x 24	24 x 24	36 x 36	48 x 48	—	36 x 36
Combined Maximum and Minimum Speed Limits	R2-4a	2B.24	24 x 48	24 x 48	36 x 72	48 x 96	—	36 x 72
Unless Otherwise Posted (plaque)	R2-5P	2B.21	24 x 18	24 x 18	36 x 24	36 x 24	—	36 x 24
Citywide (plaque)	R2-5aP	2B.21	24 x 6	24 x 6	—	—	—	30 x 9
Neighborhood (plaque)	R2-5bP	2B.21	24 x 6	24 x 6	—	—	—	30 x 9
Residential (plaque)	R2-5cP	2B.21	24 x 6	24 x 6	—	—	—	30 x 9
Fines Higher (plaque)	R2-6P	2B.25	24 x 18	24 x 18	36 x 24	48 x 36	—	36 x 24
Fines Double (plaque)	R2-6aP	2B.25	24 x 18	24 x 18	36 x 24	48 x 36	—	36 x 24
\$XX Fine (plaque)	R2-6bP	2B.25	24 x 18	24 x 18	36 x 24	48 x 36	—	36 x 24
Double Higher Fines Zone	R2-10	2B.25	24 x 30	24 x 30	36 x 48	48 x 60	—	36 x 48
Double Higher Fines Zone	R2-11	2B.25	24 x 30	24 x 30	36 x 48	48 x 60	—	36 x 48
End Variable Speed Limit	R2-13	2B.21	24 x 30	24 x 30	36 x 48	48 x 60	—	36 x 48
End Truck Speed Limit	R2-14	2B.21	24 x 30	24 x 30	36 x 48	48 x 60	—	36 x 48
Movement Prohibition	R3-1, 2, 3, 4, 18, 27	2B.26	24 x 24	36 x 36	36 x 36	—	—	48 x 48
Movement Prohibition - Trucks	R3-1b	2B.26	24 x 36	24 x 36	36 x 54	36 x 54	—	—
Movement Prohibition - Trucks Buses	R3-1c	2B.26	24 x 42	24 x 42	36 x 60	36 x 60	—	—
Movement Prohibition - Trucks Over X Tons	R3-1d	2B.26	24 x 48	24 x 48	36 x 66	36 x 66	—	—
Movement Prohibition - Except Buses	R3-1e	2B.26	24 x 36	24 x 36	36 x 54	36 x 54	—	—
Movement Prohibition - Except Buses Taxis	R3-1f	2B.26	24 x 42	24 x 42	36 x 66	36 x 66	—	—
Movement Prohibition - Time and Day	R3-1g	2B.26	24 x 36	24 x 36	36 x 54	36 x 54	—	—

Table 2B-1. Regulatory Sign and Plaque Sizes (Sheet 2 of 6)

Sign or Plaque	Sign Designation	Section	Conventional Road		Expressway	Freeway	Minimum	Oversized
			Single Lane	Multi-Lane				
Movement Prohibition - Multiple Times and Day	R3-1h	2B.26	24 x 42	24 x 42	36 x 66	36 x 66	—	—
Mandatory Movement Lane Control	R3-5,5a	2B.28	30 x 36	30 x 36	—	—	—	—
Left Lane (plaque)	R3-5bP	2B.28	30 x 12	30 x 12	—	—	—	—
HOV 2+ (plaque)	R3-5cP	2B.28	24 x 12	24 x 12	—	—	—	—
Taxi Lane (plaque)	R3-5dP	2B.28	30 x 12	30 x 12	—	—	—	—
Right Lane (plaque)	R3-5fP	2B.28	30 x 12	30 x 12	—	—	—	—
Bus Lane (plaque)	R3-5gP	2B.28	30 x 12	30 x 12	—	—	—	—
Optional Movement Lane Control Thru and Turn	R3-6	2B.29	30 x 36	30 x 36	—	—	—	—
Optional Movement U and Left Turn	R3-6a	2B.29	30 x 36	30 x 36	—	—	—	—
Optional Movement Left Turns	R3-6b	2B.29	30 x 36	30 x 36	—	—	—	—
Right (Left) Lane Must Turn Right (Left)	R3-7	2B.28	30 x 30	36 x 36	48 x 48	—	—	48 x 48
Except Buses (plaque)	R3-7aP	2B.28	24 x 12	24 x 12	—	—	—	—
Except Bicycles (plaque)	R3-7bP	2B.28	24 x 12	24 x 12	—	—	—	—
Advance Intersection Lane Control	R3-8,8a,8b,8xa,8xb,8xc	2B.30	Varies x 30	Varies x 30	—	—	—	Varies x 36
Two-Way Left Turn Only (overhead)	R3-9a	2B.32	30 x 36	30 x 36	—	—	—	—
Two-Way Left Turn Only (post-mounted)	R3-9b	2B.32	24 x 36	24 x 36	—	—	—	36 x 48
Begin (plaque)	R3-9cP	2B.33	24 x 12	24 x 12	—	—	—	36 x 18
End (plaque)	R3-9dP	2B.33	24 x 12	24 x 12	—	—	—	36 x 18
Reversible Lane Control (overhead)	R3-9e	2B.34	108 x 48	108 x 48	—	—	—	—
Reversible Lane Control (post-mounted)	R3-9f	2B.34	30 x 42	36 x 54	—	—	—	—
Advance Reversible Lane Control Transition	R3-9g,9h	2B.34	108 x 36	108 x 36	—	—	—	—
End Reverse Lane	R3-9i	2B.34	108 x 48	108 x 48	—	—	—	—
Lane For Left Turn Only	R3-19	2B.28	30 x 24	30 x 24	—	—	—	—
Lane for U Turn Only	R3-19a	2B.28	30 x 24	30 x 24	—	—	—	—
Lane For U and Left Turns Only	R3-19b	2B.28	30 x 30	30 x 30	—	—	—	—
Begin Right (Left) Turn Lane	R3-20	2B.28	24 x 36	24 x 36	—	—	—	—
All Turns (U-Turn) from Right Lane	R3-23,23a	2B.35	60 x 36	60 x 36	—	—	—	—
All Turns (U-Turn) Directional	R3-24,24b,25,25b,26a	2B.35	72 x 18	72 x 18	—	—	—	—
U-Turns and Left Turns Directional	R3-24a,25a,26	2B.35	60 x 24	60 x 24	—	—	—	—
Right (Left) Lane Must Exit	R3-33	2B.31	—	—	78 x 36	78 x 36	—	—
Right (Left) Lane Must Exit	R3-33a	2B.31	—	—	42 x 60	42 x 60	—	—
Do Not Pass	R4-1	2B.36	24 x 30	24 x 30	36 x 48	48 x 60	18 x 24	36 x 48
Pass With Care	R4-2	2B.37	24 x 30	24 x 30	36 x 48	48 x 60	18 x 24	36 x 48
Slower Traffic Keep Right	R4-3	2B.38	24 x 30	24 x 30	36 x 48	48 x 60	18 x 24	36 x 48
Trucks Use Right Lane	R4-5	2B.38	24 x 30	24 x 30	36 x 48	48 x 60	—	36 x 48
Keep Right	R4-7,7a,7b	2B.39	24 x 30	24 x 30	36 x 48	48 x 60	18 x 24	36 x 48
Narrow Keep Right	R4-7c	2B.39	18 x 30	18 x 30	—	—	—	—
Keep Left	R4-8,8a,8b	2B.39	24 x 30	24 x 30	36 x 48	48 x 60	18 x 24	36 x 48
Narrow Keep Left	R4-8c	2B.39	18 x 30	18 x 30	—	—	—	—
Stay in Lane	R4-9	2B.40	24 x 30	24 x 30	36 x 48	48 x 60	18 x 24	36 x 48
Runaway Vehicles Only	R4-10	2B.41	48 x 48	48 x 48	—	—	—	—

Table 2B-1. Regulatory Sign and Plaque Sizes (Sheet 3 of 6)

Sign or Plaque	Sign Designation	Section	Conventional Road		Expressway	Freeway	Minimum	Oversized
			Single Lane	Multi-Lane				
Slow Vehicles with XX or More Following Vehicles Must Use Turn-Out	R4-12	2B.42	42 x 24	42 x 24	—	—	—	72 x 42
Slow Vehicles Must Use Turn-Out Ahead	R4-13	2B.42	42 x 24	42 x 24	—	—	—	—
Slow Vehicles Must Turn Out	R4-14	2B.42	30 x 42	30 x 42	—	—	—	—
Keep Right Except to Pass	R4-16	2B.38	24 x 30	24 x 30	36 x 48	48 x 60	18 x 24	36 x 48
Do Not Drive on Shoulder	R4-17	2B.43	24 x 30	24 x 30	36 x 48	48 x 60	18 x 24	36 x 48
Do Not Pass on Shoulder	R4-18	2B.43	24 x 30	24 x 30	36 x 48	48 x 60	18 x 24	36 x 48
All Traffic	R4-20	2B.44	24 x 30	24 x 30	36 x 48	48 x 60	—	36 x 48
Right (Left) Turn Only	R4-21	2B.44	24 x 30	24 x 30	—	—	—	—
Do Not Enter	R5-1	2B.46	30 x 30	36 x 36	36 x 36	48 x 48	—	36 x 36
Wrong Way	R5-1a	2B.47	36 x 24	42 x 30	36 x 24	42 x 30	30 x 18	42 x 30
No Trucks	R5-2	2B.45	24 x 24	24 x 24	30 x 30	36 x 36	—	36 x 36
Except Local Deliveries (plaque)	R5-2aP	2B.45	24 x 12	24 x 12	30 x 15	36 x 18	—	36 x 18
No Thru Trucks	R5-2b	2B.45	24 x 30	24 x 30	30 x 36	36 x 48	—	36 x 48
No Motor Vehicles	R5-3	2B.45	24 x 24	24 x 24	—	—	24 x 24	—
No Commercial Vehicles	R5-4	2B.45	24 x 30	24 x 30	36 x 48	36 x 48	—	—
No Vehicles with Lugs	R5-5	2B.45	24 x 30	24 x 30	36 x 48	48 x 60	—	—
No Bicycles	R5-6	2B.45	24 x 24	24 x 24	30 x 30	36 x 36	24 x 24*	48 x 48
No Non-Motorized Traffic	R5-7	2B.45	30 x 24	30 x 24	42 x 24	48 x 30	—	42 x 24
No Motor-Driven Cycles	R5-8	2B.45	30 x 24	30 x 24	42 x 24	48 x 30	—	42 x 24
No Pedestrians, Bicycles, Motor-Driven Cycles	R5-10	2B.45	30 x 36	30 x 36	—	—	—	—
No Pedestrians, Bicycles, Motor-Driven Cycles On Freeway	R5-10a	2B.45	30 x 36	30 x 36	—	—	—	—
No Pedestrians or Bicycles	R5-10b	2B.45	30 x 18	30 x 18	—	—	—	—
No Pedestrians	R5-10c	2B.45	24 x 12	24 x 12	—	—	—	—
Authorized Vehicles Only	R5-11	2B.45	30 x 24	30 x 24	—	—	—	—
No Thru Traffic	R5-12	2B.45	24 x 30	24 x 30	—	—	—	30 x 36
One Way	R6-1	2B.49	36 x 12	48 x 18	48 x 18	48 x 18	—	72 x 24
One Way	R6-2	2B.49	24 x 30	30 x 36	36 x 48	48 x 60	18 x 24	36 x 48
Divided Highway Crossing	R6-3,3a	2B.50	30 x 24	30 x 24	36 x 30	—	—	36 x 30
Roundabout Circulation (plaque)	R6-5P	2B.51	30 x 30	30 x 30	—	—	—	—
Begin One Way	R6-6	2B.49	24 x 30	30 x 36	—	—	—	—
End One Way	R6-7	2B.49	24 x 30	30 x 36	—	—	—	—
Parking Restrictions	R7-1, 2, 2a, 3, 4, 4a, 5, 6, 8, 10, 107, 108	2B.52, 2B.53	12 X 18	12 X 18	—	—	—	—
Van Accessible (plaque)	R7-8aP	2B.52, 2B.53	12 x 6	12 x 6				
Parking Fee Station, Multispace Meter	R7-20	2B.52, 2B.53	24 x 18	24 x 18	—	—	—	—
Metered Parking	R7-21	2B.52, 2B.53	12 x 18	12 x 18	—	—	—	—
Mobile Parking Payment (plaque)	R7-21aP	2B.52, 2B.53	12 x 6	12 x 6				
Metered Parking	R7-22	2B.52, 2B.53	12 x 18	12 x 18	—	—	—	—
No Parking Bus Stop	R7-107a	2B.52, 2B.53	12 x 24	12 x 24	—	—	—	—
No Parking Bus Stop (with transit pictograph)	R7-107b	2B.52, 2B.53	12 x 30	12 x 30	—	—	—	—

Table 2B-1. Regulatory Sign and Plaque Sizes (Sheet 4 of 6)

Sign or Plaque	Sign Designation	Section	Conventional Road		Expressway	Freeway	Minimum	Oversized
			Single Lane	Multi-Lane				
No Parking Except Electric Vehicles	R7-111	2B.52, 2B.53	12 x 18	12 x 18	—	—	—	—
No Parking Except Electric Vehicles (part-time)	R7-111a	2B.52, 2B.53	12 x 18	12 x 18	—	—	—	—
Electric Vehicle Parking (time limit)	R7-112	2B.52, 2B.53	12 x 18	12 x 18	—	—	—	—
Electric Vehicle Parking (time limit part-time)	R7-112a	2B.52, 2B.53	12 x 18	12 x 18	—	—	—	—
Electric Vehicle Parking (time limit part-time)	R7-112b	2B.52, 2B.53	12 x 21	12 x 21	—	—	—	—
No Parking Except While Charging	R7-113	2B.52, 2B.53	12 x 18	12 x 18	—	—	—	—
Vehicle Must Be Plugged In (plaque)	R7-113aP	2B.52, 2B.53	12 x 6	12 x 6	—	—	—	—
Vacate Stall When Charging Completed (plaque)	R7-113bP	2B.52, 2B.53	12 x 6	12 x 6	—	—	—	—
Vehicle Charging Only (time limit)	R7-114	2B.52, 2B.53	12 x 18	12 x 18	—	—	—	—
Vehicle Charging Only (time limit, part-time)	R7-114a	2B.52, 2B.53	12 x 18	12 x 18	—	—	—	—
Vehicle Charging Only (time limit part-time)	R7-114b	2B.52, 2B.53	12 x 21	12 x 21	—	—	—	—
No Parking/Restricted Parking (combined sign)	R7-200	2B.52, 2B.53	24 x 18	24 x 18	—	—	—	—
No Parking/Restricted Parking (combined sign)	R7-200a	2B.52, 2B.53	12 x 36	12 x 36	—	—	—	—
Tow Away Zone (plaque)	R7-201P, 201aP	2B.52, 2B.53	12 x 6	12 x 6	—	—	—	—
This Side of Sign (plaque)	R7-202P	2B.52, 2B.53	12 x 6	12 x 6	—	—	—	—
Snow Emergency Route	R7-203	2B.52, 2B.53	18 x 24	18 x 24	—	—	—	24 x 30
No Parking on Pavement	R8-1	2B.52, 2B.53	24 x 30	24 x 30	36 x 48	48 x 60	—	36 x 48
No Parking Except on Shoulder	R8-2	2B.52, 2B.53	24 x 30	24 x 30	36 x 48	48 x 60	—	36 x 48
No Parking (symbol)	R8-3	2B.52, 2B.53	24 x 24	30 x 30	36 x 36	48 x 48	12 x 12	36 x 36
No Parking	R8-3a	2B.52, 2B.53	24 x 30	24 x 30	36 x 36	48 x 48	18 x 24	36 x 36
On Pavement	R8-3c	2B.52, 2B.53	24 x 36	24 x 36	—	—	18 x 30	36 x 54
On Bridge	R8-3d	2B.52, 2B.53	24 x 36	24 x 36	—	—	18 x 30	36 x 54
On Tracks	R8-3e	2B.52, 2B.53	24 x 36	24 x 36	—	—	18 x 30	36 x 54
Except on Shoulder	R8-3f	2B.52, 2B.53	24 x 36	24 x 36	—	—	18 x 30	36 x 54
Emergency Parking Only	R8-4	2B.55	30 x 24	30 x 24	30 x 24	48 x 36	—	48 x 36
No Stopping on Pavement	R8-5	2B.53, 2B.54	24 x 30	24 x 30	36 x 48	48 x 60	—	36 x 48
No Stopping Except on Shoulder	R8-6	2B.53, 2B.54	24 x 30	24 x 30	36 x 48	48 x 60	—	36 x 48
Emergency Stopping Only	R8-7	2B.55	30 x 24	30 x 24	48 x 36	48 x 36	—	48 x 36
Walk on Left Facing Traffic	R9-1	2B.56	18 x 24	18 x 24	—	—	—	—
Cross Only at Crosswalks	R9-2	2B.57	12 x 18	12 x 18	—	—	—	—
No Pedestrian Crossing (symbol)	R9-3	2B.57	18 x 18	18 x 18	24 x 24	30 x 30	—	30 x 30
No Pedestrian Crossing	R9-3a	2B.57	12 x 18	12 x 18	—	—	—	—

Table 2B-1. Regulatory Sign and Plaque Sizes (Sheet 5 of 6)

Sign or Plaque	Sign Designation	Section	Conventional Road		Expressway	Freeway	Minimum	Oversized
			Single Lane	Multi-Lane				
Use Crosswalk (plaque)	R9-3bP	2B.57	18 x 12	18 x 12	—	—	—	—
No Hitchhiking (symbol)	R9-4	2B.56	18 x 18	18 x 18	—	—	—	24 x 24
No Hitchhiking	R9-4a	2B.56	18 x 24	18 x 24	—	—	12 x 18	—
No Skaters	R9-13	2B.45	18 x 18	18 x 18	24 x 24	30 x 30	—	30 x 30
No Equestrians	R9-14	2B.45	18 x 18	18 x 18	24 x 24	30 x 30	—	30 x 30
No Snowmobiles	R9-15	2B.45	18 x 18	18 x 18	24 x 24	30 x 30	—	30 x 30
** No All-Terrain Vehicles	R9-16	2B.45	18 x 18	18 x 18	24 x 24	30 x 30	—	30 x 30
Except on Shoulder (plaque)	R9-19P	2B.45	18 x 12	18 x 12	24 x 18	30 x 24	—	30 x 24
Cross Only On Green	R10-1	2B.58	12 x 18	12 x 18	—	—	—	—
Pedestrian Signs	R10-2,3,3b,3c,3d,4	2B.58	9 x 12	9 x 12	—	—	—	—
Pedestrian Signs	R10-3a,3e,3f,3g,3h,3i,4a	2B.58	9 x 15	9 x 15	—	—	—	—
Left on Green Arrow Only	R10-5	2B.59	30 x 36	30 x 36	30 x 36	—	24 x 30	48 x 60
Stop Here on Red	R10-6	2B.59	24 x 36	24 x 36	—	—	—	36 x 48
Stop Here on Red	R10-6a	2B.59	24 x 30	24 x 30	—	—	—	36 x 42
Do Not Block Intersection	R10-7	2B.59	24 x 30	24 x 30	—	—	—	—
Use Lane with Green Arrow	R10-8	2B.59	30 x 36	30 x 36	36 x 42	—	—	60 x 72
Left (Right) Turn Signal	R10-10	2B.59	24 x 30	24 x 30	—	—	—	30 x 36
U- Turn Signal	R10-10a	2B.59	24 x 30	24 x 30	—	—	—	30 x 36
No Turn on Red	R10-11	2B.60	24 x 30	24 x 30	—	—	—	36 x 48
No Turn on Circular Red	R10-11a	2B.60	24 x 30	24 x 30	—	—	—	36 x 48
No Turn on Red	R10-11b	2B.60	24 x 24	24 x 24	—	—	—	36 x 36
No Turn on Red Except From Right Lane	R10-11c	2B.60	30 x 36	30 x 36	—	—	—	—
No Turn on Red From This Lane	R10-11d	2B.60	30 x 42	30 x 42	—	—	—	—
Left Turn Yield on Green	R10-12	2B.59	30 x 36	30 x 36	—	—	—	—
Left Turn Yield on Flashing Yellow Arrow	R10-12a	2B.59	30 x 36	30 x 36	—	—	—	—
Left Turn Yield to Bicycle	R10-12b	2B.59	30 x 36	30 x 36	—	—	—	—
Emergency Signal	R10-13	2B.59	36 x 24	36 x 24	—	—	—	42 x 30
Emergency Signal - Stop on Flashing Red	R10-14	2B.59	36 x 42	36 x 42	—	—	—	—
Emergency Signal - Stop on Flashing Red (overhead)	R10-14a	2B.59	60 x 24	60 x 24	—	—	—	—
Stop Here on Flashing Red	R10-14b	2B.59	24 x 36	24 x 36	—	—	—	36 x 48
Turning Vehicles Yield to Pedestrians	R10-15	2B.59	30 x 30	30 x 30	—	—	—	—
Turning Vehicles Stop for Pedestrians	R10-15a	2B.59	30 x 30	30 x 30	—	—	—	—
U-Turn Yield to Right Turn	R10-16	2B.59	30 x 36	30 x 36	—	—	—	—
Right on Red Arrow After Stop	R10-17a	2B.60	30 x 36	30 x 36	—	—	—	36 x 48
Traffic Laws Photo Enforced	R10-18	2B.69	36 x 24	36 x 24	48 x 30	54 x 36	—	54 x 36
Traffic Signal Photo Enforced	R10-18a	2B.69	30 x 42	30 x 42	30 x 42	—	—	36 x 54
Photo Enforced (symbol plaque)	R10-19P	2B.69	24 x 12	24 x 12	36 x 18	48 x 24	—	48 x 24
Photo Enforced (plaque)	R10-19aP	2B.69	24 x 18	24 x 18	36 x 24	48 x 36	—	48 x 36
MON—FRI (and times) (3 lines) (plaque)	R10-20aP	2B.60	24 x 24	24 x 24	—	—	—	—
SUNDAY (and times) (2 lines) (plaque)	R10-20aP	2B.60	24 x 18	24 x 18	—	—	—	—
Crosswalk - Stop on Red	R10-23	2B.59	24 x 30	24 x 30	—	—	—	—

Table 2B-1. Regulatory Sign and Plaque Sizes (Sheet 6 of 6)

Sign or Plaque	Sign Designation	Section	Conventional Road		Expressway	Freeway	Minimum	Oversized
			Single Lane	Multi-Lane				
Stop on Red - Yield on Flashing Red After Stop	R10-23a	2B.59	24 x 30	24 x 30	—	—	—	—
Push Button For Warning Lights - Wait for Gap in Traffic	R10-25	2B.58	9 x 12	9 x 12	—	—	—	—
Left Turn Yield on Flashing Red Arrow After Stop	R10-27	2B.59	30 x 36	30 x 36	—	—	—	—
XX Vehicles per Green	R10-28	2B.61	24 x 30	24 x 30	—	—	—	—
XX Vehicles per Green Each Lane	R10-29	2B.61	36 x 24	36 x 24	—	—	—	—
Right Turn on Red Must Yield to U-Turn	R10-30	2B.60	30 x 36	30 x 36	—	—	—	—
At Signal (plaque)	R10-31P	2B.59	24 x 9	24 x 9	—	—	—	—
Push Button for 2 Seconds for Extra Crossing Time	R10-32P	2B.58	9 x 12	9 x 12	—	—	—	—
Keep Off Median	R11-1	2B.62	24 x 30	24 x 30	—	—	—	—
Road Closed	R11-2,2a, 2b,2c	2B.63	48 x 30	48 x 30	—	—	—	—
Road Closed - Local Traffic Only	R11-3,3a, 3b,4	2B.63	60 x 30	60 x 30	—	—	—	—
Weight Limit	R12-1, 2	2B.64	24 x 30	24 x 30	36 x 48	—	—	36 x 48
Weight Limit - Axle, Gross	R12-4	2B.64	36 x 24	36 x 24	—	—	—	—
Weight Limit	R12-5	2B.64	24 x 36	24 x 36	36 x 48	48 x 60	—	—
Weight Limit - Specialized Hauling Vehicles	R12-6	2B.64	30 x 42	36 x 48	36 x 48	48 x 60	—	48 x 60
Weight Limit - Emergency Vehicles	R12-7	2B.64	30 x 36	30 x 36	48 x 60	48 x 60	—	48 x 60
Weight Limit - Emergency Vehicles (plaque)	R12-7aP	2B.64	30 x 30	30 x 30	48 x 48	48 x 48	—	48 x 48
Weight Station	R13-1	2B.65	72 x 54	72 x 54	96 x 72	132 x 90	—	—
Truck Route	R14-1	2B.66	24 x 18	24 x 18	—	—	—	—
Hazardous Material	R14-2,3	2B.67	24 x 24	24 x 24	30 x 30	36 x 36	—	42 x 42
National Network	R14-4,5	2B.68	30 x 30	30 x 30	36 x 36	36 x 36	—	42 x 42
Move Over or Reduce Speed	R16-3	2B.71	—	60 x 48	84 x 60	102 x 72	—	84 x 60
Minor Crashes Move Vehicles from Travel Lanes	R16-4	2B.70	—	60 x 42	84 x 54	96 x 60	—	84 x 54
Lights On When Using Wipers or Raining	R16-5,6	2B.73	24 x 30	24 x 30	36 x 48	48 x 60	—	36 x 48
Turn On Headlights Next XX Miles	R16-7	2B.73	60 x 18	60 x 18	96 x 30	132 x 36	—	96 x 30
Turn On, Check Headlights	R16-8,9	2B.73	42 x 18	42 x 18	60 x 30	78 x 36	—	60 x 30
Begin, End Daytime Headlight Section	R16-10,11	2B.73	60 x 18	60 x 18	96 x 30	120 x 36	—	96 x 30
No Hand-Held Phone Use By Driver	R16-15	2B.72	—	—	72 x 48	72 x 48	—	—
No Hand-Held Phone Use By Driver	R16-15a	2B.72	30 x 42	30 x 42	—	—	—	—

* See Table 9A-1 for minimum size required for signs on bicycle facilities

** Refer to FHWA's List of Known Errors for error in row with the R9-16 sign. Refer to Section 1A.04 for more details.

Notes: 1. Larger signs may be used when appropriate
2. Dimensions in inches are shown as width x height

Table 2B-1(CA). California Regulatory Sign and Plaque Sizes (Sheet 1 of 6)

Sign or Plaque	Sign Designation	Section	Conventional Road		Expressway	Freeway	Minimum	Oversized
			Single Lane	Multi-Lane				
Speed Zone Ahead	R2-4(CA)	2B.21	24 x 30	24 x 30	36 x 45	48 x 60	24 x 30	—
End Speed Limit	R3(CA)	2B.21	24 x 30	24 x 30	36 x 45	48 x 60	24 x 30	—
TRUCKS 3 AXLES OR MORE RIGHT 2 LANES ONLY	R6-3A(CA)	2B.38	54 x 66	54 x 66	54 x 66	54 x 66	—	—
TRUCKS, 3 AXLES OR MORE 55	R6-3B(CA)	2B.21, 2B.38	48 x 60	48 x 60	48 x 60	48 x 60	—	—
ALL VEHICLES WHEN TOWING RIGHT 2 LANES ONLY	R6-4A(CA)	2B.38	54 x 66	54 x 66	54 x 66	54 x 66	—	—
ALL VEHICLES WHEN TOWING 55	R6-4B(CA)	2B.21, 2B.22	48 x 60	48 x 60	48 x 60	48 x 60	—	—
Pedestrian Signs	R10-3e(CA) R10-3j(CA)	2B.58	9 x 15	9 x 15	—	—	—	—
Pedestrian Sign	R10-3j(CA)	2B.58	9 x 12	9 x 12	—	—	—	—
Push or Wave at Button to Turn on Warning Lights	R10-3k(CA)	2B.58	9 x 12	9 x 12	—	—	—	—
RIGHT (LEFT) LANE FREEWAY ONLY	R18B(CA)	2B.28	36 x 36	36 x 36	—	—	—	—
RIGHT (LEFT) __ LANES MUST EXIT	R18C(CA)	2B.31	—	—	102 x 36	102 x 36	—	—
RIGHT (LEFT) __ LANES MUST EXIT	R18D(CA)	2B.31	—	—	48 x 78	48 x 78	—	—
No Trucks Variable Message	R20-1(CA)	2B.45	—	—	102 x 48	102 x 48	—	—
NEXT RIGHT (plaque)	R20-1aP(CA)	2B.45	—	—	102 x 18	102 x 18	—	—
Truck Exclusion (plaque)	R20D-1P(CA)	2B.45	24 x 6	30 x 9	36 x 12	—	24 x 6	—
Truck Exclusion (plaque)	R20D-2P(CA)	2B.45	24 x 6	30 x 9	36 x 12	—	24 x 6	—
Truck Exclusion (plaque)	R20D-3P(CA)	2B.45	24 x 6	30 x 9	36 x 12	—	24 x 6	—
Truck Exclusion (plaque)	R20D-4P(CA)	2B.45	24 x 6	30 x 9	36 x 12	—	24 x 6	—
Truck Length Limit	R20H(CA)	2B.45	36 x 36	36 x 36	42 x 42	—	36 x 36	—
Bridge Speed and Weight Limit	R21(CA)	2B.45	36 x 30	36 x 30	—	—	—	—
OK TO PARK ON BRIDGE	R22(CA)	2B.52	12 x 18	12 x 18	—	—	—	—
NO FISHING (JUMPING) FROM BRIDGE	R23(CA)	2B.101(CA)	26 x 18	26 x 18	—	—	—	—
PARK PARALLEL	R24(CA)	2B.52	12 x 18	12 x 18	—	—	—	—
SCHOOL BUS ONLY w/Double Arrow	R24A(CA)	2B.52	12 x 18	12 x 18	—	—	—	—
TAXI CAB ONLY with Double Arrow	R24B(CA)	2B.52	12 x 18	12 x 18	—	—	—	—
TOUR BUS ONLY with Double Arrow	R24C(CA)	2B.52	12 x 18	12 x 18	—	—	—	—
MAIL DEPOSIT ONLY with Double Arrow	R24D(CA)	2B.52	12 x 18	12 x 18	—	—	—	—
BLOCK WHEELS TO CURB	R24E(CA)	2B.52	12 x 18	12 x 18	—	—	—	—
BACK-IN ANGLE PARKING ONLY	R24F(CA)	2B.52	12 x 18	12 x 18	—	—	—	—
PARK OFF PAVEMENT	R25(CA)	2B.52	24 x 15	24 x 15	—	—	—	—
LOADING ONLY 7 AM TO 6 PM EXCEPT SUNDAY 30-MINUTE LIMIT with Double Arrow	R25A-1(CA)	2B.52	12 x 18	12 x 18	—	—	—	—
PASSENGER LOADING ONLY 5 MINUTE LIMIT with Double Arrow	R25C(CA)	2B.52	18 x 18	18 x 18	—	—	—	—
School Passenger Loading ONLY 7 AM TO 4 PM SCHOOL DAYS 5 MINUTE LIMIT with Double Arrow	R25D-1(CA)	2B.52	18 x 30	18 x 30	—	—	—	—
PASSENGER LOADING ONLY 7 AM TO 4 PM SCHOOL DAYS 5 MINUTE LIMIT with Double Arrow	R25E(CA)	2B.52	18 x 21	18 x 21	—	—	—	—

Table 2B-1(CA). California Regulatory Sign and Plaque Sizes (Sheet 2 of 6)

Sign or Plaque	Sign Designation	Section	Conventional Road		Expressway	Freeway	Minimum	Oversized
			Single Lane	Multi-Lane				
School Bus Passenger Loading ONLY with Double Arrow	R25F-1(CA)	2B.52	18 x 24	18 x 24	—	—	—	—
Tour Bus Passenger Loading ONLY with Double Arrow	R25H-1(CA)	2B.52	18 x 24	18 x 24	—	—	—	—
CAR SHARE PARKING ONLY PERMIT REQUIRED with Double Arrow	R25J(CA)	2B.52	18 x 18	18 x 18	—	—	—	—
NO PARKING ANY TIME	R26(CA)	2B.52	12 x 18	12 x 18	—	—	—	—
NO STOPPING ANY TIME	R26(S)(CA)	2B.52	12 x 18	12 x 18	—	—	—	—
NO PARKING ANY TIME	R26A(CA)	2B.52	24 x 30	24 x 30	24 x 30	—	—	—
NO STOPPING ANY TIME	R26A(S)(CA)	2B.41, 2B.52	24 x 30	24 x 30	24 x 30	—	—	—
NO STOPPING FIRE LANE	R26F(CA)	2B.52	12 x 18	12 x 18	24 x 30	—	12 x 18	—
Tow-Away No Parking	R26K(CA)	2B.52	12 x 18	12 x 18	—	—	—	—
Tow-Away NO STOPPING ANY TIME	R26L(CA)	2B.52	12 x 18	12 x 18	—	—	—	—
NO PARKING HERE TO CORNER	R26M(CA)	2B.52	12 x 18	12 x 18	—	—	—	—
NO PARKING HERE TO X-ING	R26M-1(CA)	2B.52	12 x 18	12 x 18	—	—	—	—
NO PARKING ON BRIDGE	R27(CA)	2B.52	12 x 18	12 x 18	—	—	—	—
NO PARKING ON BRIDGE	R27A(CA)	2B.52	24 x 30	24 x 30	24 x 30	—	—	—
NO PARKING ANY TIME with Arrow	R28(CA)	2B.52	12 x 18	12 x 18	—	—	—	—
NO STOPPING ANY TIME with Arrow	R28(S)(CA)	2B.52	12 x 18	12 x 18	—	—	—	—
NO PARKING ANY TIME with Arrow	R28A(CA)	2B.52	24 x 30	24 x 30	24 x 30	—	—	—
NO STOPPING ANY TIME with Arrow	R28A(S)(CA)	2B.52	24 x 30	24 x 30	24 x 30	—	—	—
NO STOPPING BUS ONLY with Arrow	R28C(CA)	2B.52	12 x 18	12 x 18	—	—	—	—
NO PARKING VEHICLES OVER 6' HIGH with Double Arrow	R28D(CA)	2B.52	18 x 18	18 x 18	—	—	—	—
NO STOPPING VEHICLES OVER 6' HIGH with Double Arrow	R28D(S)(CA)	2B.52	18 x 18	18 x 18	—	—	—	—
NO PUBLIC PARKING SUBJECT TO CITATION AND REMOVAL AT OWNER'S EXPENSE	R28E(CA)	2B.52	18 x 24	18 x 24	—	—	—	—
No Parking VEHICLES OVER 5 TONS	R28F(CA)	2B.52	12 x 18	12 x 18	—	—	—	—
No Stopping/No Parking Specific Hours	R29(CA)	2B.52	18 x 30	18 x 30	—	—	—	—
No Parking Specific Hours	R30(CA)	2B.52	12 x 18	12 x 18	—	—	—	—
No Parking Specific Hours	R30A(CA)	2B.52	12 x 18	12 x 18	—	—	—	—
No Parking 10 AM TO 12 PM WEDNESDAY STREET SWEEPING	R30B(CA)	2B.52	12 x 18	12 x 18	—	—	—	—
No Parking 2 AM TO 6 AM EXCEPT BY PERMIT	R30C(CA)	2B.52	12 x 18	12 x 18	—	—	—	—
No Parking 2 AM TO 6 AM CITYWIDE EXCEPT BY PERMIT	R30D(CA)	2B.52	18 x 30	18 x 30	—	—	—	—
No Parking with Double Arrow	R30E(CA)	2B.52	12 x 18	12 x 18	—	—	—	—
No Stopping Specific Hours School Days	R30F(CA)	2B.52	12 x 18	12 x 18	—	—	—	—
No Parking/Parking Specific Hours	R31(CA)	2B.52	14 x 20.5	14 x 20.5	—	—	—	—
No Stopping/Parking Specific Hours	R31(S)(CA)	2B.52	18 x 30	18 x 30	—	—	—	—
Limited Hour/Minute Parking Specific Hours	R32(CA)	2B.52	12 x 18	12 x 18	—	—	—	—
The No Parking/Parking Specific Hours	R32B(CA)	2B.52	12 x 30	12 x 30	—	—	—	—
2-HOUR PARKING 8 AM TO 6 PM DISTRICT 7 PERMITS EXEMPT	R32C(CA)	2B.52	12 x 18	12 x 18	—	—	—	—
30 MINUTE PARKING 2 AM TO 6 AM DISTRICT 3 PERMITS EXEMPT	R32D(CA)	2B.52	12 x 18	12 x 18	—	—	—	—
2-HOUR PARKING 8 AM TO 4 PM – PASSENGER LOADING ONLY 4 PM TO MIDNIGHT 5 MINUTE LIMIT with Double Arrow	R32E(CA)	2B.52	18 x 30	18 x 30	—	—	—	—

Table 2B-1(CA). California Regulatory Sign and Plaque Sizes (Sheet 3 of 6)

Sign or Plaque	Sign Designation	Section	Conventional Road		Expressway	Freeway	Minimum	Oversized
			Single Lane	Multi-Lane				
2-HOUR PARKING 8 AM TO 6 PM MOTORCYCLE PARKING ONLY with Double Arrow	R32F(CA)	2B.52	12 x 18	12 x 18	—	—	—	—
EXCEPT HOLIDAYS (plaque)	R33bP(CA)	2B.26	24 x 18	24 x 18	36 x 24	36 x 24	—	—
Commercial Vehicle Weight Exclusion	R36(CA)	2B.64	24 x 24	24 x 24	—	—	—	—
Tow-Away No Stopping/Limited Hours Parking Specific Hours	R37(CA)	2B.52	18 x 31	18 x 31	—	—	—	—
Tow-Away No Stopping/Limited Hours Parking Specific Hours	R38(CA)	2B.52	14 x 20.5	14 x 20.5	—	—	—	—
Tow-Away No Stopping/Limited Hours Parking Specific Hours	R38(S)(CA)	2B.52	18 x 31	18 x 31	—	—	—	—
TOW-AWAY NO STOPPING 7 AM TO 9 AM – PASSENGER LOADING ONLY ALL OTHER TIMES 5 MINUTE LIMIT with Double Arrow	R38A(CA)	2B.52	18 x 30	18 x 30	—	—	—	—
NO PARKING OF COMMERCIAL VEHICLES EXCEPT BY PERMIT	R39(CA)	2B.52	24 x 30	24 x 30	—	—	—	—
NO DOUBLE PARKING ANYTIME COMMERCIAL VEHICLES INCLUDED	R39-1(CA)	2B.52	12 x 18	12 x 18	—	—	—	—
NO DOUBLE PARKING ANYTIME COMMERCIAL VEHICLES INCLUDED	R39-2(CA)	2B.52	18 x 18	18 x 18	—	—	—	—
10-HOUR PARKING COMMERCIAL MOTOR VEHICLES	R39-3(CA)	2B.52, 2I.05	24 x 18	24 x 18	—	—	—	—
\$1000 FINE FOR LITTERING	R47(CA)	2B.102(CA)	52 x 36	52 x 36	52 x 36	52 x 36	—	—
\$1000 FINE FOR ANIMAL ABANDONMENT	R47A(CA)	2B.102(CA)	54 x 36	54 x 36	54 x 36	54 x 36	—	—
SPEED ENFORCEMENT BY RADAR	R48(CA)	2B.21	24 x 30	24 x 30	36 x 48	48 x 60	18 x 24	—
RADAR ENFORCED (plaque)	R48-1P(CA)	2B.21	36 x 18	36 x 18	48 x 24	48 x 24	24 x 12	—
SPEED ENFORCED BY AIRCRAFT	R48-2(CA)	2B.21	24 x 30	24 x 30	36 x 48	48 x 60	18 x 24	—
NO PED CROSSING USE CROSSWALK	R49(CA)	2B.57	42x 18	42 x 18	—	—	—	—
AUTOS WITH TRAILERS – TRUCKS – PROHIBITED	R53D(CA)	2B.45	—	—	66 x 72	66 x 72	—	—
END TRUCK LANE CONTROL	R53E(CA)	2B.38	36 x 48	36 x 48	48 x 60	48 x 60	24 x 30	—
YIELD TO UPHILL TRAFFIC	R55(CA)	2B.38	—	—	48 x 54	48 x 54	—	—
BEGIN FREEWAY	R57(CA)	2B.55, 2B.109(CA)	—	—	48 x 26	48 x 26	—	—
END FREEWAY	R58(CA)	2B.55, 2B.109(CA)	—	—	48 x 26	48 x 26	—	—
Optional Movement Lane Control	R60B(CA)	2B.29	54 x 48	54 x 48	—	—	—	—
Intersection Lane Control	R61-1(CA)	2B.27	30 x 30	45 x 45	—	—	30 x 30	—
Intersection Lane Control	R61-3(CA)	2B.27	30 x 30	45 x 45	—	—	30 x 30	—
Intersection Lane Control	R61-5(CA)	2B.27	36 x 30	54 x 45	—	—	36 x 30	—
Intersection Lane Control	R61-7(CA)	2B.27	36 x 30	54 x 45	—	—	36 x 30	—
Intersection Lane Control	R61-9(CA)	2B.27	36 x 30	54 x 45	—	—	36 x 30	—
Intersection Lane Control	R61-11(CA)	2B.27	36 x 30	54 x 45	—	—	36 x 30	—
Intersection Lane Control	R61-13(CA)	2B.27	48 x 30	72 x 45	—	—	48 x 30	—
Intersection Lane Control	R61-15(CA)	2B.27	48 x 30	72 x 45	—	—	48 x 30	—
Intersection Lane Control	R61-17(CA)	2B.27	48 x 30	72 x 45	—	—	48 x 30	—
Intersection Lane Control	R61-19(CA)	2B.27	36 x 30	48 x 36	—	—	30 x 24	—
Intersection Lane Control	R61-22(CA)	2B.27	54 x 30	78 x 45	—	—	54 x 30	—
Intersection Lane Control	R61-24(CA)	2B.27	54 x 30	78 x 45	—	—	54 x 30	—
Intersection Lane Control	R61-26(CA)	2B.27	48 x 30	72 x 45	—	—	48 x 30	—
Intersection Lane Control	R61-28(CA)	2B.27	48 x 30	72 x 45	—	—	48 x 30	—
Intersection Lane Control	R61-30(CA)	2B.27	36 x 30	54 x 45	—	—	36 x 30	—
Intersection Lane Control	R61-32(CA)	2B.27	36 x 30	54 x 45	—	—	36 x 30	—
Intersection Lane Control	R61-34(CA)	2B.27	48 x 30	72 x 45	—	—	48 x 30	—

Table 2B-1(CA). California Regulatory Sign and Plaque Sizes (Sheet 4 of 6)

Sign or Plaque	Sign Designation	Section	Conventional Road		Expressway	Freeway	Minimum	Oversized
			Single Lane	Multi-Lane				
Intersection Lane Control	R61-36(CA)	2B.27	48 x 30	72 x 45	—	—	48 x 30	—
TRUCKS OK	R70(CA)	2B.38	—	—	—	96 x 70	—	—
TRUCKS	R70A(CA)	2B.38	—	—	—	72 x 30	—	—
OK	R70B(CA)	2B.38	—	—	—	72 x 30	—	—
Intersection Lane Control	R73-1(CA)	2B.27, 2B.28	36 x 30	36 x 30	—	—	24 x 20	45 x 36
Intersection Lane Control	R73-2(CA)	2B.29	36 x 36	36 x 36	—	—	24 x 24	45 x 45
Intersection Lane Control	R73-3(CA)	2B.26, 2B.27	36 x 36	36 x 36	—	—	24 x 24	45 x 45
Intersection Lane Control	R73-4(CA)	2B.26, 2B.27	36 x 45	36 x 45	—	—	36 x 45	—
Intersection Lane Control	R73-5(CA)	2B.29	36 x 36	36 x 36	—	—	24 x 24	—
Intersection Lane Control	R73-6(CA)	2B.26, 2B.27	36 x 36	36 x 36	—	—	24 x 24	—
Intersection Lane Control	R73-8(CA)	2B.26, 2B.27	36 x 45	36 x 45	—	—	24 x 30	—
CHAIN INSTALLATION ONLY	R74(CA)	2B.52	36 x 36	36 x 36	36 x 36	36 x 36	—	—
CHAINS REQUIRED (X MILE (X MILES)) AHEAD	R75(CA)	2B.52	48 x 42	48 x 42	48 x 42	48 x 42	—	—
CHAINS REQUIRED	R76(CA)	2B.52	48 x 24	48 x 24	48 x 24	48 x 24	—	—
ON SINGLE AXLE DRIVE VEHICLE WITH TRAILER	R76-1(CA)	2B.52	48 x 24	48 x 24	48 x 24	48 x 24	—	—
NO EXCEPTIONS	R77(CA)	2B.52	48 x 30	48 x 30	48 x 30	48 x 30	48 x 12	—
END CHAIN CONTROL	R78(CA)	2B.52	48 x 34	48 x 34	48 x 34	48 x 34	—	—
AUTOS & PICKUPS SNOW TIRES OK - CARRY CHAINS	R79(CA)	2B.52	48 x 30	48 x 30	48 x 30	48 x 30	—	—
4-W DRIVE WITH SNOW TIRES OK - CARRY CHAINS	R80-1(CA)	2B.52	48 x 30	48 x 30	48 x 30	48 x 30	—	—
Specific Hours/Days (plaque)	R82aP(CA)	2B.38	30 x 12	30 x 12	36 x 18	36 x 18	30 x 12	48 x 24
1 VEHICLE PER GREEN	R89A(CA)	2B.61	36 x 18	36 x 18	—	—	—	—
Accessible Parking Only	R99(CA)	2B.52, 2B.53	12 x 18	12 x 18	—	—	—	—
MINIMUM FINE \$250 plaque	R99B(CA)	2B.52	12 x 9	12 x 9	—	—	—	—
Accessible Parking Only Minimum Fine \$250	R99C(CA)	2B.52	12 x 24	12 x 24	—	—	—	—
TOW-AWAY SPECIAL PLACARD OR LICENSE PLATE REQUIRED	R100A(CA)	2B.52	12 x 8	12 x 8	—	—	—	—
Disabled Tow-Away	R100B(CA)	2B.52	24 x 24	24 x 24	—	—	—	—
PRIVATE ROAD (PRIVATE PROPERTY) VEHICLE CODE ENFORCED	R101(CA)	2B.103(CA)	36 x 24	36 x 24	—	—	24 x 18	—
HAZARDOUS WASTE PROHIBITED (plaque)	R102aP(CA)	2B.67	24 x 18	24 x 18	30 x 20	30 x 20	18 x 12	48 x 30
HAZARDOUS WASTE PERMITTED (plaque)	R103aP(CA)	2B.67	24 x 18	24 x 18	30 x 20	30 x 20	18 x 12	48 x 30
HAZARDOUS MATERIAL PROHIBITED (plaque)	R104aP(CA)	2B.67	24 x 18	24 x 18	30 x 20	30 x 20	18 x 12	48 x 30
HAZARDOUS MATERIAL PERMITTED (plaque)	R105aP(CA)	2B.67	24 x 18	24 x 18	30 x 20	30 x 20	18 x 12	48 x 30
Tow-Away NO STOPPING 4 TO 6 PM	R107(CA)	2B.52	18 x 18	18 x 18	—	—	—	—
No Parking of Vehicles for Sale	R108(CA)	2B.52	12 x 18	12 x 18	—	—	—	—
PAY AT STATION (plaque)	R109P(CA)	2B.53	12 x 6	12 x 6	12 x 6	—	—	—
STATE LAW MOVE OVER OR SLOW FOR STOPPED EMERGENCY AND MAINTENANCE VEHICLES	R110-1(CA)	2B.71(CA)	—	—	—	120 x 66	—	—
Electric Vehicle Charging Station Tow-Away	R112(CA)	2B.52	—	—	—	—	24 x 24	—
No Parking EXCEPT FOR EV CHARGING	R113(CA)	2B.52	—	—	—	—	12 x 18	—
No Parking EXCEPT FOR ELECTRIC VEHICLE CHARGING	R113A(CA)	2B.52	—	—	—	—	12 x 18	—
__ HOUR EV CHARGING __ AM TO __ PM	R114(CA)	2B.52	—	—	—	—	12 x 18	—

Table 2B-1(CA). California Regulatory Sign and Plaque Sizes (Sheet 5 of 6)

Sign or Plaque	Sign Designation	Section	Conventional Road		Expressway	Freeway	Minimum	Oversized
			Single Lane	Multi-Lane				
NO CAMPING OR SLEEPING IN VEHICLE MON Co Ord. XXXXXX	R119(CA)	2B.108(CA)	30 x 24	30 x 24	—	—	—	—
WAIT HERE UNTIL SCALE CLEAR	SR6-1(CA)	2B.65	—	—	44 x 36	44 x 36	—	—
RELEASE BRAKES WHILE ON SCALE	SR7-1(CA)	2B.65	—	—	42 x 36	42 x 36	—	—
SET PARKING BRAKES	SR8-1(CA)	2B.65	—	—	48 x 20	48 x 20	—	—
LOADED	SR9-1(CA)	2B.65	—	—	68 x 24	68 x 24	—	—
EMPTY	SR10-1(CA)	2B.65	—	—	62 x 24	62 x 24	—	—
EMPTY 5 MPH	SR11-1(CA)	2B.65	—	—	112 x 24	112 x 24	—	—
LOADED 3 MPH	SR12-1(CA)	2B.65	—	—	118 x 24	118 x 24	—	—
Theft CHP (plaque)	SR13-1P(CA)	2B.65	48 x 10	48 x 10	—	—	—	—
Seat Belt	SR15(CA)	2B.74	18 x 24	18 x 24	18 x 24	18 x 24	—	—
SAFETY BELT LAW ENFORCED (plaque)	SR15aP(CA)	2B.74	18 x 18	18 x 18	18 x 18	18 x 18	—	—
TRUCKS NOT GIVEN BYPASS SIGNAL MUST ENTER OPEN SCALES	SR17(CA)	2B.65	—	—	120 x 42	144 x 54	120 x 42	—
NO EXPLOSIVES OR FLAMMABLES	SR18(CA)	2B.67	36 x 24	36 x 24	—	—	—	—
EXPLOSIVES AND CORROSIVES PROHIBITED WITHOUT PERMIT	SR19-1(CA)	2B.67	60 x 48	60 x 48	—	—	—	—
SNOW NOT REMOVED BEYOND HERE	SR20-1(CA)	2B.52	48 x 30	48 x 30	—	—	—	—
TRANSPORTING ILLEGAL FIREWORKS PROHIBITED	SR25(CA)	2B.67	84 x 42	84 x 42	108 x 54	108 x 54	84 x 42	—
DISPLAY OF VEHICLES FOR SALE PROHIBITED	SR26(CA)	2B.52	30 x 24	30 x 24	—	—	—	—
LEFT OR U TURN ON GREEN ARROW ONLY	SR39A(U)(CA)	2B.59	42 x 24	42 x 24	—	—	—	—
LEFT TURN ON GREEN ARROW ONLY – NO U TURN	SR39B(CA)	2B.59	36 x 48	36 x 48	—	—	—	—
Width Limit	SR40(CA)	2B.65	—	—	60 x 78	60 x 78	48 x 60	—
ALL BUSES STOP AT SCALES	SR41(CA)	2B.65	—	—	84 x 48	84 x 48	—	—
ALL BUSES with Arrow	SR42(CA)	2B.65	—	—	54 x 54	54 x 54	—	—
GOLF CARTS OK DAYLIGHT HOURS	SR43(CA)	2B.104(CA)	18 x 24	18 x 24	—	—	—	—
Bus and Truck Registration	SR44(CA)	2B.105(CA)	72 x 42	72 x 42	—	—	—	—
EMERGENCY ACCESS KEEP CLEAR	SR46(CA)	2B.106(CA)	24 x 30	24 x 30	—	—	—	—
OFF HIGHWAY VEHICLES COMBINED USE NEXT (X) MILES	SR47(CA)	2B.107(CA)	48 x 48	48 x 48	—	—	—	—
NO OFF-HIGHWAY VEHICLES BEYOND THIS POINT	SR48(CA)	2B.107(CA)	48 x 48	48 x 48	—	—	—	—
TOW AWAY NO PARKING WHEN SNOW REMOVAL CONDITIONS EXIST	SR49(CA)	2B.52	36 x 45	36 x 45	—	—	18 x 24	—
SPECIAL DRIVING ZONE BEGINS HERE – DOUBLE FINE ZONE	SR53(CA)	2B.25	48 x 48	48 x 48	72 x 72	72 x 72	48 x 48	—
DOUBLE FINE ZONE	SR54(CA)	2B.25	30 x 30	30 x 30	42 x 42	42 x 42	30 x 30	—
SPECIAL DRIVING ZONE ENDS HERE	SR55(CA)	2B.25	48 x 30	48 x 30	72 x 42	72 x 42	48 x 30	—
ALL TRUCKS – 2 AXLES AND MORE – STOP AT SCALE	SR57-1(CA)	2B.65	66 x 18	66 x 18	84 x 24	108 x 30	84 x 24	—
NO PICKUPS (plaque)	SR57-1P(CA)	2B.65	66 x 12	66 x 12	84 x 18	108 x 24	84 x 18	—
RED LIGHT VIOLATION \$ _____ FINE	SR58(CA)	2B.69	30 x 36	30 x 36	36 x 48	36 x 48	30 x 36	—
STATE LAW MINOR CRASH NO INJURIES – SAFELY MOVE VEHICLES FROM TRAVEL LANES	SR61-1(CA)	2B.70	96 x 84	96 x 84	96 x 84	96 x 84	96 x 84	—
NO IDLING COMMERCIAL VEHICLES AND ALL BUSES	SR62(CA)	2B.52	18 x 24	18 x 24	—	—	—	—

Table 2B-1(CA). California Regulatory Sign and Plaque Sizes (Sheet 6 of 6)

Sign or Plaque	Sign Designation	Section	Conventional Road		Expressway	Freeway	Minimum	Oversized
			Single Lane	Multi-Lane				
NO IDLING All Buses and Commercial Vehicles	SR63(CA)	2B.52	18 x 24	18 x 24	—	—	—	—
NO IDLING All Buses and Commercial Vehicles REPORT VIOLATIONS	SR63A(CA)	2B.52	18 x 30	18 x 30	—	—	—	—
Weight Station Repair Service (plaque)	S21P(CA)	2B.65	36 x 24	36 x 24	—	—	—	—
NO LOITERING, CAMPING, VENDING OR PARKING OF VEHICLES 30 FEET OR LONGER	S22(CA)	2B.110(CA)	—	—	—	—	48 x 15	—
Rest Area/Vista Point 8-HOUR PARKING	S23(CA)	2B.52, 2I.05	24 x 24	24 x 24	—	—	—	—

Table 2B-2. Meanings of Symbols and Legends on Reversible Lane Control Signs

Symbol / Word Message	Meaning
Red X on white background	Lane closed
Upward-pointing black arrow on white background (if left turns are permitted, the arrow shall be modified to show left / through arrow)	Lane open for through travel and any turns not otherwise prohibited
Black two-way left-turn arrows on white background and legend ONLY	Lane may be used only for left turns in either direction (i.e., as a two-way left-turn lane)
Black single left-turn arrow on white background and legend ONLY	Lane may be used only for left turns in one direction (without opposing left turns in the same lane)

Table 2B-101(CA). Standard Application of Speed Limits per California Vehicle Code

Speed	Determined by	Roadway Facility	CVC Section
15 mph	State or local authority	- Railroad grade crossing with obstructed view - Uncontrolled highway intersection with obstructed view - An alley	22352.a.1
15 & 20 mph	State or local authority	Where the prima facie speed of 25 mph is more than is reasonable or safe - Narrow street not exceeding 25 feet other than a State Highway in a business or residential area or in a public park - Road near a school or senior center facility	22358.3 & 22358.4
25 mph	State or local authority	- Any highway in any business or residential district - A street contiguous to a senior citizen facility other than a State highway - Adjacent to a children's playground in a public park, but only during particular hours or days when children are expected to use the facilities	22352.b & 22357.1

Table 2B-102(CA). Standard Application of Speed Limits per California Vehicle Code

Speed	Determined by	Roadway Facility	CVC Section
15 to 60 mph	Caltrans	State highway, based on an E&TS where the limit of 65 mph is more than reasonable or safe	22354
15 to 60 mph	Local city council or county board of supervisors for Caltrans	State highway, local entities may conduct a public hearing on proposed increases or decreases, and the State Department of Transportation shall take into consideration the results of the public hearing	22354.5
30 to 65 mph	Local authority	Any street other than a state highway, by ordinance, may post a prima facie speed limit based on an E&TS where a speed > 25 mph would facilitate the orderly movement of vehicular traffic and would be reasonable and safe	22357
15 to 60 mph	Local authority	Any street other than a state highway, by ordinance, may post a prima facie speed limit based on an E&TS where the limit of 65 mph is more than is reasonable and safe	22358
20 to 50 mph for Trucks	State or local authority	Highways under their respective jurisdiction where 55 mph is more than is reasonable or safe for vehicles mentioned in CVC 22406 (Trucks and other large vehicles)	22407
Maximum Speed 55 mph	State or local authority	▪ Two-lane, undivided highway ▪ Any highway when driving any of the following vehicles: a. Motortruck or truck tractor with > 3 axles b. Passenger vehicle or bus towing any other vehicle c. School bus transporting any school pupil d. A farm labor vehicle when transporting passengers e. A vehicle transporting explosives f. A trailer bus	22349.b & .c and 22406
Maximum Speed Limit of 65 mph	State or local authority	Any highway, posted at 65 mph based upon an E&TS, for vehicles not subject to CVC 22406	22349(a) & 22349
Maximum Freeway Speed Limit of 70 mph	Caltrans	Freeways, after consultation with the California Highway Patrol, based upon an E&TS, or upon the basis of appropriate design standards and projected traffic volumes in the case of newly constructed freeway segments, for vehicles not subject to CVC 22406	22356

Table 2B-103(CA). Examples Showing the Applicability of Rounding and Additional Speed Reduction

85th.Percentile Speed (mph)	Rounding to the nearest 5 mph increment (CVC 22358.6(a))	If rounding to the nearest is up, may round down (CVC 22358.6(c))	If rounding to the nearest is down, it may additionally be lowered by 5 mph (CVC 22358.6(b))	If safety corridor or adjacent to high concentration of bicyclists & pedestrians, may additionally lower by 5 mph (CVC 22358.7)
47.5-50.0	50	45	N/A	40
45.1-47.4	45	N/A	40	35
42.5-45.0	45	40	N/A	35
40.1-42.4	40	N/A	35	30

Table 2B-104(CA). Safety Corridor Factors

Category	Factors
Crash Weighting Factors to Develop One Serious/Fatal Injury Safety Corridor	▪ Crash severity: Fatal Crashes, Serious Injury Crashes ▪ Mode: Pedestrian-bicycle related crashes, vehicle/other ▪ Disadvantaged Community Status: MPO/RTPA or locally defined disadvantaged community status based on most current version of CalEnviroScreen ▪ Vulnerable Populations: Seniors (age 65 and older) and Youth (under age 15) based on the American Community Survey ▪ School proximity (within 0.25 miles) based on the California School Campus Database ▪ Systemic or Predicted Crashes
Crash Density	Each roadway segment block may be converted into ~ 0.25-mile overlapping or contiguous “corridor” segments to create a consistent unit of measurement and assess the concentration of linear patterns of crashes within a defined distance. The highest scoring (i.e., most fatal and serious injury crashes per mile) “corridor” segments within a street need to be identified and an appropriate threshold set to determine safety corridor eligibility.
Maintenance	The jurisdiction may establish a review and re-evaluation frequency for safety corridors. However, such frequency need not exceed seven years.

Table 2B-105(CA). Generators of High Concentrations of Bicyclists or Pedestrians

Category	Generator
Land Use	Employment centers
	Presence of retail
	Parks, multi-use trails, and recreational destinations
	Schools/universities
	Senior Centers
	Cultural areas, entertainment space areas, or areas of community significance
	Religious facilities
	Health/medical facilities
Transit Factors	Transit stops
	Transit-Oriented Developments/Transit Priority Areas
Presence of Pedestrian/Bicyclist Infrastructure	Sidewalk presence
	Crosswalk presence
	Bikeway presence
	Nearby signalized intersections on four-way intersections
	Presence of micromobility devices such as bicycles or scooters
Demographic Factors	Presence of vulnerable groups, including children, seniors, persons with disabilities, users of personal assistive mobility devices, and the unhoused
	MPO/RTPA or locally defined disadvantaged community status
	Presence of students (all levels)
Local Data	Need identified in a safety analysis, such as a road safety audit or a formalized planning document, such as a local road safety plan

CHAPTER 2C. WARNING SIGNS AND OBJECT MARKERS

Chapter 2C Subchapter and Section Organization

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GENERAL

Section 2C.01 Application of Warning Signs

Standard:

01 The use of warning signs shall be based on an engineering study or on engineering judgment.

02 Warning signs shall be retroreflective or illuminated (see Section 2A.21).

Guidance:

03 The use of warning signs should be kept to a minimum as the unnecessary use of warning signs tends to breed disrespect for all signs. In situations where the condition or activity is seasonal or temporary, the warning sign should be removed or covered when the condition or activity does not exist.

Section 2C.02 Design of Warning Signs

Standard:

01 Except as provided in Paragraph 2 of this Section or unless specifically designated otherwise, all warning signs shall be diamond-shaped (square with one diagonal vertical) with a black legend and border on a yellow background. Warning signs shall be designed in accordance with the sizes, shapes, colors, and legends contained in the “Standard Highway Signs” publication (see Section 1A.05) and Caltrans’ California Sign Specifications.

Option:

02 A warning sign that is larger than the size shown in the Oversized column in Table 2C-1 and 2C-1(CA) for that particular sign may be diamond-shaped or may be rectangular or square in shape.

Support:

03 The use of a shape other than diamond-shaped is typical for overhead installations.

04 Section 2A.05 contains information on allowable methods to accommodate a diamond-shaped warning sign where the lateral space available in which to install a diamond-shaped warning sign is constrained, such as in urban locations, when mounting on a narrow median barrier or adjacent to a retaining wall, including the display of the standard legend in a vertically oriented rectangle.

05 The use of LEDs in the border and legend of warning signs is described in Section 2A.12.

Option:

06 Except for symbols on warning signs, minor modifications may be made to the design provided that the essential appearance characteristics are met. Modifications may be made to the symbols shown on combined horizontal alignment/intersection signs (see Section 2C.09) and intersection warning signs (see Section 2C.41) in order to approximate the geometric configuration of the intersecting roadway(s).

07 Word message warning signs other than those provided in this Manual may be developed by Caltrans (in accordance with CVC § 21400) and installed by State and/or local highway agencies for conditions otherwise not addressed by standard signs (see Section 2A.04).

08 Warning signs regarding conditions associated with pedestrians, bicyclists, and playgrounds and their related plaques may have a black legend and border on a yellow or fluorescent yellow-green background.

Standard:

09 Warning signs regarding conditions associated with school buses and schools and their related supplemental plaques shall have a black legend and border on a fluorescent yellow-green background (see Section 7B.01).

Option:

10 Consistent with the provisions of Section 4S.03, a Warning Beacon may be used in combination with a standard warning sign.

Support:

11 Refer to Section 2A.09 for the use of educational plaques.

Section 2C.03 Size of Warning Signs and Plaques

Standard:

01 Except as provided in Section 2A.07, the sizes for warning signs shall be as shown in Table 2C-1 and Table 2C-1(CA).

Support:

01a Refer to Paragraph 02 of Section 2C.02 and Paragraph 06 of this section for sizes larger than shown in Table 2C-1 and Table 2C-1(CA).

02 Section 2A.07 contains information regarding the applicability of the various columns in Table 2C-1.

Standard:

03 **Except as provided in Paragraph 5 of this Section, the minimum size for all diamond-shaped warning signs facing traffic on a multi-lane conventional road where the posted speed limit is higher than 35 mph shall be 36 x 36 inches.**

04 **The minimum size for supplemental warning plaques that are not included in Table 2C-1 shall be as shown in Table 2C-2.**

Option:

05 If a diamond-shaped warning sign is placed on the left-hand side of a multi-lane roadway to supplement the installation of the same warning sign on the right-hand side of the roadway, the minimum size identified in the Single Lane column in Table 2C-1 may be used.

06 Signs and plaques larger than those shown in Tables 2C-1 and 2C-2 may be used (see Section 2A.11).

Guidance:

07 *The minimum size for all diamond-shaped warning signs facing traffic on exit and entrance ramps at major interchanges connecting an Expressway or Freeway with an Expressway or Freeway (see Section 2E.11) should be the size identified in Table 2C-1 for the mainline roadway classification (Expressway or Freeway). If a minimum size is not provided in the Freeway Column, the Expressway size should be used. If a minimum size is not provided in the Freeway or the Expressway Column, the Oversized size should be used.*

08 *The minimum size for all diamond-shaped warning signs facing traffic on exit and entrance ramps at all other interchanges (see Section 2E.11) should be 36 x 36 inches.*

09 *The typical size of warning signs used on low-volume rural roads with ~~operating speeds~~ posted speed limits of 30 mph or less should be in accordance with the minimum column of Table 2C-1.*

Section 2C.04 Placement of Warning Signs

Support:

01 Information on the placement of warning signs is contained in Sections 2A.13 through 2A.18.

02 The time needed for detection, recognition, decision, and reaction is called the Perception-Response Time (PRT). Table 2C-3 is provided as an aid for determining warning sign location. The distances shown in Table 2C-3 can be adjusted for roadway features, other signing, and to improve visibility.

Guidance:

03 *Warning signs should be placed so that they provide an adequate PRT. The distances contained in Table 2C-3 should be applied with engineering judgment.*

04 *Minimum spacing between warning signs with different messages should be based on the estimated PRT for driver comprehension of and reaction to the second sign.*

05 *The effectiveness of the placement of warning signs should be periodically evaluated under both day and night conditions.*

HORIZONTAL ALIGNMENT WARNING SIGNS AND PLAQUES

Section 2C.05 Horizontal Alignment Warning Signs – General

Support:

- 01 A variety of horizontal alignment warning signs (see Figure 2C-1), pavement markings (see Chapter 3B), and delineation (see Chapter 3G) can be used to advise motorists of a change in the roadway alignment. Uniform application of these traffic control devices with respect to the amount of change in the roadway alignment conveys a consistent message establishing driver expectancy and promoting effective roadway operations. The design and application of horizontal alignment warning signs to meet those requirements are addressed in Sections 2C.05 through 2C.12.
- 02 The following list identifies treatments that might be used in advance of or within a change in horizontal alignment:
- A. Horizontal alignment (Turn (W1-1), Curve (W1-2, W1-10 series, W1-11, W1-13, W1-15), Reverse Turn (W1-3), Reverse Curve (W1-4), Winding Road (W1-5), Exit Speed (W13-2), Ramp Speed (W13-3), and Combination Horizontal Alignment (Advisory Exit or Ramp Speed W13-6 through W13-11)) signs (see Sections 2C.07, 2C.09, and 2C.12)
 - B. Advisory Speed (W13-1P) plaque (see Section 2C.59)
 - C. Chevron Alignment (W1-8) signs (see Section 2C.08)
 - D. Delineators (see Chapter 3G)
 - E. One Direction Large Arrow (W1-6) sign (see Section 2C.10)
 - F. Raised Retroreflective Pavement Markers (see Sections 3B.15 through 3B.17)
 - G. Sign or marking conspicuity enhancements (see Section 2A.11)
 - H. Wide edge lines (see Section 3A.04)
 - I. Pavement word, symbol and arrow markings (symbol or words) (see Sections 3B.20 through 3B.22)
 - J. Rumble strips (see Chapter 3K)
 - K. Vehicle Speed Feedback Sign (see Section 2C.13)
 - L. Speed reduction markings (see Section 3B.28)
- 03 In addition, considerations other than traffic control devices, such as improved surface friction (high friction surface treatments), pavement edge treatments, lighting improvements, increased superelevation, and rumble strips, might be used in advance of or within a change in horizontal alignment.

Guidance:

- 04 *Except as provided in Section 2C.06, the selection of traffic control devices used to warn road users of a change in horizontal alignment or to provide guidance in navigating the change in horizontal alignment should be based on consideration of one or more of the following factors:*
- A. The speed of traffic on the approach to the change in horizontal alignment*
 - B. The recommended advisory speed for the change in horizontal alignment*
 - C. The difference between the speed limit and the advisory speed, or the speed differential for the change in horizontal alignment*
 - D. Daily traffic volumes on the roadway*
 - E. The typical mix of vehicle types on the roadway*
 - F. Sight distance throughout the change in horizontal alignment*
 - G. Other types of traffic control devices that are used in advance of and within the change in horizontal alignment on the same roadway segment*
 - H. The crash history of the change in horizontal alignment*
 - I. The presence of driveways or intersections within the curve radius*

Section 2C.06 Device Selection for Changes in Horizontal Alignment

Standard:

- 01 **The criteria shown in Chart A of Table 2C-4 shall be used to determine the need for devices for changes in horizontal alignment. If the use of a device or devices is indicated by Chart A of Table 2C-4, then Chart B of Table 2C-4 shall be used to specify the type(s) of devices to be used in advance of, and/or along, a horizontal curve, except as provided in Paragraphs 3, 5, and 6 of this Section. The speed differential in Chart B of Table 2C-4 shall be the difference between the horizontal curve's advisory speed and the roadway's posted speed limit, statutory speed limit, or the 85th percentile speed on the approach to the curve.**

Support:

02 Chart A of Table 2C-4 represents existing AADT, type of roadway, and whether or not there are existing markings.

Option:

03 A One Direction Large Arrow (W1-6) sign may be used in place of or to supplement delineators (see Chapter 3G) or Chevron Alignment (W1-8) signs when:

A. Site conditions limit the number of delineators or Chevron Alignment signs that are visible; or

B. The number of delineators or Chevron Alignment signs that can be installed within the change in horizontal alignment is less than the number determined by the spacing specified in Sections 2C.08 or 3G.04.

04 Additional or supplemental devices may be used for a change in horizontal alignment on the basis of engineering judgment.

05 Devices for changes in horizontal alignment may be omitted when the speed limit on the approach to an alignment change is 20 mph or less.

06 Devices for changes in horizontal alignment may be omitted on urban streets with an AADT of 1,000 vehicles per day or less.

Support:

07 For purposes of selecting traffic control devices for changes in horizontal alignment, an arterial or collector is considered to have pavement markings when either a center line, edge lines, or both are present. Warrants for center lines and edge lines are provided in Sections 3B.02 and 3B.10, respectively.

Section 2C.07 Horizontal Alignment Signs (W1-1 through W1-5, W1-11, and W1-15)

Standard:

01 **If Table 2C-4 indicates that a horizontal alignment sign (see Figure 2C-1) is required, recommended, or allowed, the sign installed in advance of the curve shall be a Curve (W1-2) sign unless a different sign is recommended or allowed by the provisions of this Section.**

Guidance:

02 *A Turn (W1-1) sign should be used instead of a Curve (W1-2) sign in advance of a horizontal curve that has an advisory speed of 30 mph or less.*

03 *Where there are two changes in roadway alignment in opposite directions that are separated by a tangent distance of less than 600 feet, the Reverse Turn (W1-3) sign should be used instead of multiple Turn (W1-1) signs or the Reverse Curve (W1-4) sign should be used instead of multiple Curve (W1-2) signs.*

Support:

04 Figure 2C-2 provides examples of warning signs used for turns and curves.

Option:

05 A Winding Road (W1-5) sign may be used instead of multiple Turn (W1-1) or Curve (W1-2) signs where there are ~~three or more changes~~ a series of turns or curves in a roadway alignment which requires driving caution, and where curve or turn signs would be too numerous to be effective. ~~each separated by a tangent distance of less than 600 feet.~~

Support:

05a *Where any of the curves has an advisory speed that is 10 mph or more below that of the first curve then it should be posted with a curve or turn sign and an Advisory Speed (W13-1P) plaque.*

Option:

06 A NEXT XX MILES (W7-3aP) supplemental distance plaque (see Section 2C.61) may be installed below the Winding Road sign where continuous roadway curves exist for a specific distance.

07 If the curve has a change in horizontal alignment of 135 degrees or more, the Hairpin Curve (W1-11) sign may be used instead of a Turn or Curve sign.

08 If the curve has a change of direction of approximately 270 degrees, such as on a cloverleaf interchange ramp, the 270-degree Loop (W1-15) sign may be used instead of a Turn or Curve sign.

Guidance:

09 *When the Hairpin Curve sign or the 270-degree Loop sign is installed, either a One-Direction Large Arrow (W1-6) sign or Chevron Alignment (W1-8) signs should be installed on the outside of the turn or curve.*

Option:

10 *Horizontal Alignment Signs may be combined with the Advisory Speed (W13-1P) plaque (refer to Section 2C.59).*

Support:

- 11 Refer to Section 2C.35 for use of an oversized square shape version of W1-1 at a short ramp length with limiting curve near ramp terminals (refer to Figure 2C-3).

Section 2C.08 Chevron Alignment Sign (W1-8)

Standard:

- 01 The use of the Chevron Alignment (W1-8) sign (see Figures 2C-1 and 2C-2) to provide additional emphasis and guidance for a change in horizontal alignment shall be in accordance with the information shown in Table 2C-4.

Option:

- 02 Chevron Alignment signs may be used instead of or in addition to standard delineators.

Standard:

- 03 The Chevron Alignment sign shall be a vertical rectangle. No border shall be used on the Chevron Alignment sign.

- 04 If used, Chevron Alignment signs shall be installed on the outside of a turn or curve, in line with and at approximately a right angle to approaching traffic. Chevron Alignment signs shall be installed at a minimum height of 4 feet, measured vertically from the bottom of the sign to the elevation of the near edge of the traveled way.

Guidance:

- 05 The approximate spacing of Chevron Alignment signs on the turn or curve measured from the point of curvature (PC) should be as shown in Table 2C-5.

- 06 The Chevron Alignment signs should be visible for a sufficient distance to provide the road user with adequate time to react to the change in alignment.

Option:

- 07 LEDs may be used to enhance the conspicuity of Chevron Alignment signs (see Section 2A.12).

Standard:

- 08 The LEDs used in the Chevron Alignment sign shall consist of yellow LEDs outlining the chevron symbol.

- 09 Chevron Alignment signs shall not be placed on the far side of a T-intersection facing traffic on the stem approach to warn drivers that a through movement is not physically possible, as this is the function of a Two-Direction (or One-Direction) Large Arrow sign.

- 10 Chevron Alignment signs shall not be used to mark obstructions within or adjacent to the roadway, including the beginning of guardrails or barriers, as this is the function of an object marker (see Section 2C.70).

- 11 Chevron Alignment signs directing traffic to the right shall not be used in the central island of a roundabout or a neighborhood traffic circle.

Section 2C.09 Combination Horizontal Alignment/Intersection Signs (W1-10 Series)

Option:

- 01 The Turn (W1-1) sign, the Curve (W1-2) sign, and the Reverse Curve (W1-4) sign may be combined with the Cross Road (W2-1) sign or the Side Road (W2-2 or W2-3) sign to create a combination Horizontal Alignment/Intersection (W1-10 series) sign (see Figure 2C-1) that depicts the condition where an intersection occurs within or immediately adjacent to a turn or curve.

Support:

- 02 Section 2C.65 contains information about the use of an advance street name plaque to identify an intersecting road.

Guidance:

- 03 Elements of the combination Horizontal Alignment/Intersection sign related to horizontal alignment should comply with the provisions of Section 2C.07, and elements related to intersection configuration should comply with the provisions of Section 2C.41. The symbol design should approximate the configuration of the intersecting roadway(s). No more than one Cross Road or two Side Road symbols should be displayed on any one combination Horizontal Alignment/Intersection sign.

Standard:

- 04 The use of the combination Horizontal Alignment/Intersection sign shall be in accordance with the provisions of Section 2C.07 for the appropriate Turn or Curve sign.

Support:

05 The advisory speed needs to be determined in accordance with Section 2C.59.

Section 2C.10 One-Direction Large Arrow Sign (W1-6)

Option:

01 A One-Direction Large Arrow (W1-6) sign (see Figure 2C-1) may be used either as a supplement or alternative to Chevron Alignment signs or delineators in order to delineate a change in horizontal alignment (see Figure 2C-2).

02 A One-Direction Large Arrow (W1-6) sign may be used to supplement a Turn (W1-1) or Reverse Turn (W1-3) sign (see Figure 2C-2) to emphasize the abrupt curvature.

Standard:

03 **The One-Direction Large Arrow sign shall be a horizontal rectangle with an arrow pointing to the left or right.**

04 **If used, the One-Direction Large Arrow sign shall be installed on the outside of a turn or curve in line with and at approximately a right angle to approaching traffic.**

05 **The One-Direction Large Arrow sign shall not be used where there is no alignment change in the direction of travel, such as at the beginnings and ends of medians or at center piers.**

06 **The One-Direction Large Arrow sign directing traffic to the right shall not be used in the central island of a roundabout or a neighborhood traffic circle.**

Guidance:

07 *The One-Direction Large Arrow sign should be visible for a sufficient distance to provide the road user with adequate time to react to the change in alignment.*

08 *The OM1-3 object marker should be used below and on the same post as the W1-6 sign. Refer to Section 2C.70.*

Support:

09 Refer to Section 2C.59 for use of the Confirmation Advisory Speed Plaque (W13-1aP).

Section 2C.11 Truck Rollover Sign (W1-13)

Option:

01 A Truck Rollover (W1-13) sign (see Figure 2C-1) may be used as a supplement to a horizontal alignment warning sign to warn drivers of vehicles with a high center of gravity, such as trucks, tankers, and recreational vehicles, of a curve or turn where there are:

- A. Past incidents of truck rollovers at the specific location,
- B. High volumes of trucks, or
- C. A speed differential (see Section 2C.06) that might pose a greater risk for vehicles with high centers of gravity.

Guidance:

02 *Where engineering judgment determines the need for the installation of a Truck Rollover (W1-13) sign, it should be located downstream of the horizontal alignment warning sign in advance of the curve.*

Standard:

03 **If a Truck Rollover (W1-13) sign is used, it shall be accompanied by an Advisory Speed (W13- 1P) plaque indicating the recommended speed for vehicles with a higher center of gravity.**

Guidance:

03a *An oversized square shape version should be used if installed on the outside of a turn or curve in line with and at approximately a right angle to approaching traffic (refer to Figure 2C-3).*

Option:

04 The Truck Rollover sign may include conspicuity enhancements, or may be a blank-out sign, activated by the detection of an approaching vehicle with a high center of gravity that is traveling in excess of the recommended speed for the condition.

Support:

05 The curved arrow on the Truck Rollover sign shows the direction of roadway curvature. The truck tips in the opposite direction.

Section 2C.12 Advisory Exit and Ramp Speed Signs (W13-2 and W13-3) and Combination Horizontal Alignment/Advisory Exit and Ramp Speed Signs (W13-6 through W13-13)

Standard:

- 01 Where an advisory speed is posted in advance of a freeway or expressway exit, the Advisory Exit Speed (W13-2) sign (see Figure 2C-1) shall be used.
- 02 Where an advisory speed is posted in advance of a conventional road ramp or to another roadway or roadside facility, the Advisory Ramp Speed (W13-3) sign (see Figure 2C-1) shall be used.
- 03 An Advisory Exit Speed or Advisory Ramp Speed sign shall be used when the difference between the mainline roadway speed limit and the exit or ramp advisory speed in the vicinity of the departure is 20 mph or greater.

Guidance:

- 03a The Advisory Ramp Speed (W13-3) sign (refer to Figure 2C-1) should be installed on the right of right freeway to freeway connectors or on the left of left freeway to freeway connector ramps just beyond the neutral area (gore) where the ramps cannot be comfortably negotiated by motorists at approach speeds.
- 04 An Advisory Exit Speed or Advisory Ramp Speed sign should be used when the difference between the mainline roadway speed limit and the exit or ramp advisory speed in the vicinity of the departure is 15 mph.

Option:

- 05 An Advisory Exit Speed or Advisory Ramp Speed sign may be used based on engineering judgment when the difference between the mainline roadway speed limit and the exit or ramp advisory speed in the vicinity of the departure is 10 mph or less.

Guidance:

- 05a Where additional warning is needed for ramp curvature beyond the neutral area (gore), a curve warning sign and an advisory speed should be posted.

Option:

- 06 The Combination Horizontal Alignment/Advisory Exit Speed (W13-6, W13-8, and W13-10) signs (see Figure 2C-1) may be used in lieu of the Advisory Exit Speed (W13-2) sign, and the combination Horizontal Alignment/Advisory Ramp Speed (W13-7, W13-9, and W13-11) signs (see Figure 2C-1) may be used in lieu of the Advisory Ramp Speed (W13-3) sign.
- 07 The Combination Truck Rollover/Advisory Exit Speed and Truck Rollover/Advisory Ramp Speed (W13-12 and W13-13) signs (see Figure 2C-1) may be used in lieu of the W13-2 and W13-3 signs respectively if the tip over condition is in the vicinity of the gore.

Standard:

- 08 Roadway geometrics represented on the Combination Horizontal Alignment/Advisory Exit and Combination Horizontal Alignment/Advisory Ramp Speed signs (see Figure 2C-1) shall be limited to the standard signs shown in this Manual.

Guidance:

- 09 If used, the Advisory Exit Speed sign or the Combination Horizontal Alignment/Advisory Exit Speed sign should be installed ~~along the deceleration lane~~ on the right of right exit ramps or on the left of left exit ramps just beyond the neutral area (gore). The Advisory Exit Speed or the Combination Horizontal Alignment/Advisory Exit signs should be visible in time for the road user to decelerate and make an exiting maneuver.

Support:

- 09a Refer to FHWA's List of Known Errors for error in Paragraph 9 text. Refer to Section 1A.04 for more details.
- 09b The W13-2 sign is not necessary for an exit ramp that has tangent alignment and terminates at a stop sign or a signal.

Guidance:

- 10 Regulatory Speed Limit signs (see Section 2B.21) should not be located in the vicinity of exit ramps or deceleration lanes, particularly where they will conflict with the advisory speed displayed on the Advisory Exit or Ramp Speed signs.

Support:

- 11 Section ~~2C.06~~ 2C.59 contains provisions for the determination of the displayed advisory speed.
- 12 ~~Table 2C-3 lists recommended advance sign placement distances for deceleration to various advisory speeds.~~

Option:

- 13 Where there is a need to remind road users of the recommended advisory speed, a horizontal alignment warning sign with an advisory speed plaque displaying the same advisory speed may be installed at a downstream location along

the ramp.

Guidance:

- 14 *If the ramp curvature changes to the extent that it warrants a lower advisory speed, a horizontal alignment warning sign with the new advisory speed should be displayed in advance of the change in curvature (refer to Figure 2C-3).*

Option:

- 15 The One-Direction Large Arrow (W1-6) sign may be installed beyond the exit gore on the outside of the curve to provide additional warning of an immediate change in curvature. When used in conjunction with the exit speed, the One-Direction Large Arrow (W1-6) sign may be supplemented with a Confirmation Advisory Speed (W13-1aP) plaque (see Figure 2C-1) when the plaque is not used with the Exit Gore (E5-1 series) sign.

Guidance:

- 16 *The horizontal alignment symbol displayed on the Combination Horizontal Alignment/Advisory Exit and Ramp Speed signs should be consistent with the horizontal geometry of the ramp.*

Support:

- 17 *Examples of advisory speed signing for exit ramps are shown in Figure 2C-3.*

- 18 *Refer to FHWA's List of Known Errors for error in Paragraph 17 text. Refer to Section 1A.04 for more details.*

Section 2C.13 Vehicle Speed Feedback Sign and Plaque (W13-20 and W13-20aP)

Option:

- 01 A Vehicle Speed Feedback (W13-20) sign or (W13-20aP) plaque (see Figure 2C-4) that displays the speed of an approaching vehicle to the vehicle operator may be used to provide warning to drivers of their speed in relation to either a speed limit (R2-1) sign or a horizontal alignment warning sign assembly with a posted advisory speed.

Standard:

- 02 **When used to display the speed of an approaching vehicle in relation to the posted speed limit, the Vehicle Speed Feedback (W13-20aP) plaque shall be mounted below a Speed Limit (R2-1) sign (see Section 2B.21).**

- 03 **When used to supplement a horizontal alignment warning sign advisory speed, the Vehicle Speed Feedback (W13-20) sign shall be an independent installation near the point of curvature of a horizontal curve (see Section 2C.06).**

- 04 **The legend YOUR SPEED shall be a black legend on a yellow retroreflective background, except as provided in Sections 6H.01 and 7B.01. The changeable legend displaying the speed of the approaching vehicle shall be a yellow luminous legend on a black opaque background. The vehicle speed displayed on the changeable portion of the sign shall be displayed as an integer. The Vehicle Speed Feedback sign and plaque shall not flash, strobe, change color, or use other animated elements integrated into the changeable legend display. When no vehicles are approaching, the changeable display shall not display a legend.**

Guidance:

- 05 *The changeable portion of the Vehicle Speed Feedback legend should be approximately the same height, width, and stroke of those on the Speed Limit sign it supplements or is mounted below.*

- 06 *When a W13-20aP plaque is used with a Speed Limit sign it should be approximately the same width as the Speed Limit sign it is mounted below.*

VERTICAL GRADE WARNING SIGNS AND PLAQUES

Section 2C.14 Hill Signs (W7-1 and W7-1a)

Guidance:

- 01 The Hill (W7-1) sign (see Figure 2C-5) should be used in advance of a downgrade where the length, percent of grade, horizontal curvature, and/or other physical features require special precautions on the part of road users.
- 02 The Hill sign and supplemental grade (W7-3P) plaque (see Figure 2C-5 and Section 2C.64) used in combination, or the W7-1a sign used alone, should be installed in advance of downgrades for the following conditions:
- A. 5% grade that is more than 3,000 feet in length,
 - B. 6% grade that is more than 2,000 feet in length,
 - C. 7% grade that is more than 1,000 feet in length,
 - D. 8% grade that is more than 750 feet in length, or
 - E. 9% grade that is more than 500 feet in length.
- 03 These signs should also be installed for steeper grades or where crash experience and field observations indicate a need.
- 04 Supplemental plaques (see Sections 2C.57 and 2C.64) and larger signs should be used for emphasis or where special hill characteristics exist. On longer grades, the use of the Hill sign with a distance (W7-3aP) plaque or the combination distance/grade (W7-3bP) plaque (see Figure 2C-5) at periodic intervals of approximately 1-mile spacing should be considered.

Option:

- 05 A USE LOW GEAR (W7-2P) or TRUCKS USE LOWER GEAR (W7-2bP) supplemental plaque (see Figure 2C-5) may be used to indicate a situation where downshifting as well as braking might be advisable.
- 06 The SLOW TRUCKS (W51(CA)) sign (refer to Figure 2C-5(CA)) may be used to inform drivers that slow moving trucks substantially interfere with the flow of traffic. The Next Distance (W7-3a) plaque may be used with the W51(CA) sign.
- 07 The WATCH DOWNHILL SPEED (SW4-1(CA)) sign (refer to Figure 2C-5(CA)) may be used on long downhill grades to remind motorists to maintain the posted speed.

Section 2C.15 Truck Escape Ramp Signs (W7-4 Series)

Guidance:

- 01 Where applicable, truck escape (or runaway truck) ramp advance warning signs (see Figure 2C-5) should be located approximately 1 mile and approximately ½ mile in advance of the grade, and of the escape ramp. An additional W7-4b or W7-4c sign should be placed at the gore.
- 02 A RUNAWAY VEHICLES ONLY (R4-10) sign (see Section 2B.41) should be installed near the escape ramp entrance to discourage other road users from entering the ramp. ~~No Parking (R8-3) signs should be placed near the ramp entrance.~~ NO STOPPING ANYTIME (R26A(S)(CA)) signs (refer to Section 2B.41) should be placed to keep motorists from stopping in the path of runaway trucks.

Standard:

- 03 When truck escape ramps are installed, at least one of the W7-4 series signs shall be used.

Option:

- 04 A SAND (W7-4dP), GRAVEL (W7-4eP), or PAVED (W7-4fP) supplemental plaque (see Figure 2C- 5) may be used to describe the ramp surface. ~~State and local highway agencies~~ Caltrans (in accordance with CVC § 21400, refer to Section 2A.04) may develop appropriate word message signs for the specific situation.

Standard:

- 05 The DEEP GRAVEL (W30B(CA)) sign (refer to Figure 2C-5(CA)) shall be placed on all truck escape ramps.

Guidance:

- 06 The W30B(CA) sign should be placed near the outside edge of the paved ramp prior to the beginning of the gravel bed.
- 07 The RIGHT (LEFT) EXIT (W30cP(CA)) plaque (refer to Figure 2C-5(CA)) should be used to indicate a right or left exit to a truck escape ramp.

Support:

- 08 Erect the W30cP(CA) plaque below and on the same post with the first W7-4 sign.
- 09 Refer to Figure 3G-103(CA) for Runaway Truck Ramp sign and marking details.

Section 2C.16 HILL BLOCKS VIEW Sign (W7-6)

Option:

- 01 A HILL BLOCKS VIEW (W7-6) sign (see Figure 2C-5) may be used on the approach to a crest vertical curve where the vertical curvature provides inadequate stopping sight distance at the posted speed limit.

Guidance:

- 02 *When a vertical curve results in a sight distance obstruction to a specific condition beyond the crest of the vertical curve, the warning sign for the specific condition beyond the vertical crest should be used rather than the HILL BLOCKS VIEW sign.*
- 03 *When a HILL BLOCKS VIEW sign is used, it should be supplemented by an Advisory Speed (W13-1P) plaque (see Figure 2C-1) indicating the recommended speed for traveling over the hillcrest based on available stopping sight distance.*

ROADWAY GEOMETRY WARNING SIGNS

Section 2C.17 ROAD NARROWS Sign (W5-1)

Guidance:

- 01 Except as provided in Paragraph 2 of this Section, a ROAD NARROWS (W5-1) sign (see Figure 2C- 6) should be used in advance of a transition on two-lane roads where the pavement width is reduced abruptly to a width such that vehicles traveling in opposite directions cannot simultaneously travel through the narrow portion of the roadway without reducing speed.

Option:

- 02 The ROAD NARROWS (W5-1) sign may be omitted on low-volume local streets that have speed limits of 30 mph or less.
- 03 Additional emphasis may be provided by the use of object markers and delineators (see Sections 2C.70 through 2C.73 and Chapter 3G). The Advisory Speed (W13-1P) plaque (see Figure 2C-1 and Section 2C.59) may be used to indicate the recommended speed.

Section 2C.18 NARROW BRIDGE and NARROW UNDERPASS Signs (W5-2 and W5-2a)

Guidance:

- 01 A NARROW BRIDGE (W5-2) sign (see Figure 2C-6) should be used in advance of any bridge or culvert having a two-way roadway horizontal clearance of 16 to 18 feet, or any bridge or culvert having a roadway horizontal clearance less than the width of the approach travel lanes. Where these conditions exist for an underpass, a NARROW UNDERPASS (W5-2a) sign (see Figure 2C-6) should be used.
- 02 Additional emphasis should be provided by the use of object markers, delineators, and/or pavement markings.

Option:

- 03 A NARROW BRIDGE sign may be used in advance of a bridge or culvert on which the approach shoulders are narrowed or eliminated. Where these conditions exist for an underpass, a NARROW UNDERPASS sign may be used.
- 04 The NARROW BRIDGE or NARROW UNDERPASS sign may be omitted on low-volume rural roads where there is adequate sight distance to the bridge, culvert, or underpass on both approaches.

Support:

- 05 Refer to Figure 3G-104(CA) for narrow bridge sign and marking details.

Option:

- 06 The TUNNEL (SW37(CA)) sign (refer to Figure 2C-6(CA)) may be used to warn road user that there is a tunnel ahead.

Section 2C.19 ONE LANE BRIDGE and ONE LANE UNDERPASS Signs (W5-3 and W5-3a)

Guidance:

- 01 A ONE LANE BRIDGE (W5-3) sign (see Figure 2C-6) should be used on two-way roadways in advance of any bridge or culvert:
- A. Having a roadway horizontal clearance of less than 16 feet, or
 - B. Having a roadway horizontal clearance of less than 18 feet when commercial vehicles constitute a high proportion of the traffic, or
 - C. Having a roadway horizontal clearance of 18 feet or less where the sight distance on the approach is less than that shown in Condition A of Table 2C-3.

- 02 Where these conditions exist for an underpass, a ONE LANE UNDERPASS (W5-3a) sign (see Figure 2C-6) should be used.

- 03 Additional emphasis should be provided by the use of object markers, delineators, and/or pavement markings.

Option:

- 04 The ONE LANE BRIDGE or ONE LANE UNDERPASS sign may be omitted on low-volume rural roads where there is adequate sight distance to the bridge, culvert, or underpass on both approaches.
- 05 STOP (R1-1) or YIELD (R1-2) signs (see Sections 2B.04 and 2B.05) and related pavement markings (see Sections 3B.21 and 3B.22) may be used when conditions A, B, or C in Paragraph 1 of this Section apply.

Section 2C.20 Divided Highway Sign (W6-1)

Guidance:

- 01 A Divided Highway (W6-1) sign (see Figure 2C-6) should be used on the approaches to a section of highway (not an intersection or junction) where the opposing flows of traffic are separated by a median or other physical barrier.

Standard:

- 02 The Divided Highway (W6-1) sign shall not be used instead of a Keep Right (R4-7 series) sign on the approach end of a median island.

Section 2C.21 Divided Highway Ends Sign (W6-2)

Guidance:

- 01 A Divided Highway Ends (W6-2) sign (see Figure 2C-6) should be used in advance of the end of a section of physically divided highway (not an intersection or junction) as a warning of two-way traffic ahead.
- 02 The Two-Way Traffic (W6-3) sign (see Section 2C.51) should be used to give warning and notice of the transition to a two-lane, two-way section.

Section 2C.22 Freeway or Expressway Ends Signs (W19 Series)

Option:

- 01 A FREEWAY ENDS XX MILES (W19-1) sign or a FREEWAY ENDS (W19-3) sign (see Figure 2C-6) may be used in advance of the end of a freeway.

01a At problem locations, a W19-1 or W19-3 sign may include dual installations. Yellow flashing beacons may be considered.

Support:

- 01b Refer to Section 2B.109(CA) for the END FREEWAY (R58(CA)) sign.

Option:

- 02 An EXPRESSWAY ENDS XX MILES (W19-2) sign or an EXPRESSWAY ENDS (W19-4) sign (see Figure 2C-6) may be used in advance of the end of an expressway.

- 03 The rectangular W19-1 and W19-2 signs may be post-mounted or may be mounted overhead for increased emphasis.

Guidance:

- 04 If the reason that the freeway is ending is that the next portion of the freeway is not yet constructed and as a result all traffic must use an exit ramp to leave the freeway, an ALL TRAFFIC MUST EXIT (W19-5) sign (see Figure 2C-6) should be used in addition to the Freeway Ends signs in advance of the downstream end of the freeway.

Option:

- 05 A distance plaque may be used with a W19-3 or a W19-4 sign.

Section 2C.23 Double Arrow Sign (W12-1)

Option:

- 01 The Double Arrow (W12-1) sign (see Figure 2C-6) may be used to advise road users that traffic is permitted to pass on either side of an island, obstruction, or gore in the roadway. Traffic separated by this sign may either rejoin or change directions.

Guidance:

- 02 If used on an island, the Double Arrow sign should be mounted near the approach end.
- 03 If used in front of a pier or obstruction, the Double Arrow sign should be mounted on the face of, or just in front of, the pier or obstruction. Where stripe markings are used on the pier or obstruction, they should be discontinued to leave a 3-inch space around the outside of the Double Arrow sign.

Section 2C.24 DEAD END, NO OUTLET, and ROAD ENDS Signs (W14-1, W14-1a, W14-2, W14-2a, W8-26, and W8-26a)

Option:

- 01 The DEAD END (W14-1) sign (see Figure 2C-6) may be used at the entrance to a single road or street that terminates without intersecting another street. The NO OUTLET (W14-2) sign (see Figure 2C-6) may be used at the entrance to a road or road network from which there is no other exit.
- 02 DEAD END (W14-1a) or NO OUTLET (W14-2a) signs (see Figure 2C-6) may be used in combination with Street

Name (D3-1) signs (see Section 2D.45) to warn turning traffic that the cross street ends in the direction indicated by the arrow.

- 03 At locations where the cross street does not have a name, a W14-1a or W14-2a sign may be used alone in place of a street name sign.

Guidance:

- 04 When the W14-1 or W14-2 sign is used, the sign should be posted as near as practicable to the entry point or at a sufficient advance distance to permit the road user to avoid the dead end or no outlet condition by turning at the nearest intersecting street.

Standard:

- 05 The DEAD END (W14-1a) or NO OUTLET (W14-2a) sign shall not be used instead of the W14-1 or W14-2 signs where traffic can proceed straight through the intersection into the dead end street or no outlet area.

Option:

- 06 The ROAD ENDS XX FT (W8-26) or STREET ENDS XX FT (W8-26a) sign (see Figure 2C-11) may be used on the approach to the end of a conventional road or street where the terminus is not apparent.

- 06a The Road Ends XX FT (W8-26) or STREET ENDS XX FT (W8-26a) sign may be used in advance of the END (W31(CA)) sign in combination with an end-of-roadway marker. Refer to Section 2C.73.

Support:

- 07 Information about the use of Type 4 object markers to mark the end of the road or street is contained in Section 2C.73.

Standard:

- 08 The W8-26 and W8-26a signs shall not be used in place of a W14-1 or W14-2 sign at the entrance to such a road or street.

Support:

- 09 Section 2C.22 contains information on signs for use on the approach to the end of a freeway or expressway.

Option:

- 10 The END (W31(CA)) sign (refer to Figure 2C-6(CA)) may be used where a street or highway ends.

Support:

- 11 Install the W31(CA) sign in a head-on position (left side) in combination with an end-of-roadway marker. Refer to Section 2C.73.

Section 2C.25 Low Clearance Signs (W12-2, W12-2a, and W12-2b)

Standard:

- 01 The Low Clearance Advance (W12-2) sign (see Figure 2C-6) shall be used to warn road users of vertical clearances less than 14 feet 6 inches, or vertical clearances less than 12 inches above the statutory maximum vehicle height, whichever is greater.

- 01a The Low Clearance Advance (W12-2) sign shall be used to warn motorists of low structure clearances.

- 01b For clearance 15 feet 6 inch or less, in addition to the W12-2a sign, two Low Clearance Advance (W12-2) signs shall be installed on the right side of the roadway. The first W12-2 sign shall be placed in advance of the nearest intersecting street or highway or wide point in the road at which a motorist can detour or safely turn around. See paragraph 04.

- 01c The second W12-2 sign shall be placed in advance of the structure.

Guidance:

- 02 The actual clearance ~~should~~ shall be displayed on the Low Clearance (W12-2, W12-2a, and W12-2b) sign to the nearest 1 inch not exceeding the actual clearance. However, in areas that experience changes in temperature causing frost action, a reduction, not exceeding 3 inches, should be used for this condition.

Guidance:

- 03 Clearances should be evaluated periodically to determine if additional low clearance signing is necessary, particularly when resurfacing operations have occurred, on routes onto which over-height vehicles are normally directed under the permit process, and structures that are susceptible to catastrophic failure when struck by over-height vehicles.

- 04 The W12-2 sign with a supplemental distance plaque should also be placed at the nearest intersecting road or wide point in the road at which a vehicle can detour or turn around.

- 05 Where there is a need to warn of a low clearance on an intersecting road or off a freeway or expressway exit, a rectangular warning sign with an appropriate word legend should be used rather than a W12-2 sign.

Standard:

- 05a **The CAUTION, VERTICAL CLEARANCE ____' ____" Arrow (W34C(CA)) sign (refer to Figure 2C-6(CA)) shall be used on all blind approaches to structures with clearances 15 feet 6 inch or less.**

Support:

- 05b The W34C(CA) sign is used to warn motorists of low structure clearance around corners.

Guidance:

- 05c *The W34C(CA) sign should be placed at a location where the motorist can detour or safely turn around before making the turn.*

Option:

- 06 The Low Clearance Overhead (W12-2a or W12-2b) sign (see Figure 2C-6) may be installed on the structure to supplement the advance warning sign.

Standard:

- 06a **The Low Clearance Overhead (W12-2a or W12-2b) sign shall be used to warn motorists of structural clearance 15 feet 6 inch or less.**

Guidance:

- 06b *The W12-2a sign should be centered over the traveled way on the approach side of all underpasses, overheads, viaducts, overcrossings, undercrossings, and grade separations for State highways.*

Standard:

- 06c **The W12-2a sign shall not encroach over the shoulder area.**

Option:

- 07 In cases where physical conditions on a structure limit the width such that the W12-2a or W12-2b signs are physically unable to fit, a W12-2 sign may be installed overhead on the structure or post-mounted in front of the structure, in addition to the required W12-2 sign at the advance location.

Guidance:

- 08 *In the case of an arch, or other structure under which the clearance varies greatly, two or more Low Clearance Overhead (W12-2a or 12-2b) signs should be installed on the structure itself to give information as to the clearances over the low clearance portions of the roadway.*

Standard:

- 09 **If used, the Low Clearance Overhead (W12-2b) sign shall be placed over a lane or shoulder to indicate the portion of the structure with low clearance if the posted clearance does not apply to the entire structure.**

Guidance:

- 10 **The clearance shown on the Low Clearance Advance sign ~~should~~ shall match the clearance on the W12-2a or W12-2b sign or, if there are multiple W12-2b signs, shall match the lowest clearance.**

- 11 **The clearance shown on the W34C(CA) sign shall match the clearance on the W12-2a or W12-2b sign or, if there are multiple W12-2b signs, shall match the lowest clearance.**

ROADWAY AND WEATHER-CONDITION WARNING SIGNS AND PLAQUES

Section 2C.26 **BUMP and DIP Signs (W8-1 and W8-2)**

Guidance:

- 01 *BUMP (W8-1) and DIP (W8-2) signs (see Figure 2C-7) should be used in advance of a sharp rise or depression in the profile of the road.*

Standard:

- 01a **When used at a cattle guard, the BUMP (W8-1) or DIP (W8-2) signs shall be supplemented with a diagonal downward pointing arrow (W16-7p) plaque showing the location of the cattle guard.**

Option:

- 02 These signs may be supplemented with an Advisory Speed plaque (see Figure 2C-1 and Section 2C.59).

Guidance:

- 03 *The DIP sign should not be used in advance of a short stretch of depressed alignment that might momentarily hide a vehicle.*
- 04 *A short stretch of depressed alignment that might momentarily hide a vehicle should be treated as a no-passing zone when center line striping is provided on a two-lane or three-lane road (see Section 3B.03).*

Section 2C.27 **SPEED HUMP Sign (W17-1)**

Guidance:

- 01 *The SPEED HUMP (W17-1) sign (see Figure 2C-7) should be used in advance of a vertical deflection in the roadway that is designed to limit the speed of traffic.*
- 02 *If used, the SPEED HUMP sign should be supplemented by an Advisory Speed plaque (see Figure 2C-1 and Section 2C.59).*

Option:

- 03 If a series of speed humps exists in close proximity, an Advisory Speed plaque may be eliminated on all but the first SPEED HUMP sign in the series.
- 04 The legend SPEED BUMP may be used instead of the legend SPEED HUMP on the W17-1 sign.
- 04a If a series of speed humps exist in close proximity, a SPEED HUMPS AHEAD (W84(CA)) sign (refer to Figure 2C-7(CA)) may replace the first SPEED HUMP sign in the series, provided additional warning of speed humps are provided through signs or pavement markings at the speed humps.
- 04b If speed humps exist on a network of streets within an area accessible by a limited number of access points to the area, an optional SPEED HUMP AREA (W85(CA)) sign (refer to Figure 2C-7(CA)) may be placed at each access point to the area, provided additional warning of speed humps are provided through signs or markings at the speed humps.

Support:

- 05 Speed humps generally provide more gradual vertical deflection than speed bumps. Speed bumps limit the speed of traffic more severely than speed humps. Other forms of speed humps include speed tables and raised crosswalks or intersections. However, these differences in engineering terminology are not well known by the public, so for signing purposes these terms are interchangeable.
- 06 Sections 3B.29 and 3B.30 contain information about the use of markings at and in advance of speed humps.

Section 2C.28 **PAVEMENT ENDS Sign (W8-3)**

Guidance:

- 01 *A PAVEMENT ENDS (W8-3) sign (see Figure 2C-7) should be used where a paved surface changes to either a gravel treated surface or an earth road surface.*

Option:

- 02 An Advisory Speed plaque (see Figure 2C-1 and Section 2C.59) may be used when the change in roadway condition requires a reduced speed.

Section 2C.29 **Shoulder Signs (W8-4, W8-9, W8-17, W8-23, and W8-25)**

Option:

- 01 The SOFT SHOULDER (W8-4) sign (see Figure 2C-7) may be used to warn of a soft shoulder condition.
- 02 The LOW SHOULDER (W8-9) sign (see Figure 2C-7) may be used to warn of a shoulder condition where there is

an elevation difference of 3 inches or less between the shoulder and the travel lane.

Standard:

02a **The black on yellow background LOW SHOULDER (W8-9) sign shall not be used on State highways.**

Support:

02b The low shoulder condition (elevation difference up to 3 inches) between shoulder and the travel lane) is not treated as a permanent condition on State highways.

02c Refer to Section 6H.26 for use of W8-9 on state highway construction zones

Guidance:

03 *The Shoulder Drop Off (W8-17) sign (see Figure 2C-7) should be used where an unprotected shoulder drop-off, adjacent to the travel lane, exceeds 3 inches in depth for a significant continuous length along the roadway, based on engineering judgment.*

Option:

04 A SHOULDER DROP-OFF (W8-17P) supplemental plaque (see Figure 2C-7) may be mounted below the W8-17 sign.

05 The NO SHOULDER (W8-23) sign (see Figure 2C-7) may be used to warn road users that a shoulder does not exist along a portion of the roadway.

06 The SHOULDER ENDS (W8-25) sign (see Figure 2C-7) may be used to warn road users that a shoulder is ending.

Guidance:

07 *Additional shoulder signs should be placed at appropriate intervals along the road where the condition continually exists.*

Section 2C.30 Surface Condition Signs (W8-5, W8-7, W8-8, W8-11, W8-13, and W8-14)

Option:

01 The Slippery When Wet (W8-5) sign (see Figure 2C-7) may be used to warn of unexpected slippery conditions. Supplemental plaques (see Figure 2C-7) with legends such as ICE, WHEN WET, STEEL DECK, or EXCESS OIL may be used with the W8-5 sign to indicate the reason that the slippery conditions might be present.

01a The slippery When Wet (W8-5) sign may be used with the SNOW (SW46P(CA)) plaque to warn road users of conditions where snow may be on the roadway surface, but chains are not yet required. The combination may be placed in advance of areas where such conditions may exist, and intermittently as needed where such conditions may exist for long sections of highways.

01b The sign combination may be displayed when weather conditions are such that it would be reasonable to assume that snow on the roadway would be a possibility.

Support:

01c Refer to Section 2C.01 for information on when the seasonal snow condition no longer exists.

Standard:

01d **When used at a cattle guard, the Slippery When Wet (W8-5) signs shall be supplemented with a diagonal downward pointing arrow (W16-7p) plaque showing the location of the cattle guard.**

Option:

02 The LOOSE GRAVEL (W8-7) sign (see Figure 2C-7) may be used to warn of loose gravel on the roadway surface.

03 The ROUGH ROAD (W8-8) sign (see Figure 2C-7) may be used to warn of a rough roadway surface. It may be desirable to supplement this sign with an Advisory Speed (W13-1P) plaque. Where the rough road is 1 mile or more in length, the W8-8 sign may be supplemented with a Next Distance (W7-3a) plaque.

04 An UNEVEN LANES (W8-11) sign (see Figure 2C-7) may be used to warn of a difference in elevation between travel lanes.

05 The BRIDGE ICES BEFORE ROAD (W8-13) sign (see Figure 2C-7) may be used in advance of bridges to advise bridge users of winter weather conditions. The BRIDGE ICES BEFORE ROAD sign may be removed or covered during seasons of the year when its message is not relevant.

06 The FALLEN ROCKS (W8-14) sign (see Figure 2C-7) may be used in advance of an area that is adjacent to a hillside, mountain, or cliff where rocks frequently fall onto the roadway.

Guidance:

07 *When used, Surface Condition signs should be placed in advance of the beginning of the affected section (see Table 2C-3), and additional signs should be placed at appropriate intervals along the road where the condition exists.*

Option:

- 08 The SLIDE AREA (W38(CA)) sign (refer to Figure 2C-7(CA)) may be used in advance of where slides on the highway could be expected.
- 09 The SNOW SLIDE AREA (SW41(CA)) sign (refer to Figure 2C-7(CA)) may be used in areas of known snow slide or avalanche activity.
- 10 The Next Distance (W7-3a) plaque may be used below the W38(CA), W50-1(CA) and SW41(CA) signs.
- 11 The DRIFTING SAND (SW32(CA)) sign (refer to Figure 2C-7(CA)) may be used to warn traffic of drifting sand on the roadway.

Section 2C.31 Warning Signs and Plaque for Motorcyclists (W8-15, W8-15aP, and W8-16)

Support:

- 01 The signs and plaques described in this Section are intended to give motorcyclists advance notice of surface conditions that might adversely affect their ability to maintain control of their motorcycle under wet or dry conditions. The use of some of the advance surface condition warning signs described in Section 2C.30, such as Slippery When Wet, LOOSE GRAVEL, or ROUGH ROAD, can also be helpful to motorcyclists if those conditions exist.

Option:

- 02 If a portion of a street or highway features a roadway pavement surface that is grooved or textured instead of smooth, such as a grooved skid resistance treatment for a horizontal curve or a brick pavement surface, a GROOVED PAVEMENT (W8-15) sign (see Figure 2C-7) may be used to provide advance warning of this condition to motorcyclists, bicyclists, and other road users. Alternate legends such as TEXTURED PAVEMENT or BRICK PAVEMENT may also be used on the W8-15 sign.
- 03 If a bridge or a portion of a bridge includes a metal or grated surface, a METAL BRIDGE DECK (W8-16) sign (see Figure 2C-7) may be used to provide advance warning of this condition to motorcyclists, bicyclists, and other road users.
- 04 A Motorcycle (W8-15aP) plaque (see Figure 2C-7) may be mounted below or above a W8-15 or W8-16 sign if the warning is intended to be directed primarily to motorcyclists.

Section 2C.32 NO CENTER LINE Sign (W8-12)

Option:

- 01 The NO CENTER LINE (W8-12) sign (see Figure 2C-7) may be used to warn of a roadway without center line pavement markings.

Section 2C.33 NO TRAFFIC SIGNS Sign (W18-1)

Option:

- 01 The NO TRAFFIC SIGNS (W18-1) sign (see Figure 2C-6) may be used only on low-volume rural roads to advise road users that no signs are installed along the distance of the road. The sign may be installed at the point where road users would enter the low volume road or where, based on engineering judgment, the road user might need this information.
- 02 A W7-3aP (see Figure 2C-5), W16-2P (see Figure 2C-16), or W16-9P (see Figure 2C-16) supplemental plaque with the legend NEXT XX MILES, XX FEET, or AHEAD may be installed below the W18-1 sign when appropriate.

Section 2C.34 Weather Condition Signs (W8-18, W8-19, W8-21, and W8-22)

Option:

- 01 The ROAD MAY FLOOD (W8-18) sign (see Figure 2C-7) may be used to warn road users that a section of roadway is subject to frequent flooding. A Depth Gauge (W8-19) sign (see Figure 2C-7) may also be installed within a roadway section that frequently floods.

Guidance:

- 02 *If used, the Depth Gauge sign should be in addition to the ROAD MAY FLOOD sign and should be mounted at the appropriate height to indicate the depth of the water at the deepest point on the roadway.*

Option:

- 02c The FLASH FLOOD AREA (SW35(CA)) sign (refer to Figure 2C-7(CA)) may be used in advance of depressions in the highway alignment that are subject to flash flooding.
- 03 The GUSTY WINDS AREA (W8-21) sign (see Figure 2C-7) may be used to warn road users that wind gusts frequently occur along a section of highway that are strong enough to impact the stability of trucks, recreational

vehicles, and other vehicles with high centers of gravity. A NEXT XX MILES (W7-3aP) supplemental plaque (see Figure 2C-5) may be mounted below the W8-21 sign to inform road users of the length of roadway that frequently experiences strong wind gusts.

- 04 The FOG AREA (W8-22) sign (see Figure 2C-7) may be used to warn road users that foggy conditions frequently reduce visibility along a section of highway. A NEXT XX MILES (W7-3aP) supplemental plaque (see Figure 2C-5) may be mounted below the W8-22 sign to inform road users of the length of roadway that frequently experiences foggy conditions.

Support:

- 05 Chapter 2L contains provisions for the use of blank-out or changeable message signs that can be activated by detection of the applicable condition.

- 06 [Refer to Chapter 6O for additional flooding signs.](#)

TRAFFIC CONTROL AND INTERSECTION WARNING SIGNS AND PLAQUES

Section 2C.35 Advance Traffic Control Signs (W3-1, W3-2, W3-3, and W3-4)

Standard:

- 01 The Stop Ahead (W3-1), Yield Ahead (W3-2), and Signal Ahead (W3-3) Advance Traffic Control signs (see Figure 2C-8) shall be installed on an approach to a primary traffic control device that is not visible for a sufficient distance to permit the road user to respond to the device (see Table 2C-3). The visibility criteria for a traffic control signal shall be based on having a continuous view of at least two signal faces for the distance specified in Table 4D-2.

Guidance:

- 02 Where intermittent obstructions occur, engineering judgment should determine the treatment to be implemented.

Support:

- 03 Figure 2A-4 shows examples of the typical placement of an Advance Traffic Control sign.
04 Permanent obstructions causing the limited visibility might include roadway alignment or structures. Intermittent obstructions might include foliage or parked vehicles.

Option:

- 05 An Advance Traffic Control sign may be used for additional emphasis of the primary traffic control device, even when the visibility distance to the device is satisfactory.

Support:

- 06 Section 2C.65 contains information about the use of an advance street name plaque to identify an intersecting road.

Option:

- 07 A BE PREPARED TO STOP (W3-4) sign (see Figure 2C-8) may be used to warn of stopped traffic caused by a traffic control signal or a STOP sign.
08 A Warning Beacon (see Section 4S.03) or yellow LEDs within the border of the sign may be used with an Advance Traffic Control or BE PREPARED TO STOP sign.
08a Yellow flashing beacons may be used with Signal Ahead (W3-3) signs in advance of:
A. An isolated traffic signal on either a conventional highway or on an expressway in a rural area.
B. The first traffic signal approaching an urban area.
C. Any traffic signal with limited approach visibility, or where approach speeds exceed 50 mph.
08b On divided highways where the median is 8 feet wide, or greater, the installation may consist of:
A. Two Type 1 standards, each with a Signal Ahead (W3-3) sign and a 12-inch signal face, with one standard located in the median and the other off of the right shoulder; or
B. A Type 9 cantilever flashing beacon installation with a Signal Ahead (W3-3) sign and two 12-inch signal faces as shown in Caltrans' Standard Plans. Refer to Section 1A.05 for information regarding this publication.

Standard:

- 09 When a BE PREPARED TO STOP sign is used in advance of a traffic control signal, it shall be used in addition to a Signal Ahead sign and shall be placed downstream from the Signal Ahead sign.

Guidance:

- 10 ~~When a Warning Beacon is interconnected with a traffic control signal or queue detection system, the BE PREPARED TO STOP sign should be supplemented with a WHEN FLASHING (W16-13P) plaque (see Figure 2C-16).~~
10a WHEN FLASHING (W16-13P) plaque shall not be used to supplement the BE PREPARED TO STOP (W3-4) sign.

Support:

- 10b Studies indicate that the W16-13P plaque is generally not effective as a warning device for motorists approaching signalized intersections. Not using the W16-13P plaque also addresses the situation when a warning beacon is inoperative for any reason.
11 Section 2C.45 contains information regarding the use of a NO MERGE AREA (W4-5aP) supplemental plaque in conjunction with a Yield Ahead sign.

Guidance:

- 12 An oversized square shape version of W1-1 should be used if installed on the outside curve in line with and at approximately a right angle to exiting traffic from a short ramp length with limiting curve near ramp terminal (refer to Figure 2C-3) where W3-1 and W3-3 signs have proven ineffective.

Standard:

- 13 A SIGNAL AHEAD (SW26aP(CA)) plaque or a STOP AHEAD (SW26bP(CA)) plaque (refer to Figure 2C-8(CA)) shall be

used below an oversized square shape version of W1-1 at short ramp lengths with limiting curve near ramp terminals to indicate that a signal or stop sign configuration is present at the terminal.

Guidance:

- 14 The W3-1 or W3-3 signs should be left in place when the oversized W1-1 sign with its accompanying plaque is placed.

Section 2C.36 DRAW BRIDGE Sign (W3-6)

Standard:

- 01 A DRAW BRIDGE (W3-6) sign (see Figure 2C-8) shall be used in advance of movable bridge signals and gates (see Section 4Q.02) to give warning to road users.

Guidance:

- 02 Where physical conditions prevent a motorist driving at the legal speed limit from having a continuous view of at least one signal indication before reaching the stop line, an auxiliary device should be provided in advance of movable bridge signals and gates.

Option:

- 03 This device may be either a supplemental signal or the mandatory DRAW BRIDGE (W3-6) sign to which has been added a flashing yellow beacon interconnected with movable bridge control.

Section 2C.37 Advance Ramp Control Signal Signs (W3-7 and W3-8)

Support:

- 00 For State highways, refer to Caltrans' Ramp Metering Design Manual. Refer to Section 1A.05 for information regarding this publication.

Option:

- 01 A RAMP METER AHEAD (W3-7) sign (see Figure 2C-8) may be used to warn road users that a freeway entrance ramp is metered and that they will encounter a ramp control signal (see Chapter 4P).

Guidance:

- 02 When the ramp control signals are *in operation* ~~operated only during certain periods of the day~~, a RAMP METERED WHEN FLASHING (W3-8) sign (see Figure 2C-8) or an overhead Activated Blank-Out "METER ON" message (W88-2(CA) and W88-3(CA)) sign, or "PREPARE TO STOP" message (W89(CA)) sign (refer to Figure 2C-8(CA)) should be installed in advance of the ramp control signal near the entrance to the ramp, or on the arterial on the approach to the ramp, to alert road users to the presence and operation of ramp meters. .

Standard:

- 03 The RAMP METERED WHEN FLASHING sign shall be supplemented with a Warning Beacon (see Section 4S.03) that flashes when the ramp control signal is in operation.

Section 2C.38 NEW TRAFFIC PATTERN and NEW SIGNAL OPERATION AHEAD Signs (W23-2 and W23-2a)

Option:

- 01 A NEW TRAFFIC PATTERN AHEAD (W23-2) sign (see Figure 2C-8) may be used on the approach to an intersection or along a section of roadway to provide advance warning of a change in traffic patterns, such as revised lane usage or roadway geometry.

- 02 A NEW SIGNAL OPERATION AHEAD (W23-2a) sign (see Figure 2C-8) may be used on the approach to a signalized intersection to provide advance warning of a change in signal phasing.

Guidance:

- 03 The NEW TRAFFIC PATTERN or NEW SIGNAL OPERATION AHEAD sign should be removed when the traffic pattern returns to normal, when the changed pattern is no longer considered to be new, or within 12 months.

Section 2C.39 WATCH FOR STOPPED TRAFFIC Sign (W26-1)

Option:

- 01 The WATCH FOR STOPPED TRAFFIC (W26-1) sign (see Figure 2C-8) may be used to warn road users of the possibility of vehicles stopping abruptly in the travel lane due to recurring congested conditions.

- 02 The WATCH FOR STOPPED TRAFFIC (W26-1) sign may be used to alert road users in areas with limited sight distance where they could encounter stopped traffic unexpectedly.

- 03 A Warning Beacon (refer to Section 4S.03) or yellow LEDs within the border of the sign may be used with the WATCH FOR STOPPED TRAFFIC (W26-1) sign.

Section 2C.40 Reduced Speed Limit Ahead and Speed Zone Signs (W3-5, W3-5a, W3-5b, and W3-5c)

Guidance:

- 01 A Reduced Speed Limit Ahead (W3-5 or W3-5a) or Truck Speed Zone Ahead (W3-5c) sign (see Figure 2C-9) should be used to inform road users of a reduced speed zone where the speed limit is being reduced by more than 10 mph, or where engineering judgment indicates the need for advance notice to comply with the posted speed limit ahead.
- 02 A VARIABLE SPEED ZONE AHEAD (W3-5b) sign (see Figure 2C-9) should be used to inform road users of a zone where the speed limit is varied by time of day or as conditions change.

Standard:

- 03 If used, Reduced Speed Limit, Variable Speed Zone, or Truck Speed Zone Ahead signs shall be followed by a Speed Limit (R2-1) sign (see Figure 2B-3), with the Trucks (R2-2P-M4-4P) plaque or the R6-3(CA) and R6-4(CA) signs (see Figure 2B-3(CA)) on separate installations (refer to chapter 2B) if applicable, installed at the beginning of the zone where the speed limit applies.
- 04 The speed limit displayed on the W3-5, W3-5a, and W3-5c signs shall be identical to the speed limit displayed on the subsequent Speed Limit sign.

Section 2C.41 Intersection Warning Signs (W2-1 through W2-8)

Option:

- 01 A Cross Road (W2-1), Side Road (W2-2, W2-3, or W2-3a), T-Intersection (W2-4), or Y-Intersection (W2-5) sign (see Figure 2C-10) may be used in advance of an intersection to indicate the presence of an intersection and the possibility of turning or entering traffic.
- 02 The Circular Intersection (W2-6) sign (see Figure 2C-10) may be installed in advance of a circular intersection (see Figures 2B-21 through 2B-23).

Guidance:

- 03 If an approach to a circular intersection has a statutory or posted speed limit of 40 mph or higher, the Circular Intersection (W2-6) sign should be installed in advance of the circular intersection.

Option:

- 04 An educational plaque (see Figure 2C-10) with a legend such as TRAFFIC CIRCLE (W16-12P) or ROUNDABOUT (W16-12aP) may be mounted below a Circular Intersection sign.

Support:

- 05 Section 2C.65 contains information about the use of an advance street name plaque to identify an intersecting road.

Guidance:

- 06 The Intersection Warning sign should illustrate and depict the general configuration of the intersecting roadway, such as a cross road, side road, T-intersection, or Y-intersection.
- 07 Intersection Warning signs, other than the Circular Intersection (W2-6) sign, the T-intersection (W2-4) sign, and the Grade Crossing and Intersection Advance Warning (W10-2, W10-3, W10-4, W10-11, and W10-12) signs (see Figure 8B-4) should not be used on approaches controlled by STOP signs, YIELD signs, or signals.
- 08 If an Intersection Warning sign is used where the side roads are not opposite of each other, the Offset Side Roads (W2-7) sign (see Figure 2C-10) should be used instead of the Cross Road sign.
- 09 If an Intersection Warning sign is used where two closely-spaced side roads are on the same side of the highway, the Double Side Roads (W2-8) sign (see Figure 2C-10) should be used instead of the Side Road sign.
- 10 No more than two side roads should be depicted on the same side of the highway on a W2-7 or W2-8 sign, and no more than three side roads should be depicted on a W2-7 or W2-8 sign.

Option:

- 11 ~~When at least one side road is shown, the stem of an additional side road representing a significantly lower relative volume may be depicted using a line that is two-thirds the width of the through road based on engineering judgment.~~

Support:

- 12 Figure 2A-4 shows examples of the typical placement of an Intersection Warning sign.

Guidance:

- 14 The Cross Traffic Ahead (W70(CA)) sign (refer to Figure 2C-10(CA)) should be used to warn motorists that crossing at grade

can be expected at non-signalized intersections in an expressway corridor.

Option:

- 15 If two freeway sections are connected by a short expressway segment or if multiple non-signalized intersections are close together, the Next Distance (W7-3aP) plaque may be placed below the W70(CA) sign.
- 16 Refer to Section 2C.24 for DEAD END (W14-1) sign.

Section 2C.42 Actuated Advance Intersection Signs (W2-10 and W2-11)

Support:

- 01 ~~Actuated Advance Intersection signs are typically associated with restricted sight distance and gap selection at stop-controlled intersections.~~

Option:

- 02 ~~The TRAFFIC ENTERING WHEN FLASHING (W2-10) sign (see Figure 2C-10) may be used on the uncontrolled through roadway approach to a side or cross road stop-controlled intersection to warn of entering traffic from the side or cross road.~~
- 03 ~~The TRAFFIC APPROACHING WHEN FLASHING (W2-11) sign (see Figure 2C-10) may be used on the side road stop-controlled approach to warn of traffic approaching on the uncontrolled through road.~~

Standard:

- 04 ~~When used, the TRAFFIC ENTERING WHEN FLASHING sign, and the TRAFFIC APPROACHING WHEN FLASHING sign shall be supplemented with a Warning Beacon (see Section 4S.03) that activates when a vehicle on a conflicting approach is detected.~~
- 05 *WHEN FLASHING is not used in California to address the situation when a warning beacon is inoperative for any reason.*

Section 2C.43 Two-Direction Large Arrow Sign (W1-7)

Standard:

- 01 **The Two-Direction Large Arrow (W1-7) sign (see Figure 2C-10) shall be a horizontal rectangle.**
- 02 **If used, the Two-Direction Large arrow sign shall be installed on the far side of a T-intersection in line with, and at approximately a right angle to, traffic approaching from the stem of the T- intersection.**
- 03 **The Two-Direction Large Arrow sign shall not be used where there is no change in the direction of travel such as at the beginnings and ends of medians or at center piers.**

Guidance:

- 04 *The Two-Direction Large Arrow sign should be visible for a sufficient distance to provide the road user with adequate time to react to the intersection configuration.*
- 05 *The OM1-3 object marker should be used below and on the same post as the W1-7 sign. Refer to Section 2C.70.*

Section 2C.44 Traffic Signal Oncoming Extended Green Signs (W25-1 and W25-2)

Standard:

- 01 ~~At locations where either a W25-1 or a W25-2 sign is required based on the provisions in Section 4F.01, the W25-1 or W25-2 sign (see Figure 2C-10) shall be installed near the left-most signal face for the approach.~~

Guidance:

- 02 *The "yellow trap" should be eliminated rather than trying to correct it with these signs. Refer to Part 4.*

MERGING, TWO-WAY TRAFFIC, AND NO PASSING WARNING SIGNS AND PLAQUES

Section 2C.45 Merge Signs and Plaque (W4-1, W4-5, and W4-5aP)

Option:

- 01 A Merge (W4-1) sign (see Figure 2C-11) may be used to warn road users on the major roadway that merging movements might be encountered in advance of a point where lanes from two separate roadways converge as a single traffic lane and no turning conflict occurs.

Guidance:

- 01a *When installed at freeway entrance ramps, the W4-1 sign should be installed in advance of the paved gore area.*
- 02 A Merge sign may also be installed on the side of the entering roadway to warn road users on the entering roadway of the merge condition.
- Guidance:
- 03 *The Merge sign should be installed on the side of the major roadway where merging traffic will be encountered and in such a position as to not obstruct the road user's view of entering traffic.*
- 04 *When a Merge sign is installed on a major roadway, the symbol should be oriented right or left as appropriate to depict the side from which the merge occurs, with the arrow representing the major roadway and the curved stem representing the entering roadway (see Figure 2C-11).*
- 05 *When a Merge sign is to be installed on an entering roadway that curves before merging with the major roadway, such as a ramp with a curving horizontal alignment as it approaches the major roadway, the Entering Roadway Merge (W4-5) sign (see Figure 2C-11) should be used to better portray the actual geometric conditions to road users on the entering roadway.*
- 06 *Where two roadways of approximately equal importance converge and merging movements are required, a Merge sign should be placed on each roadway.*
- 07 *The Merge sign should not be used where two roadways converge and merging movements are not required.*

Standard:

- 08 **The Merge sign shall not be used in place of a Lane Ends (W4-2) sign (see Section 2C.47) where lanes of traffic moving on a single roadway must merge because of a reduction in the actual or usable pavement width.**

Option:

- 09 An Entering Roadway Merge (W4-5) sign with a NO MERGE AREA (W4-5aP) supplemental plaque (see Figure 2C-11) mounted below it may be used to warn road users on an entering roadway that they will encounter an abrupt merging situation without an acceleration lane at the downstream end of the ramp.
- 10 A Merge (W4-1) sign with a NO MERGE AREA (W4-5aP) supplemental plaque mounted below it may be used to warn road users on the major roadway that traffic on an entering roadway will encounter an abrupt merging situation without an acceleration lane at the downstream end of the ramp.
- 11 For a yield-controlled channelized right-turn movement onto a roadway without an acceleration lane, a NO MERGE AREA (W4-5aP) supplemental plaque may be mounted below a Yield Ahead (W3-2) sign and/or below a YIELD (R1-2) sign when engineering judgment indicates that road users would expect an acceleration lane to be present.

Support:

- 12 Examples of the use of Merge (W4-1) signs are shown in Drawing A in Figure 2C-12.

Section 2C.46 Added Lane Signs (W4-3 and W4-6)

Guidance:

- 01 *The Added Lane (W4-3) sign (see Figure 2C-11) should be installed in advance of a point where two roadways converge and merging movements are not required. When possible, the Added Lane sign should be placed such that it is visible from both roadways; if this is not possible, an Added Lane sign should be placed on the side of each roadway.*

Support:

- 01a *When installed at freeway entrance ramps, the sign should be installed in advance of the paved gore area.*

Guidance:

- 02 *When an Added Lane (W4-3) sign is installed on a major roadway, the symbol should be oriented right or left as appropriate to depict the side from which the entering roadway converges, with the straight arrow representing the major roadway and the curved arrow representing the entering roadway. The sign should be located on the side of the major roadway from which the entering roadway converges.*

03 *When an Added Lane sign is to be installed on a roadway that curves before converging with another roadway that has a tangent alignment at the point of convergence, the Entering Roadway Added Lane (W4-6) sign (see Figure 2C-11) should be used to better portray the actual geometric conditions to road users on the curving roadway.*

Support:

04 Examples of the use of Added Lane (W4-3) and Entering Roadway Added Lane (W4-6) signs are shown in Drawing B in Figure 2C-12.

Section 2C.47 Lane Ends Signs (W4-2 and W9-1)

Support:

01 The Lane Ends (W4-2) and RIGHT (LEFT) LANE ENDS (W9-1) signs (see Figure 2C-11) are used to warn of the reduction in the number of traffic lanes in the direction of travel.

02 The sequence of the W4-2 and W9-1 signs is illustrated in Figure 2C-13.

Guidance:

03 *The Lane Ends (W4-2) sign should be installed at the advance placement distance in accordance with Table 2C-3.*

Option:

04 *A RIGHT (LEFT) LANE ENDS (W9-1) sign ~~may~~ should be installed in advance of the Lane Ends sign to provide additional warning that a lane is ending and that a merging maneuver will be required.*

Guidance:

05 *If a W9-1 sign is installed, a Distance (W16-2P series or W16-3P series) plaque (see Figure 2C-16) should be installed below the W9-1 sign.*

06 *On one-way streets or on divided highways where the left-hand lane is ending and the width of the median will permit, the W9-1 and W4-2 signs should be placed facing approaching traffic on the left-hand side or median.*

Option:

07 Where a lane ends a distance beyond the intersection that is less than the advance placement distance indicated in Table 2C-3, the W4-2 sign may be located at the far side of the intersection (see Sheet 4 of Figure 2C-13).

Guidance:

08 *When the W4-2 sign is located at the far side of the intersection in accordance with Paragraph 7 of this Section, the W9-1 sign should be placed upstream of the intersection with the appropriate distance plaque.*

Support:

09 Section 3B.12 contains information regarding the use of pavement markings in conjunction with a lane reduction.

Guidance:

10 *Lane Ends signs should not be installed in advance of the downstream end of an acceleration lane.*

Standard:

11 **The W4-2 and W9-1 signs shall not be used in dropped lane situations. In dropped lane situations on conventional roads at intersections, regulatory signs (see Section 2B.28) shall be used to inform road users that a through lane becomes a mandatory turn lane.**

Guidance:

12 *The W74(CA) sign should not be used for a lane reduction.*

Section 2C.48 Lanes Merge Signs (W9-4 and W4-8)

Support:

01 ~~The LANES MERGE (W9-4) and Single Lane Transition (W4-8) signs (see Figure 2C-11) are used to warn of a merge of two lanes to one in the same direction of travel with a merging maneuver required for each lane (see Sheet 5 of Figure 2C-13). This type of merge is for a geometric condition where both approach lanes merge into a single lane, not where one lane merges into the other. Section 6H.08 contains information about the use of the late merge sign.~~

Guidance:

02 ~~The Single Lane Transition (W4-8) sign should be located at the advance placement distance in accordance with Table 2C-3.~~

Option:

03 ~~The Lanes Merge (W9-4) sign may be used in advance of the W4-8 sign to provide additional warning that both lanes form a single lane and that a merging maneuver is needed for the traffic in each lane.~~

Section 2C.49 HEAVY MERGE FROM LEFT (RIGHT) Sign (W4-7)

Option:

- 01 The HEAVY MERGE FROM LEFT (RIGHT) (W4-7) sign (see Figure 2C-11) may be used to supplement a W4-1 sign at multilane approaches to congested areas to inform road users that it is desirable for through traffic to move out of a lane that will be occupied by a high volume of entering traffic. If used, the W4-7 sign may be supplemented with a W16-2P series or W16-3P series plaque (see Section 2C.61).

Standard:

- 02 If used, the W4-7 sign shall be installed at a location upstream from the location of the W4-1 sign.

Section 2C.50 RIGHT (LEFT) LANE FOR EXIT ONLY Sign (W9-7)

Standard:

- 00 The THRU TRAFFIC MERGE LEFT (RIGHT) (W74(CA)) sign shall be used on freeways and expressways to inform motorists that the outside or inside lane is being dropped at the next exit, and through traffic must merge into the adjacent lane.

Option:

- 01 The RIGHT (LEFT) LANE FOR EXIT ONLY (W9-7) sign (see Figure 2C-11) may be used to provide advance warning to road users that traffic in the right-hand (left-hand) lane of a roadway will be required to depart the roadway at the next exit.

Standard:

- 01a The RIGHT (LEFT) LANE FOR EXIT ONLY (W9-7) sign shall be placed between the THRU TRAFFIC MERGE LEFT (RIGHT) (W74(CA)) sign (refer to Figure 2C-11(CA)) and the RIGHT (LEFT) LANE MUST EXIT (R3-33) sign, at locations where overhead Exit Only signs (E11-1 Series) are not in place for lane drops at freeway exit ramps.

Option:

- 01b A RIGHT (LEFT) X LANES FOR EXIT ONLY (W73B(CA)) sign may be used in lieu of a W9-7 if more than one lane will be required to depart the roadway at the next exit.

Guidance:

- 02 If used, the W9-7 sign should be installed upstream from the first overhead guide sign that contains an EXIT ONLY sign panel or upstream from the first RIGHT (LEFT) LANE MUST EXIT (R3-33) regulatory sign, if used, whichever is farther upstream from the exit.

Option:

- 03 A legend or plaque displaying the distance may be added to the W9-7 sign where the distance along the dropped lane between the sign and the exit ramp is greater than 1 mile.

Support:

- 04 Section 2B.31 contains information regarding a regulatory sign that can be used for lane drops at grade-separated interchanges.

Option:

- 05 On expressways, the THRU TRAFFIC MERGE LEFT (RIGHT) (W74(CA)) sign (refer to Figure 2C-11(CA)) may be used in advance of the RIGHT(LEFT) LANE MUST TURN RIGHT(LEFT) sign (R3-7).

Guidance:

- 06 On conventional highways, the RIGHT(LEFT) LANE TURNS RIGHT(LEFT) AHEAD (W73A(CA)) sign (refer to Figure 2C-8(CA)) should be used in advance of the RIGHT(LEFT) LANE MUST TURN RIGHT(LEFT) sign (R3-7).

Option:

- 07 A THRU TRAFFIC MERGE LEFT (RIGHT) (W74(CA)) sign may be placed in advance of the W73A(CA) sign.

Support:

- 08 Refer to Figure 3B-11(CA) for lane drop markings at exit ramps.

Section 2C.51 Two-Way Traffic Sign (W6-3)

Guidance:

- 01 A Two-Way Traffic (W6-3) sign (see Figure 2C-11) should be used to warn road users of a transition from a multi-lane divided section of roadway to a two-lane, two-way section of roadway.

- 02 A Two-Way Traffic (W6-3) sign with an AHEAD (W16-9P) plaque (see Figure 2C-16) should be used to warn road users of a transition from a one-way street to a two-lane, two-way section of roadway (see Figure 2B-18).

Option:

- 03 The Two-Way Traffic sign may be used at intervals along a two-lane, two-way roadway and may be used to supplement the Divided Highway (Road) Ends (W6-2) sign discussed in Section 2C.21.

Support:

- 04 Section 6H.17 contains information on a Narrow Two-Way Traffic (W6-4) sign for use in temporary traffic control situations.

Guidance:

- 05 *The Two-Way Traffic (W6-3) sign should also be used at locations where motorists could perceive that they are on a one-way roadway when, in fact, they are on a two lane, two-way highway. Following are some typical situations:*
- A. *Construction sites where a two-lane highway is being converted to a freeway or an expressway.*
 - B. *Two-lane, two-way highways where ultimate freeway or expressway right-of-way has been purchased and grading for the full width has been completed.*
 - C. *Two-lane, two-way highways following long sections of multi-lane freeway or expressway.*
 - D. *Two-way highway with edge lines but with no centerlines.*

Standard:

- 06 **The TWO WAY TRAFFIC (W44aP(CA)) plaque (refer to Figure 2C-11(CA)), if used, shall be positioned below the W6-3, W6-5, and W6-5a signs.**
- 07 **The Black on Yellow PASS WITH CARE (W83P(CA)) plaque (refer to Figure 2C-11(CA)), when used, shall be positioned below the Two Way Traffic (W6-3) sign where two-way traffic is being routed over a single roadway of a divided highway and passing is permitted.**

Support:

- 08 Refer to Figure 3B-14(CA) for signing and marking applications for lane reductions.
- 09 Typical example of W6-3 sign application is shown in Figure 3B-103(CA).

Section 2C.52 Two-Way Traffic on a Three-Lane Roadway Signs (W6-5 and W6-5a)

Option:

- 01 The Two-Way Traffic on a Three-Lane Roadway (W6-5 and W6-5a) signs (see Figure 2C-11) may be installed along three-lane roadways with two lanes in one direction and one in the opposing direction.

Section 2C.53 NO PASSING ZONE Sign (W14-3)

Standard:

- 01 **The NO PASSING ZONE (W14-3) sign (see Figure 2C-11) shall be a pennant-shaped isosceles triangle with its longer axis horizontal and pointing to the right. When used, the NO PASSING ZONE sign shall be installed on the left-hand side of the roadway at the beginning of no-passing zones identified by pavement markings or DO NOT PASS signs or both (see Sections 2B.36 and 3B.03).**

Option:

- 02 The NO PASSING ZONE (W14-3) sign may be used at the beginning of no-passing zones identified by either pavement markings or DO NOT PASS signs or both (refer to Sections 2B.36 and 3B.03).

MISCELLANEOUS WARNING SIGNS AND PLAQUES

Section 2C.54 Vehicular Traffic Warning Signs (W8-6, W11-1, W11-5, W11-8, W11-10, W11-11, W11-12P, W11-14, W11-15, and W11-15a)

Option:

- 01 Vehicular Traffic Warning (W8-6, W11-1, W11-5, W11-8, W11-10, W11-11, W11-12P, W11-14, W11-15, and W11-15a) signs (see Figure 2C-14) may be used to alert road users to locations where unexpected entries into the roadway by trucks, bicycles, farm vehicles, emergency vehicles, golf carts, horse-drawn vehicles, or other vehicles might occur. The TRUCK CROSSING (W8-6) word message sign may be used as an alternate to the Truck (W11-10) symbol sign.

Support:

- 02 These locations might be relatively confined or might occur randomly over a segment of roadway.

Guidance:

- 03 *Vehicular Traffic Warning signs should be used only at locations where the road user's sight distance is restricted, or the condition, activity, or entering traffic would be unexpected.*
- 04 *If the condition or activity is seasonal or temporary, the Vehicular Traffic Warning sign should be removed or covered when the condition or activity does not exist.*

Option:

- 05 The Trail Crossing (W11-15) sign may be used where both bicyclists and pedestrians might be crossing the roadway, such as at an intersection with a shared-use path. A TRAIL X-ING (W11-15P) supplemental plaque (see Figure 2C-14) may be mounted below the W11-15 sign. The TRAIL CROSSING (W11-15a) sign may be used to warn of shared-use path crossings where pedestrians, bicyclists, and other user groups might be crossing the roadway.
- 06 The W11-1, W11-15, and W11-15a signs and their related supplemental plaques may have a fluorescent yellow-green background with a black legend and border.
- 07 Supplemental plaques (see Figure 2C-16 and Section 2C.57) with legends such as AHEAD, XX FEET, NEXT XX MILES, IN STREET, or IN ROAD may be mounted below Vehicular Traffic Warning signs to provide advance notice to road users of unexpected entries.

Guidance:

- 07a *On state highways, the IN STREET plaque should not be used.*

Support:

- 07b *Refer to Section 2C.67 for more information for IN STREET and IN ROAD plaques.*

Guidance:

- 08 *If used in advance of a trail crossing, a W11-15 or W11-15a sign should be supplemented with an AHEAD or XX FEET plaque to inform road users that they are approaching a point where crossing activity might occur.*

Standard:

- 09 **If a post-mounted W11-1, W11-11, W11-15, or W11-15a sign is placed at the location of the crossing point where golf carts, pedestrians, bicyclists, or other shared-use path users might be crossing the roadway, a diagonal downward-pointing arrow (W16-7P) plaque (see Figure 2C-16 and Section 2C.63) shall be mounted below the sign. If the W11-1, W11-11, W11-15, or W11-15a sign is mounted overhead, the W16-7P supplemental plaque shall not be used.**
- 10 **A Vehicular Traffic Warning sign assembly shall not be installed on an approach controlled by a STOP or a YIELD sign, except as provided in Paragraphs 11 and 12 of this Section.**
- Option:**
- 11 The Vehicular Traffic Warning sign assembly may be installed on an approach to a circular intersection controlled by a YIELD sign where the crosswalk is at least 20 feet in advance of the yield point at the entrance to the circulatory roadway.
- 12 At a signalized or stop-controlled intersection the Vehicular Traffic Warning sign assembly may be installed on an approach to a channelized right-turn lane controlled by a YIELD sign where the crosswalk is at least 20 feet in advance of the yield point.
- 13 The crossing location identified by a W11-1, W11-11, W11-15, or W11-15a sign may be defined with crosswalk markings (see Chapter 3C).

Standard:

- 14 **The Emergency Vehicle (W11-8) sign (see Figure 2C-14) with the EMERGENCY SIGNAL AHEAD (W11-12P) supplemental plaque (see Figure 2C-14) shall be placed in advance of all emergency-vehicle traffic control signals (see Chapter 4M).**

Option:

- 15 The Emergency Vehicle (W11-8) sign, or a word message sign indicating the type of emergency vehicle (such as rescue squad), may be used in advance of the emergency-vehicle station when no emergency- vehicle traffic control signal is present.
- 16 A Warning Beacon (see Section 4S.03) may be used with any Vehicular Traffic Warning sign to indicate specific periods when the condition or activity is present or is likely to be present, or to provide enhanced sign conspicuity.
- 17 ~~A supplemental WHEN FLASHING (W16-13P) plaque (see Figure 2C-16) may be used with any Vehicular Traffic Warning sign that is supplemented with a Warning Beacon to indicate specific periods when the condition or activity is present or is likely to be present.~~

Standard:

- 18 **WHEN FLASHING (W16-13P) plaque shall not be used to supplement any Vehicular Traffic Warning sign.**

Support:

- 19 Studies indicate that the W16-13P plaque is generally not effective as a warning device for motorists approaching signalized intersections. Not using the W16-13P plaque also addresses the situation when a warning beacon is inoperative for any reason.

Option:

- 20 The Golf Cart (W11-11) signs may be used to alert road users to locations where unexpected entries into the roadway by golf carts might occur, such as at golf cart crossings. Refer to CVC § 38025. Also refer to CVC § 21115.1.
- 21 The W11-11 sign may also be used in combination with the IN ROAD plaque sign at locations where a local agency permits the sharing of the roadway with slower moving golf carts. Refer to CVC § 21115.
- 22 The ALL TERRAIN VEHICLES (SW47A(CA)) sign (refer to Figure 2C-14(CA)) may be used in advance of a segment of highway that permits the use of regular vehicular traffic and also the driving of off highway motor vehicles on that portion of the highway.

Guidance:

- 23 *A Next Distance (W7-3a) plaque should supplement the SW47A(CA).*

Option:

- 24 The WATCH FOR SNOW REMOVAL EQUIPMENT (SW58(CA)) sign (refer to Figure 2C-14(CA)) may be used on highways leading to snow areas.

Guidance:

- 25 *The SW58(CA) sign should be covered or removed during the summer season.*

Support:

- 26 The SW58(CA) sign is normally placed at lower elevations where the first snow is usually encountered.

Section 2C.55 Non-Vehicular Warning Signs (W11-2, W11-3, W11-4, W11-6, W11-7, W11-9, and W11-16 through W11-22)

Option:

- 01 Non-Vehicular Warning (W11-2, W11-3, W11-4, W11-6, W11-7, W11-9, and W11-16 through W11- 22 and W11-23(CA)) signs (see Figure 2C-15 and 2C-15(CA)) may be used to alert road users in advance of locations where unexpected entries into the roadway might occur or where shared use of the roadway by pedestrians, animals, or equestrians might occur.

Support:

- 01a Refer to CVC §§ 21364 and 21365 for the Cattle (W11-4) sign.

- 01b Refer to CVC § 21805 for the Equestrian (W11-7) sign.

Guidance:

- 01c *The Deer Crossing (W11-3) sign should be used only after confirmation from a Department of Fish and Wildlife warden having jurisdiction in the area that a substantial problem exists.*

Option:

- 01d The Bear (W11-16) sign (refer to Figure 2C-15) may be used in advance of an area known to be inhabited by bear and there have been reported instances where bears are crossing the roadway.

Guidance:

- 01e The WILDLIFE CROSSING (W11-23(CA)) sign should be used to alert road users of multiple types of wild animals present in or by the sides of the roadways. The W11-23(CA) sign should not be used in lieu of the individual symbol signs for animals.

Option:

- 01f The WILDLIFE CROSSING (W11-23(CA)) sign may be used to alert road users of a wild animal which may cause traffic safety hazard and for which there are currently no symbol signs available.

Support:

- 01g Since wildlife migration patterns can change over time, it is recommended that the placement of non-vehicular warning signs featuring wildlife be periodically reviewed to verify that they continue to reflect current crossing behavior and remain effective.

Option:

- 01h The DEAF CHILDREN NEAR (SW38(CA)) sign (refer to Figure 2C-15(CA)) may be used on city streets or county roads to indicate that a deaf child is near. Refer to CVC § 21351.7.

- 01i The SENIOR ZONE (SW50-1P(CA)) plaque or SENIOR (SW50-2P(CA)) plaque (refer to Figure 2C-15(CA)) may be used in combination, above the Speed Limit (R2-1 (25,20 or 15)) sign on any street or road, other than a State highway, with a speed limit greater than 25 mph that is adjacent to a senior citizen facility. Refer to CVC §§ 22352 and 22358.4.

Guidance:

- 01j If used, the NEXT XX MILES supplemental plaque should be placed at approximately 5 mile intervals, or when intersecting major traffic generators.

Support:

- 02 These conflicts might be relatively confined, or might occur randomly over a segment of roadway.

Guidance:

- 03 If used in advance of a pedestrian, snowmobile, or equestrian crossing, the W11-2, W11-6, W11-7, and W11-9 signs should be supplemented with plaques (see Figure 2C-16 and Section 2C.61) with the legend AHEAD or XX FEET to inform road users that they are approaching a point where crossing activity might occur.

Standard:

- 04 If a post-mounted W11-2, W11-6, W11-7, or W11-9 sign is placed at the location of the crossing point where pedestrians, snowmobilers, or equestrians might be crossing the roadway, a diagonal downward-pointing arrow (W16-7P) plaque (see Figure 2C-16 and Section 2C.63) shall be mounted below the sign. If the W11-2, W11-6, W11-7, or W11-9 sign is mounted overhead, the W16-7P plaque shall not be used.

- 05 A Non-Vehicular Warning sign assembly shall not be installed on an approach controlled by a STOP or a YIELD sign, except as provided in Paragraphs 6 and 7 of this Section.

Option:

- 06 The Non-Vehicular Warning sign assembly may be installed on an approach to a circular intersection controlled by a YIELD sign where the crosswalk is at least 20 feet in advance of the yield point at the entrance to a circulatory roadway.

- 07 At a signalized or stop-controlled intersection the Non-Vehicular Warning sign assembly may be installed on an approach to a channelized right-turn lane controlled by a YIELD sign where the crosswalk is at least 20 feet in advance of the yield point.

- 08 A Pedestrian Crossing (W11-2) sign may be placed overhead or may be post-mounted with a diagonal downward-pointing arrow (W16-7P) plaque at the crosswalk location where Yield Here To (Stop Here For) Pedestrians signs (see Section 2B.19) have been installed in advance of the crosswalk.

Standard:

- 09 If a W11-2 sign has been post-mounted at the crosswalk location where a Yield Here To (~~Stop Here For~~) Pedestrians sign is used on the approach, the Yield Here To (~~Stop Here For~~) Pedestrians sign shall not be placed on the same post as the W11-2 sign.

Option:

- 10 An advance Pedestrian Crossing (W11-2) sign with an AHEAD or a distance supplemental plaque may be used in conjunction with a Yield Here To (~~Stop Here For~~) Pedestrians sign on the approach to the same crosswalk.

- 11 The crossing location identified by a W11-2, W11-6, W11-7, or W11-9 sign may be defined with crosswalk markings (see Chapter 3C).

- 12 The W11-2 and W11-9 signs and their related supplemental plaques may have a fluorescent yellow- green

background with a black legend and border.

Guidance:

- 13 *When a fluorescent yellow-green background is used, a systematic approach featuring one background color within a zone or area should be used. The mixing of standard yellow and fluorescent yellow-green backgrounds within a selected site area should be avoided.*

Option:

- 14 A Warning Beacon (see Section 4S.03) may be used with any Non-Vehicular Warning sign to indicate specific periods when the condition or activity is present or is likely to be present, or to provide enhanced sign conspicuity.
- 15 ~~A supplemental WHEN FLASHING (W16-13P) plaque (see Figure 2C-16) may be used with any Non-Vehicular Warning sign that is supplemented with a Warning Beacon to indicate specific periods when the condition or activity is present or is likely to be present.~~

Standard:

- 16 **WHEN FLASHING (W16-13P) plaque shall not be used to supplement any Non-Vehicular Warning sign.**

Support:

- 17 Studies indicate that the W16-13P plaque is generally not effective as a warning device for motorists approaching signalized intersections. Not using the W16-13P plaque also addresses the situation when a warning beacon is inoperative for any reason.

Section 2C.56 Playground Sign (W15-1)

Option:

- 01 The Playground (W15-1) sign (see Figure 2C-15) may be used to give advance warning of a designated children's playground that is located adjacent to the road.
- 02 The Playground sign may have a fluorescent yellow-green background with a black legend and border.

Guidance:

- 03 *If the access to the playground area requires a roadway crossing, the application of crosswalk pavement markings (see Chapter 3C) and Non-Vehicular Warning signs (see Section 2C.55) should be considered.*
- 04 *The PLAYGROUND (SW49P(CA)) plaque (refer to Figure 2C-15(CA)) should not be used alone.*

Option:

- 05 The SW49P(CA) plaque may be used in combination above the Speed Limit (R2-1 (25)) sign and WHEN CHILDREN ARE PRESENT (S4-2) sign on any street or road, other than a State highway, with a speed limit greater than 25 mph that is adjacent to a children's playground within a public park. Refer to CVC § 22357.1.

SUPPLEMENTAL WARNING PLAQUES

Section 2C.57 Use of Supplemental Warning Plaques

Option:

- 01 A supplemental warning plaque (see Figure 2C-16) may be displayed with a warning or regulatory sign when engineering judgment indicates that road users require additional warning information beyond that contained in the main message of the warning or regulatory sign.

Standard:

- 02 **Supplemental warning plaques shall be used only in combination with and installed on the same post(s) as warning or regulatory signs. They shall not be mounted alone or displayed alone.**
- 03 **Unless otherwise provided in this Manual for a particular plaque, supplemental warning plaques shall be mounted below the sign they supplement.**

Section 2C.58 Design of Supplemental Warning Plaques

Standard:

- 01 **A supplemental warning plaque used with a warning sign shall have the same legend, border, and background color as the warning sign with which it is displayed. A supplemental warning plaque used with a regulatory sign shall have a black legend and border on a yellow background.**
- 02 **Supplemental warning plaques shall be square or rectangular.**

Section 2C.59 Advisory Speed Plaque (W13-1P) and Confirmation Advisory Speed Plaque (W13-1aP)

Option:

- 01 The Advisory Speed (W13-1P) plaque (see Figure 2C-1) may be used to supplement an advance warning sign to indicate the advisory speed for a condition.
- 02 The Confirmation Advisory Speed (W13-1aP) plaque (see Figure 2C-1) may be used to supplement a One-Direction Large Arrow (W1-6) sign on the outside of a turn or curve in line with and at approximately a right angle to approaching traffic.

Standard:

- 03 **The use of the Advisory Speed and Confirmation Advisory Speed plaques for horizontal curves shall be in accordance with Section 2C.06 and Table 2C-6. The speed differential in Table 2C-6 shall be the difference between the advisory speed for the horizontal curve and the posted speed limit, ~~statutory speed limit, or the 85th percentile speed on the approach to the curve.~~ The Advisory Speed plaque shall also be used where an engineering study indicates a need to advise road users of the advisory speed for other roadway conditions.**
- 04 **The speed displayed on the Advisory Speed and Confirmation Advisory Speed plaques shall be a multiple of 5 mph.**
- 05 **Except in emergencies or when the condition is temporary, an Advisory Speed or Confirmation Advisory Speed plaque shall not be installed until the advisory speed has been determined by an engineering study.**
- 06 **The Advisory Speed plaque shall only be used to supplement an advance warning sign. The Advisory Speed plaque or the Confirmation Advisory Speed plaque shall not be installed as a separate sign installation.**

Guidance:

- 07 *The Advisory Speed plaque, if used with a sign that is also supplemented with another plaque, such as an Advance Street Name plaque (see Section 2C.65), should be mounted immediately below the primary warning sign with any other plaque mounted below the Advisory Speed plaque.*

Standard:

- 08 **The Confirmation Advisory Speed plaque shall only be used to supplement a One-Direction Large Arrow (W1-6) sign (see Section 2C.10) or an Exit Gore (E5-1 series) sign (see Section 2E.26) and shall not be installed as a separate sign installation.**
- 09 **The advisory speed shall be determined by an engineering study that follows established engineering practices.**

Guidance:

- 10 *The advisory speed should be determined based on free-flowing traffic conditions.*
- 11 *Because changes in conditions, such as roadway geometrics, surface characteristics, or sight distance, might affect*

the advisory speed, each location should be evaluated periodically or when conditions change.

Support:

- 12 Among the established engineering practices that are appropriate for the determination of the recommended advisory speed for a horizontal curve are the following:
- A. Compass method
 - B. Safety-based method
 - C. Accelerometer method
 - D. Design equation method
 - E. Ball-bank method using the following criteria:
 - 1. 16 degrees of ball-bank for speeds of 20 mph or less
 - 2. 14 degrees of ball-bank for speeds of 25 to 30 mph
 - 3. 12 degrees of ball-bank for speeds of 35 mph and higher

- 13 The 16, 14, and 12 degrees of ball-bank criteria are comparable to the current AASHTO horizontal curve design guidance. Research has shown that drivers often exceed existing posted advisory curve speeds by 7 to 10 mph.

Standard:

- 14 **If used, the speed shown on the W13-1P plaque shall not be in excess of the posted or maximum speed limit.**
- 15 **The Advisory Speed plaque shall not be used in conjunction with any sign other than a warning sign, nor shall it be used alone. When used, it shall be positioned below the warning sign.**

Guidance:

- 16 *In determining the need for curve or turn warning signs, consideration should be given to driver expectancy based on the driving environment. If the curve can be driven at legal speed without discomfort, there is normally no need for a sign. A curve warning sign should be considered in advance of any curve that produces a reading of 10 degrees on a Ball Bank Indicator at speeds lower than the approach speed. If a curve warning sign is needed, it should be supplemented with an advisory speed message.*
- 17 *A mechanical or electronic Ball Indicator should be used to determine the advisory speed for curves.*

Support:

- 18 This speed is shown on Advisory Exit and Ramp Speed Signs and Advisory Speed Plaques.

Option:

- 19 The Advisory Speed (W13-1P) plaque may also be used with a number of other warning signs.

Support:

- 20 One method of determining the advisory speed is to drive the curve at several selected uniform speeds and plot the Ball Bank Indicator readings as shown in Figure 2C-101(CA).

Guidance:

- 21 *A minimum of three speed runs should be made in each direction.*

Section 2C.60 NEW Plaque (W16-15P)

Option:

- 01 A NEW (W16-15P) plaque (see Figure 2C-16) may be mounted above a regulatory sign when a new regulation takes effect in order to alert road users to the new traffic regulation. A NEW plaque may also be mounted above an advance warning sign (such as a Signal Ahead sign for a newly-installed traffic control signal) for a warning of a new traffic condition.

Guidance:

- 02 *The NEW plaque should be removed no later than ~~6~~ 12 months after it was installed.*

Support:

- 03 Refer to FHWA's List of Known Errors for error in Paragraph 2 text. Refer to Section 1A.04 for more details.

Section 2C.61 Distance Plaques (W16-2 Series, W16-3 Series, W16-4P, and W7-3aP)

Option:

- 01 The Distance Ahead (W16-2 series and W16-3 series) plaques (see Figure 2C-16) may be used to inform the road user of the distance to the condition indicated by the warning sign.
- 02 The Next Distance (W7-3aP and W16-4P) plaques (see Figures 2C-5 and 2C-16) may be used to inform road users of the length of roadway over which the condition indicated by the warning sign exists.

Guidance:

- 03 When the distance is in miles, the mileage shown should be to the nearest 1/4 mile for a distance of less than 1 mile and to the nearest mile for distances over one mile. The text "MILE" should be used for a distance of one mile or less. The text "MILES" should be used for distances over one mile.

Section 2C.62 Supplemental Arrow Plaques (W16-5P and W16-6P)

Guidance:

- 01 If the condition indicated by a warning sign is located on an intersecting road and the distance between the intersection and condition is not sufficient to provide adequate advance placement of the warning sign, a Supplemental Arrow (W16-5P or W16-6P) plaque (see Figure 2C-16) should be used below the warning sign.

Standard:

- 02 Supplemental Arrow plaques shall have the same legend design as the Advance Turn Arrow and Directional Arrow auxiliary signs (see Sections 2D.26 and 2D.28) except that they shall have a black legend and border on a yellow or fluorescent yellow or yellow-green background, as appropriate.

Section 2C.63 Diagonal Downward-Pointing Arrow Plaques (W16-7P and W16-7aP)

Support:

- 01 Diagonal downward-pointing arrow (W16-7P and W16-7aP) plaques (see Figure 2C-16) are used with certain Vehicular Traffic Warning signs (see Section 2C.54) and certain Non-Vehicular Warning signs (see Section 2C.55), and School Crossing signs (see Section 7B.03) to indicate the specific location of a crossing point.
- 02 The W16-7P plaque contains a single arrow pointing diagonally down to the right or left, toward the roadway, depending on which side of the roadway it is located.

Option:

- 03 A W16-7aP plaque may be used with a single crossing sign located on a narrow median separating two roadways with traffic in the same direction where the crossing traverses both roadways.
- 04 The Diagonal Downward-Pointing Arrow Plaque W16-7P may be used where object markers (refer to Sections 2C.70 and 2C.72) may be ineffective, with the downward arrow either left or right, to mark obstructions in the roadway where traffic is permitted to pass on one side only.

Section 2C.64 Hill-Related Plaques (W7-2 Series and W7-3 Series)

Guidance:

- 01 Hill-Related (W7-2 series and W7-3 series) plaques (see Figure 2C-5) or other appropriate legends and larger signs should be used for emphasis or where special hill characteristics exist.
- 02 On longer grades, the use of a distance (W7-3aP or W7-3bP) plaque (see Figure 2C-5) at periodic intervals of approximately 1-mile spacing should be considered.

Section 2C.65 Advance Street Name Plaques (W16-8P and W16-8aP)

Option:

- 01 An Advance Street Name (W16-8P or W16-8aP) plaque (see Figure 2C-16) may be used with any Intersection (W1-10 series, W2 series, W10-2, W10-3, or W10-4) or Advance Traffic Control (W3 series) sign to identify the name of the intersecting street.

Standard:

- 02 The lettering on Advance Street Name plaques shall be composed of a combination of lower- case letters with initial upper-case letters.
- 03 If two street names are used on the Advance Street Name plaque, a directional arrow pointing in the direction of the street shall be placed next to each street name. Arrows pointing to the left shall be placed to the left of the street name, and arrows pointing to the right shall be placed to the right of the street name.

Guidance:

- 04 If two street names are used on the Advance Street Name plaque, the street names and associated arrows should shall be displayed in the following order:
- A. For a single intersection, the name of the street to the left should shall be displayed above the name of the street to the right; or

- B. For two sequential intersections, such as where the plaque is used with an Offset Side Roads (W2-7) or a Double Side Road (W2-8) sign, the name of the first street encountered ~~should~~ **shall** be displayed above the name of the second street encountered, and the arrow associated with the second street encountered should ~~shall~~ be an advance arrow, such as the arrow shown on the W16-6P arrow plaque (see Figure 2C-16).**

Section 2C.66 Traffic Does Not Stop Plaques (W4-4P Series)

Option:

- 01 The CROSS TRAFFIC DOES NOT STOP (W4-4P) plaque (see Figure 2C-10) may be used in combination with a STOP sign when engineering judgment indicates that conditions are present that are causing or could cause road users to misinterpret the intersection as an all-way stop.

Guidance:

- 01a *The CROSS TRAFFIC DOES NOT STOP (W4-4p) plaque should be used in combination with a STOP sign at two-way stop-controlled intersections when a conversion from four-way stop to two-way stop operation is implemented.*

Option:

- 02 The TRAFFIC FROM LEFT (RIGHT) DOES NOT STOP (W4-4aP) or ONCOMING TRAFFIC DOES NOT STOP (W4-4bP) plaque may be used when such messages more accurately describe the traffic controls established at the intersection.

Guidance:

- 03 *The W4-4aP and W4-4bP plaques should be used at intersections where STOP signs control all but one approach to the intersection, unless the only non-stopped approach is from a one-way street.*

Standard:

- 04 **If a W4-4P series plaque is used, it shall be mounted below the STOP sign.**

Support:

- 05 Section 9C.06 contains information for Bicycle Cross Traffic warning plaques that can be used below STOP signs on crossroads or driveways that intersect with bicycle facilities.

Section 2C.67 IN ROAD and IN STREET Plaques (W16-1P and W16-1aP)

Option:

- 01 In situations where there is a need to warn drivers to watch for other slower forms of transportation traveling along the highway, such as bicycles, pedestrians, golf carts, horse-drawn vehicles, or farm machinery, an IN ROAD (W16-1P) plaque or IN STREET (W16-1aP) plaque (see Figure 2C-16) may be used.

Guidance:

- 01a *On state highways, the IN STREET plaque should not be used.*

Standard:

- 02 **The background color of the W16-1P or W16-1aP plaque shall match the background color of the warning sign with which it is displayed. If a W16-1P or W16-1aP plaque is used, it shall be mounted below either a Vehicular Traffic Warning sign (see Section 2C.54) or a Non-Vehicular Warning sign (see Section 2C.55), and shall not be mounted alone.**

Support:

- 03 Section 9B.14 contains information about the use of a Bicycles Allowed Use of Full Lane (R9-20) sign to inform drivers of the presence of bicycles in the roadway or where bicyclists are expected or preferred to use the full lane.

Section 2C.68 EXCEPT BICYCLES Plaque (W16-20P)

Option:

- 01 Where it is desired to notify bicyclists that the conditions depicted by a warning sign are not applicable to bicycles, the EXCEPT BICYCLES (W16-20P) supplemental warning plaque (see Figure 2C-16) may be mounted below the warning sign.

Support:

- 02 Examples of warning signs with which an EXCEPT BICYCLES (W16-20P) plaque can be mounted include DEAD END (W14-1) or NO OUTLET (W14-2) signs.

Section 2C.69 Photo Enforced Plaques (W16-10P and W16-10aP)

Option:

- 01 A Photo Enforced (W16-10P) plaque or a PHOTO ENFORCED (W16-10aP) word message plaque (see Figure 2C-16) may be mounted below a warning sign to advise road users that the regulations associated with the condition being warned about (such as a traffic control signal or a toll plaza) are being enforced by photographic equipment.

OBJECT MARKERS

Section 2C.70 Object Marker Design and Placement Height

Support:

- 01 Types 1, 2, and 3 object markers are used to mark obstructions within or adjacent to the roadway. Type 4 object markers are used to mark the end of a roadway.

Standard:

- 02 When used, object markers (see Figure 2C-17 and 2C-17(CA)) shall not have a border and shall consist of an arrangement of one or more of the following types:

Type 1—a diamond-shaped sign, at least 18 inches on a side, consisting of either a yellow (OM1-1) or black (OM1-2) sign with nine yellow retroreflective devices, each with a minimum diameter of 3 inches, mounted symmetrically on the sign, or an all-yellow retroreflective sign (OM1-3).

Type 2—either a marker (OM2-1V or OM2-1H) consisting of three yellow retroreflective devices, each with a minimum diameter of 3 inches, arranged either horizontally or vertically on a white sign measuring at least 6 x 12 inches; or an all-yellow horizontal or vertical retroreflective sign (OM2-2V or OM2-2H), measuring at least 6 x 12 inches.

Type 3—a striped marker, 12 x 36 inches, consisting of a vertical rectangle with alternating black and retroreflective yellow stripes sloping downward at an angle of 45 degrees toward the side of the obstruction on which traffic is to pass. The minimum width of the yellow and black stripes shall be 3 inches.

Type 4—a diamond-shaped sign, at least 18 inches on a side, consisting of either a red (OM4-1) or black (OM4-2) sign with nine red retroreflective devices, each with a minimum diameter of 3 inches, mounted symmetrically on the sign, or an all-red retroreflective sign (OM4-3).

Type L(CA) Utility Pole marker (refer to Figure 2C-17(CA)) shall be yellow retroreflective material consisting of three 2 x 12 inch horizontal rectangles arranged vertically on a utility pole.

Type Q(CA) object marker (refer to Figure 2C-17(CA)) shall be a vertical tubular marker, with a height of 18 to 24 inch and a minimum cross sectional dimension of 2 ¼ inch. The yellow retroreflective material shall consist of three bands, each 3 inch in height or a single band 9 inch in height.

Support:

- 03 Type 3 object markers with stripes that begin at the upper right side and slope downward to the lower left side are designated as right object markers (OM3-R). Object markers with stripes that begin at the upper left side and slope downward to the lower right side are designated as left object markers (OM3-L). Object markers with chevron stripes that slope downward to both the lower left and lower right sides are designated as center object markers (OM3-C).

Guidance:

- 04 When used for marking obstructions within the roadway or obstructions that are 8 feet or less from the shoulder or curb, the minimum mounting height, measured from the bottom of the object marker to the elevation of the near edge of the traveled way, should be 4 feet.

- 05 When used to mark obstructions more than 8 feet from the shoulder or curb, the clearance from the ground to the bottom of the object marker should be at least 4 feet.

- 06 Object markers should not present a vertical or horizontal clearance obstacle for pedestrians.

Option:

- 07 When object markers or markings are applied to an obstruction that by its nature requires a lower or higher mounting, the vertical mounting height may vary according to need.

Support:

- 08 Section 9C.09 contains information regarding the use of object markers on shared-use paths.

Section 2C.71 Object Markers for Obstructions Within the Roadway

Standard:

- 01 Obstructions within the roadway shall be marked with a Type 1 or Type 3 object marker. In addition to markers on the face of the obstruction, warning of approach to the obstruction shall be given by appropriate pavement markings (see Section 3B.13).

Option:

- 01a The Type Q(CA) object marker may be used to emphasize objects within the roadway, for example, curb noses, where it is

desirable that the marker be visible from all directions.

02 To provide additional emphasis, a Type 1 or Type 3 object marker may be installed at or near the approach end of a median island.

03 To provide additional emphasis, large surfaces such as bridge piers may be painted with diagonal stripes, 12 inches or greater in width, similar in design to the Type 3 object marker.

Standard:

04 **The alternating black and retroreflective yellow stripes (OM3-L, OM3-R) shall be sloped down at an angle of 45 degrees toward the side on which traffic is to pass the obstruction. If traffic can pass to either side of the obstruction, the alternating black and retroreflective yellow stripes (OM3-C) shall form chevrons that point upwards.**

Guidance:

04a *The OM3-L or OM3-R object marker should be in line with the inner edge of the obstruction.*

Option:

05 Appropriate signs (see Sections 2B.40 and 2C.23) directing traffic to one or both sides of the obstruction may be used instead of the object marker.

Guidance:

06 *If any object marker is located behind the guard rail, all of the marker panel should be visible to approaching traffic.*

Section 2C.72 Object Markers for Obstructions Adjacent to the Roadway

Support:

01 Obstructions not actually within the roadway are sometimes so close to the edge of the road that they need a marker. These include underpass piers, bridge abutments, handrails, ends of traffic barriers, utility poles, and culvert headwalls. In other cases there might not be a physical object involved, but other roadside conditions exist, such as narrow shoulders, drop-offs, gores, small islands, and abrupt changes in the roadway alignment, that might make it undesirable for a road user to leave the roadway, and therefore would create a need for a marker.

Option:

02 Type 2 or Type 3 object markers may be used to mark an obstruction adjacent to the roadway.

Guidance:

03 *If a Type 2 or Type 3 object marker is used to mark an obstruction adjacent to the roadway, the edge of the object marker that is closest to the road user should be installed in line with the closest edge of the obstruction.*

04 *When a marker is applied to the approach ends of guardrail or crash cushion terminals it should have the appearance of a Type 3 object marker and should be directly affixed, without a substrate, to the approach end of the guardrail or crash cushion and generally conform to the size and shape of the approach end of the guardrail or crash cushion.*

Standard:

05 **Type 1 and Type 4 object markers shall not be used to mark obstructions adjacent to the roadway.**

Guidance:

06 *Standard warning signs in this Chapter should also be used where applicable.*

Option:

07 Objects in a paved area within 8 feet of the traveled way may be marked with a Type 3 object marker. Objects outside of the paved shoulder, within 12 feet of the traveled way, may be marked with Type 2 object markers.

08 Type 2 object markers may be placed in front of, alongside of, or attached to the object. Where objects are very close to each other, only the first object may need to be marked.

09 The Type L(CA) Utility Pole marker may be used to mark a utility pole.

Guidance:

10 *If used, the utility company should be responsible for installing and maintaining the Type L(CA) Utility Pole marker.*

Support:

11 Refer to Section 2C.10 and 2C.43 for use of Type 1 (OM1-3) object markers in conjunction with One-Directional Large Arrow (W1-6) and Two-Direction Large Arrow (W1-7) signs for abrupt changes in the roadway alignment.

12 Refer to Section 6H.104(CA) for use of Type 1 and Type 3 object markers for temporary traffic control.

Option:

- 13 If engineering judgment indicates that the exit gore at an interchange cannot be negotiated in a reasonable manner, then in addition to the Type F and G delineators, a OM3-C object marker may be used as shown in Figure 3G-102(CA).

Section 2C.73 Object Markers for Ends of Roadways

Support:

- 01 The Type 4 object marker is used to warn and alert road users of the end of a roadway in other than construction or maintenance areas.

Standard:

- 02 **If an object marker is used to mark the end of a roadway, a Type 4 object marker shall be used.**

~~Option:~~

- 03 ~~The Type 4 object marker may be used in instances where there are no alternate vehicular paths.~~

- 03a **The Type 4 object marker shall be used at the end of a road or cul-de-sac street where there is no alternate vehicular path.**

Option:

- 04 Where conditions warrant, more than one marker, or a larger marker with or without a Type 3 Barricade (see Section 2B.75), may be used at the end of the roadway.

Support:

- 04a Refer to Section 2C.24 for use of end-of-roadway marker in conjunction with END (W31(CA)) sign.

Standard:

- 05 **The minimum mounting height, measured vertically from the bottom of a Type 4 object marker to the elevation of the near edge of the traveled way, shall be 4 feet.**

Guidance:

- 06 *Appropriate advance warning signs in this Chapter should be used.*

Section 2C.101(CA) TRACTOR-SEMI OVER ____ FEET KINGPIN TO REAR AXLE NOT ADVISED (SW48(CA))

Option:

- 01 The TRACTOR-SEMI OVER ____ FEET KINGPIN TO REAR AXLE NOT ADVISED (SW48(CA)) sign (refer to Figure 2C-6(CA)) may be used on certain specified conventional highways and freeways that have restricted turning radii.

Standard:

- 02 **At freeway off-ramps to restricted conventional highways, the SW48(CA) sign shall be installed with a NEXT EXIT (SW48-1P(CA)) plaque.**

Guidance:

- 03 *The SW48(CA) sign should be located far enough in advance of the restricted area to allow the vehicle operator time to select an alternate route.*

Option:

- 04 The NEXT EXIT (SW48-1P(CA)) plaque (refer to Figure 2C-6(CA)) or Distance plaque may supplement the SW48(CA) sign, as appropriate. Alternate messages for the SW48-1P(CA) plaque may be NEXT RIGHT, SECOND EXIT, SECOND RIGHT, NEXT LEFT or SECOND LEFT.

Section 2C.102(CA) Weight Limit signs (W20(CA) and W20A(CA))

Option:

- 01 The Weight Limit (W20(CA) and W20A(CA)) signs (refer to Figure 2C-6(CA)) may be used in combination with a Distance Plaque, far enough in advance to allow the vehicle operator to select an alternate route.

Guidance:

- 02 *An alternative route should be evaluated for height, weight and size restrictions. Appropriate signs should be posted along the route to advise motorists of any restrictions.*

Support:

- 03 Refer to Section 2B.64 for regulatory Weight Limit signs.

Section 2C.103(CA) Safety Corridor Sign (SW33(CA))

Option:

- 01 The Safety Corridor (SW33(CA)) sign (refer to Figure 2C-6(CA)) may be installed at the written request of an official Corridor Safety Task Force on any roadway segment that is designated as a Safety Awareness Zone under the authority of SHS § 97.1.

Support:

- 02 More information on Highway Safety Corridors and Task Forces is available at:

<http://www.chp.ca.gov/community/corridor.html>

Standard:

- 03 **The SW33(CA) sign shall not be installed on freeways.**

Guidance:

- 04 *When used, one SW33(CA) sign should be posted at each end of the corridor. The SW33(CA) sign specifications should be as follows: Yellow background with black text having a primary safety message.*

Standard:

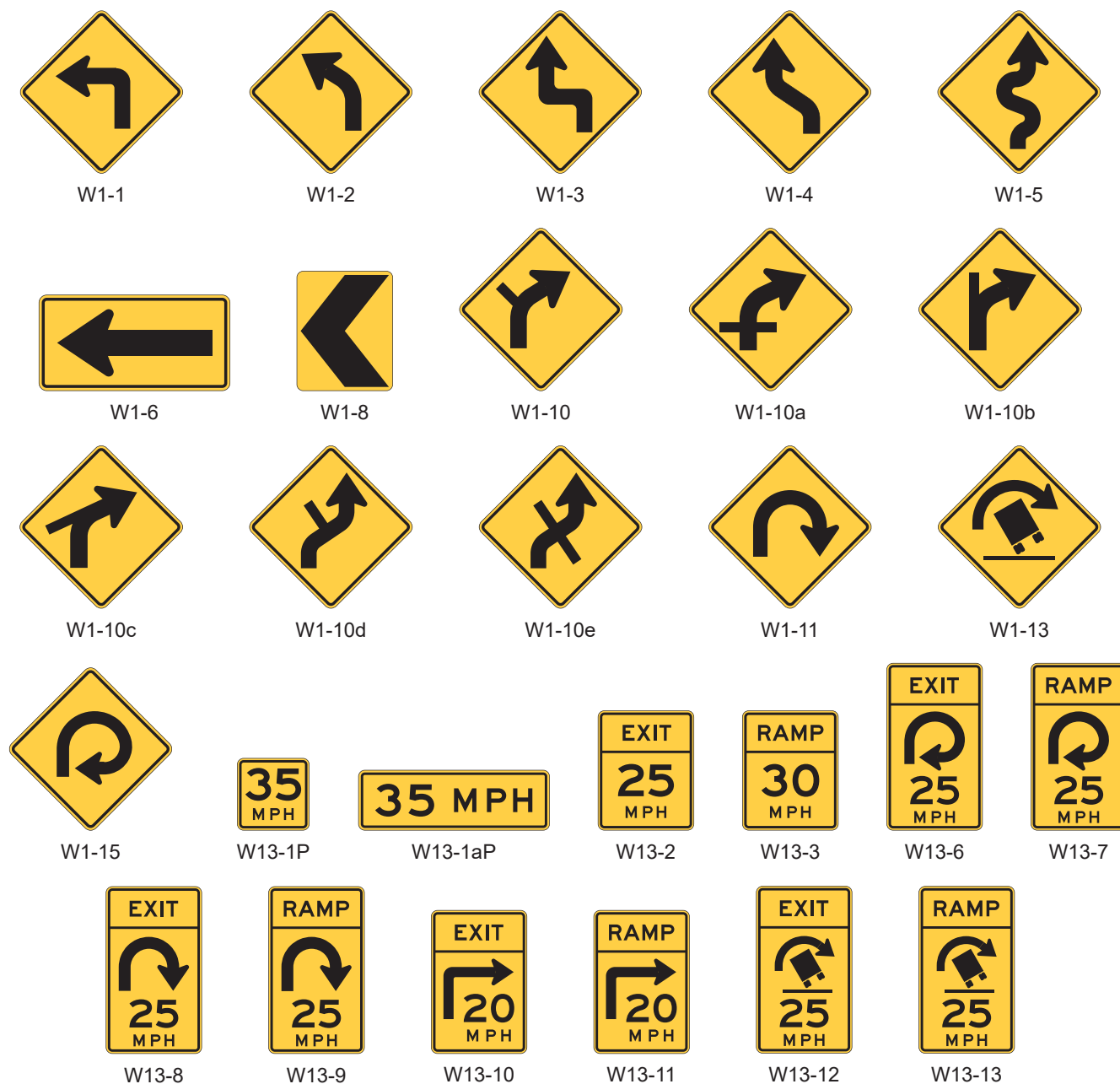
- 05 **A secondary message shall be agreed upon by the Task Force. The secondary message shall not cover more than 25 percent of the sign's surface area.**

- 06 **Caltrans shall purchase and install the SW33(CA) sign.**

Guidance:

- 07 *The Task Force is to advise Caltrans, in writing, as to how long the signs are to remain on the highway, but this time period should not exceed three years.*

Figure 2C-1. Horizontal Alignment Signs and Plaques



Note: Turn arrows and reverse turn arrows may be substituted for the curve arrows and reverse curve arrows on the W1-10 series signs where appropriate.

Figure 2C-2. Examples of Warning Signs for Changes in Horizontal Alignment (Sheet 1 of 2)

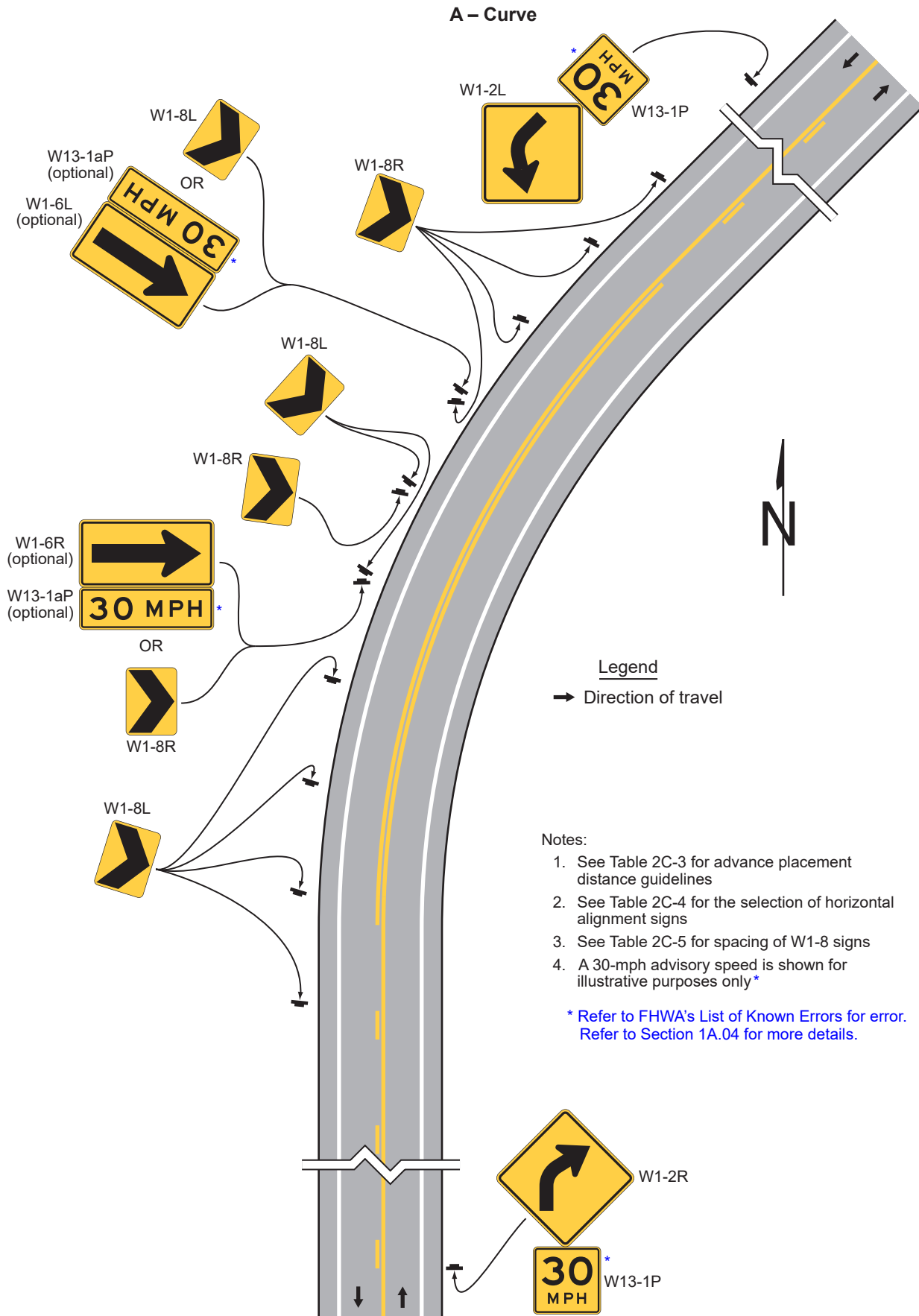


Figure 2C-2. Examples of Warning Signs for Changes in Horizontal Alignment (Sheet 2 of 2)

B – Turn

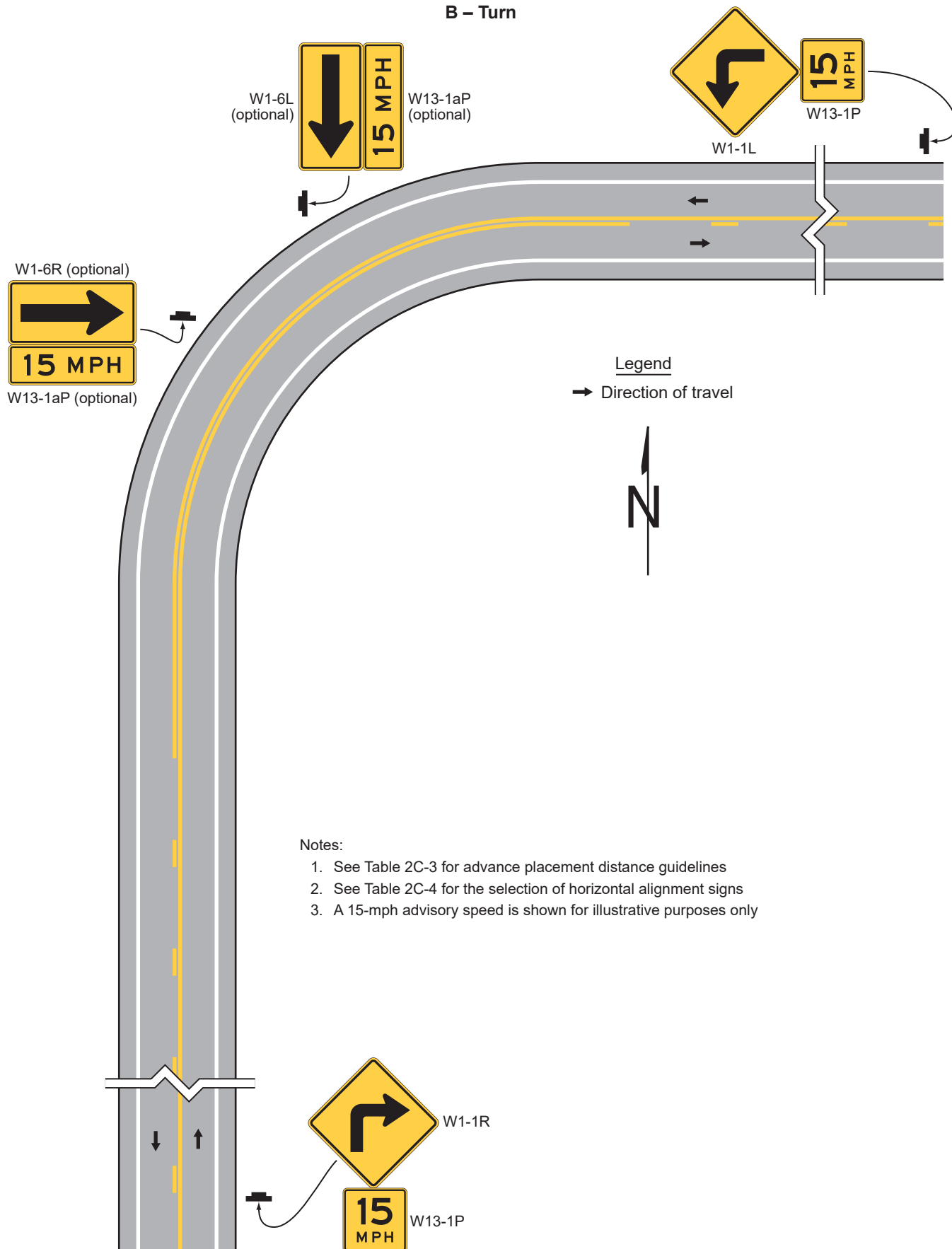


Figure 2C-3. Examples of Exit Ramp Advisory Speed and Other Warning Signs (Sheet 1 of 5)

A – Loop ramp with constant controlling curvature along ramp proper

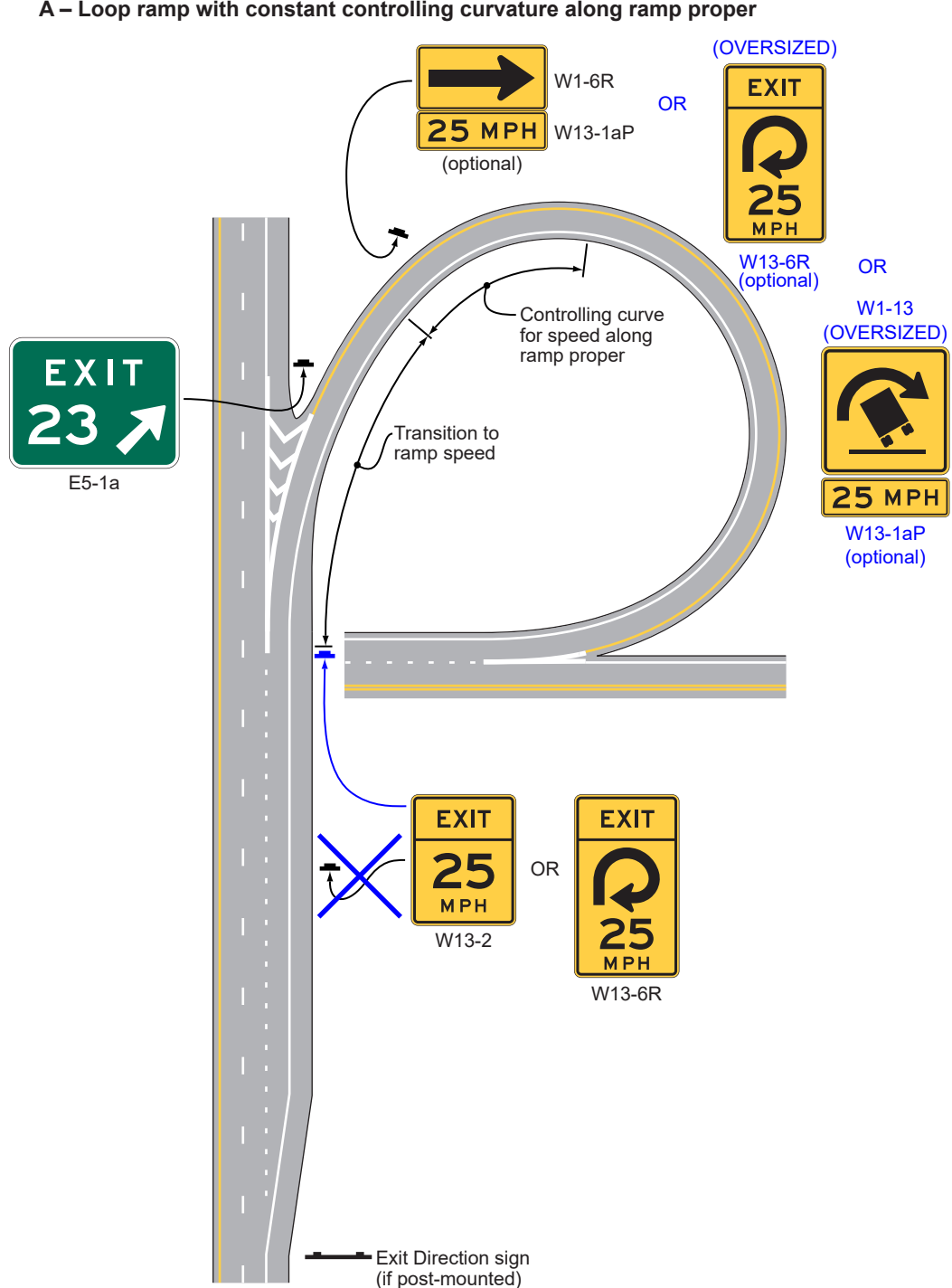


Figure 2C-3. Examples of Exit Ramp Advisory Speed and Other Warning Signs (Sheet 2 of 5)

B – Loop ramp with downstream limiting curvature

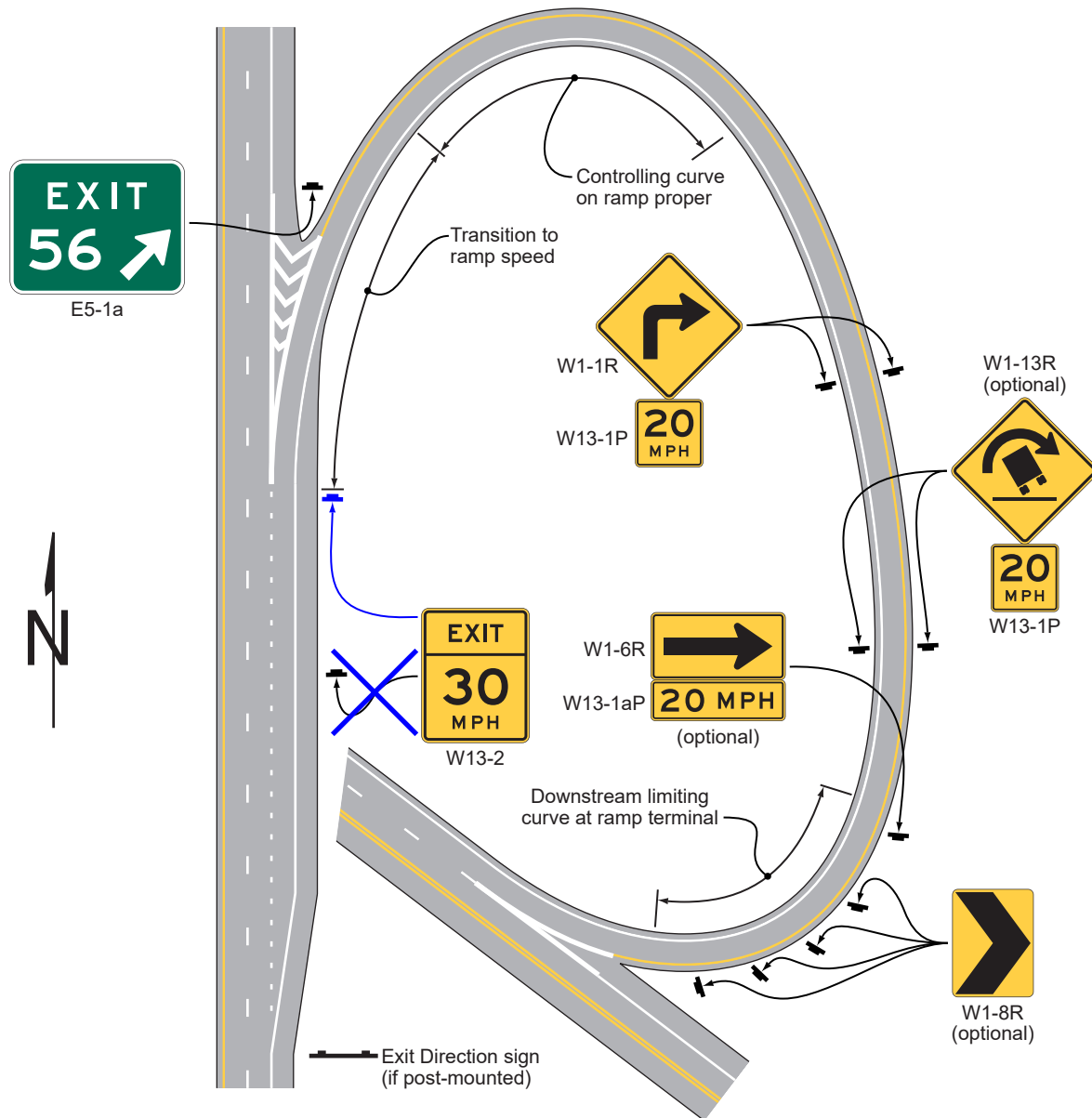


Figure 2C-3. Examples of Exit Ramp Advisory Speed and Other Warning Signs (Sheet 3 of 5)

C – Directional ramp

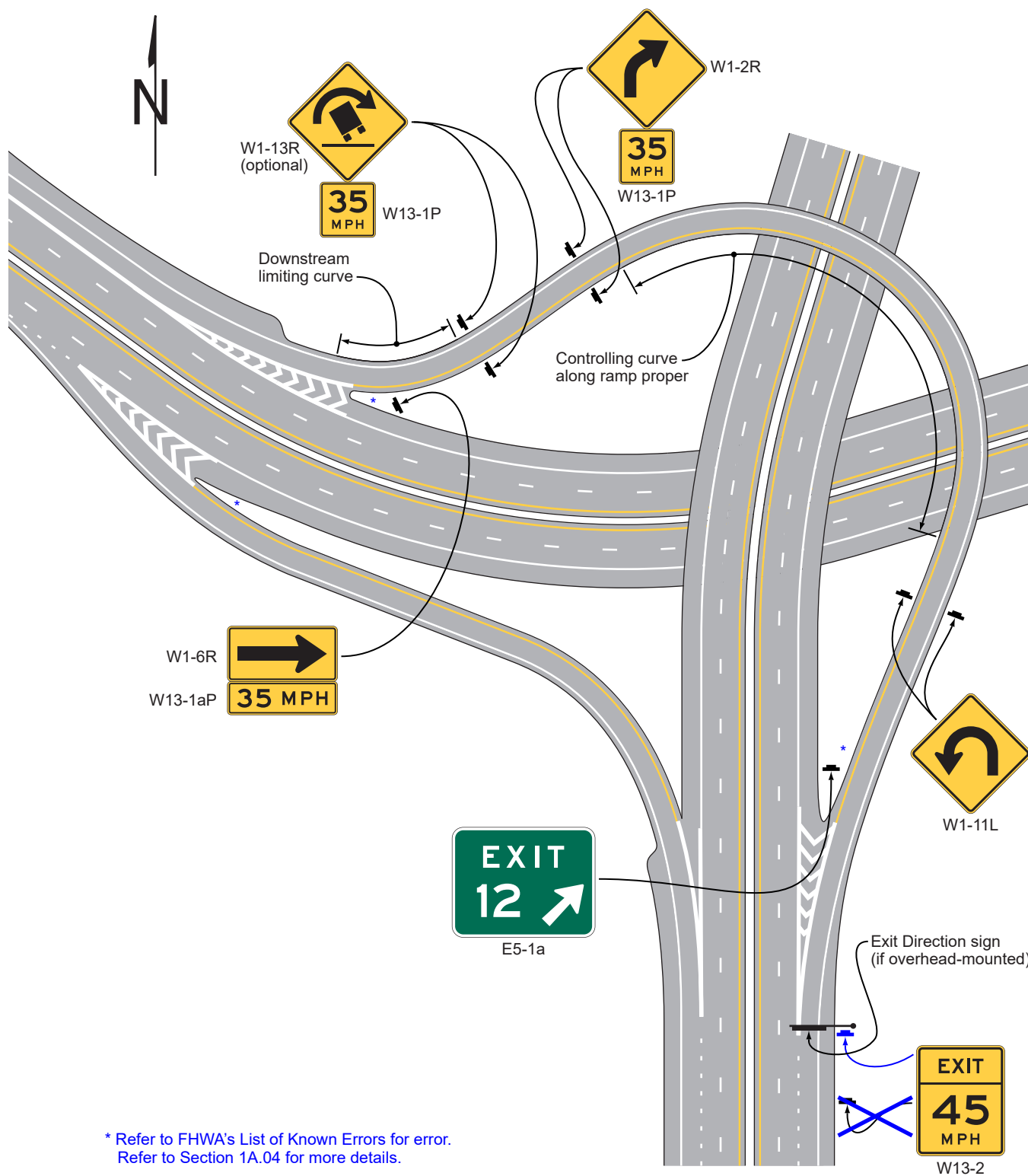


Figure 2C-3. Examples of Exit Ramp Advisory Speed and Other Warning Signs (Sheet 4 of 5)

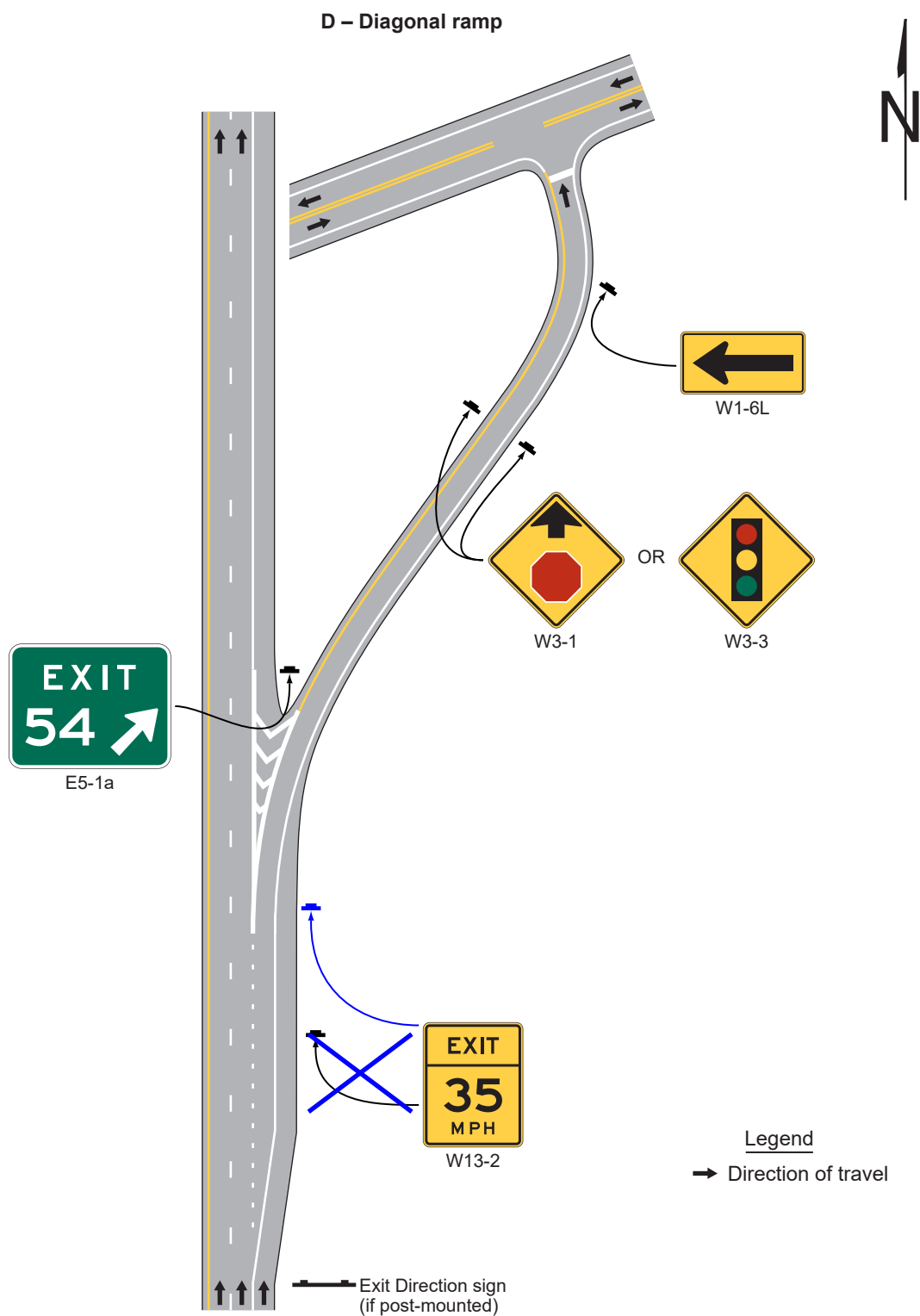
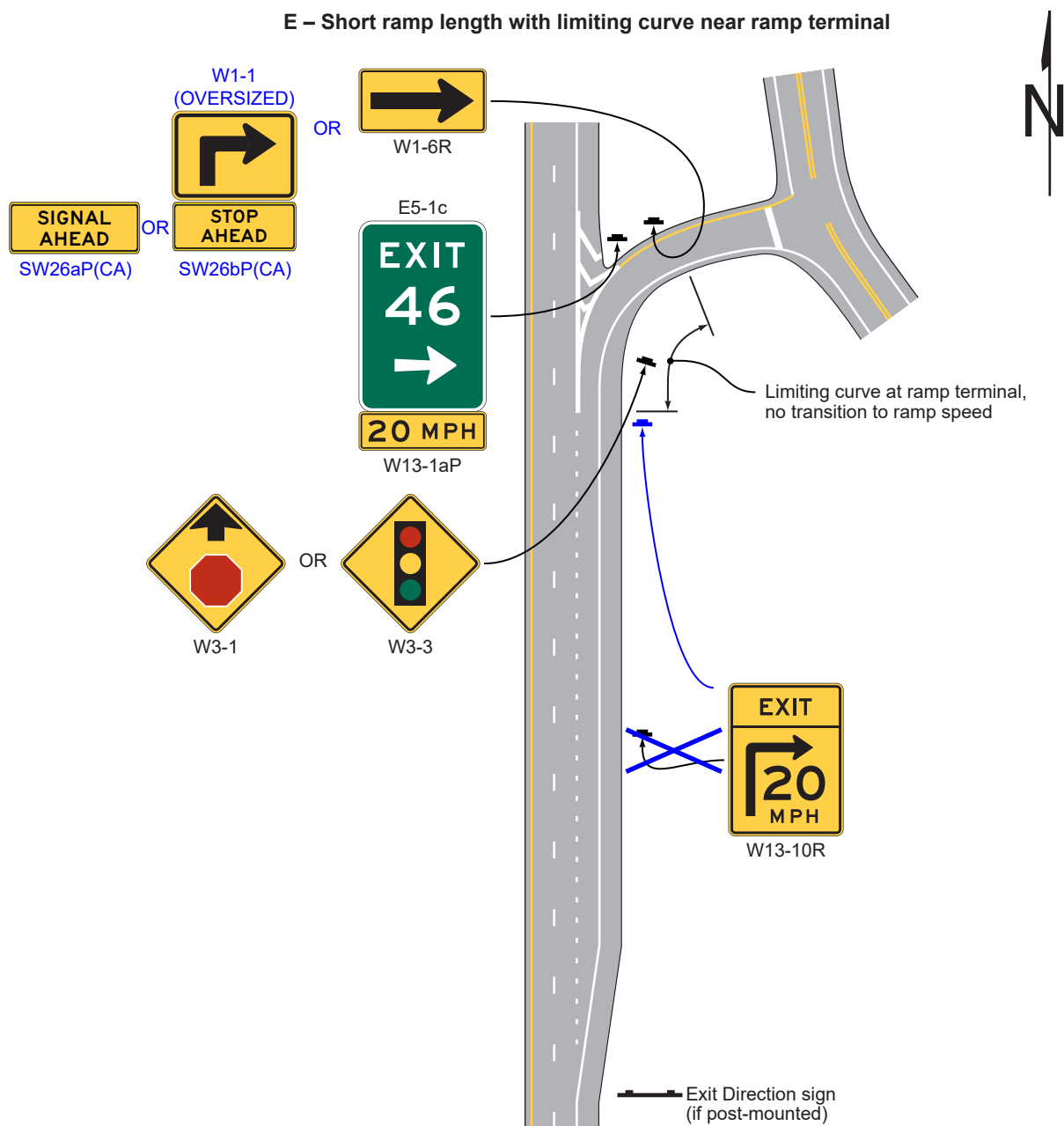


Figure 2C-3. Examples of Exit Ramp Advisory Speed and Other Warning Signs (Sheet 5 of 5)



**Figure 2C-4. Vehicle Speed Feedback
Sign and Plaque**



Figure 2C-5. Vertical Grade Signs and Plaques

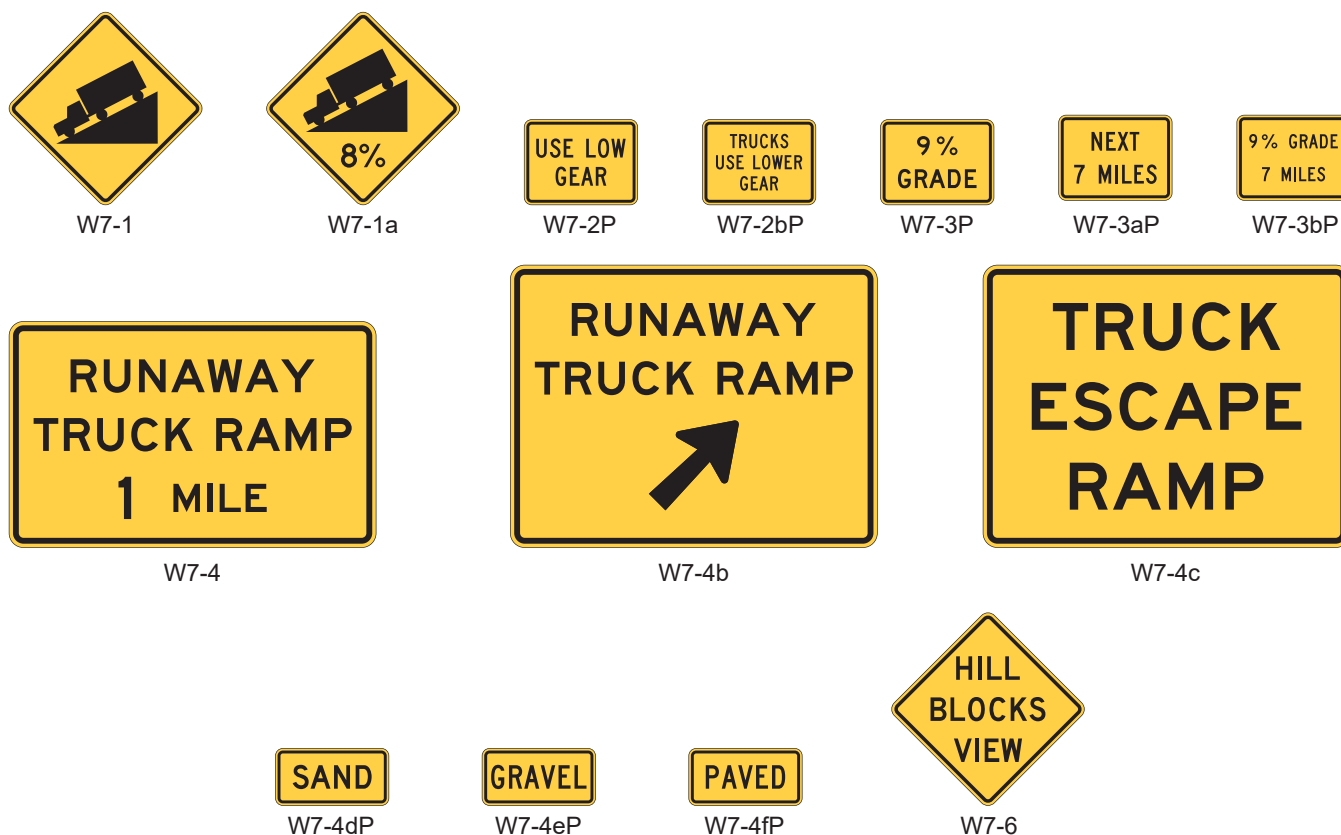


Figure 2C-5(CA). California Vertical Grade Signs and Plaques

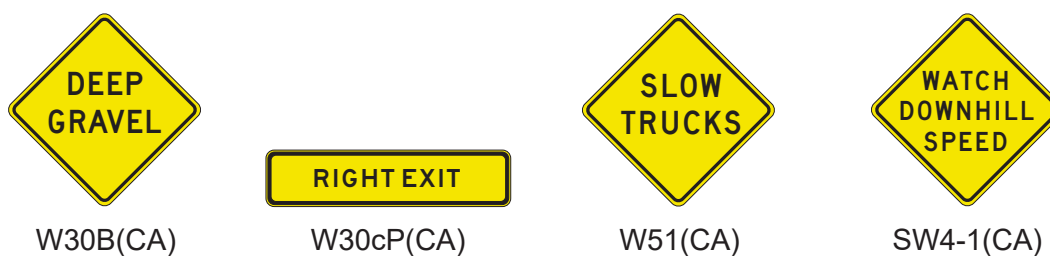


Figure 2C-6. Miscellaneous Warning Signs



Figure 2C-6(CA). California Miscellaneous Warning Signs



W20(CA)



W20A(CA)



W31(CA)



W34C(CA)



SW33(CA)



SW37(CA)



SW48(CA)



SW48-1P(CA)

Figure 2C-7. Roadway and Weather Condition Signs and Plaques

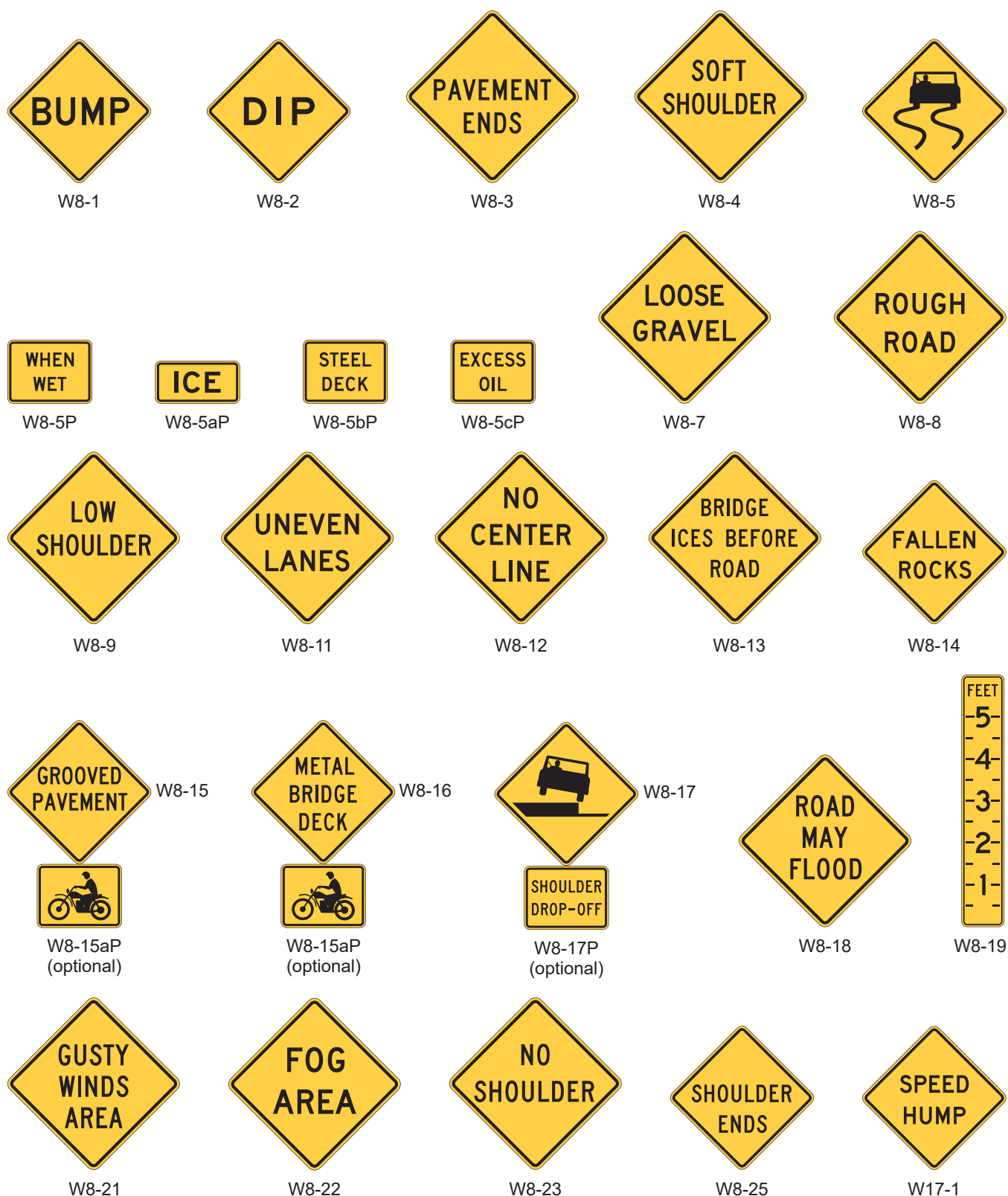


Figure 2C-7(CA). California Roadway and Weather Condition Signs and Plaques



SW32(CA)



SW35(CA)



SW41(CA)



SW46P(CA)



W38(CA)



W84(CA)



W85(CA)

Figure 2C-8. Advance Traffic Control Signs

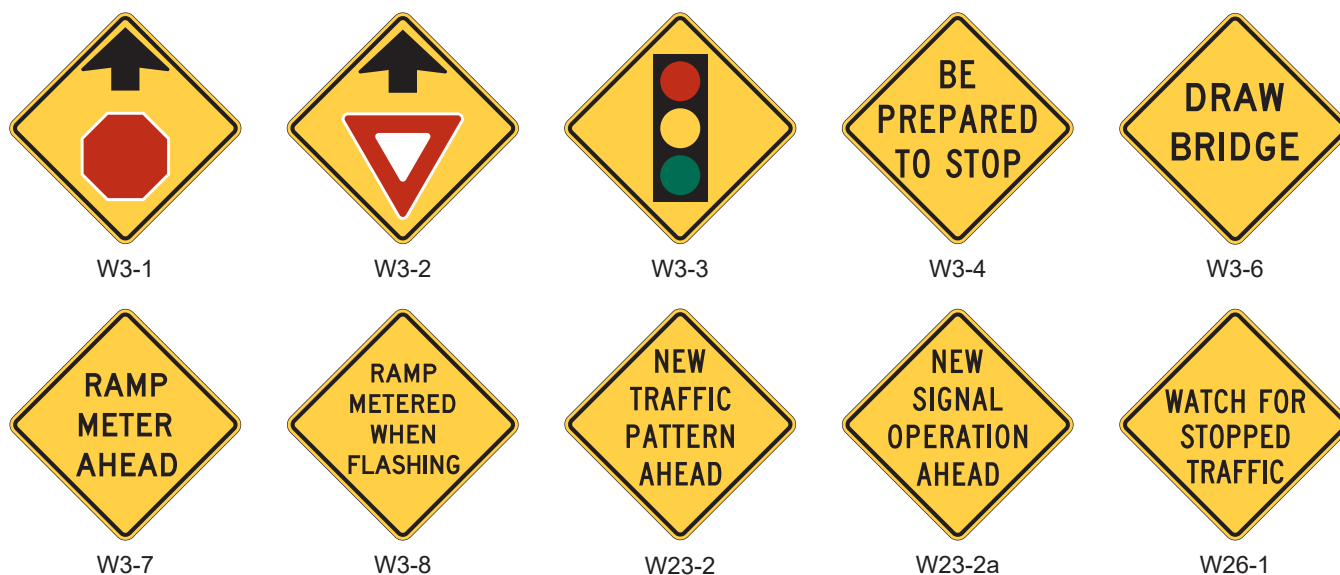


Figure 2C-8(CA). California Advance Traffic Control Signs

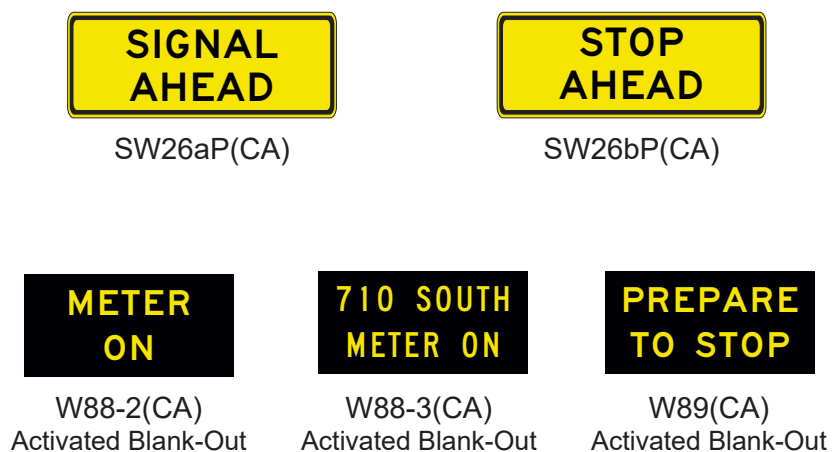


Figure 2C-9. Reduced Speed Limit Ahead and Speed Zone Signs



W3-5



W3-5a



W3-5b



W3-5c

Figure 2C-10. Intersection Warning Signs and Plaques

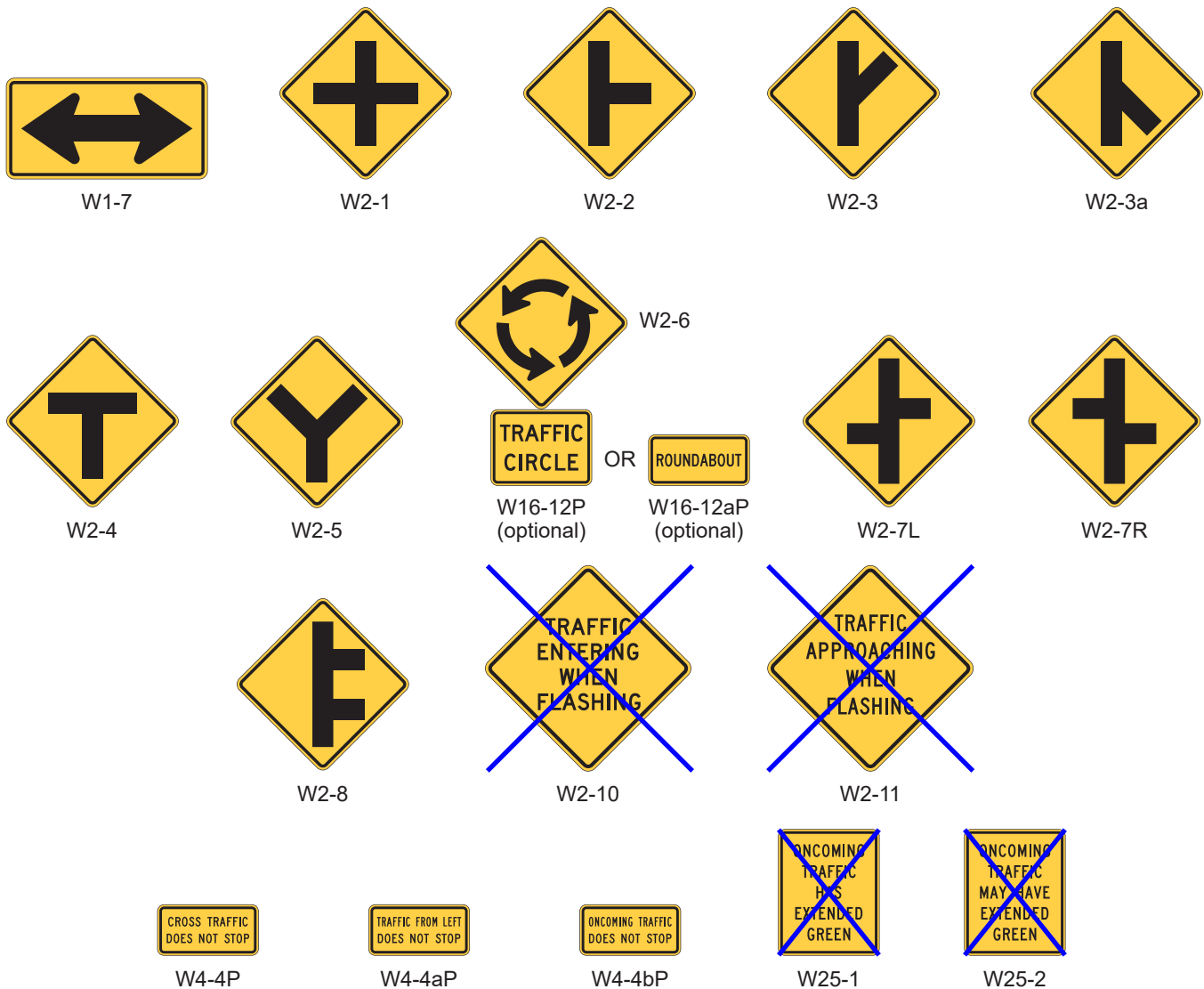


Figure 2C-10(CA). California Intersection Warning Signs and Plaques



W70(CA)

Figure 2C-11. Merging and Passing Signs and Plaques

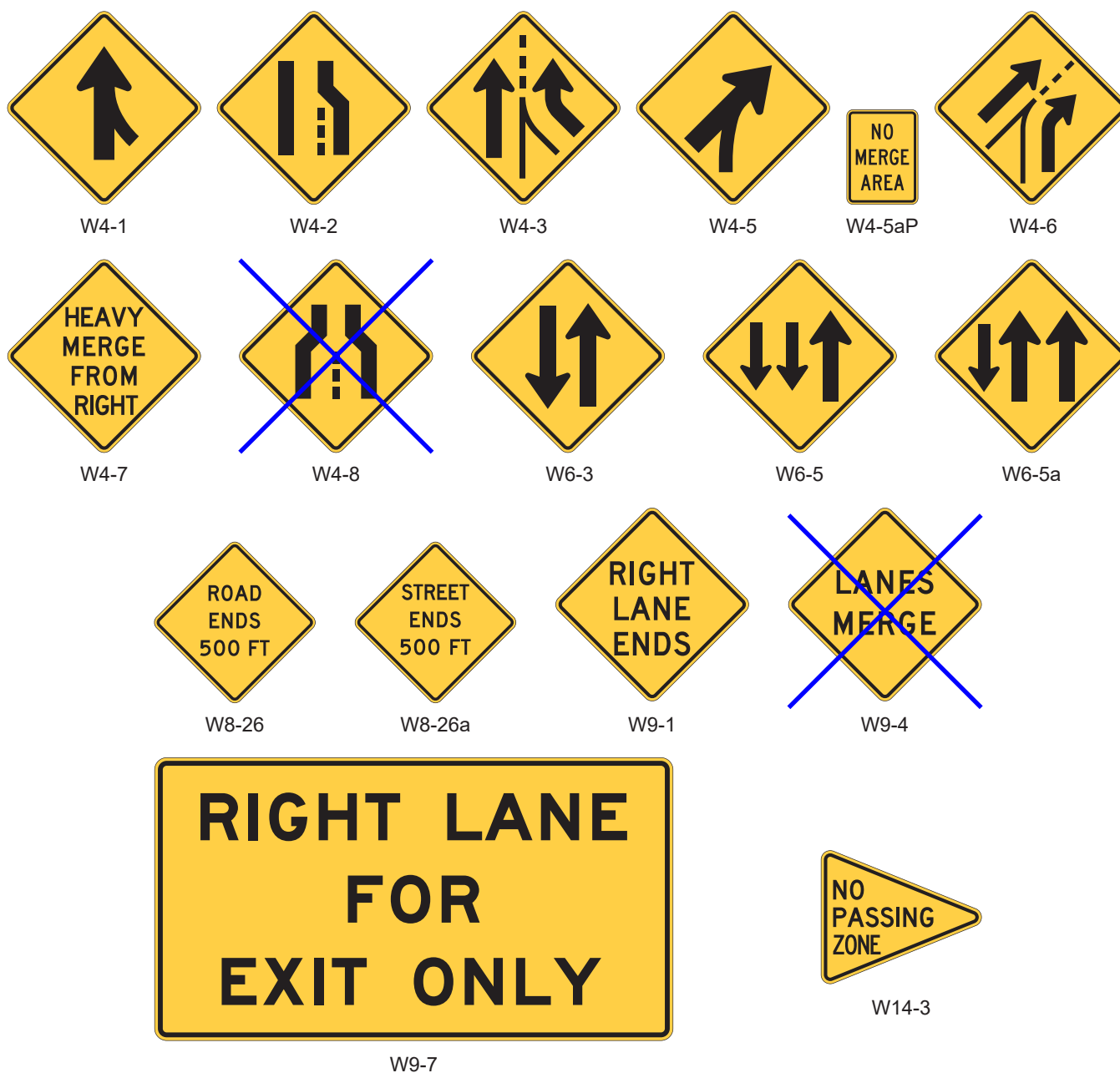
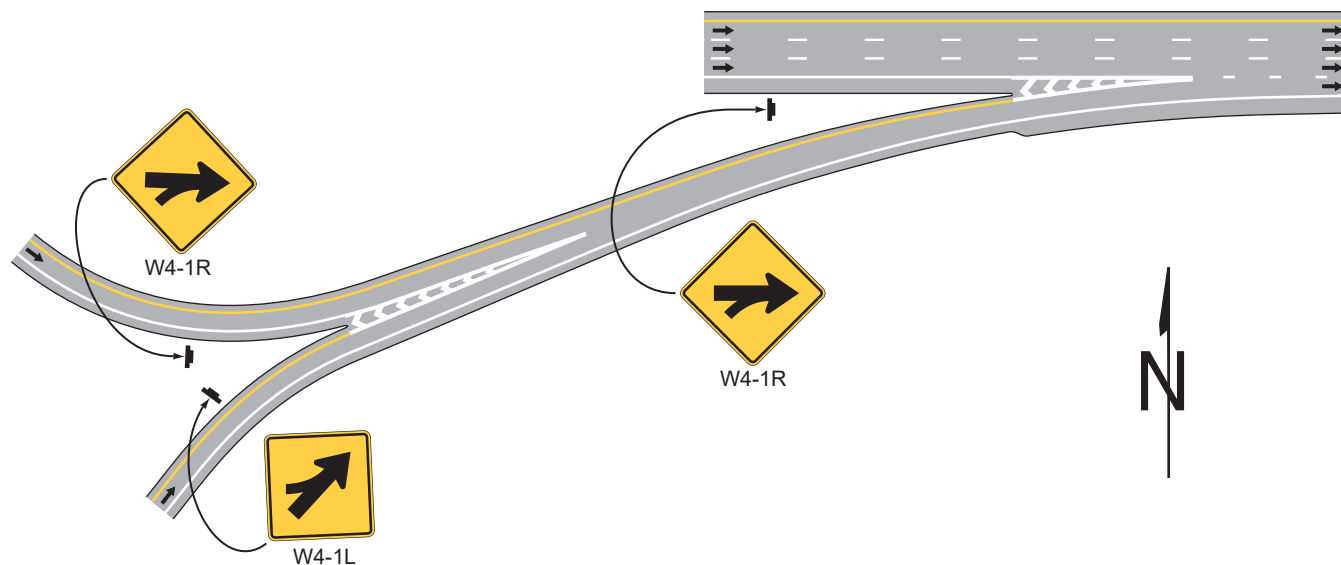


Figure 2C-11(CA). California Merging and Passing Signs and Plaques



Figure 2C-12. Examples of Merge and Added Lane Sign Placement for Entering and Converging Roadways

A – Example for converging and entering roadways



B – Examples for an added lane

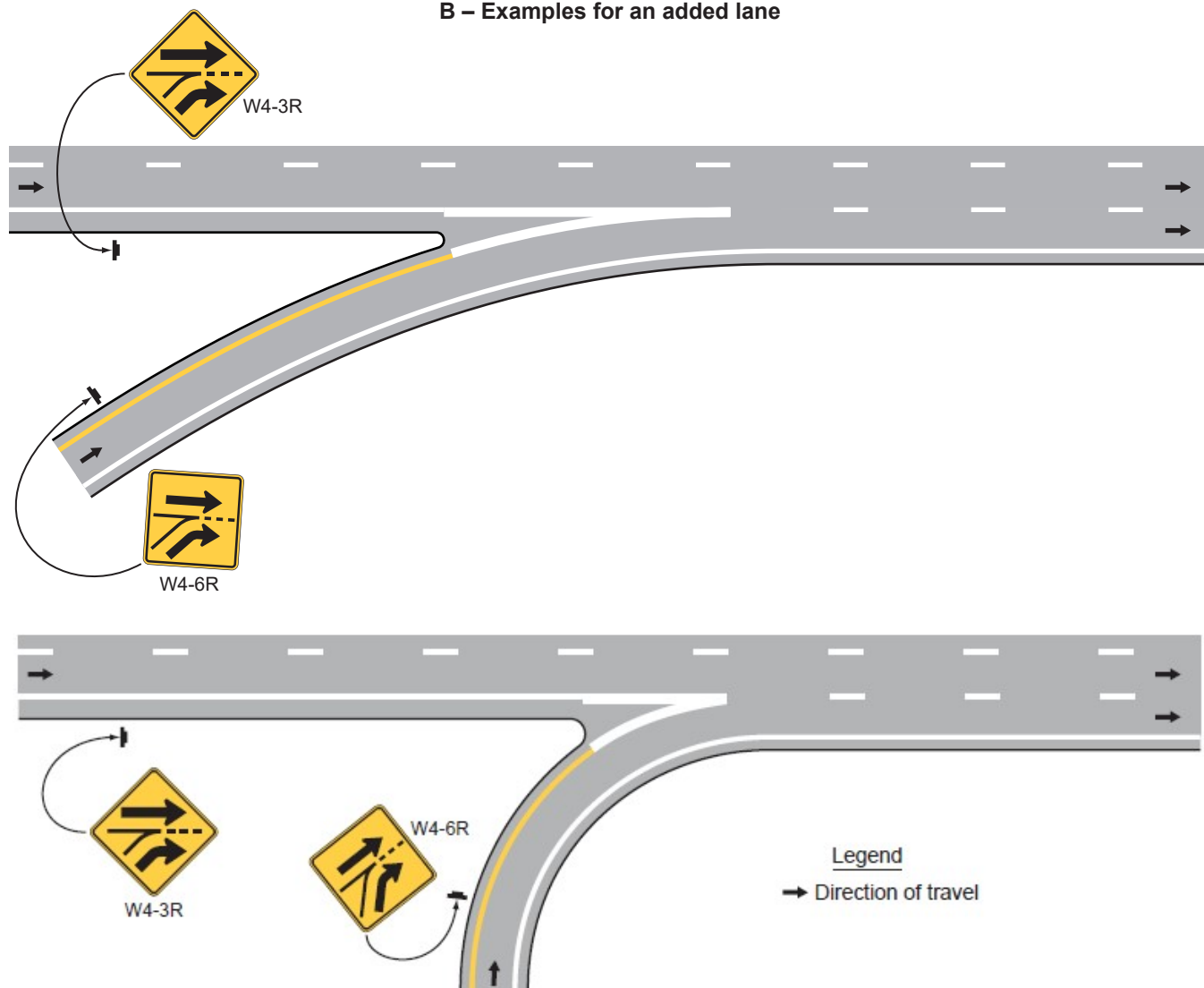


Figure 2C-13. Example Sequences for Lane Ends and Lane Merge Signs (Sheet 1 of 5)

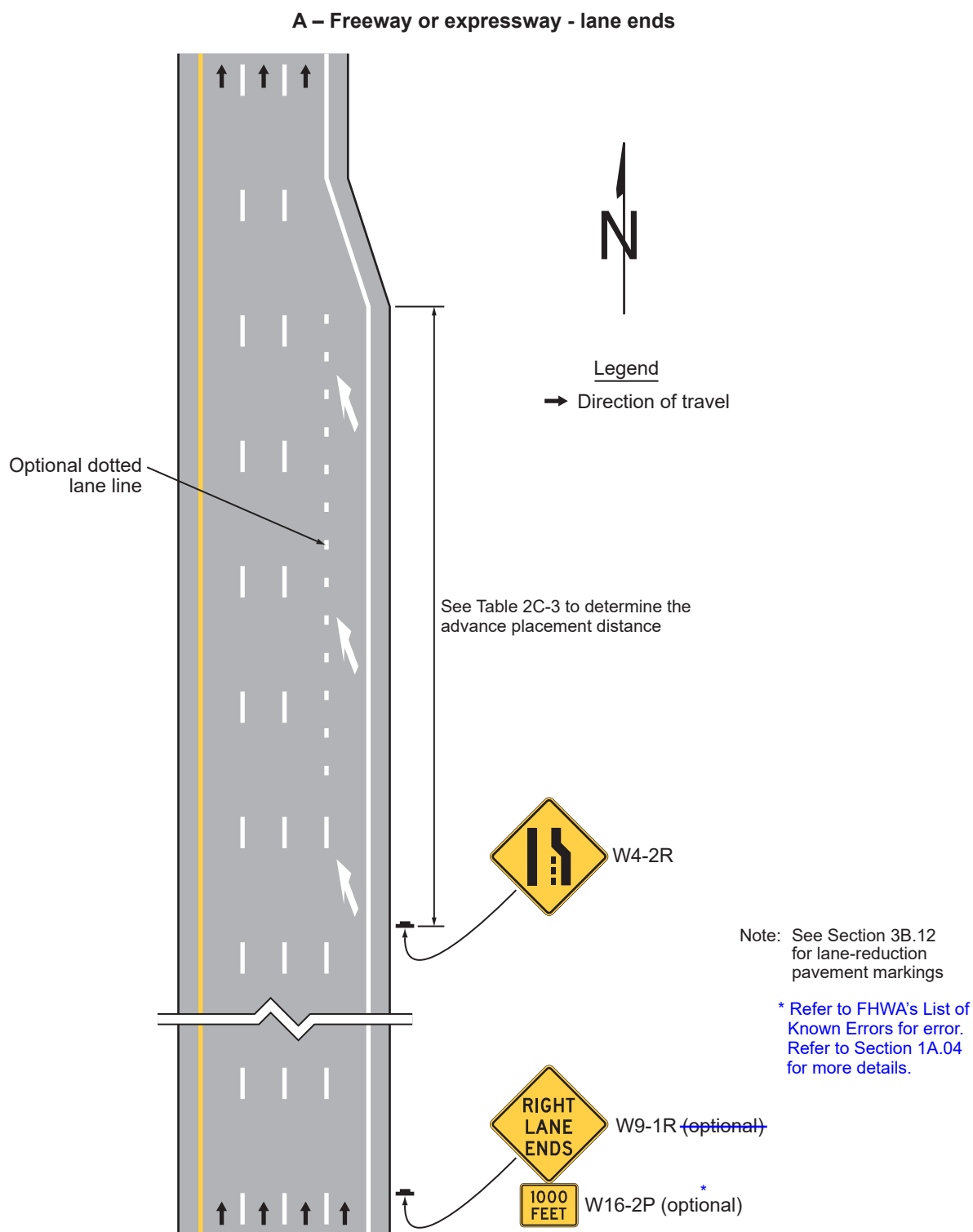


Figure 2C-13. Example Sequences for Lane Ends and Lane Merge Signs (Sheet 2 of 5)

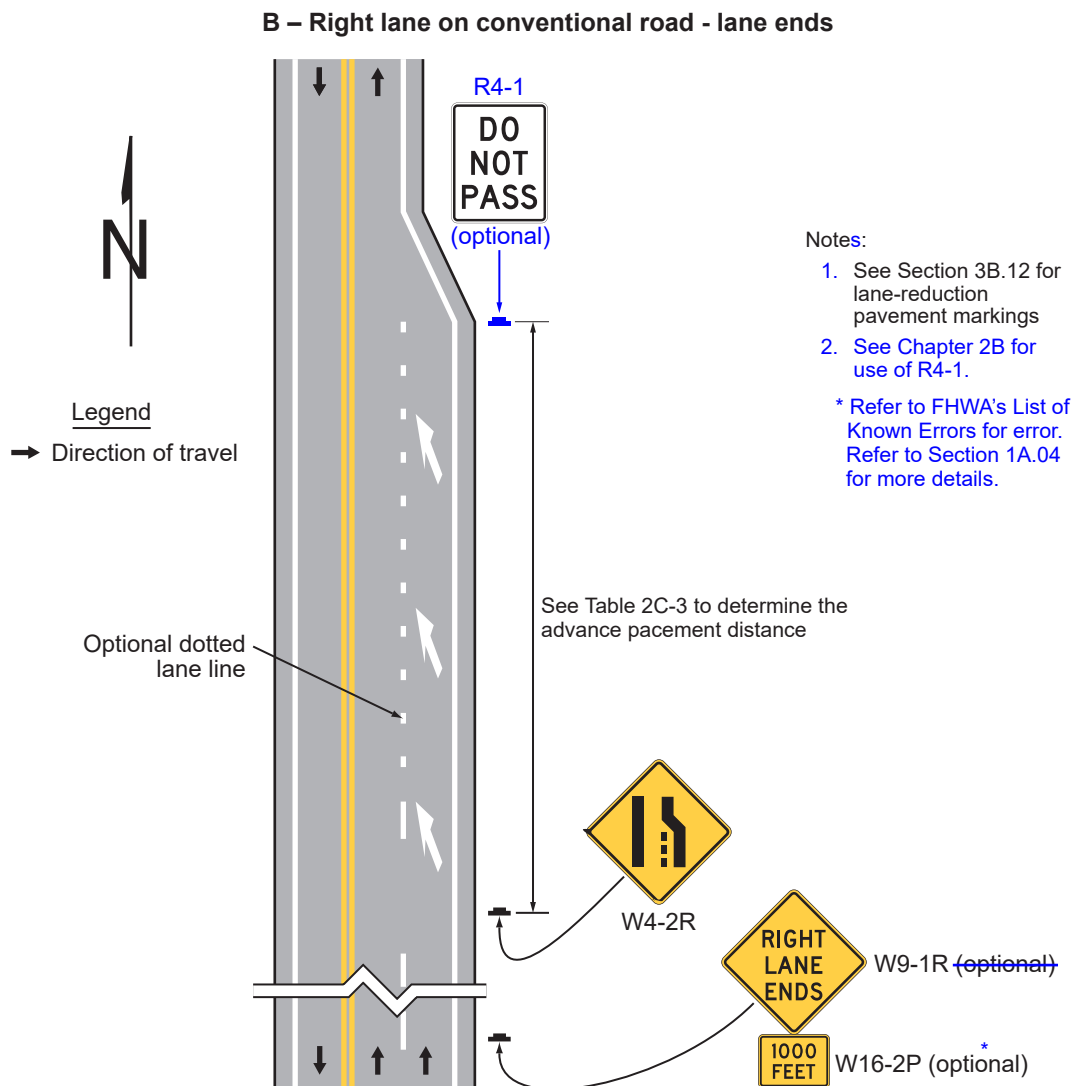


Figure 2C-13. Example Sequences for Lane Ends and Lane Merge Signs (Sheet 3 of 5)

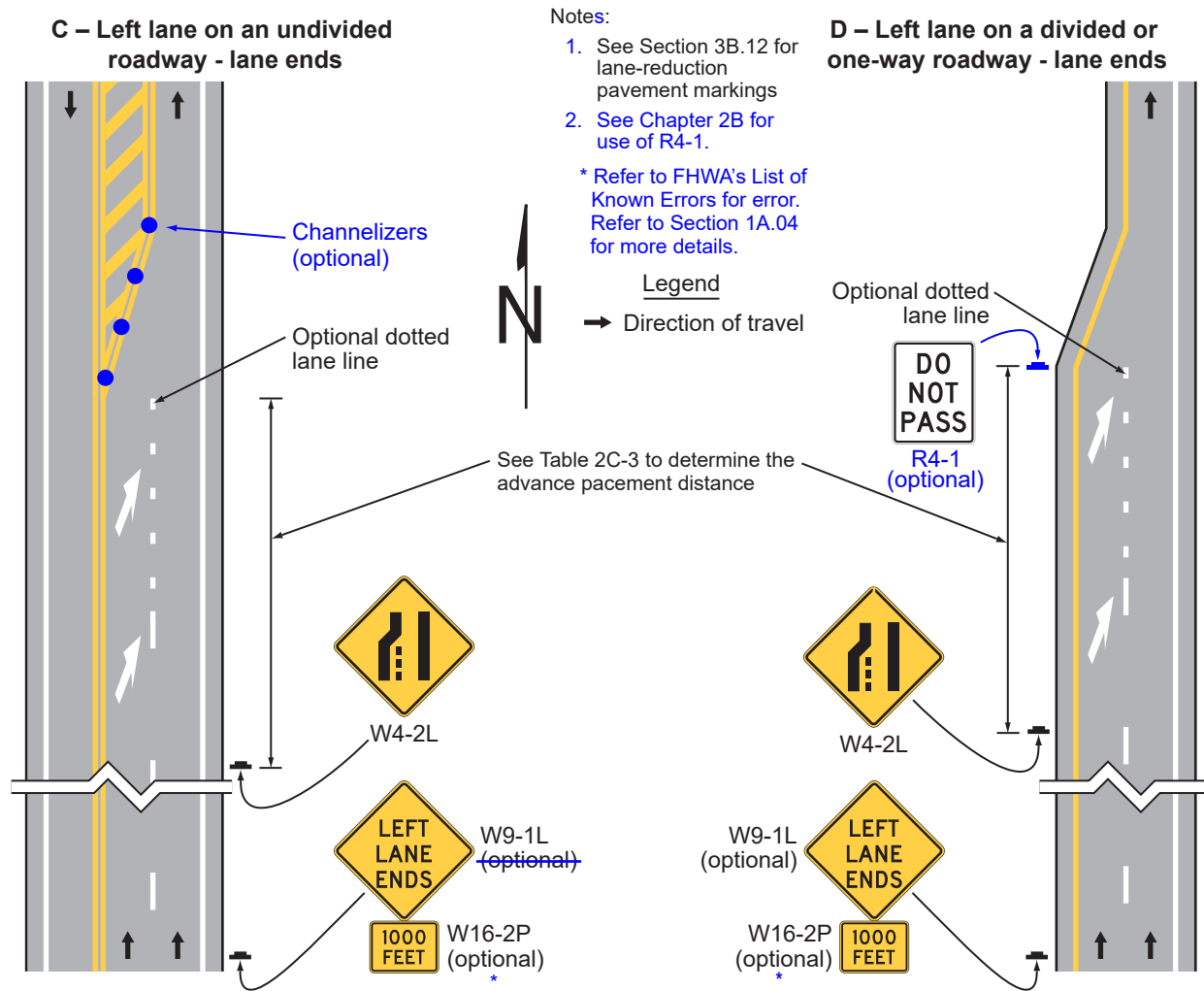


Figure 2C-13. Example Sequences for Lane Ends and Lane Merge Signs (Sheet 4 of 5)

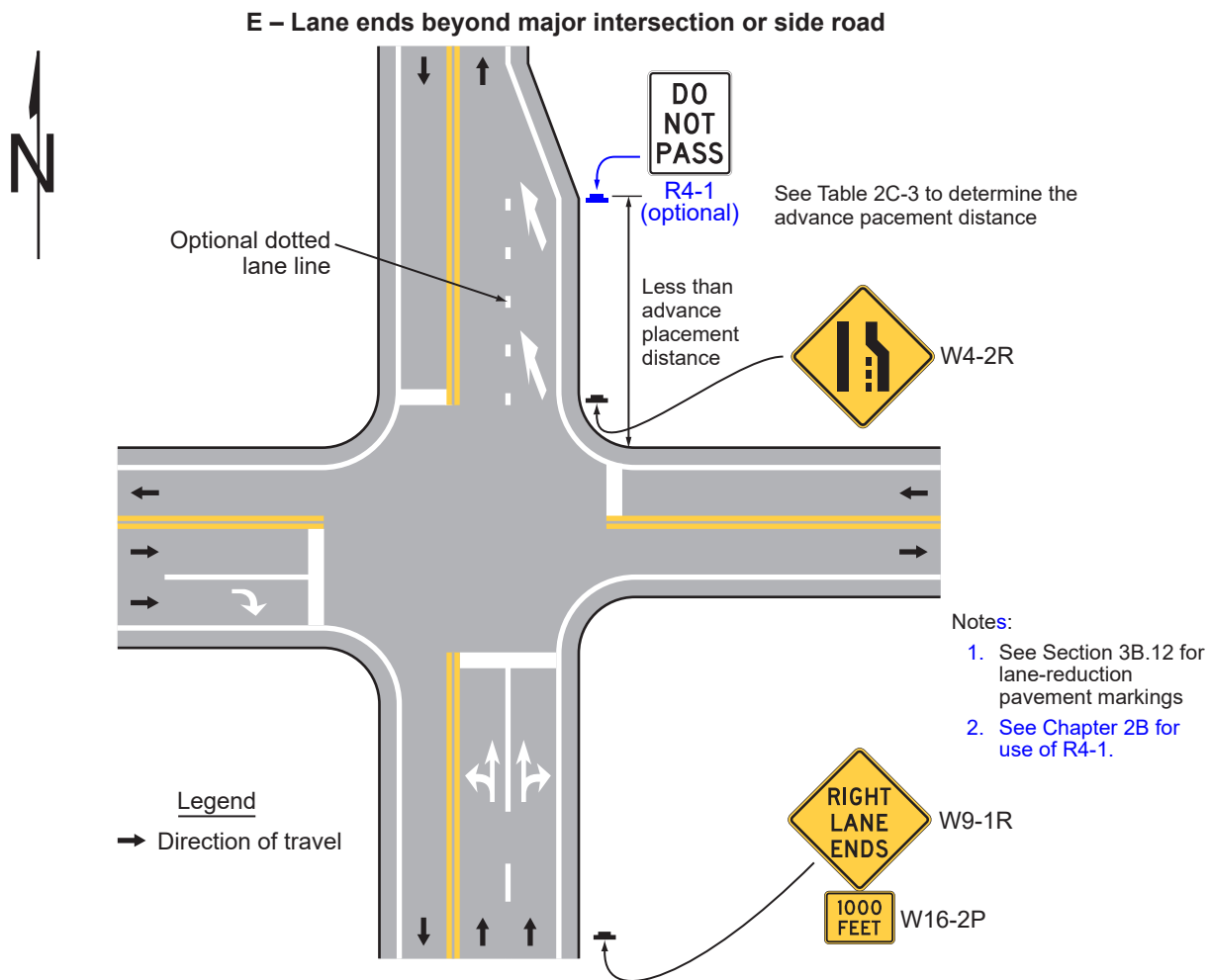


Figure 2C-13. Example Sequences for Lane Ends and Lane Merge Signs (Sheet 5 of 5)

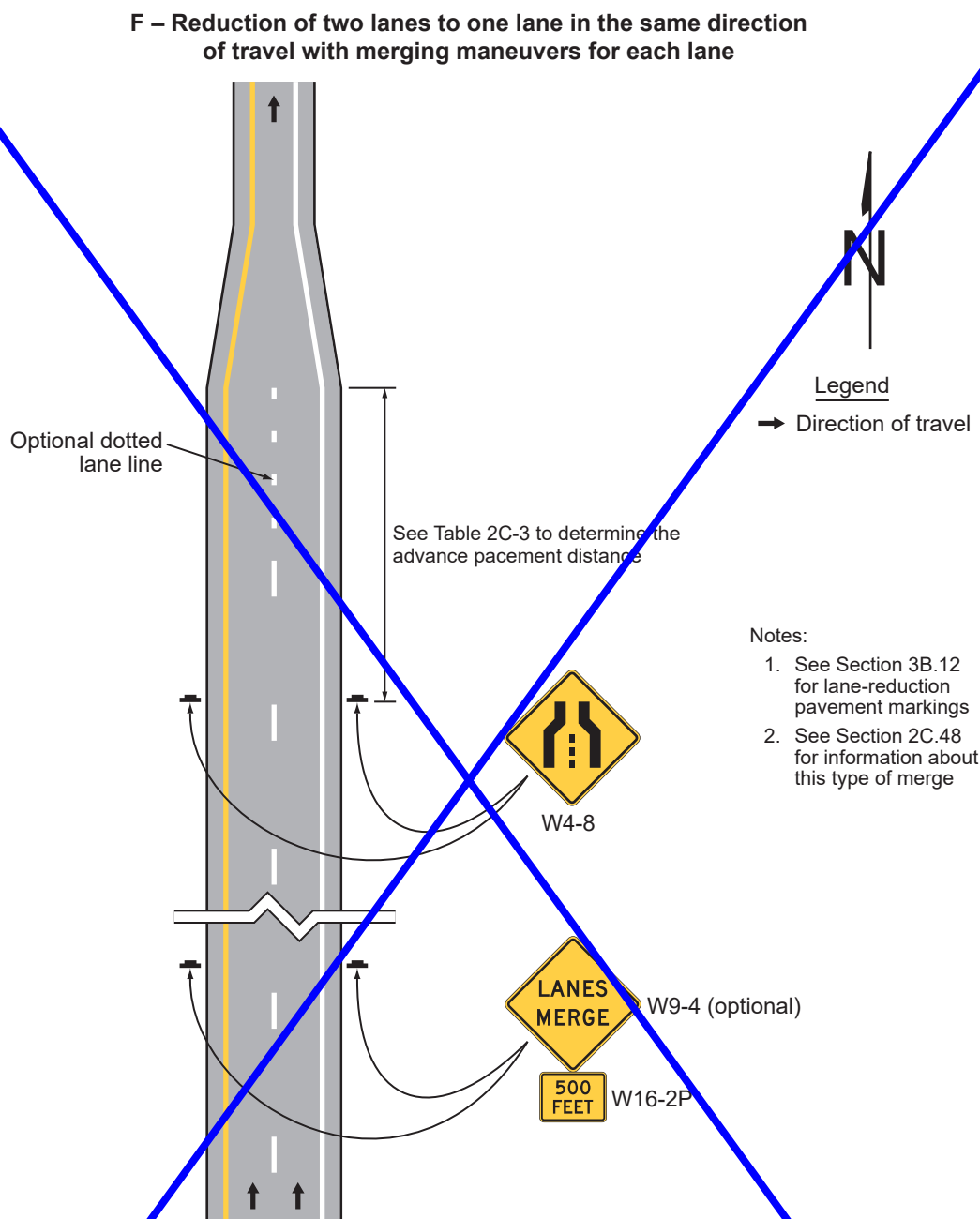
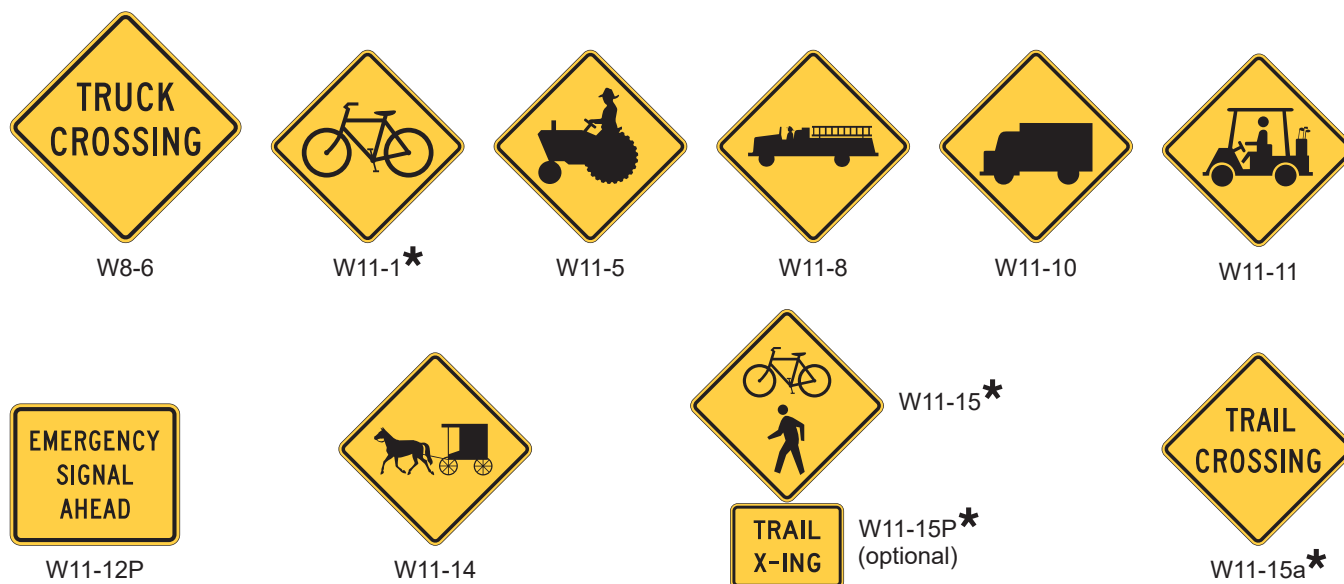


Figure 2C-14. Vehicular Traffic Warning Signs and Plaques



* A fluorescent yellow-green background color may be used for this sign or plaque.

Figure 2C-14(CA). California Vehicular Traffic Warning Signs and Plaques

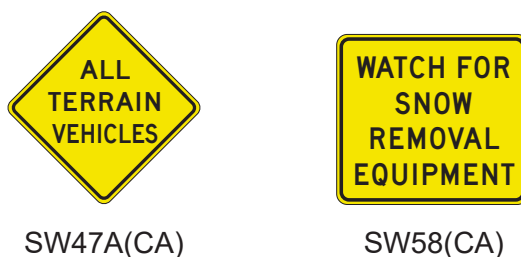


Figure 2C-15. Non-Vehicular Warning Signs

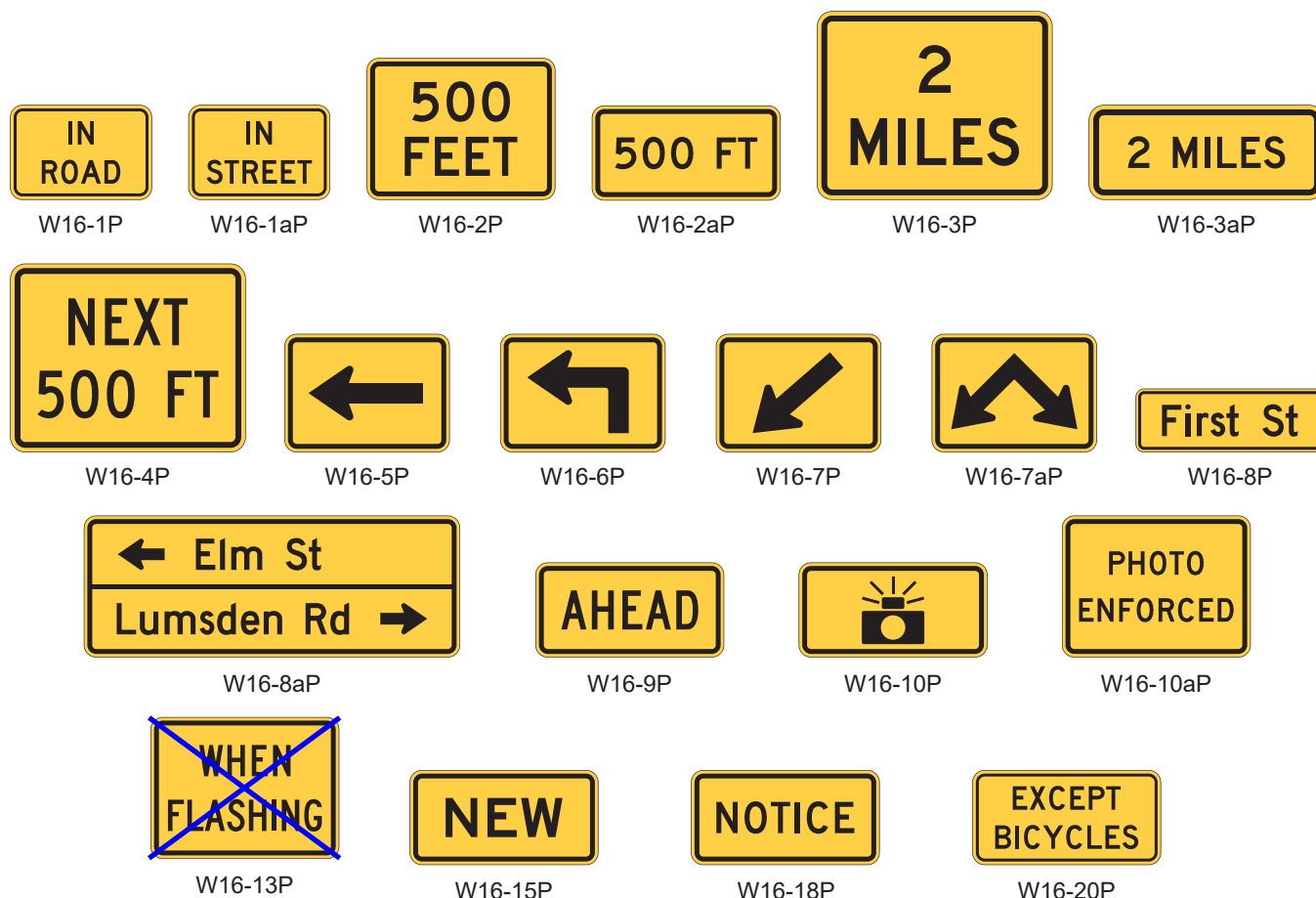


* A fluorescent yellow-green background color may be used for this sign or plaque.

Figure 2C-15(CA). California Non-Vehicular Warning Signs



Figure 2C-16. Supplemental Warning Plaques



Note: The background color (yellow or fluorescent yellow-green) shall match the color of the warning sign that it supplements.

Figure 2C-17. Object Markers

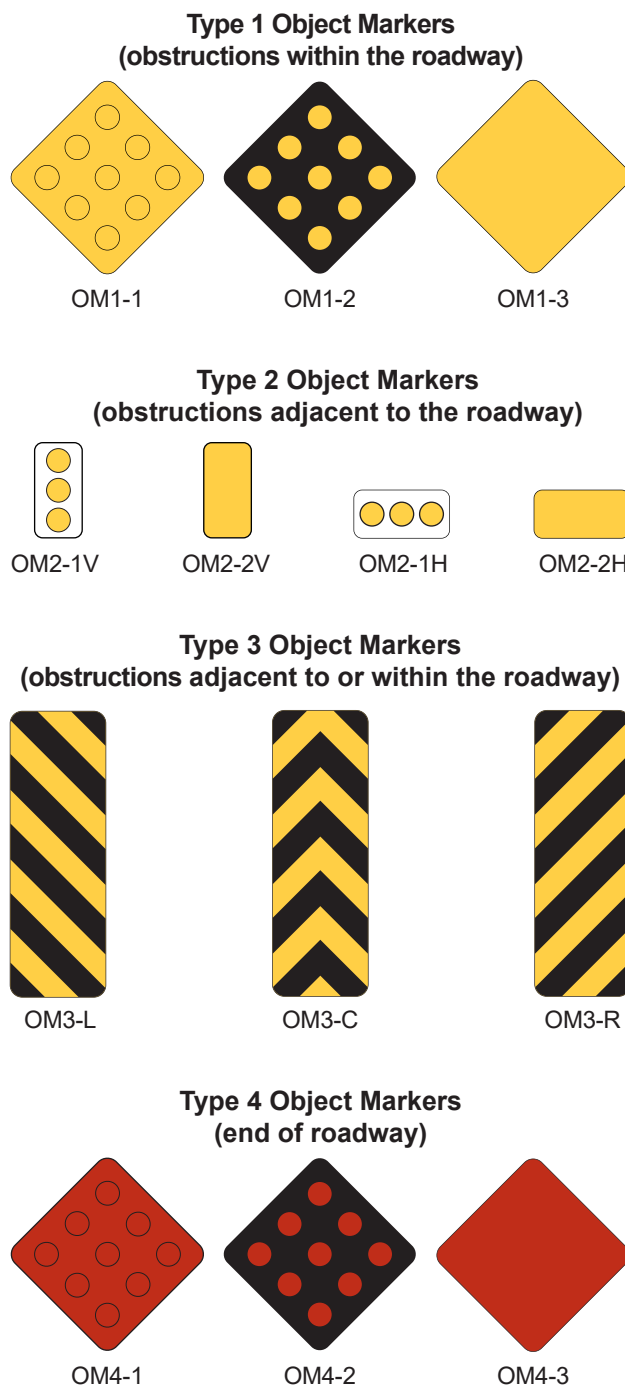
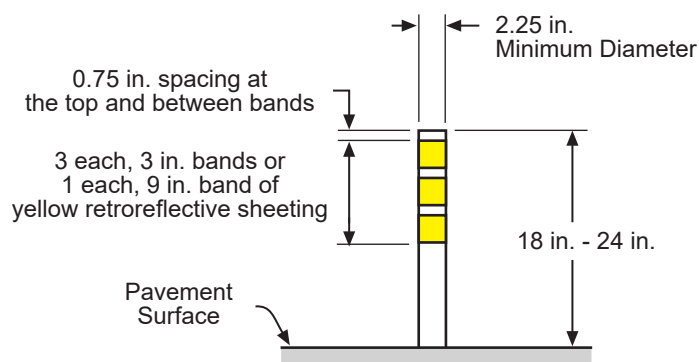
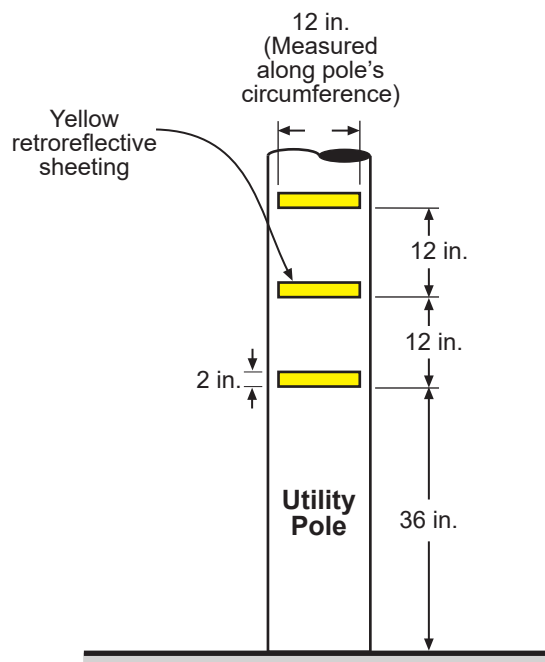


Figure 2C-17(CA). California Object Markers

**Type Q(CA) Object Marker (Type 1)
(obstructions within the roadway)**



**Type L(CA) Object Marker (Type 2)
(obstructions adjacent to the roadway)**



NOT TO SCALE

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

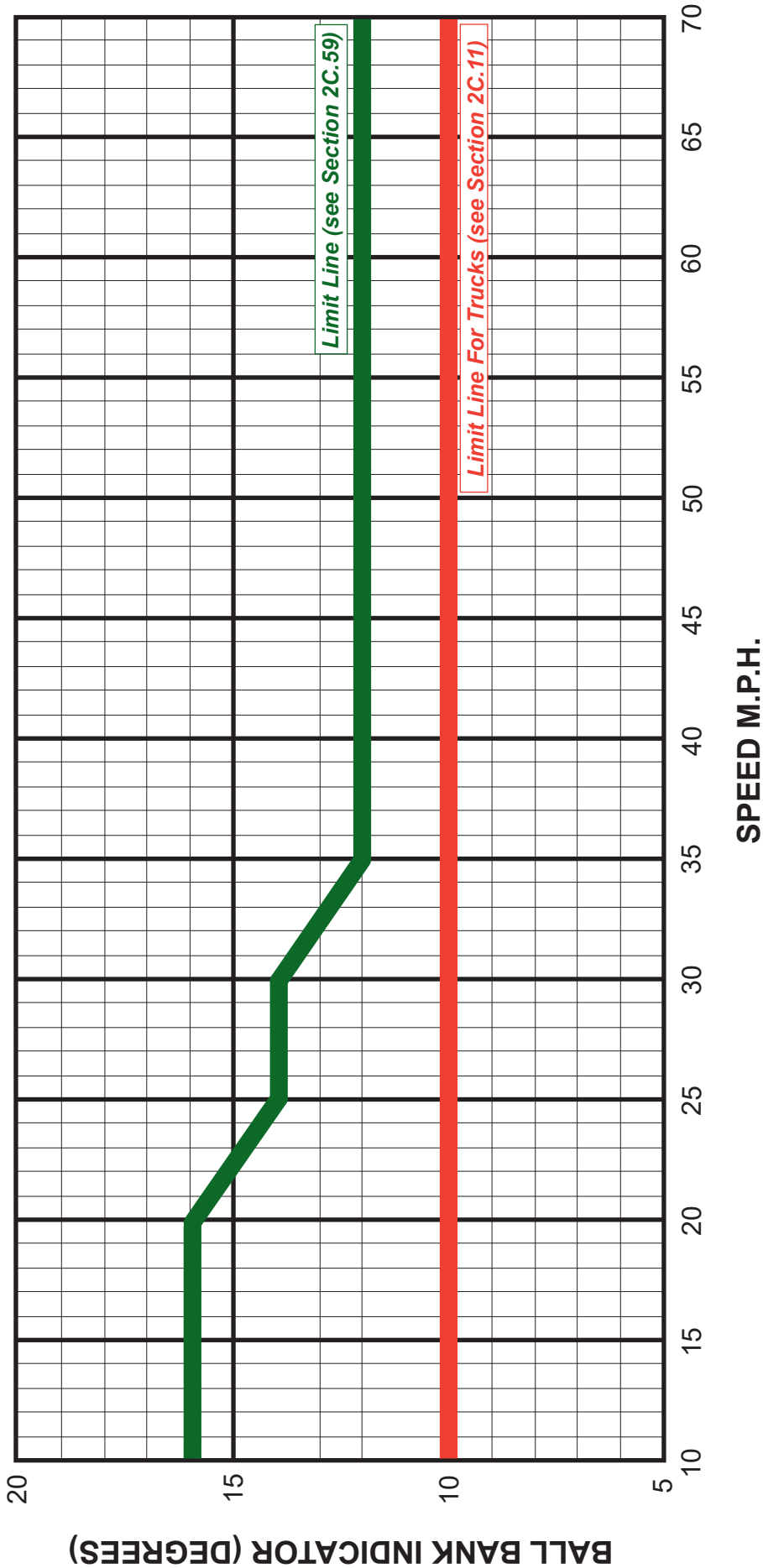


Table 2C-1. Warning Sign and Plaque Sizes (Sheet 1 of 4)

Sign or Plaque	Sign Designation	Section	Conventional Road		Expressway	Freeway	Minimum	Oversized
			Single Lane	Multi-Lane				
Horizontal Alignment	W1-1,2,3,4,5	2C.07	30 x 30*	36 x 36	36 x 36	36 x 36	—	48 x 48**
One-Direction Large Arrow	W1-6	2C.10	48 x 24	48 x 24	60 x 30	60 x 30	—	60 x 30
Two-Direction Large Arrow	W1-7	2C.43	48 x 24	48 x 24	—	—	—	60 x 30
Chevron Alignment	W1-8	2C.08	18 x 24	18 x 24	30 x 36	36 x 48	—	24 x 30
Combination Horizontal Alignment/Intersection	W1-10,10a,10b,10c,10d,10e	2C.09	36 x 36	36 x 36	36 x 36	48 x 48	—	—
Hairpin Curve	W1-11	2C.07	30 x 30	30 x 30	36 x 36	48 x 48	—	48 x 48
Truck Rollover	W1-13	2C.11	36 x 36	36 x 36	36 x 36	48 x 48	—	48 x 48
270-degree Curve	W1-15	2C.07	30 x 30	30 x 30	36 x 36	48 x 48	—	48 x 48
Intersection Warning	W2-1,2,3,3a,4,5,6,7,8	2C.41	30 x 30	30 x 30	36 x 36	—	24 x 24	48 x 48
Traffic Entering When Flashing	W2-10	2C.42	36 x 36	36 x 36	48 x 48			
Traffic Approaching When Flashing	W2-11	2C.42	36 x 36	36 x 36	48 x 48			
Stop, Yield, Signal Ahead	W3-1,2,3	2C.35	30 x 30	30 x 30	48 x 48	48 x 48	30 x 30	—
Be Prepared to Stop	W3-4	2C.35	36 x 36	36 x 36	48 x 48	48 x 48	30 x 30	—
Reduced Speed Limit Ahead	W3-5	2C.40	36 x 36	36 x 36	48 x 48	48 x 48	—	—
XX MPH Speed Zone Ahead	W3-5a	2C.40	36 x 36	36 x 36	48 x 48	48 x 48	—	—
Variable Speed Zone Ahead	W3-5b	2C.40	36 x 36	36 x 36	48 x 48	48 x 48	—	—
XX MPH Truck Speed Zone Ahead	W3-5c	2C.40	36 x 36	36 x 36	48 x 48	48 x 48	—	—
Draw Bridge	W3-6	2C.36	36 x 36	36 x 36	48 x 48	—	—	60 x 60
Ramp Meter Ahead	W3-7	2C.37	36 x 36	36 x 36	—	—	—	—
Ramp Metered When Flashing	W3-8	2C.37	36 x 36	36 x 36	—	—	—	—
Merge	W4-1	2C.45	36 x 36	36 x 36	48 x 48	48 x 48	30 x 30*	—
Lane Ends	W4-2	2C.47	36 x 36	36 x 36	48 x 48	48 x 48	30 x 30*	—
Added Lane	W4-3	2C.46	36 x 36	36 x 36	48 x 48	48 x 48	30 x 30*	—
Cross Traffic Does Not Stop (plaque)	W4-4P	2C.66	24 x 12	24 x 12	36 x 18	—	—	48 x 24
Traffic From Left (Right) Does Not Stop (plaque)	W4-4aP	2C.66	24 x 12	24 x 12	36 x 18	—	—	48 x 24
Oncoming Traffic Does Not Stop (plaque)	W4-4bP	2C.66	24 x 12	24 x 12	36 x 18	—	—	48 x 24
Entering Roadway Merge	W4-5	2C.45	36 x 36	36 x 36	48 x 48	48 x 48	—	—
No Merge Area (plaque)	W4-5aP	2C.45	18 x 24	18 x 24	24 x 30	24 x 30	—	—
Entering Roadway Added Lane	W4-6	2C.46	36 x 36	36 x 36	48 x 48	48 x 48	—	—
Heavy Merge from Right (Left)	W4-7	2C.49	36 x 36	36 x 36	48 x 48	48 x 48	—	—
Single Lane Transition	W4-8	2C.48	36 x 36	36 x 36	36 x 36	48 x 48		48 x 48
Road Narrows	W5-1	2C.17	36 x 36	36 x 36	48 x 48	48 x 48	30 x 30*	—
Narrow Bridge	W5-2	2C.18	36 x 36	36 x 36	48 x 48	48 x 48	30 x 30*	—
Narrow Underpass	W5-2a	2C.18	36 x 36	36 x 36	48 x 48	48 x 48	30 x 30*	—
One Lane Bridge	W5-3	2C.19	36 x 36	36 x 36	48 x 48	48 x 48	30 x 30*	—
One Lane Underpass	W5-3a	2C.19	36 x 36	36 x 36	48 x 48	48 x 48	30 x 30*	—
Divided Highway	W6-1	2C.20	36 x 36	36 x 36	48 x 48	48 x 48	—	—
Divided Highway Ends	W6-2	2C.21	36 x 36	36 x 36	48 x 48	48 x 48	—	—
Two-Way Traffic	W6-3	2C.51	36 x 36	36 x 36	48 x 48	48 x 48	—	—
Two-Way Traffic (3-Lane)	W6-5	2C.52	36 x 36	36 x 36	48 x 48	—	—	—
Two-Way Traffic (3-Lane)	W6-5a	2C.52	36 x 36	36 x 36	48 x 48	—	—	—
Hill	W7-1	2C.14	30 x 30*	36 x 36	36 x 36	36 x 36	24 x 24*	48 x 48
Hill with Grade	W7-1a	2C.14	30 x 30*	36 x 36	36 x 36	36 x 36	24 x 24*	48 x 48

Table 2C-1. Warning Sign and Plaque Sizes (Sheet 2 of 4)

Sign or Plaque	Sign Designation	Section	Conventional Road		Expressway	Freeway	Minimum	Oversized
			Single Lane	Multi-Lane				
Use Low Gear (plaque)	W7-2P	2C.64	24 x 18	24 x 18	—	—	—	—
Trucks Use Lower Gear (plaque)	W7-2bP	2C.64	24 x 18	24 x 18	—	—	—	—
XX% Grade (plaque)	W7-3P	2C.64	24 x 18	24 x 18	—	—	—	—
Next XX Miles (plaque)	W7-3aP	2C.61	24 x 18	24 x 18	—	—	—	—
XX% Grade, XX Miles (plaque)	W7-3bP	2C.64	24 x 18	24 x 18	—	—	—	—
Runaway Truck Ramp XX Miles	W7-4	2C.15	84 x 48	84 x 48	120 x 72	120 x 72	—	—
Runaway Truck Ramp Entrance Direction	W7-4b	2C.15	84 x 54	84 x 54	120 x 78	120 x 78	—	—
Truck Escape Ramp	W7-4c	2C.15	78 x 60	78 x 60	78 x 60	78 x 60	—	—
Sand, Gravel, Paved (plaques)	W7-4dP, 4eP, 4fP	2C.15	24 x 12	24 x 12	24 x 12	24 x 12	—	—
Hill Blocks View	W7-6	2C.16	30 x 30*	36 x 36	36 x 36	—	—	48 x 48
Bump or Dip	W8-1,2	2C.26	30 x 30*	36 x 36	36 x 36	48 x 48	24 x 24*	48 x 48
Pavement Ends	W8-3	2C.28	36 x 36	36 x 36	48 x 48	—	30 x 30*	—
Soft Shoulder	W8-4	2C.29	36 x 36	36 x 36	48 x 48	48 x 48	24 x 24*	48 x 48
Slippery When Wet	W8-5	2C.30	30 x 30*	36 x 36	36 x 36	48 x 48	24 x 24*	48 x 48
Road Condition (plaques)	W8-5P, 5bP, 5cP	2C.30	24 x 18	24 x 18	30 x 24	36 x 30	—	36 x 30
Ice (plaque)	W8-5aP	2C.30	24 x 12	24 x 12	30 x 18	30 x 18	—	—
Truck Crossing	W8-6	2C.54	36 x 36	36 x 36	36 x 36	48 x 48	24 x 24*	48 x 48
Loose Gravel	W8-7	2C.30	36 x 36	36 x 36	36 x 36	—	24 x 24*	48 x 48
Rough Road	W8-8	2C.30	36 x 36	36 x 36	36 x 36	48 x 48	24 x 24*	48 x 48
Low Shoulder	W8-9	2C.29	36 x 36	36 x 36	36 x 36	48 x 48	24 x 24*	48 x 48
Uneven Lanes	W8-11	2C.30	36 x 36	36 x 36	36 x 36	48 x 48	—	48 x 48
No Center Line	W8-12	2C.32	36 x 36	36 x 36	36 x 36	48 x 48	—	—
Bridge Ices Before Road	W8-13	2C.30	36 x 36	36 x 36	36 x 36	48 x 48	24 x 24*	48 x 48
Fallen Rocks	W8-14	2C.30	30 x 30*	36 x 36	36 x 36	48 x 48	24 x 24*	48 x 48
Grooved Pavement	W8-15	2C.31	30 x 30*	36 x 36	36 x 36	48 x 48	24 x 24*	48 x 48
Motorcycle (plaque)	W8-15aP	2C.31	24 x 18	24 x 18	30 x 24	36 x 30	—	36 x 30
Metal Bridge Deck	W8-16	2C.31	30 x 30*	36 x 36	36 x 36	48 x 48	24 x 24*	48 x 48
Shoulder Drop-Off	W8-17	2C.29	30 x 30*	36 x 36	36 x 36	48 x 48	24 x 24*	48 x 48
Shoulder Drop-Off (plaque)	W8-17P	2C.29	24 x 18	24 x 18	30 x 24	36 x 30	—	36 x 30
Road May Flood	W8-18	2C.34	36 x 36	36 x 36	36 x 36	48 x 48	24 x 24*	48 x 48
Depth Gauge	W8-19	2C.34	12 x 72	12 x 72	—	—	—	—
Gusty Winds Area	W8-21	2C.34	36 x 36	36 x 36	36 x 36	48 x 48	24 x 24*	48 x 48
Fog Area	W8-22	2C.34	36 x 36	36 x 36	36 x 36	48 x 48	24 x 24*	48 x 48
No Shoulder	W8-23	2C.29	36 x 36	36 x 36	36 x 36	48 x 48	24 x 24*	48 x 48
Shoulder Ends	W8-25	2C.29	30 x 30*	36 x 36	36 x 36	48 x 48	24 x 24*	48 x 48
Road Ends	W8-26	2C.24	30 x 30	36 x 36	—	—	—	—
Street Ends	W8-26a	2C.24	30 x 30	36 x 36	—	—	—	—
Right (Left) Lane Ends	W9-1	2C.47	36 x 36	36 x 36	36 x 36	48 x 48	30 x 30*	48 x 48
Lanes Merge	W9-4	2C.48	36 x 36	36 x 36	36 x 36	48 x 48	30 x 30*	48 x 48
Right (Left) Lane for Exit Only	W9-7	2C.50	132 x 72	132 x 72	132 x 72	132 x 72	—	—
Bicycle	W11-1	2C.54	30 x 30	30 x 30	36 x 36	—	—	48 x 48
Pedestrian	W11-2	2C.55	30 x 30*	36 x 36	36 x 36	—	—	48 x 48
Large Animals	W11-3, 4, 16, 17, 18, 19, 20, 21, 22	2C.55	30 x 30*	36 x 36	36 x 36	—	24 x 24*	48 x 48
Farm Vehicle	W11-5	2C.54	30 x 30*	36 x 36	36 x 36	—	24 x 24*	48 x 48
Snowmobile	W11-6	2C.55	30 x 30*	36 x 36	36 x 36	—	24 x 24*	48 x 48
Equestrian	W11-7	2C.55	30 x 30*	36 x 36	36 x 36	—	24 x 24*	48 x 48

Table 2C-1. Warning Sign and Plaque Sizes (Sheet 3 of 4)

Sign or Plaque	Sign Designation	Section	Conventional Road		Expressway	Freeway	Minimum	Oversized
			Single Lane	Multi-Lane				
Emergency Vehicle	W11-8	2C.54	30 x 30*	36 x 36	36 x 36	—	24 x 24*	48 x 48
Handicapped	W11-9	2C.55	30 x 30*	36 x 36	36 x 36	—	—	48 x 48
Truck	W11-10	2C.54	30 x 30*	36 x 36	36 x 36	—	24 x 24*	48 x 48
Golf Cart	W11-11	2C.54	30 x 30*	36 x 36	36 x 36	—	24 x 24*	48 x 48
Emergency Signal Ahead (plaque)	W11-12P	2C.54	36 x 30	36 x 30	36 x 30	—	—	—
Horse-Drawn Vehicle	W11-14	2C.54	30 x 30*	36 x 36	36 x 36	—	24 x 24*	48 x 48
Trail Crossing	W11-15	2C.54	30 x 30*	36 x 36	36 x 36	—	24 x 24*	48 x 48
Trail Crossing	W11-15a	2C.54	30 x 30*	36 x 36	36 x 36	—	24 x 24*	48 x 48
Trail Crossing (plaque)	W11-15P	2C.54	24 x 18	24 x 18	30 x 24	—	—	36 x 30
Double Arrow	W12-1	2C.23	30 x 30*	36 x 36	36 x 36	—	—	—
Low Clearance Advance	W12-2	2C.25	36 x 36	36 x 36	48 x 48	48 x 48	30 x 30*	—
Low Clearance Overhead	W12-2a	2C.25	84 x 24	84 x 24	84 x 24	84 x 24	—	—
Low Clearance - Lane Overhead	W12-2b	2C.25	102 x 24	102 x 24	102 x 24	102 x 24	—	—
Advisory Speed (plaque)	W13-1P	2C.59	18 x 18	18 x 18	24 x 24	30 x 30	—	30 x 30
Advisory Speed Confirmation (plaque)	W13-1aP	2C.59	48 x 15	48 x 15	60 x 18	60 x 18	48 x 15	72 x 24
Advisory Exit or Ramp Speed	W13-2,3	2C.12	24 x 30	24 x 30	36 x 48	36 x 48	—	48 x 60
Combination Horizontal Alignment/Advisory Exit or Ramp Speed Loop	W13-6,7,8,9	2C.12	24 x 42	24 x 42	36 x 66	36 x 66	—	48 x 84 72 x 126
Combination Horizontal Alignment/Advisory Exit or Ramp Speed Turn	W13-10,11	2C.12	24 x 36	24 x 36	36 x 54	36 x 54	—	48 x 72
Combination Horizontal Alignment/Advisory Exit or Ramp Speed - Truck Rollover	W13-12,13	2C.12	24 x 42	24 x 42	36 x 66	36 x 66	—	48 x 84 72 x 126
Vehicle Speed Feedback Sign	W13-20	2C.13	24 x 30	30 x 36	36 x 48	48 x 60	—	—
Vehicle Speed Feedback (plaque)	W13-20aP	2C.13	24 x 18	30 x 24	36 x 30	48 x 36	—	—
Dead End, No Outlet	W14-1,2	2C.24	30 x 30*	36 x 36	36 x 36	—	24 x 24*	48 x 48
Dead End, No Outlet (with arrow)	W14-1a,2a	2C.24	36 x 9	36 x 9	—	—	—	—
No Passing Zone	W14-3	2C.53	48 x 48 x 36	48 x 48 x 36	64 x 64 x 48	64 x 64 x 48	40 x 40 x 30	64 x 64 x 48
Playground	W15-1	2C.56	30 x 30*	36 x 36	36 x 36	—	24 x 24*	48 x 48
In Road (plaque)	W16-1P	2C.67	18 x 12	18 x 12	24 x 18	—	—	24 x 18
In Street (plaque)	W16-1aP	2C.67	18 x 12	18 x 12	24 x 18	—	—	24 x 18
XX Feet (2-line plaque)	W16-2P	2C.61	24 x 18	24 x 18	30 x 24	30 x 24	—	30 x 24
XX Ft (1-line plaque)	W16-2aP	2C.61	24 x 12	24 x 12	—	—	—	30 x 18
XX Miles (2-line plaque)	W16-3P	2C.61	30 x 24	30 x 24	—	—	—	—
XX Miles (1-line plaque)	W16-3aP	2C.61	30 x 12	30 x 12	—	—	—	—
Next XX Feet (plaque)	W16-4P	2C.61	30 x 24	30 x 24	—	—	—	—
Supplemental Arrow (plaque)	W16-5P,6P	2C.62	21 x 15	21 x 15	—	—	—	30 x 21
Diagonal Downward Arrow (plaque)	W16-7P	2C.63	21 x 15	21 x 15	—	—	—	30 x 21
Dual Downward Diagonal Arrow (plaque)	W16-7aP	2C.63	21 x 15	21 x 15	—	—	—	30 x 21
Advance Street Name (1-line plaque)	W16-8P	2C.65	Varies x 8	Varies x 8	—	—	—	—
Advance Street Name (2-line plaque)	W16-8aP	2C.65	Varies x 15	Varies x 15	—	—	—	—
Ahead (plaque)	W16-9P	2C.55	24 x 12	24 x 12	30 x 18	—	—	30 x 18
Photo Enforced (symbol plaque)	W16-10P	2C.69	24 x 12	24 x 12	36 x 18	—	—	48 x 24
Photo Enforced (plaque)	W16-10aP	2C.69	24 x 18	24 x 18	36 x 30	—	—	48 x 36

Table 2C-1. Warning Sign and Plaque Sizes (Sheet 4 of 4)

Sign or Plaque	Sign Designation	Section	Conventional Road		Expressway	Freeway	Minimum	Oversized
			Single Lane	Multi-Lane				
Traffic Circle (plaque)	W16-12P	2C.41	24 x 18	24 x 18	—	—	—	—
Roundabout (plaque)	W16-12aP	2C.41	24 x 12	24 x 12	—	—	—	—
When Flashing (plaque)	W16-13P	2C.55	24 x 18	24 x 18	—	—	—	—
New (plaque)	W16-15P	2C.60	24 x 12	24 x 12	—	—	—	—
Notice (plaque)	W16-18P	2A.11	24 x 12	24 x 12	—	—	—	—
Except Bicycles (plaque)	W16-20P	2C.68	24 x 12	24 x 12	—	—	—	—
Speed Hump	W17-1	2C.27	30 x 30*	36 x 36	—	—	24 x 24*	48 x 48
No Traffic Signs	W18-1	2C.33	30 x 30*	36 x 36	—	—	24 x 24*	36 x 36
Freeway Ends XX Miles	W19-1	2C.22	—	—	—	144 x 48	—	—
Expressway Ends XX Miles	W19-2	2C.22	—	—	144 x 48	—	—	—
Freeway Ends	W19-3	2C.22	—	—	—	48 x 48	—	—
Expressway Ends	W19-4	2C.22	—	—	48 x 48	—	—	—
All Traffic Must Exit	W19-5	2C.22	—	—	90 x 48	90 x 48	—	—
New Traffic Pattern Ahead	W23-2	2C.38	36 x 36	36 x 36	—	—	—	—
New Signal Operation Ahead	W23-2a	2C.38	36 x 36	36 x 36	48 x 48	48 x 48	—	—
Oncoming Traffic Has (May Have) Extended Green	W25-1,2	2C.44	24 x 30	24 x 30	—	—	—	—
Watch for Stopped Traffic	W26-1	2C.39	36 x 36	36 x 36	48 x 48	48 x 48	—	—

* The minimum size required for diamond-shaped warning signs facing traffic on multi-lane conventional roads shall be 36 x 36 per Section 2C.03

** A rectangular 72 x 72 version may be used at freeway ramps

Notes:

1. Larger signs may be used when appropriate
2. Dimensions are shown as width x height, in inches

Table 2C-1(CA). California Warning Sign and Plaque Sizes

Sign or Plaque	Sign Designation	Section	Conventional Road		Expressway	Freeway	Minimum	Oversized
			Single Lane	Multi-Lane				
WILDLIFE CROSSING	W11-23(CA)	2C.55	36 x 36	36 x 36	48 x 48	48 x 48	30 x 30	—
Weight Limit	W20(CA)	2C.102(CA)	30 x 36	30 x 36	36 x 48	36 x 48	—	—
Weight Limit	W20A(CA)	2C.102(CA)	30 x 30	30 x 30	36 x 40	36 x 40	—	—
DEEP GRAVEL	W30B(CA)	2C.15	36 x 36	36 x 36	36 x 36	36 x 36	—	—
RIGHT(LEFT) EXIT (plaque)	W30cP(CA)	2C.15	—	—	114 x 24	114 x 24	78 x 18	—
END	W31(CA)	2C.24, 2C.73	30 x 30	30 x 30	30 x 30	30 x 30	24 x 24	—
CAUTION VERTICAL CLEARANCE ___' ___" Arrow	W34C(CA)	2C.25	36 x 54	36 x 54	48 x 72	48 x 72	—	—
SLIDE AREA	W38(CA)	2C.30	30 x 30	30 x 30	48 x 48	48 x 48	—	—
TWO-WAY TRAFFIC (plaque)	W44aP(CA)	2C.51	36 x 24	36 x 24	—	—	—	—
SLOW TRUCKS	W51(CA)	2C.14	48 x 48	48 x 48	48 x 48	48 x 48	—	72 x 72
CROSS TRAFFIC AHEAD	W70(CA)	2C.41	—	—	60 x 60	—	—	—
RIGHT(LEFT) LANE TURNS RIGHT(LEFT) AHEAD	W73A(CA)	2C.50	36 x 36	36 x 36	48 x 48	—	—	60 x 60
RIGHT(LEFT) ___ LANES FOR EXIT ONLY	W73B(CA)	2C.50	—	—	168 x 72	168 x 72	—	—
THRU TRAFFIC MERGE LEFT (RIGHT)	W74(CA)	2C.47, 2C.50	36 x 36	36 x 36	48 x 48	48 x 48	—	60 x 60
PASS WITH CARE (plaque)	W83P(CA)	2C.51	24 x 30	24 x 30	36 x 45	36 x 45	—	—
SPEED HUMPS AHEAD	W84(CA)	2C.27	36 x 36	36 x 36	—	—	30 x 30	—
SPEED HUMP AREA	W85(CA)	2C.27	36 x 36	36 x 36	—	—	30 x 30	—
"METER ON" Activated Blank- Out	W88-2(CA)	2C.37	—	—	96 x 48	96 x 48	—	—
"_____ METER ON" Activated Blank-Out	W88-3(CA)	2C.37	—	—	96 x 48	96 x 48	—	—
"PREPARE TO STOP" Activated Blank-Out	W89(CA)	2C.37	—	—	96 x 48	96 x 48	—	—
WATCH DOWNHILL SPEED	SW4-1(CA)	2C.14	72 x 72	72 x 72	72 x 72	72 x 72	—	—
SIGNAL AHEAD (plaque)	SW26aP(CA)	2C.35	—	—	—	72 x 30 (ramps)	—	—
STOP AHEAD (plaque)	SW26bP(CA)	2C.35	—	—	—	72 x 30 (ramps)	—	—
DRIFTING SAND	SW32(CA)	2C.30	36 x 36	36 x 36	48 x 48	48 x 48	30 x 30	—
Safety Corridor Sign	SW33(CA)	2C.103(CA)	102 x 48	102 x 48	—	—	—	—
FLASH FLOOD AREA	SW35(CA)	2C.34	36 x 36	36 x 36	36 x 36	36 x 36	—	—
TUNNEL	SW37(CA)	2C.18	30 x 30	30 x 30	30 x 30	30 x 30	—	—
DEAF CHILDREN NEAR	SW38(CA)	2C.55	30 x 30	30 x 30	30 x 30	—	24 x 24	—
SNOW SLIDE AREA	SW41(CA)	2C.30	36 x 36	36 x 36	48 x 48	48 x 48	30 x 30	—
SNOW (plaque)	SW46P(CA)	2C.30	24 x 12	24 x 12	30 x 18	30 x 18	—	—
ALL TERRAIN VEHICLES	SW47A(CA)	2C.54	36 x 36	36 x 36	36 x 36	—	30 x 30	—
TRACTOR-SEMI OVER ___ FEET KINGPIN TO REAR AXLE NOT ADVISED	SW48(CA)	2C.101(CA)	48 x 36	48 x 36	72 x 54	72 x 54	—	—
NEXT RIGHT (plaque)	SW48-1P(CA)	2C.101(CA)	48 x 12	48 x 12	72 x 18	72 x 18	—	—
PLAYGROUND (plaque)	SW49P(CA)	2C.56	36 x 12	36 x 12	36 x 12	—	—	—
SENIOR ZONE	SW50-1P(CA)	2C.55	24 x 18	24 x 18	24 x 18	—	—	—
SENIOR	SW50-2P(CA)	2C.55	24 x 8	24 x 8	24 x 8	—	—	—
WATCH FOR SNOW REMOVAL EQUIPMENT	SW58(CA)	2C.54	36 x 36	36 x 36	54 x 48	54 x 48	—	—

Table 2C-2. Minimum Size of Supplemental Warning Plaques

Size of Warning Sign	Size of Supplemental Plaque			
	Rectangular			Square
	1 Line	2 Lines	Arrow	
24 x 24	24 x 12	24 x 18	21 x 15	18 x 18
30 x 30				
36 x 36	30 x 18	30 x 24	30 x 21	24 x 24
48 x 48				

Notes:

1. Larger supplemental plaques may be used when appropriate
2. Dimensions are shown as width x height, in inches

Table 2C-3. Guidelines for Advance Placement of Warning Signs

Posted or 85th- Percentile Speed	Advance Placement Distance ¹									
	Condition A: Speed reduction and lane changing in heavy traffic ²	Condition B: Deceleration to the listed advisory speed (mph) for the condition								
		0 ³	10 ⁴	20 ⁴	30 ⁴	40 ⁴	50 ⁴	60 ⁴	70 ⁴	80 ⁴
20 mph	225 ft	115 ft	N/A ⁵	—	—	—	—	—	—	—
25 mph	325 ft	155 ft	N/A ⁵	N/A ⁵	—	—	—	—	—	—
30 mph	460 ft	200 ft	N/A ⁵	N/A ⁵	—	—	—	—	—	—
35 mph	565 ft	250 ft	N/A ⁵	N/A ⁵	N/A ⁵	—	—	—	—	—
40 mph	670 ft	305 ft	100 ft ⁶	100 ft ⁶	N/A ⁵	—	—	—	—	—
45 mph	775 ft	360 ft	125 ft	100 ft ⁶	100 ft ⁶	N/A ⁵	—	—	—	—
50 mph	885 ft	425 ft	200 ft	175 ft	125 ft	100 ft ⁶	—	—	—	—
55 mph	990 ft	495 ft	275 ft	225 ft	200 ft	125 ft	N/A ⁵	—	—	—
60 mph	1,100 ft	570 ft	350 ft	325 ft	275 ft	200 ft	100 ft ⁶	—	—	—
65 mph	1,200 ft	645 ft	450 ft	400 ft	350 ft	275 ft	200 ft	100 ft ⁶	—	—
70 mph	1,250 ft	730 ft	525 ft	500 ft	450 ft	375 ft	275 ft	150 ft	—	—
75 mph	1,350 ft	820 ft	625 ft	600 ft	550 ft	475 ft	375 ft	250 ft	100 ft ⁶	—
80 mph	1,475 ft	910 ft	725 ft	700 ft	625 ft	550 ft	450 ft	350 ft	200 ft	—
85 mph	1,600 ft	1,010 ft	825 ft	800 ft	750 ft	675 ft	575 ft	450 ft	300 ft	150 ft

¹ The distances are adjusted for a sign legibility distance of 180 feet for Condition A. The distances for Condition B (with the exception of the potential stop condition) have been adjusted for a sign legibility distance of 250 feet, which is appropriate for an alignment warning symbol sign. For Conditions A and B, warning signs with less than 6-inch legend or more than four words, a minimum of 100 feet should be added to the advance placement distance to provide adequate legibility of the warning sign.

² Typical conditions are locations where the road user must use extra time to adjust speed and change lanes in heavy traffic because of a complex driving situation. Typical signs are Merge and Right Lane Ends. The distances are determined by providing the driver a PRT of 14.0 to 14.5 seconds for vehicle maneuvers (2018 AASHTO Policy, Table 3-3, Decision Sight Distance, Avoidance Maneuver E) and adjusted for a legibility distance of 180 feet for the appropriate sign.

³ A typical condition is the warning of a potential stop situation. Typical signs are Stop Ahead, Yield Ahead, Signal Ahead, and Intersection Warning signs. The distances are based on the 2018 AASHTO Policy, Table 3-1, Stopping Sight Distance, providing a PRT of 2.5 seconds, a deceleration rate of 11.2 feet/second².

⁴ Typical conditions are locations where the road user must decrease speed to maneuver through the warned condition. Typical signs are Turn, Curve, Reverse Turn, or Reverse Curve. The distance is determined by providing a 2.5 second PRT, a vehicle deceleration rate of 10 feet/second², and adjusted for a sign legibility distance of 250 feet.

⁵ No suggested distances are provided for these speeds, as the placement location is dependent on site conditions and other signing. An alignment warning sign may be placed anywhere from the point of curvature up to 100 feet in advance of the curve. However, the alignment warning sign should be installed in advance of the curve and at least 100 feet from any other signs.

⁶ The minimum advance placement distance is listed as 100 feet to provide adequate spacing between signs.

Note: Warning signs that advise road users about conditions that are not related to a specific location, such as Deer Crossing or SOFT SHOULDER, can be installed in an appropriate location, based on engineering judgment.

Table 2C-4. Application of Traffic Control Devices for Changes in Horizontal Alignment

A - Determination of the Need for Devices for Changes in Horizontal Alignment¹

Roadway Type	AADT			
	Less than 1,000	1,000-2,999	3,000-3,999	Greater than 3,999
Freeways and Expressways	Required	Required	Required	Required
Arterial or Collector without Pavement Markings	Optional	Recommended	Required	Required
Arterial or Collector with Pavement Markings ²	Optional	Recommended	Recommended	Required
All other roadways	Optional	Optional	Optional	Optional

¹ If devices are determined to be needed, the selection of the device(s) is based on Chart B below.

² An arterial or collector is considered to have pavement markings when either a center line, edge lines, or both are present.

B - Selection of Devices for Changes in Horizontal Alignment

Speed Differential ³	Devices for Change in Horizontal Alignment ³
5 mph	Pavement markings or advance horizontal alignment warning sign on paved roadways. Advance horizontal alignment warning sign on unpaved roadways. ⁴
10 mph	Advance horizontal alignment warning sign
15 mph	Delineators ⁵ and advance horizontal alignment warning sign
20 mph or more	Chevrons ⁵ and advance horizontal alignment warning sign

³ The provisions for the use of Horizontal Alignment warning signs and devices are contained in Section 2C.06. The need for devices is determined by Chart A above.

⁴ A roadway is considered to have pavement markings when either a center line, edge lines, or both are present.

⁵ Section 2C.06 contains information about the use of a One Direction Large Arrow (W1-6) sign in place of or to supplement delineators and chevrons.

Table 2C-5. Typical Spacing of Chevron Alignment Signs on Horizontal Curves

Advisory Speed	Curve Radius	Sign Spacing
15 mph or less	Less than 200 feet	40 feet
20 to 30 mph	200 to 400 feet	80 feet
35 to 45 mph	401 to 700 feet	120 feet
50 to 60 mph	701 to 1,250 feet	160 feet
More than 60 mph	More than 1,250 feet	200 feet

Note: The relationship between the curve radius and the advisory speed shown in this table should not be used to determine the advisory speed.

Table 2C-6. Use of Advisory Speed Plaque for Horizontal Alignment Changes

Speed Differential	Use of Advisory Speed Plaque (W13-1P) ¹
5 mph	Optional
10 mph	Recommended
15 mph or more	Required

¹ See Section 2C.59

CHAPTER 2D. GUIDE SIGNS—CONVENTIONAL ROADS

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SIGNING AT AIRPORTS

- 2D.60 Signing at Airports

CALIFORNIA SECTION

- 2D.101(CA) Intersection Number (G98A(CA)) Sign

GENERAL DESIGN

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

Standard:

- 01 The provisions of this Chapter shall apply to **expressways, freeways, any road or street other than expressways and freeways, except as otherwise provided in this Manual.**

Support:

- 02 Guide signs direct road users along streets and highways; inform them of intersecting routes; direct them to cities, towns, villages, or other important destinations; identify nearby rivers and streams, parks, forests, and historical sites; and provide information that will help them along their way in the most simple and direct manner possible.

Guidance:

- 03 *The selection of primary or control destinations (those displayed consistently over longer distances along a route) displayed on guide signs should be meaningful to road users in navigation and orientation. The destinations selected should be identifiable on official maps.*
- 04 *The familiarity of the road users with the road should be considered in determining the need for guide signs on low-volume roads.*

Support:

- 05 Low-volume roads generally do not require guide signs to the extent that they are needed on higher classes of roads. Because guide signs are typically only beneficial as a navigational aid for road users who are unfamiliar with a low-volume road, guide signs might not be needed on low-volume roads that serve only local traffic.
- 06 Guide signs, other than Street Name signs, generally are not used on low-volume rural roads except as needed to guide road users back to the major roadways.

Guidance:

- 07 *If used on low-volume roads, destination names should be as specific and descriptive as possible. Destinations such as campgrounds, ranger stations, recreational areas, and the like should be clearly indicated so that they are not interpreted to be communities or locations with road user services.*

Option:

- 08 Guide signs may be used on low-volume roads at intersections to provide information for road users returning to a higher class of roads.

Support:

- 09 Chapter 2A addresses placement, location, and other general criteria for signs.

Guidance:

- 10 *A minimum spacing of 200 feet between guide signs should be maintained on conventional highways.*
- 11 *A minimum spacing of 800 feet between guide signs should be maintained on freeways and expressways.*

Section 2D.02 Color, Retroreflection, and Illumination

Support:

- 01 Requirements for illumination, retroreflection, and color are stated under the specific headings for individual guide signs or groups of signs. General provisions are given in Sections 2A.06, 2A.21, and 2A.22.

Standard:

- 02 **Except as otherwise provided in this Manual for individual signs or groups of signs, guide signs on streets and highways shall have a white message and border on a green background. All messages, borders, and legends shall be retroreflective and all backgrounds shall be retroreflective or illuminated.**

Support:

- 03 Color coding is sometimes used to help road users distinguish between multiple potentially confusing destinations. Examples of valuable uses of color coding include guide signs for roadways approaching or inside an airport property with multiple terminals serving multiple airlines, and community wayfinding guide signs for various traffic generator destinations within a community or area.

Standard:

- 04 **Except as otherwise provided in this Manual, different color sign backgrounds shall not be used to provide color coding of destinations. The color coding shall be accomplished by the use of different colored square or rectangular sign panels on the face of the guide signs (see Figure 2D-1)**

Option:

- 05 The different colored sign panels on the face of a sign may include a black or white (whichever provides the better contrast with the panel color) letter, numeral, or other appropriate designation to identify an airport terminal or other destination.

Support:

- 06 Section 2D.55 contains specific provisions regarding Community Wayfinding guide signs.
- 07 Refer to the Caltrans' Traffic Operations Policy website for the most recent published memorandum regarding retroreflection and illumination requirements for State highways.

Section 2D.03 Size of Signs

Standard:

- 01 Except as provided in Section 2A.07, the minimum sizes of conventional road guide signs that have standardized designs shall be as shown in Table 2D-1 and Table 2D-1(CA).

Support:

- 02 Section 2A.07 contains information regarding the applicability of the various columns in Table 2D-1 and Table 2D-1(CA).

Option:

- 03 Signs larger than those shown in Table 2D-1 and Table 2D-1(CA) may be used (see Section 2A.07).

Support:

- 04 For other guide signs, the legends are so variable that a standardized design or size is not appropriate. The sign size is determined primarily by the length of the message, and the size of lettering and spacing necessary for proper legibility.

Option:

- 05 Reduced letter height, reduced interline spacing, and reduced edge spacing may be used on guide signs if sign size must be limited by factors such as lane width or vertical or lateral clearance.

Guidance:

- 06 *Reduced spacing between the letters or words on a line of legend should not be used as a means of reducing the overall size of a guide sign, except where determined necessary by engineering judgment to meet unusual lateral-space constraints. In such cases, the legibility distance of the sign legend should be the primary consideration in determining whether to reduce the spacing between the letters or the words or between the words and the sign border, or to reduce the letter height.*

- 07 *When a reduction in the prescribed size is necessary, the design used should be as similar as possible to the design for the standard size.*

Support:

- 08 Sign design details are provided in the "Standard Highway Signs" publication (FHWA) and in Caltrans' California Sign Specifications. Refer to Section 1A.05 for additional information.

Section 2D.04 Lettering Style

Standard:

- 01 The design of upper-case letters, lower-case letters, numerals, route shields, and spacing shall be as provided in the "Standard Highway Signs" publication (see Section 1A.05) and in Caltrans' California Sign Specifications.
- 02 The lettering for names of places, streets, and highways on conventional road guide signs shall be a combination of lower-case letters with initial upper-case letters (see Section 2A.08). The nominal loop height of the lower-case letters shall be $\frac{3}{4}$ the height of the initial upper-case letter. When a mixed-case legend letter height is specified referring only to the initial upper-case letter, the height of the lower-case letters that follow shall be determined by this proportion. When the height of a lower-case letter is referenced, the reference is made to the nominal loop height. The height of the initial upper-case letter shall also be determined by this proportion.
- 03 All other word legends on conventional road guide signs shall be in upper-case letters.
- 04 The unique letter forms for each of the Standard Alphabet series shall not be stretched, compressed, warped, or otherwise manipulated. Modifications to the length of a word for a given letter height and series shall be accomplished only by the methods described in Section 2D.03.

Section 2D.05 Size of Lettering

Support:

- 01 Sign legibility is a direct function of letter size and spacing. Legibility distance has to be sufficient to give road users enough time to read and comprehend the sign. Under optimum conditions, a guide sign message can be read and understood in a brief glance. The legibility distance takes into account factors such as inattention, blocking of view by other vehicles, unfavorable weather, inferior eyesight, or other causes for delayed or slow reading. Where conditions permit, repetition of guide information on successive signs gives the road user more than one opportunity to obtain the information needed.

Standard:

- 02 **Design layouts for conventional road guide signs showing interline spacing, edge spacing, and other specification details shall be as shown in the “Standard Highway Signs” publication (see Section 1A.05) and in [Caltrans’ California Sign Specifications](#).**
- 03 **Except as otherwise provided in this Manual, the principal legend on post-mounted guide signs shall be in letters and numerals at least 6 inches in height for all upper-case letters, or a combination of 6 inches in height for upper-case letters and 4.5 inches in nominal loop height (see Section 2D.04) for lower-case letters. On low-volume roads with speeds of 25 mph or less, and on urban streets with speeds of 25 mph or less, the principal legend on post-mounted guide signs shall be in letters at least 4 inches in height for all upper-case letters, or a combination of 4 inches in height for upper-case letters and 3 inches in nominal loop height for lower-case letters.**
- 04 **Except as otherwise provided in this Manual, the principal legend on overhead guide signs shall be in letters and numerals at least 6 inches in height for all upper-case letters, or a combination of 6 inches in height for upper-case letters and 4.5 inches in nominal loop height (see Section 2D.04) for lower-case letters.**

Guidance:

- 05 *Lettering sizes should be consistent on any particular class of highway.*
- 06 *The minimum lettering and numeral sizes provided in this Manual (see Table 2D-2) should be exceeded where conditions indicate a need for greater legibility.*

Section 2D.06 Amount of Legend

Support:

- 01 The longer the legend on a guide sign, the longer it will take road users to recognize and comprehend it, regardless of letter size.

Guidance:

- 02 *Except where otherwise provided in this Manual, guide signs should be limited to no more than three lines of destinations, which include place names, route numbers, street names, and cardinal directions. Where two or more signs are included in the same overhead display, the amount of legend should be further minimized. Where appropriate, a distance message or action information, such as an exit number, NEXT RIGHT, or directional arrows, should be provided on guide signs in addition to the destinations.*

Section 2D.07 Abbreviations

Support:

- 01 The use of commonly recognized abbreviations for certain words can be useful in reducing the reading time and improve quicker comprehension of a sign message. Descriptors and directional or quadrant orientations for street names and destinations, such as Boulevard (Blvd), North (N), and Southwest (SW), are some examples of commonly recognized abbreviations. Examples of the use of some guide sign abbreviations are shown in Figure 2D-2.

Standard:

- 02 **The words NORTH, SOUTH, EAST, and WEST shall not be abbreviated when used to indicate cardinal directions of numbered or named highways on guide signs.**

Guidance:

- 03 *Abbreviations should be kept to a minimum; however, they are useful when complete destination messages produce excessively long signs. If used, abbreviations should be unmistakably recognized by road users (see Section 1D.08). Longer commonly used words that are not part of a proper name and are readily recognizable, such as street name descriptors (such as Street, Boulevard, or Avenue), should be abbreviated as provided in Table 2D-3 to expedite recognition of the sign legend by reducing the amount and complexity of the legend. Shorter street name descriptors,*

such as those shown in Table 2D-4, should not be abbreviated.

04 *Periods, apostrophes, question marks, ampersands, or other punctuation or characters that are not letters, numerals, or hyphens should not be used in abbreviations, unless necessary to avoid confusion.*

05 *The solidus is intended to be used for fractions only and should not be used to separate words on the same line of legend. Instead, a hyphen should be used for this purpose, such as "TRUCKS – BUSES."*

Section 2D.08 Arrows

Support:

01 Arrows are used for lane assignment and to indicate the direction toward designated routes or destinations. Figure 2D-3 shows the various standard arrow designs that have been approved for use on guide signs. Detailed drawings are shown for these arrows in the "Standard Highway Signs" publication (see Section 1A.05).

Standard:

02 **Except for Overhead Arrow-per-Lane signs (see Section 2D.37), on overhead signs where it is desirable to indicate a lane to be followed, a down arrow shall be positioned over the approximate center of the lane and shall point vertically downward toward the approximate center of that lane. Down arrows shall be used only on overhead guide signs that restrict the use of specific lanes to traffic bound for the destination(s) and/or route(s) indicated by these arrows. Down arrows shall not be used unless an arrow can be located over and pointed to the approximate center of each lane that can be used to reach the destination displayed on the sign.**

03 **If down arrows are used, having more than one down arrow pointing to the same lane on a single overhead sign (or on multiple signs on the same overhead sign structure) shall not be permitted.**

04 **Where a roadway is leaving the through lanes, a directional arrow shall point upward at an angle that approximates the alignment of the exit roadway in the vicinity of the point of departure.**

05 **The Type E directional arrow for circular intersections shall not be used on any sign that is not associated with a circular intersection.**

Guidance:

06 *The Type A directional arrow should be used on guide signs on freeways, expressways, and conventional roads to indicate the direction to a specific destination or group of destinations, except as otherwise provided in this Section and in Section 2E.18.*

07 *When a directional arrow in a vertical, upward-pointing orientation is placed to the side of a group of destinations to indicate a through movement, the Type A directional arrow should be used. When a directional arrow in a vertical, upward-pointing orientation is placed to the side of a single destination or under a destination or group of destinations, the Type B directional arrow should be used.*

08 *The Type B directional arrow should be used on guide signs on conventional roads when placed at any angle to the side of a single destination or when placed in a horizontal orientation to the side of a group of destinations.*

09 *The Type C advance turn directional arrow should be used on conventional road guide signs placed in advance of an intersection where a turn must be made to reach a posted destination or group of destinations.*

10 *The Type D directional arrow should be used primarily for sign applications other than guide signs, except as provided in Paragraph 15 of this Section.*

11 *If the Type E directional arrow is used, the principles set forth in Sections 2D.26 through 2D.29 should be followed.*

Option:

12 The Type A-Extended directional arrow may be used on guide signs where additional emphasis regarding the direction is needed relative to the amount of legend on the sign.

13 The Type C directional arrow may be used to the side of the legend of an overhead guide sign to accentuate a sharp turn exit maneuver from a mainline roadway (see Section 2E.25 for additional information regarding Exit Direction signs for low advisory ramp speeds).

14 On conventional roads on the approach to an intersection where the Combination Lane- Use/Destination overhead guide sign (see Section 2D.38) is not used, the Type C advance turn directional arrow may be used beneath the legend of an overhead guide sign to indicate the fact that a turn must be made from a mandatory movement lane over which the sign is placed to reach the destination or destinations displayed on the sign.

15 The Type D directional arrow may be used on post-mounted guide signs on conventional roads with lower operating speeds if the height of the text on the sign is 8 inches or less. Type D arrows may be used on a Street Name (D3-1 only) sign displaying two street names to indicate the different direction of travel for each street.

16 The Type E directional arrow may be used on guide signs on approaches to circular intersections to represent the intended driver paths to destinations involving left-turn movements around the circulatory island.

17 The directional and down arrows shown in Figure 2D-3 may be used on signs other than guide signs for the purposes of providing directional guidance and lane assignment.

Guidance:

18 *Arrows used on guide signs to indicate the directions toward designated routes or destinations should be pointed at the appropriate angle to clearly convey the direction to be taken. A horizontally-oriented directional arrow design should be used at right-angle intersections.*

19 *On a post-mounted guide sign, a directional arrow for a straight-through movement should point upward. Except as provided in Section 2D.50, for a turn, the arrow on a guide sign should point horizontally or at an upward angle that approximates the sharpness of the turn.*

20 *At an exit, an arrow should be placed at the side of the sign that will reinforce the movement of exiting traffic. The directional arrow design should be used.*

Standard:

21 **If used, the Type C advance turn directional arrow shall display a right or left arrow, the shaft of which is bent at a 90-degree or oblique angle.**

Option:

22 Arrows may be placed below the principal sign legend or on the appropriate side of the legend that is consistent with the direction of the movement.

23 On a post-mounted sign at an exit where placement of the arrow to the side of the legend farthest from the roadway would create an unusually wide sign that limits the road user's view of the arrow, the directional arrow may be placed at the bottom portion of the sign, centered under the legend.

Guidance:

24 *The width across the arrowhead for the Types A, B, and C directional arrows should be between 1.5 and 1.75 times the height of the upper-case letters of the principal legend on the sign. The width across the arrowhead for the Type D directional arrow should be at least equal to the height of the upper-case letters of the principal legend on the sign. For down arrows used on overhead signs, the width across the arrowhead should be approximately 2 times the height of the upper-case letters of the principal legend on the sign.*

Support:

25 Section 2D.37 contains the provisions for arrows used in Overhead Arrow-per-Lane signs on approaches to conventional road intersections. Section 2D.41 contains the provisions for arrows used in Diagrammatic Advance guide signing on approaches to conventional road intersections other than circular intersections. Section 2D.39 contains the provisions for diagrammatic arrows used in Destination signs on the approaches to circular intersections (see Figure 2D-11).

25a [Refer to FHWA's List of Known Errors for error in Paragraph 25 text. Refer to Section 1A.04 for more details.](#)

26 The "Standard Highway Signs" publication (see Section 1A.05) contains design details and standardized sizes of the various arrows based on ranges of letter heights of principal legends.

ROUTE SIGNS AND AUXILIARY PLAQUES

Section 2D.09 Numbered Highway Systems

Support:

- 01 The purpose of numbering and signing highway systems is to identify routes and facilitate travel.
- 02 The Interstate and United States (U.S.) highway systems are numbered by the American Association of State Highway and Transportation Officials (AASHTO) upon recommendations of the State highway organizations because the respective States own these systems. State and county road systems are numbered by the appropriate authorities.
- 03 The basic policy for numbering the Interstate and U.S. highway systems is contained in the following Purpose and Policy statements published by AASHTO:
- A. "Establishment and Development of United States Numbered Highways," and
 - B. "Establishment of a Marking System of the Routes Comprising the National System of Interstate and Defense Highways."

Guidance:

- 04 *The principles of these policies should be followed in establishing the highway systems described in Paragraph 3 of this Section and any other systems, with effective coordination between adjacent jurisdictions. Care should be taken to avoid the use of numbers or other designations that have been assigned to Interstate, U.S., or State routes in the same geographic area. Overlapping numbered routes should be kept to a minimum.*

Standard:

- 05 **Route systems shall be given preference in this order: Interstate, United States, State, and county. The preference shall be given by installing the highest-priority route number on the top or the left of the sign, except as provided in Paragraph 7 of this Section.**

Support:

- 05a Refer to FHWA's List of Known Errors for error in Paragraph 5 text. Refer to Section 1A.04 for more details.

Standard:

- 06 **Interstate route numbering shall be approved by the FHWA.**

Option:

- 07 The prioritization of route systems may be modified when a different prioritization would better accommodate the expectancy of the road user and provide more effective direction, such as for separate decision points for routes that are encountered in a particular order.

Support:

- 08 Section 2D.56 contains information regarding the signing of unnumbered highways to enhance route guidance and facilitate travel.
- 09 The California Legislature designates all State highway routes and assigns their route numbers. General route descriptions and numbers are outlined in Chapter 2, Article 3, of the SHC. These route numbers are used for all administrative purposes.

Section 2D.10 Route Signs and Auxiliary Plaques

Standard:

- 01 **Except as provided in Paragraph 9 of Section 2D.29, all numbered highway routes shall be identified by route signs and auxiliary plaques.**
- 02 **The signs for each system of numbered highways, which are distinctive in shape and color, shall be used only on that system and the approaches thereto.**

Option:

- 03 Route signs and auxiliary plaques may be proportionally enlarged where greater conspicuity or legibility is needed.

Support:

- 04 Route signs are typically mounted in assemblies with auxiliary plaques.
- 05 Section 2D.57 contains information regarding the signing for National Scenic Byways.
- 06 Section 2D.58 contains information regarding the signing for State-designated scenic byways, historic trails, and auto tour routes.

Section 2D.11 Design of Route Signs

Standard:

01 The design of standard route signs shall conform to the designs provided in the “Standard Highway Signs” publication (see Section 1A.05). The design of other route signs shall be established by the authority having jurisdiction and shall be in general conformance with the designs provided in the “Standard Highway Signs” publication.

02 Interstate Route (M1-1 (Shield) and M1-1a (Marker)) signs (see Figure 2D-4) shall be used on all Interstate routes and in connection with Route Sign assemblies on intersecting highways.

03 Except as otherwise provided in this Manual, a 24 x 24-inch minimum sign size shall be used for Interstate route numbers with one or two digits, and a 30 x 24-inch minimum sign size shall be used for Interstate route numbers having three digits.

Option:

04 When the Interstate Route sign is used in a route sign assembly (see Section 2D.29), the M1-1a (Marker) sign, containing the State name in white upper-case letters on a blue background as detailed in the “Standard Highway Signs” publication (see Section 1A.05), may be used in place of the M1-1 (Shield) sign.

Standard:

05 Use of the M1-1a (Marker) sign shall be limited to route sign assemblies.

06 Off-Interstate Business Route (M1-2 and M1-3) signs (see Figure 2D-4) shall consist of a cutout shield displaying the number of the connecting Interstate route and the words BUSINESS and either LOOP (when the route rejoins the same Interstate route) or SPUR (when the route leaves the corresponding Interstate route and does not rejoin) in upper-case letters. The legend and border shall be white on a green background, and the shield shall be the same shape and dimensions as the Interstate Route sign. In no instance shall the word INTERSTATE appear on the Off-Interstate Business Route sign.

Option:

07 The Off-Interstate Business Route sign may be used on a major highway that is not a part of the Interstate system, but one that serves the business area of a city from an interchange on the system.

Standard:

08 U.S. Route signs (Marker) (see Figure 2D-4) shall consist of black numerals on a white shield surrounded by a rectangular black background without a border. This sign shall be used on all U.S. routes and in connection with Route Sign assemblies on intersecting highways.

09 A 24 x 24-inch minimum sign size shall be used for U.S. route numbers with one or two digits, and a 30 x 24-inch minimum sign size shall be used for U.S. route numbers having three digits.

10 State Route signs shall be designed by the individual State highway agencies.

11 The legend on State Route signs shall conform to the Standard Alphabets contained in the “Standard Highway Signs” publication (see Section 1A.05).

Guidance:

12 ~~State Route signs (see Figure 2D-4) should be rectangular and should be approximately the same size as the U.S. Route sign. State Route signs should also be similar to the U.S. Route sign by containing approximately the same size black numerals on a white area surrounded by a rectangular black background without a border, and should be devoid of complex graphics. The shape of the white area should be circular in the absence of any determination to the contrary by the individual State concerned.~~

12a The State Route (Marker) sign (G28-2(CA)) shall be used in accordance with the sizes provided in Table 2D-1(CA). The State Route (Shield) sign (G28-1(CA)) shall be used in accordance with the sizes provided in the Caltrans' California Sign Specifications.

13 Where U.S. or State Route signs are used as components of guide signs, only the distinctive shape of the shield itself and the route numerals within should be used. The rectangular background upon which the distinctive shape of the shield is mounted, such as the black area around the outside of the shields on the M1-4 and standard M1-5 signs, should shall not be included on the guide sign. Where U.S. or State Route signs are used as components of other signs of non-contrasting background colors, the rectangular background should shall be used so that recognition of the distinctive shape of the shield can be maintained.

Standard:

14 If county road authorities elect to establish and identify a special system of important county roads, a

statewide policy for such signing shall be established that includes a uniform numbering system to uniquely identify each route. The County Route (M1-6) sign (see Figure 2D-4) shall consist of a pentagon shape with a yellow county name and route number and border on a blue background. County Route signs shall be a minimum size of 24 x 24 inches.

- 15 If a jurisdiction uses letters instead of numbers to identify routes, all references to numbered routes in this Chapter shall be interpreted to also include lettered routes.

Guidance:

- 16 If used with other route signs in common assemblies, the County Route sign should be of a size compatible with that of the other route signs.

Standard:

- 17 The design of the National Forest Route (M1-7) sign (see Figure 2D-4) shall be as detailed in the “Standard Highway Signs” publication (see Section 1A.05). Route signs for other park and forest roads shall be designed with an appropriate level of distinctiveness and adequate legibility, but in general compliance with the design principles for route signs and of a size compatible with other route signs used in common assemblies.

Support:

- 18 The State Route (Shield) sign is used on the face of guide signs. The State Route (Marker) sign is used for stand-alone assembly installations.

- 19 For U.S. Route (Shield) sign and both the State Route (Shield and Marker) signs, refer to Figure 2D-4(CA).

- 20 Standard details for State Route shields and markers are provided in Caltrans' California Sign Specifications.

Section 2D.12 Design of Route Sign Auxiliary Plaques

Standard:

- 01 Route sign auxiliary plaques displaying word legends, except the Junction (M2-1P) auxiliary plaque, shall have a minimum standard size of 24 x 12 inches. The Junction auxiliary plaque and those auxiliary plaques displaying arrows shall have a minimum standard size of 21 x 15 inches. All route sign auxiliary plaques shall match the color combination of the route sign that they supplement.

Guidance:

- 02 The background, legend, and border of a route sign auxiliary plaque should have the same colors as those of the route sign with which the auxiliary plaque is mounted in a route sign assembly (see Section 2D.29). For a route sign design that uses multiple background colors, such as the Interstate Route sign, the background color of the corresponding auxiliary plaque should be that of the background area on which the route number is placed on the route sign.

Option:

- 03 A route sign and any auxiliary plaques used with it may be combined on a single sign as a guide sign.

Standard:

- 04 If a route sign and its auxiliary plaques are combined to form a single guide sign, the background color of the sign shall be green and the design shall comply with the basic principles for the design of guide signs. The auxiliary messages shall be white legends placed directly on the green background. Auxiliary plaques shall not be mounted directly to a guide sign or other type of sign.

Support:

- 05 Chapter 2F contains information regarding auxiliary plaques for toll highways.

Section 2D.13 Junction Auxiliary Plaque (M2-1P)

Standard:

- 01 The Junction (M2-1P) auxiliary plaque (see Figure 2D-5) shall display the abbreviated legend JCT and shall be mounted at the top of an assembly (see Section 2D.30) directly above the route sign, the sign for an alternative route (see Section 2D.17) that is part of the route designation, or the Cardinal Direction auxiliary plaque where access is available only to one direction of the intersected route. The minimum size of the Junction auxiliary plaque shall be 21 x 15 inches for compatibility with auxiliary plaques displaying arrow symbols.

Section 2D.14 Combination Junction Sign (M2-2)

Option:

- 01 As an alternative to the standard Junction assembly where more than one route is to be intersected or joined, a rectangular guide sign may be used displaying the word JUNCTION above the route numbers.

Standard:

- 02 **The Combination Junction (M2-2) sign (see Figure 2D-5) shall have a green background with white border and lettering for the word JUNCTION.**

Guidance:

- 03 *The Combination Junction sign should comply with the specific provisions of Section 2D.11 regarding the incorporation of the route signs as components of guide signs.*
- 04 *Although the size of the Combination Junction sign will depend on the number of routes involved, the numerals should be large enough for clear legibility and should be of a size comparable with those in the individual route signs.*

Section 2D.15 Cardinal Direction Auxiliary Plaques (M3-1P through M3-4P)

Guidance:

- 01 *Cardinal Direction auxiliary plaques (see Figure 2D-5) displaying the legend NORTH, EAST, SOUTH, or WEST should be used to indicate the general direction of the entire route.*

Standard:

- 02 **To improve the readability and recognition of the cardinal directions, the first letter of the cardinal direction words shall be ten percent larger, rounded up to the nearest whole number size.**
- 03 **If used, the Cardinal Direction auxiliary plaque shall be mounted directly above a route sign or, if used, an auxiliary plaque for an alternative route.**

Option:

- 04 *Cardinal Direction auxiliary plaque may be placed either above or to the right of the Route shield when used on the face of a guide sign.*

Support:

- 05 *For application of Cardinal Direction auxiliary plaques in Freeway Entrance sign package, refer to Section 2D.50.*

Section 2D.16 Alternative Route Auxiliary Plaques (M4-1P through M4-4P)

Option:

- 01 Alternative Route auxiliary plaques (see Figure 2D-5) displaying legends such as ALTERNATE, BY-PASS, BUSINESS, or TRUCK, may be used to indicate an alternate route of the same number between two points on that route.

Standard:

- 02 **If used, the Alternative Route auxiliary plaques shall be mounted directly above a route sign.**

Section 2D.17 ALTERNATE Auxiliary Plaques (M4-1P and M4-1aP)

Option:

- 01 The ALTERNATE (M4-1P) or the ALT (M4-1aP) auxiliary plaque (see Figure 2D-5) may be used to indicate an officially designated alternate routing of a numbered route between two points on that route.

Standard:

- 02 **If used, the ALTERNATE or ALT auxiliary plaque shall be mounted directly above a route sign.**
- 03 **The M4-1P series plaques shall not be used to sign an alternative routing that is not officially designated and incorporated into the numbered highway system, such as alternative routings for incident management or emergency detours.**

Guidance:

- 04 *The shorter (time or distance) or better-constructed route should retain the regular route number, and the longer or worse-constructed route should be designated as the alternate route.*

Section 2D.18 BY-PASS Auxiliary Plaque (M4-2P)

Option:

- 01 The BY-PASS (M4-2P) auxiliary plaque (see Figure 2D-5) may be used to designate a route that branches from the

numbered route through a city, bypasses a part of the city or congested area, and rejoins the numbered route beyond the city.

Standard:

- 02 If used, the BY-PASS auxiliary plaque shall be mounted directly above a route sign.

Section 2D.19 BUSINESS Auxiliary Plaque (M4-3P)

Option:

- 01 The BUSINESS (M4-3P) auxiliary plaque (see Figure 2D-5) may be used to designate an alternate route that branches from a numbered route, passes through the business portion of a city or unincorporated area, and rejoins the numbered route beyond that area.

Standard:

- 02 If used, the BUSINESS auxiliary plaque shall be mounted directly above a route sign.

Support:

- 03 Refer to Chapter 20 of Caltrans' Highway Design Manual for guidance on establishing business routes.

Section 2D.20 TRUCK Auxiliary Plaque (M4-4P)

Option:

- 01 The TRUCK (M4-4P) auxiliary plaque (see Figure 2D-5) may be used to designate an alternate route that branches from a numbered route, when it is desirable to encourage or require commercial vehicles to use the alternate route.

Standard:

- 02 If used, the TRUCK auxiliary plaque shall be mounted directly above a route sign.

Section 2D.21 TO Auxiliary Plaque (M4-5P)

Option:

- 01 The TO (M4-5P) auxiliary plaque (see Figure 2D-5) may be used to provide directional guidance to a particular road facility from other highways in the vicinity (see Section 2D.34).

Standard:

- 02 If used, the TO auxiliary plaque shall be mounted directly above a route sign or an auxiliary plaque for an alternative route. If a Cardinal Direction auxiliary plaque is also included in the assembly, the TO auxiliary plaque shall be mounted directly above the Cardinal Direction auxiliary plaque.

Section 2D.22 END Auxiliary Plaque (M4-6P)

Guidance:

- 01 The END (M4-6P) auxiliary plaque (see Figure 2D-5) should be used where the route being traveled ends, usually at a junction with another route.

Standard:

- 02 If used, the END auxiliary plaque shall be mounted either directly above a route sign or above a sign for an alternative route that is part of the designation of the route being terminated.

Section 2D.23 BEGIN Auxiliary Plaque (M4-14P)

Option:

- 01 The BEGIN (M4-14P) auxiliary plaque (see Figure 2D-5) may be used where a route begins, usually at a junction with another route.

Standard:

- 02 If used, the BEGIN auxiliary plaque shall be mounted at the top of the first Confirming assembly (see Section 2D.33) for the route that is beginning.

Guidance:

- 03 If a BEGIN auxiliary plaque is included in the first Confirming assembly, a Cardinal Direction auxiliary plaque should also be included in the assembly.

Standard:

- 04 If a Cardinal Direction auxiliary plaque is also included in the assembly, the BEGIN auxiliary plaque shall be mounted directly above the Cardinal Direction auxiliary plaque.

Section 2D.24 TEMPORARY Auxiliary Plaques (M4-7P and M4-7aP)

Option:

- 01 The TEMPORARY (M4-7P) or the TEMP (M4-7aP) auxiliary plaque (see Figure 2D-5) may be used for an interim period to designate a section of highway that is not planned as a permanent part of a numbered route, but that connects completed portions of that route.

Standard:

- 02 If used, the TEMPORARY or TEMP auxiliary plaque shall be mounted directly above the route sign, above a Cardinal Direction auxiliary plaque, or above an auxiliary plaque for an alternate route that is a part of the route designation.
- 03 TEMPORARY or TEMP auxiliary plaques shall be promptly removed when the temporary route is abandoned.

Section 2D.25 Temporary Detour Signs and Auxiliary Plaques

Support:

- 01 Chapter 6F contains information regarding Temporary Detour signs and auxiliary plaques.
- 02 Refer to FHWA's List of Known Errors for error in Paragraph 1 text. Refer to Section 1A.04 for more details.

Section 2D.26 Advance Turn Arrow Auxiliary Plaques (M5-1P, M5-2P, and M5-3P)

Standard:

- 01 If used, the Advance Turn Arrow auxiliary plaque (see Figure 2D-6) shall be mounted directly below the route sign in Advance Route Turn assemblies, and shall display a right or left arrow, the shaft of which is bent at a 90-degree angle (M5-1P) or at an oblique angle (M5-2P).
- 02 If used, the Circular Intersection Advance Turn Arrow (M5-3P) auxiliary plaque (see Figure 2D-6) shall be used only on the approach to a circular intersection to depict a movement along the circulatory roadway around the central island and to the left, relative to the approach roadway and entry into the intersection.

Guidance:

- 03 If the M5-3P plaque is used, then this arrow type should also be used consistently on any regulatory lane-use signs (see Chapter 2B), Destination signs (see Section 2D.36), and pavement markings (see Part 3) for a particular destination or movement.

Option:

- 04 The Advance Turn (G22(CA)) sign (refer to Figure 2D-6(CA)) may be used to provide advance notice of a turnoff on expressways and high-speed two-lane roads.

Guidance:

- 05 The G22(CA) sign should not be used on freeways. The G22(CA) sign should be installed on the right side of the roadway approximately 0.25 to 0.5 miles in advance of the turnoff.

Option:

- 06 A Route shield and a Cardinal Direction auxiliary plaque may be included on the G22(CA) sign in lieu of the destination.

Section 2D.27 Lane Designation Auxiliary Plaques (M5-4P, M5-5P, and M5-6P)

Option:

- 01 A Lane Designation (M5-4P, M5-5P, or M5-6P) auxiliary plaque (see Figure 2D-6) may be mounted directly below the route sign in an Advance Route Turn assembly on multi-lane roadways to allow road users to move into the appropriate lane prior to reaching the intersection or interchange.

Standard:

- 02 If used, the Lane Designation auxiliary plaques shall be used only where the designated lane is a mandatory movement lane and shall be located adjacent to the full-width portion of the mandatory movement lane. The Lane Designation auxiliary plaques shall not be installed adjacent to a through lane in advance of a lane that is being added or along the taper for a lane that is being added.

Section 2D.28 Directional Arrow Auxiliary Plaques (M6 Series)

Standard:

01 If used, the Directional Arrow auxiliary plaque (see Figure 2D-6) shall be mounted below the route sign and any other auxiliary plaques in Directional assemblies (see Section 2D.32), and shall display a single-headed or double-headed arrow pointing in the general direction that the route follows.

02 A Directional Arrow auxiliary plaque that displays a double-headed arrow shall not be mounted in any Directional assembly in advance of or at a circular intersection.

Option:

03 The diagonal downward-pointing arrow auxiliary (M6-2aP) plaque may be used in a Directional assembly at the far corner of an intersection to indicate the immediate entry point to a freeway or expressway entrance ramp (see Section 2D.50).

Standard:

04 The M6-2aP plaque shall not be used on the approach to or on the near side of an intersection, such as to designate an approach lane.

Option:

05 The Directional Arrow auxiliary (G33-1P(CA)) plaque (refer to Figure 2D-6(CA)) may be used in lieu of the Directional Arrow auxiliary (M6 Series) signs.

Support:

06 The G33-1P(CA) plaque is used to reduce the overall height of the sign assembly when combined with other signs, such as general service, recreational, or cultural interest signs, particularly when installations are adjacent to pedestrian facilities.

SIGN ASSEMBLIES

Section 2D.29 Route Sign Assemblies

Standard:

- 01 A Route Sign assembly shall consist of a route sign and auxiliary plaques that further identify the route and indicate the direction. Except as provided in Paragraph 9 of this Section, Route Sign assemblies shall be installed on all approaches to numbered routes that intersect with other numbered routes.
- 02 Where two or more routes follow the same section of highway, the route signs for Interstate, U.S., State, and county routes shall be mounted in that order from the left in horizontal arrangements and from the top in vertical arrangements. Subject to this order of precedence, route signs for lower- numbered routes shall be placed at the left or top.
- 03 Within groups of assemblies, information for routes intersecting from the left shall be mounted at the left in horizontal arrangements and at the top or center of vertical arrangements. Similarly, information for routes intersecting from the right shall be at the right or bottom, and for straight- through routes at the center in horizontal arrangements or top in vertical arrangements.
- 04 Route Sign assemblies shall be mounted in accordance with the general specifications for signs (Chapter 2A), with the lowest sign in the assembly at the height prescribed for single signs.

Guidance:

- 05 *Assemblies for two or more routes, or for different directions on the same route, should be mounted in groups on a common support.*
- 06 *Where more than four route signs would be needed in a single Advance Route Turn or Directional assembly, the route signs should instead be mounted in a guide sign to minimize the need for repetition of the same information on multiple Cardinal Direction and Directional Arrow auxiliary plaques (see Figure 2D-7).*

Option:

- 07 Route Sign assemblies may be installed on the approaches to numbered routes on unnumbered roads and streets that carry an appreciable amount of traffic destined for the numbered route.
- 08 If engineering judgment indicates that groups of assemblies that include overlapping routes or multiple turns might be confusing, route signs or auxiliary signs may be omitted or combined, provided that clear directions are given to road users.
- 09 Route Sign assemblies may be omitted for routes that are part of an agency's internal numbering system, such as for maintenance or other purposes, and are not publicly mapped or intended to be used for navigational purposes by the general public. Similarly, numbered routes that are not maintained during certain times of year, such as not being plowed during winter months, may be omitted from Route Sign assemblies.

Support:

- 10 Figure 2D-8 shows typical placements of route signs.

Standard:

- 11 **On freeways, Route Sign (Marker) shall be installed beyond the end of the acceleration lane at all entrances to freeway-to-freeway interchanges, and at intermediate locations spaced at intervals at 3 to 5 miles.**

Guidance:

- 12 *On conventional highways, Route Sign (Marker) should be installed at important urban and rural intersections, as well as at intermediate locations spaced at 3 to 5 mile intervals in rural areas.*
- 13 *The Off-Interstate Business Loop (M1-2) (Marker) should not be placed on the interstate route itself.*

Section 2D.30 Junction Assembly

Standard:

- 01 A Junction assembly shall consist of a Junction auxiliary plaque (see Section 2D.13) and a route sign. The route sign shall display the number of the intersected or joined route.
- 02 The Junction assembly shall be installed in advance of every intersection where a numbered route is intersected or joined by another numbered route.

Guidance:

- 03 *In urban areas, the Junction assembly should be installed in the block preceding the intersection. In urban areas*

where speeds are low, the Junction assembly should not be installed more than 300 feet in advance of the intersection.

04 In rural areas, the Junction assembly should be installed at least 400 feet in advance of the intersection. In rural areas, the minimum distance between a Junction assembly and either a Destination sign or an Advance Route Turn assembly should be 200 feet.

05 Where speeds are high, greater spacings should be used.

Option:

06 Where two or more routes are to be indicated, a single Junction auxiliary plaque may be used for the assembly and all route signs grouped in a single mounting, or a Combination Junction (M2-2) sign (see Section 2D.14) may be used.

Section 2D.31 Advance Route Turn Assembly

Standard:

01 An Advance Route Turn assembly shall consist of a route sign, an Advance Turn Arrow or word message auxiliary plaque, and a Cardinal Direction auxiliary plaque, if needed. It shall be installed in advance of an intersection where a turn must be made to remain on the indicated route.

Option:

02 The Advance Route Turn assembly may be used to supplement the required Junction assembly in advance of intersecting routes.

~~Guidance:~~

Standard:

03 Where a multi-lane highway approaches an interchange or intersection with a numbered route, the Advance Route Turn assembly ~~should~~ **shall** be used to provide advance notice so that road users know the correct lane(s) from which to make their turn.

Option:

04 Lane Designation auxiliary plaques (see Section 2D.27) may be used in Advance Route Turn Assemblies in place of the Advance Turn Arrow auxiliary plaques where engineering judgment indicates that specific lane information associated with each route is needed and overhead signing is impracticable and the designated lane is a mandatory movement lane. An assembly with the Lane Designation auxiliary plaques may supplement or substitute for an assembly with Advance Turn Arrow auxiliary plaques.

Guidance:

05 In low-speed areas, the Advance Route Turn assembly should be installed not less than 200 feet in advance of the turn. In high-speed areas, the Advance Route Turn assembly should be installed not less than 300 feet in advance of the turn. In rural areas, the minimum distance between an Advance Route Turn assembly and either a Destination sign or a Junction assembly should be 200 feet.

Standard:

06 An assembly that includes an Advance Turn Arrow auxiliary plaque shall not be placed where there is an intersection between it and the designated turn.

Guidance:

07 Sufficient distance should be allowed between the assembly and any preceding intersection that could be mistaken for the indicated turn.

Standard:

08 The Advance Lane Assignment (G20(CA) Series or G21(CA) Series) or Interchange Guide (G77(CA) Series or G78(CA) Series) signs (refer to Figure 2D-6(CA)) shall be used on multilane cross streets approaching a freeway interchange to indicate the proper lane for the desired freeway entrance. The principal message shall be route and cardinal direction.

Guidance:

09 The names of major or control cities should be included in the G20(CA) and G21(CA) Series signs.

10 The Interchange Guide (G77(CA) Series) sign should be used on two-lane cross streets at interchange areas to direct motorists from the cross street to the freeway ramp entrances.

Option:

11 The G77(CA) Series sign may also be used at an exit ramp split.

12 The Interchange Guide (G78(CA) Series) signs (refer to Figure 2D-6(CA)) may be used to direct motorists to a single cardinal direction or destination.

Support:

- 13 The G78(CA) Series signs are ordinarily used as a follow-up to the G77(CA) Series sign.
- 14 The FREEWAY with Arrow (G82(CA)) sign (refer to Figure 2D-6(CA)) may be used to direct motorists to a freeway from a business route or from a community served by a single freeway.
- 15 The G82(CA) sign is formatted with the word FREEWAY and with a vertical, diagonal, or horizontal arrow on either side of the message.

Option:

- 16 The G82(CA) sign may be placed at appropriate locations to guide traffic to the freeway.

Section 2D.32 Directional Assembly

Standard:

- 01 **A Directional assembly shall consist of a Cardinal Direction auxiliary plaque, if needed; a route sign; and a Directional Arrow auxiliary plaque. The uses of Directional assemblies shall comply with the following:**
 - A. Turn movements (indicated in advance by an Advance Route Turn assembly) shall be marked by a Directional assembly with a route sign displaying the number of the turning route and a single-headed arrow pointing in the direction of the turn. The beginning of a route (indicated in advance by a Junction assembly) shall be marked by a Directional assembly with a route sign displaying the number of that route and a single-headed arrow pointing in the direction of the route.**
 - B. An intersected route (indicated in advance by a Junction assembly) on a crossroad where the route is designated on both legs shall be designated by:**
 - 1. Two Directional assemblies, each with a route sign displaying the number of the intersected route, a Cardinal Direction auxiliary plaque, and a single-headed arrow pointing in the direction of movement on that route; or**
 - 2. A Directional assembly with a route sign displaying the number of the intersected route and a double-headed arrow, pointing at appropriate angles to the left, right, or ahead.**
 - C. An intersected route (indicated in advance by a Junction assembly) on a side road or on a crossroad where the route is designated only on one of the legs shall be designated by a Directional assembly with a route sign displaying the number of the intersected route, a Cardinal Direction auxiliary plaque, and a single-headed arrow pointing in the direction of movement on that route.**

Guidance:

- 02 *Straight-through movements should be indicated by a Directional assembly with a route sign displaying the number of the continuing route and a vertical arrow. A Directional assembly should not be used for a straight-through movement in the absence of other assemblies indicating right or left turns, as the Confirming assembly sign beyond the intersection normally provides adequate guidance.*
- 03 *Directional assemblies should be located on the near right corner of the intersection. At major intersections and at Y or offset intersections, additional Directional assemblies should be installed on the far right or left corner to confirm the near-side assemblies. When the near-corner position is impractical for Directional assemblies, the far right corner should be the preferred alternative, with oversized signs, if necessary, for legibility. Where unusual conditions exist, the location of a Directional assembly should be determined by engineering judgment with the goal being to provide the best possible combination of view and safety.*

Support:

- 04 It is more important that guide signs be readable, and that the information and direction displayed thereon be readily understood, at the appropriate time and place than to be located with absolute uniformity.
- 05 Figure 2D-8 shows typical placements of Directional assemblies.

Section 2D.33 Confirming or Reassurance Assemblies

Standard:

- 01 **If used, Confirming or Reassurance assemblies shall consist of a Cardinal Direction auxiliary plaque and a route sign. Where the Confirming or Reassurance assembly is for an alternative route, the appropriate auxiliary plaque for an alternative route (see Section 2D.16) shall also be included in the assembly.**

Guidance:

- 02 *A Confirming assembly should be installed just beyond intersections of numbered routes. It should be placed 25 to*

200 feet beyond the far shoulder or curb line of the intersected highway.

03 *If used, Reassurance assemblies should be installed between intersections in urban areas as needed, and beyond the built-up area of any incorporated city or town.*

04 *Route signs for either confirming or reassurance purposes should be spaced at such intervals as necessary to keep road users informed of their routes.*

Section 2D.34 Trailblazer Assembly

Support:

01 Trailblazer assemblies provide directional guidance to a particular road facility from other highways in the vicinity. This guidance is accomplished by installing Trailblazer assemblies at strategic locations to indicate the direction to the nearest or most convenient point of access. The use of the word TO indicates that the road or street where the sign is posted is not a part of the indicated route, and that a road user is merely being directed progressively to the route.

Standard:

02 **A Trailblazer assembly shall consist of a TO auxiliary plaque (see Section 2D.21), a route sign for a numbered or named highway (see Section 2D.56) or an identification sign for a byway, historic trail, or auto tour route sign (see Sections 2D.57 and 2D.58), and a single-headed Directional Arrow auxiliary plaque pointing in the direction leading to the route. Where the Trailblazer assembly is for an alternative route, the appropriate auxiliary plaque for an alternative route (see Section 2D.16) shall also be included in the assembly.**

Option:

03 A Cardinal Direction auxiliary plaque (see Section 2D.15) may be used in a Trailblazer assembly where the direction leading to the route provides access only to one direction of travel for that route.

Guidance:

04 *The TO auxiliary plaque, Cardinal Direction auxiliary plaque, and Directional Arrow auxiliary plaque should be of the standard size provided for auxiliary plaques of their respective type. The route sign should be the size provided in Section 2D.11.*

Option:

05 Trailblazer assemblies may be installed with other Route Sign assemblies, or alone, in the immediate vicinity of the designated facilities.

06 CVC § 21350 authorizes the State, with the consent of the local authorities, to place and maintain appropriate signs along city streets and county roads to direct traffic to State highways.

Guidance:

07 *Cooperation with local authorities should be sought when placing Trailblazer assembly.*

Standard:

08 **Permission shall be obtained from the appropriate local agency for all signs placed outside the State right-of-way.**

Support:

09 For all signs placed outside of the State right-of-way, refer to Section 2A.101(CA).

Option:

10 In metropolitan areas, freeway name may be used only if they are well known, commonly used, and omitting them would cause confusion.

Standard:

11 **The Trailblazer format shall include the appropriate route shield.**

DESTINATION AND DISTANCE SIGNS

Section 2D.35 Destination and Distance Signs

Support:

- 01 In addition to guidance by route numbers, it is desirable to supply the road user information concerning the destinations that can be reached by way of numbered or unnumbered routes. This is done by means of Destination signs and Distance signs.

01a For California Destination and Distance Signs (G1(CA) Series, G8(CA) Series, and G86(CA) Series), refer to Figure 2D-9(CA).

Option:

- 02 Route shields and cardinal directions may be included on the Destination sign with the destinations and arrows.

Guidance:

- 03 *If Route shields and cardinal directions are included on a Destination sign, the height of the Route shields should be at least two times the height of the upper-case letters of the principal legend and not less than 18 inches, and the letter height of cardinal directions should be at least the minimum letter height specified for these signs.*
- 04 *If used, destination names on low-volume rural roads should be as specific and descriptive as possible. Destinations such as campgrounds, ranger stations, and recreational areas should be clearly indicated so that they are not interpreted to be communities or locations with road user services.*

Section 2D.36 Destination Signs (D1 Series)

Standard:

- 01 **Except on approaches to interchanges (see Section 2D.49), the Destination (D1-1 through D1-3) signs (see Figure 2D-9), if used, shall be a horizontal rectangle displaying the name of a city, town, village, or other traffic generator, and a directional arrow.**

Option:

- 02 The distance (see Section 2D.43) to the place named may also be displayed on the Destination (D1-1a through D1-3a) signs (see Figure 2D-9). If several destinations are to be displayed at a single point, the several names may be placed on a single sign with an arrow (and the distance, if desired) for each name. If more than one destination lies in the same direction, a single arrow may be used for such a group of destinations.

Guidance:

- 03 *Adequate separation should be made between any destinations or group of destinations in one direction and those in other directions by suitable design of the arrow, spacing of lines of legend, heavy lines entirely across the sign, or separate signs.*

Support:

- 04 Separation of destinations by direction by the use of a horizontal separator line can enhance the readability of a Destination sign by relating an arrow and its corresponding destination(s) and by eliminating the need for multiple arrows that point in the same direction and excessive space between lines of legend.

Standard:

- 05 **Except as otherwise provided in this Manual, an arrow pointing to the right shall be at the extreme right of the sign, and an arrow pointing left or up shall be at the extreme left. The distance numerals, if used, shall be placed to the right of the destination names.**

Option:

- 06 An arrow pointing up may be placed at the extreme right of the sign when the sign is mounted to the left of the traffic to which it applies.

Guidance:

- 07 *Unless a sloping arrow will convey a clearer indication of the direction to be followed, the directional arrows should be horizontal or vertical.*

- 08 *If several individual name signs are assembled into a group, all signs in the assembly should be of the same horizontal width.*

- 09 *Destination signs should be used:*

- A. *At the intersections of U.S. or State numbered routes with Interstate, U.S., or State numbered routes; and*
- B. *At points where they serve to direct traffic from U.S. or State numbered routes to the business section of towns, or to other destinations reached by unnumbered routes.*

Standard:

- 10 **Where a total of three or fewer destinations are displayed on the Advance guide (see Section 2E.23) and Supplemental guide (see Section 2E.51) signs, no more than three destination names shall be displayed on a Destination sign. Where four destinations are displayed on the Advance guide and Supplemental guide signs, no more than four destination names shall be displayed on a Destination sign.**

Guidance:

- 11 *If space permits, four destinations should be displayed on two separate signs at two separate locations.*

Option:

- 12 Where space does not permit, or where all four destinations are in one direction, a single sign may be used. Where a single sign is used and all destinations are in the same direction, the arrow may be placed below the destinations for the purpose of enhancing the conspicuity of the arrow.

Standard:

- 13 **Where a single four-name sign assembly is used, a heavy line approximating the width of the sign border entirely across the sign or separate signs shall be used to separate destinations by direction.**

Guidance:

- 14 *The closest destination lying straight ahead should be at the top of the sign or assembly, and below it the closest destinations to the left and to the right, in that order. The destination displayed for each direction should ordinarily be the next county seat or the next principal city, rather than a more distant destination. In the case of overlapping routes, only one destination should be displayed in each direction for each route.*

Standard:

- 15 **If more than one destination is displayed in the same direction, the name of a nearer destination shall be displayed above the name of a destination that is farther away.**

Support:

- 16 Overhead destination guide signs are sometimes helpful on multi-lane conventional roadways with complex or unusual roadway alignments or geometrics at intersecting highways to provide positive direction to destinations and to assign lanes to be used for destinations.

Option:

- 17 Overhead Destination signs may be used to provide lane assignment and destination information for some or all of the lanes on the approach to a multi-lane intersection. Destination information may include cardinal directions, route numbers, street names, and/or place names.

- 18 Overhead signs using the Arrow-per-Lane sign design configuration (see Figure 2D-10) may be used to provide lane assignments for some or all lane destinations at the approach to a multi-lane intersection (see Section 2D.37).

Support:

- 19 Refer to Section 2E.07 for the Designation of Destinations and control cities.

Standard:

- 20 **If there are more eligible destinations at a given intersection than can be accommodated (under the limitations mentioned in this section), they shall compete for signs on the basis of traffic volumes to these destinations.**

Guidance:

- 21 *Destinations should be signed by the route requiring the least amount of time to travel from the nearest State highway.*

Standard:

- 22 **Criteria for supplemental destination signs shall be as shown in Table 2D-101(CA).**

- 23 **Signs shall not be provided for privately owned, profit-making enterprises regardless of their size.**

Option:

- 24 If unusual operational or safety issues are identified that could be mitigated by signing to the private enterprise, signs on State highways may be used with the approval of the Caltrans' District Director.

Standard:

- 25 **Signs to shopping centers shall not be allowed.**

- 26 **When a street or facility name change is made on an existing sign on a State highway primarily for the benefit of the requestor, with no or only minor improvement of traffic flow, the costs of materials and labor for such change, plus the current overhead assessment rate as determined by the Accounting Service Center to cover administrative overhead, shall be paid by the requestor. Such changes shall require approval of the Caltrans' District Director.**

Option:

27 Street name changes on signs on State highways that are clearly in the best interest of the motorists and the State may also be approved by the Caltrans' District Director.

Standard:

28 **New signs, if warranted, shall be installed at State expense.**

Option:

29 Signs to a public or nonprofit facility may be installed and maintained on conventional State highways in a "city street" configuration, by local governmental bodies under an encroachment permit.

31 The Veterans National Cemetery (G86-14(CA)) or the Veterans Home of California (G86-16(CA)) signs may be placed, one in each direction of travel from and on the nearest State highway, based upon a request from the Federal Department of Veterans Affairs.

Supplemental Signing for City Civic Center Areas

Option:

32 Signs to City Civic Center areas may be installed on State highways for incorporated cities.

Standard:

33 **The city shall be incorporated and contiguous with the State highway right-of-way.**

34 **The city shall adopt a resolution requesting installation of signs on specific State highways for the purpose of guiding motorists to the city's civic center area, otherwise commonly referred to as downtown, central business district, city center, or city hall. The resolution shall include the appropriate wording for the legend on the sign.**

35 **The route from State highways to City Hall shall not be more than 3 miles.**

Option:

36 When requested by resolution, signs may be placed on all State highways, which are within 3 miles of City Hall.

Standard:

37 **Only one sign shall be installed in each direction of travel for each State highway so requested. If any portion of the route from a State highway to the Civic Center area is under the jurisdiction of another city, both cities shall agree in writing that signs can be installed on the State highway.**

Guidance:

38 *Trailblazer assemblies should be in place on local streets and roads prior to installation of signs on State highways.*

Option:

39 The legend may be "(city name) Civic Center", "Downtown (city name)", "(city name) Central Business District," "(city name) City Center," "(city name) City Hall," or a very similar message.

Standard:

40 **Only one legend shall be selected and used on all corresponding State highways for a particular Civic Center area.**

Guidance:

41 *Signs should be roadside signs. Where possible, signs should be supplemental plaques mounted on existing roadside Supplemental Destination (G86(CA) Series) signs and NEXT X EXITS (E9) signs.*

Option:

42 When this is not reasonable, signs may be separate roadside signs.

43 Signs may be mounted overhead if there is no reasonable roadside alternative.

Standard:

44 **The city shall have the signs installed under an encroachment permit and shall pay all costs for fabrication and installation. Caltrans shall maintain these signs.**

45 **Signs shall comply with this Manual, as well as applicable Caltrans' policies, specifications, and standards.**

Bypassed Communities

46 § 100.9 of the SHC provides that appropriate directional signs shall be installed directing motorists to bypassed cities and business districts. This law requires that all signs, except Route shields, be left in place on the old highway, regardless of its status as a business route.

Guidance:

47 *When relinquishing any bypassed highway, the city or county concerned should be advised regarding continued maintenance of*

such signs by the local agencies.

Signing for Indian Reservations and Rancherias

Standard:

- 48 **Indian Reservations and Rancherias shall be signed in a like manner as cities and unincorporated communities for supplemental destination and miscellaneous guide signs. Only the official name of the federally recognized Indian Tribe, Reservation, or Rancheria shall be used on signs. The signs shall be white with retroreflective legend and border on green retroreflective background.**
- 49 **The signs and sign messages shall conform to the requirements of the California Outdoor Advertising Act, which prohibits advertising displays within the right-of-way of any State highway.**

Section 2D.37 Overhead Arrow-per-Lane Destination Guide Signs

Support:

- 01 **Overhead Arrow-per-Lane destination guide signs are sometimes used on multi-lane conventional roadways to provide positive direction to destinations and to indicate lanes to be used for those destinations. These locations typically include complex or unusual roadway alignments or geometrics. Overhead Arrow-per-Lane signs on conventional roads do not always have arrows for every lane. Sheet 2 of Figure 2A-4 and Sheet 1 of Figure 2D-10 show examples of the use of an Overhead Arrow-per-Lane Guide sign on a conventional road. Unlike the Combined Lane-Use/Destination (D15-1) sign (see Section 2D.38), Overhead Arrow-per-Lane signs can be used to provide lane assignments where the designated lane is not a mandatory movement lane.**

Option:

- 02 **At complex intersection approaches involving multiple lanes and destinations, an Overhead Arrow-per-Lane destination guide sign may be used to provide destination information for some or all lanes. Destination information may include cardinal direction, route numbers, street names, and/or place names.**

Standard:

- 03 **Overhead Arrow-per-Lane signs for conventional roads shall only be used for multi-lane approaches to intersections that have an option lane.**
- 04 **Overhead Arrow-per-Lane guide signs used on conventional roads shall include as a minimum one arrow above each mandatory turn lane and a bifurcated arrow for the option lane from which both the through and turning movements are allowed.**

Guidance:

- 05 *Displaying an arrow over each through movement lane that does not allow turning should be considered for providing additional positive guidance.*

Standard:

- 06 **Overhead Arrow-per-Lane signs for conventional roads shall be designed in accordance with the following criteria:**
- A. The shaft of each arrow shall be located over the approximate center of the lane to which it applies.**
 - B. Arrows for continuing through lanes shall be vertically upward-pointing (see Figure 2D-10).**
 - C. The arrow for a lane that must turn shall be curved in the direction of the turn and shall be accompanied by a black-on-yellow ONLY (E11-1b) sign panel (see Figure 2E-17) adjacent to the lower end of the arrow shaft.**
 - D. The arrow for an optional exit lane that also carries the through route shall have a single shaft that bifurcates into a vertically upward-pointing arrow and a curving arrow corresponding to the configuration of the through and turn lanes.**
 - E. A vertical white line shall be used to separate the route shields and destinations for the two diverging movements from each other.**
 - F. The number of lanes displayed on a sign shall correspond to the number of lanes being signed for at the location of that sign. An advance sign shall not depict lanes that are added downstream of a sign location.**

Guidance:

- 07 *Overhead Arrow-per-Lane guide signs used on conventional roads should be designed in accordance with the following additional criteria:*
- A. No more than one destination should be displayed for each movement, and no more than three destinations*

should be displayed per sign.

- B. *The arrowhead(s) for the diverging movement should be positioned lower on the sign than the arrowhead(s) for the movement that continues straight ahead.*
 - C. *Route shields, cardinal directions, and destinations should be positioned on the sign such that they are clearly related to the arrowhead(s) for the movement to which they apply.*
 - D. *The vertical white line that is used to separate the route shields and destinations for the two diverging movements from each other should not descend below the top of the arrowheads for the through lanes, and should be positioned approximately halfway between the diverging arrowheads for the optional movement lane.*
- 08 *Destination information should be kept to a minimum necessary to provide positive guidance without overloading the road user.*

Standard:

- 09 **The minimum height of arrows on an Overhead Arrow-per-Lane sign used on a conventional road shall be as shown in Table 2D-5.**

Guidance:

- 10 *When letter heights and other sign legend elements are enlarged there should be an corresponding increase in the arrow size used.*

Option:

- 11 *Curved-stem arrows may be substituted on Overhead Arrow-per-Lane Signs on multi-lane approaches to a circular intersection with an option lane (see Section 2D.39).*

Section 2D.38 Combination Lane-Use/Destination Overhead Guide Sign (D15-1)

Option:

- 01 *At intersection approaches involving multiple turn lanes and destinations, a Combination Lane- Use/Destination (D15-1) overhead guide sign (see Figure 2D-9) that combines a lane-use regulatory sign with destination information such as a cardinal direction, a route number, a street name, and/or a place name may be used.*

Support:

- 02 *At such locations, the combined information on the D15-1 signs can be even more effective than separate lane-use and guide signs for conveying to unfamiliar drivers which lane or lanes to use for a particular destination.*
- 03 *Figure 2D-9 shows an example of a D15-1 sign that combines lane-use and street name information and an example of a D15-1 sign that combines lane-use, cardinal direction, and route number information.*

Standard:

- 04 **The Combination Lane-Use/Destination (D15-1) overhead guide sign shall be used only where the designated lane is a mandatory movement lane. The D15-1 sign shall not be used for lanes with optional movements.**
- 05 **The D15-1 sign shall have a green background with a white border. As shown in Figure 2D-9, the lane-use sign (see Chapter 2B) shall be placed near the bottom of the sign and the destination information shall be placed near the top of the sign. The D15-1 sign shall be located over the approximate center of the lane to which it applies.**

Section 2D.39 Destination Signs at Circular Intersections

Standard:

- 01 **Destination signs that are used at circular intersections shall comply with the provisions of Section 2D.36, except as provided in this Section.**

Option:

- 02 *Exit Destination (D1-1d and D1-1e) signs (see Figure 2D-11) with diagonal upward-pointing arrows or Directional assemblies (see Section 2D.32) may be used to designate a particular exit from a circular intersection.*
- 03 *Destination (D1-2d and D1-3d) signs (see Figure 2D-11) with curved-stem arrows may be used on approaches to circular intersections to represent the left-turn movements.*
- 04 *Curved-stem arrows on circular intersection destination signs may point in diagonal directions to depict the location of an exit relative to the approach roadway and entry into the intersection.*
- 05 *An Overhead Arrow-per-Lane Destination sign (see Section 2D.37) with curved-stem arrows may be used on multi-lane approaches to circular intersections that have an option lane.*
- 06 *A Destination (D1-5 or D1-5a) sign (see Figure 2D-11) with a diagram of the circular intersection may be used on*

approaches to circular intersections.

Guidance:

- 07 *If curved-stem arrows are used on destination signs, then this arrow type should also be used consistently on any regulatory lane-use signs (see Chapter 2B), Directional assemblies (see Section 2D.32), and pavement markings (see Part 3) for a particular destination or movement.*

Support:

- 08 Figure 2D-12 shows examples of guide signing for circular intersections.

- 09 Circular Intersection Diagrammatic (D1-5 or D1-5a) signs might be preferable where space is available and where the geometry of the circular intersection is non-typical, such as where more than four legs are present or where the legs are not at approximately 90-degree angles to each other. In such cases, minimizing the amount of legend for each destination and designing the sign so that the arrows for each destination clearly align with the roadway geometry will aid road user understanding of the sign and navigation through the area.

Standard:

- 10 **If used, the Circular Intersection Diagrammatic signs shall not depict the number of lanes within the circulatory roadway of the intersection, or on its approaches or exits, through the use of lane lines, multiple arrow shafts for the same movement, or other methods.**

Support:

- 11 Chapter 2B contains information regarding regulatory signs at circular intersections, Chapter 2C contains information regarding warning signs at circular intersections, and Chapter 3D contains information regarding pavement markings at circular intersections.

Section 2D.40 Destination Signs at Jughandles

Standard:

- 01 **Destination signs that are used at jughandles shall comply with the provisions of Section 2D.36.**

Support:

- 02 Section 2B.35 contains information regarding regulatory signs for jughandle turns. Figure 2B-9 shows examples of regulatory and destination guide signing for various types of jughandle turns.

Section 2D.41 Destination Signs at Intersections with Indirect Turning Movements

Guidance:

- 01 *A system of guide signs along with associated lane markings should be used to direct traffic through intersections with indirect turning movements.*

Support:

- 02 Figure 2D-13 shows examples of destination guide signing for intersections with indirect turning movements.

Section 2D.42 Location of Destination Signs

Guidance:

- 01 *When used in high-speed areas, Destination signs should be located 200 feet or more in advance of the intersection, and following any Junction or Advance Route Turn assemblies that might be required. In rural areas, the minimum distance between a Destination sign and either an Advance Route Turn assembly or a Junction assembly should be 200 feet.*

Option:

- 02 In urban areas, advance distances shorter than those specified in Paragraph 1 of this Section may be used.

- 03 Because the Destination sign is of lesser importance than the Junction, Advance Route Turn, or Directional assemblies, the Destination sign may be eliminated where the distance in which to provide adequate sign spacing is limited.

Support:

- 04 Figure 2D-8 shows typical placements of Destination signs.

Section 2D.43 Distance Signs (D2 Series)

Standard:

- 01 **If used, the Distance (D2-1 through D2-3) signs (see Figure 2D-9) shall be a horizontal rectangle of a size**

appropriate for the required legend, displaying the names of no more than three cities, towns, junctions, or other traffic generators, and the distance (to the nearest mile) to those places.

02 **The distance numerals shall be placed to the right of the destination names as shown in Figure 2D-9.**

Guidance:

03 *The distance displayed should be selected on a case-by-case basis by the jurisdiction that owns the road or by statewide policy. A well-defined central area or central business district should be used where one exists. In other cases, the layout of the community should be considered in relation to the highway being signed and the decision based on where it appears that most drivers would feel that they are in the center of the community in question.*

04 *The top name on the Distance sign should be that of the next place on the route having a post office or a railroad station, a route number or name of an intersected highway, or any other significant geographical identity. The bottom name on the sign should be that of the next major destination or control city. If three destinations are displayed, the middle line should be used to indicate communities of general interest along the route or important route junctions.*

Option:

05 *The choice of names for the middle line may be varied on successive Distance signs to give road users additional information concerning communities served by the route.*

Guidance:

06 *The control city should remain the same on all successive Distance signs throughout the length of the route until that city is reached.*

Option:

07 *If more than one distant point may properly be designated, such as where the route divides at some distance ahead to serve two destinations of similar importance, and if these two destinations cannot appear on the same sign, the two names may be alternated on successive signs.*

Guidance:

08 *On a route continuing into another State, destinations in the adjacent State ~~may~~ should be displayed.*

Support:

09 *Refer to Section 2E.07 for the Designation of Destinations and control cities.*

Section 2D.44 Location of Distance Signs

Guidance:

01 *If used, Distance signs should be installed on important routes leaving municipalities and just beyond intersections of numbered routes in rural areas. If used, they should be placed just outside the municipal limits or at the edge of the built-up area if it extends beyond the limits.*

02 *Where overlapping routes separate a short distance from the municipal limits, the Distance sign at the municipal limits should be omitted. The Distance sign should be installed approximately 300 feet beyond the separation of the two routes.*

03 *Where, just outside of an incorporated municipality, two routes are concurrent and continue concurrently to the next incorporated municipality, the top name on the Distance sign should be that of the place where the routes separate; the bottom name should be that of the city to which the greater part of the through traffic is destined.*

Support:

04 *Figures 2D-7 and 2D-8 show typical placements of Distance signs.*

Guidance:

05 *The Distance (G5(CA)) sign should be placed at approximately 10-mile intervals, unless the destinations have changed. Distances to the same destinations should not be displayed more frequently than every 5 miles.*

Option:

06 *The Destination and Street Name with Arrow (G8(CA) Series) signs may be used in advance of intersections on conventional highways.*

STREET NAME AND PARKING SIGNS

Section 2D.45 Street Name Signs (D3-1 and D3-1a)

Support:

- 01 Street Name signs at intersections and along roadways provide road users with important navigation information. Section 2H.10 contains information about signs used to identify the names of grade-separated streets, railways, bikeways, or other transportation facilities.

Guidance:

- 02 *Street Name (D3-1 or D3-1a) signs (see Figure 2D-14) should be installed in urban areas at all street intersections regardless of other route signs that might be present and should be installed in rural areas to identify important roads that are not otherwise signed.*

Guidance:

- 03 *To minimize wrong-way movements onto freeway or expressway exit ramps, Street Name signs should not be used at the intersection of a freeway or expressway exit ramp with the crossroad to display the name of the freeway or expressway to traffic on the crossroad.*

Option:

- 04 For streets that are part of a U.S., State, or county numbered route, a D3-1a Street Name sign (see Figure 2D-14) that incorporates a route shield may be used to assist road users who might not otherwise be able to associate the name of the street with the route number.

Standard:

- 05 **The lettering for names of streets and highways on Street Name signs shall be composed of a combination of lower-case letters with initial upper-case letters (see Section 2A.08).**

Guidance:

- 06 *The determination of letter heights to be used on Street Name signs should be based on, but not limited to, the following considerations:*

- A. *Use of Advance Street Name signs (see Section 2D.46);*
- B. *Number of lanes on the intersection approach;*
- C. *Length of turn lanes;*
- D. *Distance the Street Name sign is located across the intersection (if a sign is not provided on the near side of the intersection).*

- 07 *Letter heights on street name signs should be as shown in Table 2D-6.*

Option:

- 08 For two-lane local roadways with speed limits of 25 mph or less, the lettering on post-mounted Street Name signs may be composed of initial upper-case letters at least 4 inches in height and lower-case letters at least 3 inches in nominal loop height.

Support:

- 09 The recommended minimum letter heights for Street Name signs are summarized in Table 2D-6. The speed limits specified and the recommended minimum letter heights provided in this Section apply to the roadway that each Street Name sign faces rather than to the street that has its name displayed on the Street Name sign. The letter heights specified in Table 2D-6 are the initial upper-case letter of a mixed-case legend.

- 09a [Refer to FHWA's List of Known Errors for error in Paragraph 9 text. Refer to Section 1A.04 for more details.](#)

- 10 A minimum upper-case letter height of 12 inches with a lower-case nominal loop height of 9 inches is recommended for all overhead Street Name signs regardless of posted speed limit as Street Name signs generally require greater legibility distances for road users to properly react.

Option:

- 11 Each Street Name sign in a sign assembly may use different letter heights determined by the speed limit of the street that each sign faces.

- 12 The letter height of the street name descriptor (such as St, Ave, or Rd), the directional legend (such as NW), or any other supplemental legend (such as block or house numbers) on the D3-1 and D3-1a signs may be smaller than that of the street name itself.

Guidance:

- 13 *The letter height of the street name descriptor, the directional legend, or any other supplemental legend on the D3-1*

and D3-1a signs should be at least two-thirds of the letter height of the street name itself, but not less than 3 inches for the initial upper-case letters and not less than 2.25 inches for the nominal loop height of the lower-case letters.

- 14 *Conventional abbreviations (see Section 1D.08) should be used except for the street name itself. Acceptable abbreviations for street name descriptors such as “Ave” for Avenue and “Blvd” for Boulevard should be as provided in Table 2D-3 (see Section 2D.07). The street name descriptors that are provided in Table 2D-4 should not be abbreviated (see Section 2D.07).*

Option:

- 15 Block or house numbers may be displayed as a supplemental legend on a Street Name sign to aid emergency responders and road users in locating addresses.

Guidance:

- 16 *If block or house numbers are displayed on a Street Name sign where only a single Street Name sign is provided for the crossroad, the block or house numbers for the left and right blocks should be positioned at the left and right sides of the sign, respectively.*

- 17 *If block or house numbers are displayed on a Street Name sign where two Street Name signs are provided for the crossroad, such as on diagonally opposite corners of an intersection, each Street Name sign should display only the block or house numbers associated with that block of the crossroad.*

Option:

- 18 A pictograph (see definition in Section 1C.02) representing the municipality, in accordance with the provisions of Section 2A.04 may be used on a D3-1 sign. For street networks under the primary jurisdiction of another governmental-approved entity, such as within a college or university campus, within a military base, or within a transportation facility (such as an airport or port), a pictograph representing that entity, in accordance with the provisions of Section 2A.04, may be used on a D3-1 sign within the jurisdictional boundaries of that entity.

Standard:

- 19 **Pictographs shall not be displayed on D3-1a or Advance Street Name (D3-2) signs (see Section 2D.46).**

- 20 **If a pictograph is used on a D3-1 sign, the height and width of the pictograph shall not exceed the upper-case letter height of the principal legend of the sign.**

Guidance:

- 21 *The pictograph should be positioned to the left of the street name.*

- 22 *Pictographs should not be used on a D3-1 sign that contains directional arrows.*

Standard:

- 23 **The Street Name sign shall be retroreflective or illuminated in accordance with the provisions of Section 2A.21.**

Option:

- 24 The border may be omitted from a post-mounted Street Name sign.

Guidance:

- 25 *The decision to omit the border from a post-mounted Street Name sign should be based on such factors as the visual complexity of the environment and the degree of conspicuity needed to provide for adequate recognition of the sign by the road user.*

Option:

- 26 An alternative background color (see Paragraph 28 of this Section) other than the standard guide sign color of green may be used for Street Name (D3-1 or D3-1a) signs where the highway agency determines this is necessary to assist road users in determining jurisdictional authority for roads.

Standard:

- 27 **Alternative background colors shall not be used for Advance Street Name (D3-2) signs (see Section 2D.46).**

- 28 **The only acceptable alternative background colors for Street Name (D3-1 or D3-1a) signs shall be blue, brown, or white. Regardless of whether green, blue, or brown is used as the background color for Street Name (D3-1 or D3-1a) signs, the legend (and border, if used) shall be white. For Street Name signs that use a white background, the legend (and border, if used) shall be black.**

Guidance:

- 29 *An alternative background color for Street Name signs, if used, should be applied to the Street Name (D3-1 or D3-1a) signs on all roadways under the jurisdiction of a particular highway agency.*

- 30 *In business or commercial areas and on principal arterials, Street Name signs should be placed at least on*

diagonally opposite corners. In residential areas, at least one Street Name sign should be mounted at each intersection. Signs naming both streets should be installed at each intersection.

Standard:

30a ~~They~~ **Street Name signs shall be mounted with their faces parallel to the streets they name.**

Guidance:

31 *Where used, Street Name signs should display their legends on both the front and back sides of the sign to facilitate navigation for pedestrians.*

Option:

32 To optimize visibility, Street Name signs may be mounted overhead. Street Name signs may also be placed above a regulatory or STOP or YIELD sign with no required vertical separation.

Guidance:

33 *In urban or suburban areas, especially where Advance Street Name signs for signalized and other major intersections are not used, the use of overhead Street Name signs should be strongly considered.*

Option:

34 At intersection crossroads where the same road has two different street names for each direction of travel, both street names may be displayed on the same Street Name (D3-1) sign along with Type D directional arrows, except where one arrow would point in a direction opposing the flow of traffic on a one-way street or where a turn in the direction of the arrow is not allowed.

35 On lower-speed roadways, historic street name signs within locally identified historic districts that are consistent with the criteria contained in 36 CFR 60.4 for such structures and districts may remain in service without complying with the provisions of Paragraphs 3, 4, 6, 9, 12 through 14, and 18 through 20 of this Section.

Support:

35a Refer to FHWA's List of Known Errors for error in Paragraph 35 text. Refer to Section 1A.04 for more details.

Guidance:

36 *Streets or segments of a street that have been memorialized or dedicated should not use a second Street Name sign to display the memorial or dedication name (see Section 2D.56). When signed, the Memorial or Dedication sign should be located to minimize its conspicuity to and potential for confusion.*

Support:

37 Information regarding the use of street names on supplemental plaques for use with intersection-related warning signs is contained in Section 2C.65.

38 Information regarding the identification of overcrossing and undercrossing roadways at grade separations is contained in Section 2H.10.

Standard:

39 **Street Name signs shall be placed where clearly visible to traffic approaching from all directions at all signalized intersections. Refer to CVC § 21366.**

Option:

40 Where structurally adequate luminaire poles are available, the street name signs may be mounted on these poles at a height of approximately 15 feet. Refer to Caltrans' Standard Plans.

Section 2D.46 Advance Street Name Signs (D3-2 Series)

Support:

01 Advance Street Name (D3-2) signs (see Figure 2D-14) identify a downstream intersection. Although this is often the next intersection, it could also be several intersections away in cases where the next signalized intersection is referenced.

Standard:

02 **Advance Street Name (D3-2) signs, if used, shall supplement rather than be used instead of the Street Name (D3-1 or D3-1a) signs at the intersection.**

Option:

03 Advance Street Name (D3-2) signs may be installed in advance of signalized or unsignalized intersections to provide road users with advance information to identify the name(s) of the next intersecting street to prepare for crossing traffic and to facilitate timely deceleration and/or lane changing in preparation for a turn.

Guidance:

Standard:

- 04 **On arterial highways in rural areas, Advance Street Name signs ~~should~~ **shall** be used in advance of all signalized intersections and in advance of all intersections with mandatory turn lanes.**

Guidance:

- 05 *In urban areas, Advance Street Name signs should be used in advance of all signalized intersections on major arterial streets, except where signalized intersections are so closely spaced that advance placement of the signs is impracticable.*
- 06 *The heights of the letters on Advance Street Name signs should comply with the provisions of Section 2D.05.*

Standard:

- 07 **If used, Advance Street Name signs shall have a white legend and border on a green background. Alternative background colors shall not be used on Advance Street Name signs.**
- 08 **If used, Advance Street Name signs shall provide the name(s) of the intersecting street(s) on the top line(s) of the legend and the distance to the intersecting streets or messages such as NEXT SIGNAL, NEXT INTERSECTION, NEXT CIRCLE, or directional arrow(s) on the bottom line of the legend.**
- 09 **Pictographs shall not be displayed on Advance Street Name signs.**

Option:

- 10 Directional arrow(s) may be placed to the right or left of the street name or message such as NEXT SIGNAL, as appropriate, rather than on the bottom line of the legend. Curved-stem arrows may be used on Advance Street Name signs on approaches to circular intersections.
- 11 For intersecting crossroads where the same road has a different street name for each direction of travel, the different street names may be displayed on the same Advance Street Name sign along with directional arrows.
- 12 In advance of two closely-spaced intersections where it is impracticable to install separate Advance Street Name signs, the Advance Street Name sign may include the street names for both intersections along with appropriate supplemental legends for both street names, such as NEXT INTERSECTION, 2ND INTERSECTION, or NEXT LEFT and NEXT RIGHT, or directional arrows.

Guidance:

- 13 *If two street names are used on the Advance Street Name sign, the street names should be displayed in the following order:*
- A. *For a single intersection where the same road has a different street name for each direction of travel, the name of the street to the left should be displayed above the name of the street to the right; or*
 - B. *For two closely-spaced intersections, the name of the first street encountered should be displayed above the name of the second street encountered, and the arrow associated with the second street encountered should be an advance arrow, such as the arrow shown on the W16-6P arrow plaque (see Figure 2C-16).*

Option:

- 14 An Advance Street Name (W16-8P or W16-8aP) plaque (see Section 2C.65) with black legend on a yellow background, installed to supplement an Intersection (W2 series) or Advance Traffic Control (W3 series) warning sign may be used instead of an Advance Street Name guide sign.
- 15 **The Destination and Street Name with Arrow (G8(CA) Series) signs may be used in advance of intersections on conventional highways.**

Section 2D.47 Parking Area Guide Sign (D4-1)

Option:

- 01 The Parking Area (D4-1) guide sign (see Figure 2D-14) may be used to show the direction to a nearby public parking area or parking facility.

Standard:

- 02 **The smaller size of 18 x 15 inches for the Parking Area guide sign shall be limited to minor, low- speed streets.**

Guidance:

- 03 *If used, the Parking Area guide sign should be installed on major thoroughfares at the nearest point of access to the parking facility and where it can advise drivers of a place to park. The sign should not be used more than four blocks from the parking area.*

Section 2D.48 PARK - RIDE Sign (D4-2)

Option:

- 01 A PARK - RIDE (D4-2) sign (see Figure 2D-14) may be used to direct road users to park-and-ride facilities.

Standard:

- 02 The signs shall display the word message **PARK - RIDE** and direction information (arrow or word message).

Option:

- 03 PARK - RIDE signs may display the local transit pictograph and/or carpool symbol.

Standard:

- 04 If used, the local transit pictograph and/or carpool symbol shall be located in the top part of the sign above the message **PARK - RIDE**. In no case shall the vertical dimension of the local transit pictograph and/or carpool symbol exceed 18 inches.

Guidance:

- 05 *If the function of the parking facility is to provide parking for persons using public transportation, the local transit pictograph should be used on the guide sign. If the function of the parking facility is to serve carpool riders, the carpool symbol should be used on the guide sign. If the parking facility serves both functions, both the pictograph and carpool symbol should be used.*

Standard:

- 06 These signs shall have a white legend and border on a rectangular green background. The carpool symbol shall be as shown for the D4-2 sign. The color of the local transit pictograph shall be selected by the local transit authority.

Option:

- 07 To increase the target value and contrast of the local transit pictograph, and to allow the local transit pictograph to retain its distinctive color and shape, the pictograph may be included within a white border or placed on a white background.

FREEWAY INTERCHANGE APPROACH SIGNS

Section 2D.49 Signing on Conventional Roads on Approaches to Interchanges

Support:

- 01 Because there are a number of different ramp configurations that are commonly used at interchanges with conventional roads, drivers on the conventional road cannot reliably predict whether they will be required to turn left or right in order to enter the correct ramp to access the freeway or expressway in the desired direction of travel. Consistently applied signing for conventional road approaches to freeway or expressway interchanges is highly desirable.

Standard:

- 02 **On multi-lane conventional roads approaching an interchange, guide signs shall be provided to identify which direction of turn is to be made and/or which specific lane to use for ramp access to each direction of the freeway or expressway.**

Guidance:

- 03 *The signing of conventional roads with one lane of traffic approaching an interchange should consist of a sequence containing the following signs (see Figure 2D-15):*

- A. *Junction Assembly*
- B. *Destination sign*
- C. *Directional Assembly or Entrance Direction sign for the first ramp*
- D. *Advance Route Turn Assembly or Advance Entrance Direction sign with an advance turn arrow*
- E. *Directional Assembly or Entrance Direction sign for the second ramp*

Standard:

- 04 **If used, the Entrance Direction sign shall consist of a white legend and border on a green background. It shall contain the freeway or expressway route shield(s), cardinal direction, and directional arrow(s).**

Option:

- 05 The Entrance Direction sign may contain a destination(s) and/or an action message such as NEXT RIGHT.
- 06 At minor interchanges (see Section 2E.30), the following sequence of signs may be used (see Figure ~~2D-16~~ 2D-15):
- A. *Junction Assembly*
 - B. *Directional Assembly for the first ramp*
 - C. *Directional Assembly for the second ramp*

Guidance:

- 07 *On multi-lane conventional roads approaching an interchange, the sign sequence should contain the following signs (see Figures 2D-17 through 2D-19):*

- A. *Junction Assembly*
- B. *Advance Entrance Direction sign(s) for both directions (if applicable) of travel on the freeway or expressway*
- C. *Entrance Direction sign for first ramp*
- D. *Advance Turn Assembly*
- E. *Entrance Direction sign for the second ramp*

Support:

- 08 Advance Entrance Direction signs are used to direct road users to the appropriate lane(s).

Standard:

- 09 **The Advance Entrance Direction sign shall consist of a white legend and border on a green background. It shall contain the freeway or expressway route shield(s) and cardinal direction(s).**

Option:

- 10 The Advance Entrance Direction sign may have destinations, directional arrows, and/or an action message such as KEEP LEFT, NEXT LEFT, or SECOND RIGHT. Signs in this sequence may be mounted overhead to improve visibility as shown in Figures 2D-17 through 2D-19.

Support:

- 11 A post-mounted Advance Entrance Direction diagrammatic sign (see Figure 2D-20), within the sequence of approach guide signing described in Paragraphs 3, 6, and 7 of this Section, might be helpful in depicting the location of a freeway or expressway entrance ramp that is in close proximity to an intervening intersection on the same side of the approach roadway and where signing for only the ramp might cause confusion to road users.

Standard:

- 12 If used, the post-mounted Advance Entrance Direction diagrammatic sign shall display only the two successive turns from the same side of the roadway, one of which shall be the entrance ramp. The post-mounted Advance Entrance Direction sign shall depict only the successive turns and shall not depict lane use with lane lines, multiple arrow shafts for the approach roadway, action messages, or other representations.

Support:

- 13 Example guide signing for a transposed-alignment crossroad at a diamond interchange is shown in Figure 2D-21. Example guide signing for a single-point urban intersection at a diamond interchange is shown in Figure 2D-22.
- 14 Section 2D.50 contains information regarding the use of a Directional assembly or a FREEWAY ENTRANCE sign to mark the entrance to a freeway or expressway at the far corner of an intersection.

Section 2D.50 Freeway Entrance Signs (D13-3 and D13-3a)

Option:

- 01 FREEWAY ENTRANCE (D13-3) signs or FREEWAY ENTRANCE with diagonal downward-pointing arrow (D13-3a) signs (see Figure 2D-18) may be used on entrance ramps near the crossroad to inform road users of the freeway or expressway entrance, as appropriate.
- 02 The D13-3 and D13-3a signs may display an alternate legend in place of FREEWAY, such as EXPRESSWAY or PARKWAY, as appropriate, or may display the name of an unnumbered highway.
- 03 A Directional assembly (see Section 2D.32) with a diagonal downward-pointing arrow (M6-2aP) auxiliary plaque (see Section 2D.28) may be used at the far left-hand corner of an intersection with a freeway or expressway entrance ramp as an alternative to the D13-3a sign, facing left-turning traffic on the conventional road approach to indicate the immediate point of entry to the freeway or expressway and distinguish the entrance ramp from an adjoining exit ramp terminal at the same intersection with the conventional road (see Figure 2D-18). A similar Directional assembly may be used at the far right-hand corner of an intersection with a freeway or expressway entrance ramp where the entrance ramp and a crossroad or side road follow one another in close succession on the conventional road approach and the point of entry to the freeway or expressway might be difficult for the road user to distinguish from the crossroad or side road on the conventional road approach (see Figure 2D-20).

Support:

- 03a A Freeway Entrance Package consists of a vertically arranged set of signs mounted on a single post. From top to bottom, it includes the FREEWAY ENTRANCE (D13-3) sign, a Cardinal Direction auxiliary plaque, a Route shield, and a Directional Arrow auxiliary plaque at the bottom.
- 03b Refer to Figure 2B-15(CA) for typical layouts and placement guidance for the Freeway Entrance Package.
- 04 Section 2B.48 contains information regarding the use of regulatory signs to deter wrong-way movements at intersections of freeway or expressway ramps with conventional roads, and in the area where entrance ramps intersect with the mainline lanes.

WEIGH STATION, CROSSOVER, TRUCK AND PASSING LANE, AND EMERGENCY AND SLOW VEHICLE TURN-OUT SIGNS

Section 2D.51 WEIGH STATION Signing (D8 Series)

Support:

- 01 Independent facilities or areas have been added along many highways where certain commercial vehicles are directed to stop to be weighed and/or inspected. These areas are sometimes permanent, such as in a roadside area, or temporary mobile facilities deployed along the roadway.
- 02 The general concept for signing permanent Weigh Stations is similar to signing Rest Areas (see Section 2I.05) because in both cases traffic using either area remains within the right-of-way.

Standard:

- 03 **The standard sequence of signs for a Weigh Station on a conventional highway shall include three basic signs (see Figure 2D-23):**
- A. Weigh Station Advance (D8-1) sign,**
 - B. Weigh Station Advance Direction (D8-2) sign, and**
 - C. Weigh Station Entrance Direction (D8-3) sign.**

Support:

- 03a Refer to FHWA's List of Known Errors for error in Paragraph 3, Item A text. Refer to Section 1A.04 for more details.

Guidance:

- 04 *A Gore sign with the same basic legend as the Weigh Station Entrance Direction (D8-3) sign should also be used to emphasize the entrance to the weigh station.*

Option:

- 05 ~~Where State law requires trucks of a certain weight to enter the Weigh Station, a Weigh Station (R13-1) regulatory sign (see Section 2B.65) may be located following the Advance Weigh Station Ahead sign (see Figure 2D-23).~~
- 06 ~~Where only commercial vehicle inspections are conducted in the inspection area, the WEIGH STATION legend of the D8 series signs may be replaced with the alternate legend, COMMERCIAL VEHICLE INSPECTION.~~

Guidance:

- 07 *The Weigh Station Advance Direction (D8-2) Sign or the Weigh Station Advance (D8-1) sign should display, either on the sign or on a supplemental plaque or sign panel, the changeable legend OPEN or CLOSED.*

Support:

- 07a Refer to FHWA's List of Known Errors for error in Paragraph 7 text. Refer to Section 1A.04 for more details.

Standard:

- 08 ~~When the WEIGH STATION legend of the D8 series signs is replaced with the COMMERCIAL VEHICLE INSPECTION legend, as provided in Paragraph 6 of this Section, the WEIGH STATION legend of the R13-1 sign shall likewise be replaced with the alternate legend.~~

Option:

- 09 The ALL TRUCKS – STOP AT SCALE (SR57-1(CA)) sign may be installed below the Weigh Station Advance Direction (D8-2) sign to inform drivers that all trucks are required to stop at the weigh station.
- 10 The NO PICKUPS (SR57-1P(CA)) plaque may be mounted below SR57-1(CA) sign at identified problem locations to advise motorists that pickup trucks are prohibited from entering weigh stations.
- 11 On State highways, an extinguishable message sign may be used in lieu of the OPEN/CLOSED supplemental plaque.
- 12 The VEHICLE INSPECTION ONLY NO LOITERING OR CAMPING (S22-1(CA)) sign may be installed at problem locations within areas designated for brake checks or safety inspections at weigh stations.

Section 2D.52 Crossover Signs (D13-1 and D13-2)

Option:

- 01 Crossover signs may be installed on divided highways to identify median openings not otherwise identified by warning or other guide signs.

Standard:

- 02 **A Crossover (D13-1) sign (see Figure 2D-24) shall not be used to identify a median opening that is permitted to be used only by official or authorized vehicles.**

Guidance:

- 03 *If used, the Crossover sign should be installed immediately beyond the median opening, either on the right-hand side of the roadway or in the median.*

Option:

- 04 The Advance Crossover (D13-2) sign (see Figure 2D-24) may be installed in advance of the Crossover sign to provide advance notice of the crossover.

Guidance:

- 05 *The distance displayed on the Advance Crossover sign should be 1 MILE, ½ MILE, or ¼ MILE, unless unusual conditions require some other distance. If used, the sign should be installed either on the right-hand side of the roadway or in the median at approximately the distance displayed on the sign.*

Section 2D.53 Truck and Passing Lane Signs (D17-1 through D17-4)

Guidance:

- 01 *If an extra lane has been provided to the right-hand side of the travel lane for use by trucks and other slow-moving traffic, an Advance Truck Lane (D17-2) sign (see Figure 2D-25) should be installed in advance of the lane.*
- 02 *If a series of truck lanes is provided along a highway, a Next Truck Lane (D17-1) sign (see Figure 2D-25) should be installed after each truck lane segment.*
- 03 *If an extra lane has been provided to the left-hand side of the travel lane for passing slower moving vehicles in the travel lane, an Advance Passing Lane Advance (D17-4) sign (see Figure 2D-25) should be installed in advance of the lane.*
- 04 *If a series of passing lanes are provided along a highway, a Next Passing Lane (D17-3) sign (see Figure 2D-25) should be installed after each passing lane segment.*

Support:

- 05 An example of signing for a truck lane is shown in Figure 2D-26. An example of signing for an intermittent passing lane is shown in Figure 2D-27.
- 06 Section 2B.38 contains information regarding regulatory signs for these types of lanes.

Option:

- 07 The DIVIDED ROAD (X MILES) AHEAD (G68(CA)) sign (refer to Figure 2D-101(CA)) may be used to indicate the distance to the next section of divided highway.

Guidance:

- 08 *The mileage shown should be rounded to the nearest one-fourth mile for distances up to one mile, and to the nearest whole mile for distances over one mile.*

Support:

- 09 The G68(CA) sign is used on a two-lane highway in advance of a divided section to encourage passing within the upcoming divided segment.

Section 2D.54 Emergency and Slow Vehicle Turn-Out Signs (D17-5 through D17-7)

Guidance:

- 01 *If an emergency turn-out area has been provided where a shoulder is not available for emergency stopping or where there is part-time shoulder use by traffic (see Section 2G.23), Emergency Turn-Out signs should be installed. The Advance Emergency Turn-Out Advance (D17-5) sign (see Figure 2D-28) should be installed between ¼ mile and 500 feet in advance of the turn-out area. The Emergency Turn-Out Directional (D17-6) sign (see Figure 2D-28) should be installed near the beginning of the turn-out area.*

Support:

- 01a Refer to FHWA's List of Known Errors for error in Paragraph 1 text. Refer to Section 1A.04 for more details.

Guidance:

- 02 *If a slow vehicle turn-out area has been provided for slow-moving traffic, an Advance Slow Vehicle Turn-Out (D17-7) sign (see Figure 2D-28) should be installed in advance of the turn-out area.*

Support:

- 03 An example of signing for an emergency turn-out is shown in Figure 2D-29.
- 04 Section 2B.42 contains information regarding regulatory signs for slow vehicle turn-out areas.

OTHER GUIDE SIGNS

Section 2D.55 Community Wayfinding Signs

Support:

- 01 Community wayfinding guide signs are part of a coordinated and continuous system of signs that direct tourists and other road users to key civic, cultural, visitor, and recreational attractions and other similar secondary destinations within a city or a local urbanized or downtown area.
- 02 Community wayfinding guide signs are a type of destination guide sign for conventional roads with a common color and/or identification marker for destinations within an overall wayfinding guide sign plan for an area.
- 03 Figures 2D-30 through 2D-32 illustrate various examples of the design and application of community wayfinding guide signs.

Standard:

- 04 **The use of community wayfinding guide signs shall be limited to conventional roads. Community wayfinding guide signs shall not be installed on freeway or expressway mainlines or ramps. Direction to community wayfinding destinations from a freeway or expressway shall be limited to the use of a Supplemental guide sign (see Section 2E.51) on the mainline and a Destination sign (see Section 2D.36) on the ramp to direct road users to the area or areas within which community wayfinding guide signs are used. The individual wayfinding destinations shall not be displayed on the Supplemental guide and Destination signs except where the destinations are in accordance with the State or agency policy on Supplemental guide signs.**
- 05 **Community wayfinding guide signs shall not be used to provide direction to primary destinations or highway routes or streets. Destination or other guide signs shall be used for this purpose as described elsewhere in this Chapter and shall have priority over any community wayfinding sign in placement, prominence, and conspicuity.**
- 06 **Because regulatory, warning, and other guide signs have a higher priority, community wayfinding guide signs shall not be installed where adequate spacing cannot be provided between the community wayfinding guide sign and other higher-priority signs. Community wayfinding guide signs shall not be installed in a position where they would obscure the road users' view of other traffic control devices.**
- 07 **Community wayfinding guide signs shall not be mounted overhead.**

Guidance:

- 08 *If used, a community wayfinding guide sign system should be established on a local municipal or equivalent jurisdictional level or for an urbanized area of adjoining municipalities or equivalent that form an identifiable geographic entity that is conducive to a cohesive and continuous system of signs. Community wayfinding guide signs should not be used on a regional or statewide basis where infrequent or sparse placement does not contribute to a continuous or coordinated system of signing that is readily identifiable as such to the road user. In such cases, Destination or other guide signs detailed in this Chapter should be used to direct road users to an identifiable area in which the type of eligible destination described in Paragraph 1 of this Section is located.*

- 08a *On State highways, community wayfinding guide signs should be installed under an encroachment permit issued by Caltrans.*

Standard:

- 08b **Placement of community wayfinding guide signs shall be performed by the jurisdiction or agency making the request through the normal permit process, as a fee-exempt permit.**
- 08c **These signs shall be installed in accordance with this Manual and the Caltrans' Standard Plans.**

Guidance:

- 08d *Community wayfinding sign panels should be clearly marked to indicate ownership.*
- 09 *When a system of community wayfinding guide signs is being considered, the system of existing guide signs should be evaluated for applicability and general compliance with the provisions of this Manual to ensure road user directional guidance is adequately being addressed.*

Support:

- 10 The specific provisions of this Section regarding the design of community wayfinding sign legends apply to vehicular community wayfinding signs and do not apply to those signs that are intended only to provide information or direction to pedestrians or other users of a sidewalk or roadside area.

Guidance:

- 11 *Because pedestrian wayfinding signs typically use smaller legends that are inadequately sized for viewing by vehicular traffic and because they can provide direction to pedestrians that might conflict with that appropriate for vehicular traffic, wayfinding signs designed for and intended to provide direction to pedestrians or other users of a sidewalk or other roadside area should be located to minimize their conspicuity to vehicular traffic. Such signs should be located as far as practicable from the street, such as at the far edge of the sidewalk. Where locating such signs farther from the roadway is impracticable, the pedestrian wayfinding signs should have their conspicuity to vehicular traffic minimized by employing one or a combination of the following methods:*
- A. Locating signs away from intersections where high-priority traffic control devices are present.*
 - B. Facing the pedestrian message toward the sidewalk and away from the street.*
 - C. Cantilevering the sign over the sidewalk if the pedestrian wayfinding sign is mounted at a height consistent with vehicular traffic signs, removing the pedestrian wayfinding signs from the line of sight in a sequence of vehicular signs.*
- 12 *To further minimize their conspicuity to vehicular traffic during nighttime conditions, pedestrian wayfinding signs should not be retroreflective.*

Support:

- 13 Color coding is sometimes used on community wayfinding guide signs to help road users distinguish between multiple potentially confusing traffic generator destinations located in different neighborhoods or subareas within a community or area.

Option:

- 14 At the boundaries of the geographical area within which community wayfinding guide signing is used, an informational guide sign may be posted to inform road users about the presence of wayfinding signing and to identify the meanings of the various color codes or pictographs that are being used.

Standard:

- 15 **These informational guide signs shall have a white legend and border on a green background and shall have a design similar to that illustrated in Figure 2D-1 and shall be consistent with the basic design principles for guide signs. These informational guide signs shall not be installed on freeway or expressway mainlines or ramps.**
- 16 **The color coding or a pictograph of the identification markers of the community wayfinding guide signing system shall be included on the informational guide sign posted at the boundary of the community wayfinding guide signing area. The color coding or pictographs shall apply to a specific, identifiable neighborhood or geographical subarea within the overall area covered by the community wayfinding guide signing. Color coding or pictographs shall not be used to distinguish between different types of destinations that are within the same designated neighborhood or subarea. The color coding shall be accomplished by the use of different colored square or rectangular panels on the face of the informational guide sign, each positioned to the left of the neighborhood or named geographic area to which the color-coding panel applies. The height of the colored square or rectangular panels shall not exceed 2 times the height of the upper-case letters of the principal legend on the sign.**

Option:

- 17 The different colored square or rectangular panels may include either a black or a white (whichever provides the better contrast with the color of the panel) letter, numeral, or other appropriate designation to identify the destination.
- 18 Except for the informational guide sign posted at the boundary of the wayfinding guide sign area, community wayfinding guide signs may use background colors other than green in order to provide a color identification for the wayfinding destinations by geographical area within the overall wayfinding guide signing system. Color-coded community wayfinding guide signs may be used with or without the boundary informational guide sign displaying corresponding color-coding panels described in Paragraphs 13 through 16 of this Section. Except as provided in Paragraph 19 of this Section, in addition to the colors that are approved in this Manual for use on official traffic control signs (see Section 2A.06), other background colors may also be used for the color coding of community wayfinding guide signs.

Standard:

- 19 **The standard colors of red, orange, yellow, purple, or the fluorescent versions thereof, fluorescent yellow-green, and fluorescent pink shall not be used as background colors for community wayfinding guide signs, in order to minimize possible confusion with critical, higher-priority regulatory and warning sign color meanings**

readily understood by road users.

20 The minimum contrast value of legend color to background color for community wayfinding guide signs shall be at least 0.70 (or 70%).

21 All messages, borders, legends, and backgrounds of community wayfinding guide signs and any identification markers shall be retroreflective (see Sections 2A.21 and 2A.22).

22 Community wayfinding guide signs, exclusive of any identification marker used, shall be rectangular in shape.

Guidance:

23 Simplicity and uniformity in design, position, and application as described in Section 2A.04 are important and should be incorporated into the community wayfinding guide sign design and location plans for the area.

24 Community wayfinding guide signs should be limited to three destinations per sign (see Section 2D.06).

25 Abbreviations (see Section 1D.08) should be kept to a minimum, and should include only those that are commonly recognized and understood.

26 Horizontal lines of a color that contrasts with the sign background color should be used to separate groups of destinations by direction from each other.

Support:

27 The basic requirement for all highway signs, including community wayfinding signs, is that they be legible to those for whom they are intended and that they be understandable in time to permit a proper response. Section 2A.04 contains additional information on the design of signs, including desirable attributes of effective designs.

Guidance:

28 Word messages should be as brief as practical and the lettering should be large enough to provide the necessary legibility distance.

Standard:

29 The minimum specific ratio of letter height to legibility distance shall comply with the provisions of Section 2A.08. The size of lettering used for destination and directional legends on community wayfinding signs shall comply with the provisions of minimum letter heights as provided in Section 2D.05.

30 Interline and edge spacing shall comply with the provisions of Section 2D.05.

31 Except as provided in Paragraph 34 of this Section, the lettering style used for destination and directional legends on community wayfinding guide signs shall comply with the provisions of Section 2D.04.

32 The lettering for destinations on community wayfinding guide signs shall be a combination of lower-case letters with initial upper-case letters (see Section 2D.04). All other word messages on community wayfinding guide signs shall be in all upper-case letters.

Guidance:

33 Except as provided in Paragraphs 34 and 35 of this Section, letters, numerals, and other characters should be composed of the Standard Alphabets as detailed in the "Standard Highway Signs" publication (see Section 1C.05).

Support:

33a Refer to FHWA's List of Known Errors for error in Paragraph 33 text. Refer to Section 1A.04 for more details.

Option:

34 A lettering style other than the Standard Alphabets provided in the "Standard Highway Signs" publication (see Section 1C.05) may be used on community wayfinding guide signs if an engineering study determines that the legibility and recognition values for the chosen lettering style meet or exceed the values for the Standard Alphabets for the same legend height and stroke width.

Support:

34a Refer to FHWA's List of Known Errors for error in Paragraph 34 text. Refer to Section 1A.04 for more details.

Standard:

35 If a lettering style other than the Standard Alphabets is used, the alternative lettering style shall be conventional in form. The letters, numerals, and other characters shall not be italic, oblique, script, highly decorative, or of other unusual forms.

36 In accordance with Section 2A.04, except for signs that are designed and located with the intent to be viewed only by pedestrians, bicyclists stopped out of the flow of traffic, or occupants of parked vehicles, Internet and e-mail addresses, including domain names and uniform resource locators (URL), and scanning graphics for the purpose of obtaining information (see Section 2A.04), shall not be displayed on any community wayfinding guide

sign or sign assembly.

37 **The arrow location and priority order of destinations shall follow the provisions described in Sections 2D.08 and 2D.36. Arrows shall be of the designs provided in Section 2D.08.**

Option:

38 Pictographs (see definition in Section 1C.02) may be used on community wayfinding guide signs.

Standard:

39 **If a pictograph is used, its height shall not exceed 2 times the height of the upper-case letters of the principal legend on the sign.**

40 **Except for pictographs, symbols that are not approved in this Manual for use on guide signs shall not be used on community wayfinding guide signs.**

41 **Business logos, commercial graphics, or other forms of advertising (see Section 1D.07) shall not be used on community wayfinding guide signs or sign assemblies.**

Option:

42 Other graphics that specifically identify the wayfinding system, including identification markers, may be used on the overall sign assembly and sign supports.

Support:

43 An identification marker consists of a shape, color, and/or pictograph that is used as a visual identifier for the community wayfinding guide signing system for an area. Figure 2D-30 shows examples of identification marker designs that can be used with community wayfinding guide signs.

Option:

44 An identification marker may be used in a community wayfinding guide sign assembly, or may be incorporated into the overall design of a community wayfinding guide sign, as a means of visually identifying the sign as part of an overall system of community wayfinding signs and destinations.

Standard:

45 **The sizes and shapes of identification markers shall be smaller than the community wayfinding guide signs themselves. Identification markers shall not be designed to have an appearance that could be mistaken by road users as being a traffic control device.**

Guidance:

46 *The area of the identification marker should not exceed 1/5 of the area of the community wayfinding guide sign with which it is mounted in the same sign assembly.*

Section 2D.56 Signing of Named Highways for Mapping and Address Purposes

Support:

01 A highway name is the officially designated name of a freeway, expressway, or conventional road for navigational, official mapping, and address purposes. Some highways are named in addition to or in lieu of being assigned a highway route number. Memorial, honorary, ceremonial, or other secondary names, such as touring route and byway names, are not considered to be highway names.

Option:

02 Guide signs may contain street or highway names if the purpose is to enhance driver communication and guidance; however, they are to be considered as supplemental information to route numbers.

Standard:

03 **Highway names shall not replace official numeral designations.**

04 **Memorial, honorary, or other secondary names (see Section 2M.10) shall not appear on supplemental signs or on any other information sign on or along the highway or its intersecting routes.**

05 **The use of route signs shall be restricted to signs officially used for guidance of traffic in accordance with this Manual and the “Purpose and Policy” statement of the American Association of State Highway and Transportation Officials that applies to Interstate and U.S. numbered routes.**

Option:

06 Unnumbered routes having major importance to proper guidance of traffic may be signed if carried out in accordance with the aforementioned policies. For unnumbered highways, a name to enhance route guidance may be used where the name is applied consistently throughout its length.

Guidance:

07 *Only one name should be used to identify any highway, whether numbered or unnumbered.*

Option:

08 The Named State Highway (SG1(CA)) sign may be used to identify a named State highway when required by legislation or when deemed necessary to provide traveler information.

Section 2D.57 National Scenic Byways Sign and Plaque (M10-1 and M10-1aP)

Support:

01 Certain roads have been designated by the U.S. Secretary of Transportation as National Scenic Byways or All-American Roads based on their archeological, cultural, historic, natural, recreational, or scenic qualities.

Option:

02 State and local highway agencies may install the National Scenic Byways (M10-1) sign or (M10-1aP) plaque (see Figure 2D-33) at entrance points to a route that has been recognized by the U.S. Secretary of Transportation as a National Scenic Byway or an All-American Road. The M10-1 sign may be installed as independent Directional (see Section 2D.32) or Confirming (see Section 2D.33) assemblies at periodic intervals along the designated route and near intersections where the designated route turns or follows a different numbered highway. The M10-1aP plaque may be installed below a route sign in a Confirming assembly. At locations where roadside features have been developed to enhance the traveler's experience such as rest areas, historic sites, interpretive facilities, or scenic overlooks, the National Scenic Byways sign or plaque may be placed on the associated sign assembly to inform travelers that the site contributes to the byway travel experience.

Guidance:

03 *Where the byway is identified only by the National Scenic Byways sign, the Directional assembly should consist of the M10-1 sign and an M5 series or M6 series auxiliary plaque when indication of a turn is necessary to remain on the byway route.*

04 *Where the name of the byway is to be displayed on identification signs or plaques along the byway route, the name should be displayed in a Directional or Confirming assembly as follows (see Figure 2D-34):*

A. On a Byway Identification (M10-2aP) plaque (see Section 2D.58) mounted below the M10-1 sign; or

B. On a Byway Identification (M10-2) sign (see Section 2D.58) with the M10-1aP plaque mounted below the sign.

05 *In either case, the size of the National Scenic Byways (M10-1) sign, (M10-1aP) plaque, Byway Identification (M10-2) sign, and Byway Identification (M10-2aP) plaque should be consistent with that specified for route signs (see Section 2D.10) for the roadway classification .*

06 *Where the name of the byway is to be displayed along the byway route as provided in Paragraph 4 of this Section, the byway Directional or Confirming assemblies should be located separately from any route Sign assemblies or Destination guide signs.*

Standard:

07 **When a National Scenic Byways sign is installed on a National Scenic Byway or an All- American Road, the design shown for the M10-1 sign or M10-1aP plaque in Figure 2D-33 shall be used. Use of this design shall be limited to routes that have been designated as a National Scenic Byway or All-American Road by the U.S. Secretary of Transportation.**

08 **If used, the M10-1 sign or M10-1aP plaque shall be placed such that the highway route signs have primary visibility for the road user.**

09 **The M10-1 sign or the M10-1aP plaque shall not be installed as sign panels on a guide sign or as part of a guide sign assembly.**

Section 2D.58 State-Designated Scenic Byway, Historic Trail, and Auto Tour Route Signs

Support:

01 Signing for State-designated scenic byways, historic trails, and auto tour routes, is similar in concept to that for National Scenic Byways as provided in Section 2D.57.

02 Named highways are officially designated and shown on official maps and serve the purpose of providing route guidance, primarily on unnumbered highways, and property addresses. A highway designated as a trail, auto tour route, or byway is not considered to be a highway name for the purposes of highway signing or road user navigation and orientation. Section 2D.56 contains provisions for the signing of named highways.

03 Section 1D.09 provides information on the authority for placement of traffic control devices within the highway right-of-way.

Guidance:

04 *Route Sign assemblies and Destination guide signs should have priority in visibility and location over signing related to historic trails, auto tour routes, and byways.*

Option:

05 Identification signs for a State scenic byway may be installed along conventional roads that have been designated as part of a State scenic byway system. A Byway Identification (M10-2) sign (see Figure 2D-34) with the name of the byway displayed may be installed in a Directional or Confirming assembly with the SCENIC BYWAY (M10-3bP) plaque (see Figure 2D-34) mounted below the M10-2 sign.

06 Where a National Scenic Byway is part of a State scenic byway system, the National Scenic Byways (M10-1aP) plaque (see Section 2D.57) may be installed in a Directional or Confirming assembly below the Byway Identification (M10-2) sign or State Scenic Byway (M10-3 or M10-3a) sign (see Figure 2D-34) for the State scenic byway.

07 A State Scenic Byway System (M10-3) sign may be installed in a Directional or Confirming assembly with the name of the byway displayed on a Byway Identification (M10-2aP) plaque below the sign (see Figure 2D-34).

08 A State Scenic Byway (M10-3a) sign with a simple graphic and the name of the byway displayed may be installed in a Directional or Confirming assembly with the SCENIC BYWAY (M10-3bP) plaque mounted below the M10-3a sign.

09 Identification signs for a historic trail, such as the National Historic Trails administered by the National Park Service, may be installed along segments of conventional roads that coincide with the original route of the trail. National Historic Trail Identification (M11-1) signs (see Figure 2D-34) may be installed in a Directional or Confirming assembly with a HISTORIC ROUTE (M11-1aP), CROSSING (M11-1bP), or AUTO TOUR ROUTE (M11-1cP) auxiliary plaque (see Figure 2D-34) mounted below the M11-1 sign. The beginning and end of a historic trail route or auto tour route may be indicated with a BEGIN (M4-14P) or END (M4-6P) auxiliary plaque (see Figure 2D-5) with a white legend and border on a brown background mounted above the historic trail identification sign. The length of the route may be identified by a NEXT XX MILES (M11-1dP) auxiliary plaque mounted below the M11-1aP or M11-1cP auxiliary plaque.

Guidance:

10 *The design and size of historic trail and State scenic byway identification or system signs should comply with the general provisions and principles for route signs (see Section 2D.10). Designs should be simple, dignified, and devoid of complex graphics. The size of the signs should not exceed the size of the route signs used along a particular route.*

Standard:

11 **Scenic byway, historic trail, and auto tour route sign designs shall not have a similar design to or resemble a highway route sign.**

Guidance:

12 *Where used, historic trail and State scenic byway identification signs should be installed as Directional (see Section 2D.32) or Confirming (see Section 2D.33) assemblies at independent locations, separate from other Route Sign assemblies and Destination guide signs. Where used, Confirming assemblies for the trail or byway should be installed at less frequent intervals than Confirming assemblies for the numbered route.*

Support:

13 Where all or part of the original route of a historic trail does not follow a roadway, an auto tour route is sometimes established along a conventional road in the general vicinity of the historical route of the trail. Examples include auto tour routes following other routes that parallel the original routes of the Lewis and Clark National Historic Trail, the Oregon National Historic Trail, and the Santa Fe National Historic Trail. The auto tour route is shown on touring maps along State or other highways and provides access to sites on the trail from those highways.

14 A system of signing providing direction along conventional roads for a historic trail with an auto tour route is shown in Figure 2D-35. Examples of Destination and Supplemental guide signs providing direction to historic trail sites from a freeway or expressway interchange are shown in Figure 2D-36.

Guidance:

15 *Signing for historic trails should be limited to Destination signs for the sites related to the trail and to Directional and Confirming assemblies for the original portions of the trail itself. If an auto tour route has been designated along other highways to provide access to sites along the original trail as described in Paragraph 13 of this Section, then the signing should be limited to Destination signs for those sites and directional signing to access the original route of the*

trail. Identification signs for the auto tour route should not be installed. Instead, direction along the auto tour route should rely on the touring map and other directional signs for the highways that the auto tour route follows.

Support:

15a Refer to Section 2M.09 for additional guidance on the design of signs for historic trails.

Standard:

16 **Identification signs for historic trails, auto tour routes, and scenic byways shall not be installed on freeways or expressways, except as necessary to provide continuity between discontinuous segments of conventional roadways that are designated as a trail, auto tour route, or byway, for which the freeway or expressway provides the only connection between the segments. If installed on freeways or expressways, the identification signs shall be installed as independent trailblazer assemblies (see Sections 2D.34 and 2E.55) and shall not be installed with other route signs or Confirming assemblies or on guide signs. If installed on freeways or expressways, the trailblazer assemblies for the trail, auto tour route, or byway shall be installed at less frequent intervals than Confirming assemblies for the highway route.**

17 **Identification signs for historic trails, auto tour routes, and scenic byways shall not be installed as sign panels on a guide sign or as part of a guide sign assembly.**

Scenic Route (G30(CA) Series) Sign and Plaques

Support:

18 A scenic route is defined as an officially designated portion of the State Highway System that traverses areas of outstanding scenic beauty and, together with the adjacent scenic corridors, requires special scenic conservation treatment. Refer to SHC, §§ 260 through 263.8.

Standard:

19 **The Scenic Route (G30(CA)) sign shall be used to identify routes that have been designated as official State Scenic Highways. The G30(CA) sign shall be installed on the right side of the roadway at the beginning of the scenic route.**

Guidance:

20 *The Scenic Route (G30aP(CA)) plaque for State routes and G30bP(CA) plaque for county routes, when used, should be placed below and on the same post with the Route shield signs.*

Option

21 The BEGIN (M4-14P) auxiliary plaque may be mounted above the G30(CA) sign at the beginning of the scenic route. Similarly, the END (M4-6P) auxiliary plaque may be mounted above the G30(CA) sign at the end of the scenic route.

Support:

22 Refer to Figure 2D-101(CA) for Scenic Route sign and associated plaques.

Section 2D.59 Emergency Routing Signs and Plaques (M4-11 and M4-12 Series)

Support:

01 As part of an agency's transportation incident management plan it is sometimes desirable to permanently sign routes that provide rerouting of traffic around highway segments susceptible to traffic incidents. Permanently-installed Emergency Routing signs and plaques (see Figure 2D-37) provide direction on conventional roads from an exit located upstream of an area that can be susceptible to traffic incidents back to the original route at a point downstream of the incident-susceptible area.

Option:

02 EMERGENCY ROUTE (M4-11 and M4-11a) signs and EMERGENCY ROUTE TO (M4-11bP and M4-11cP) plaques mounted on a directional assembly may be permanently installed on conventional roadways to provide trailblazing along a designated diversionary route to bypass a traffic incident.

Support:

03 The purpose of Emergency Routing signs and plaques is for corridor management along routes that have recurring incidents and have reasonable rerouting paths available. These signs are intended to be permanently installed to provide instant rerouting guidance to road users when traffic congestion or backups first begin even before emergency responders could provide temporary traffic control for rerouting traffic. These signs can be used as a stand-alone system or be a part of a larger system which might also incorporate other devices such as changeable message signs. These signs provide road users assurance that a diversionary route will lead them back to their original route of travel.

Standard:

04 **Emergency Routing signs and plaques shall only be installed at departure points and along diversion routes for directing road users around highway segments in areas that are more susceptible to traffic incidents (see Figure 2D-38). EMERGENCY ROUTE and EMERGENCY ROUTE TO signs shall be placed at each turning decision point along the designated route until it rejoins the original route or until other directional signs leading back to the original route are provided.**

05 **Emergency Routing signs shall have a white legend and border on a green background.**

Option:

06 For additional emphasis the legend EMERGENCY ROUTE or EMERGENCY ROUTE TO may be displayed in a yellow panel with black letters near the top of the sign (see Figure 2D-37).

Standard:

07 **Orange or pink shall not be used as alternate colors on permanently-installed signs or plaques for rerouting traffic during an incident or other event. If a route shield is displayed as part of the message, the wording of the sign or plaque shall be EMERGENCY ROUTE TO as shown in Figure 2D-37.**

Option:

08 An EMERGENCY ROUTE TO plaque with either a white legend and border on a green background (M4-11bP) or black legend and border on a yellow background (M4-11cP) may be added to the top of a conventional Route assembly on a diversion route to provide direction back to the original route downstream of the incident (see Figures 2D-37 and 2D-38).

09 A combination warning and regulatory message sign with flashing beacons mounted above and the legend, WHEN FLASHING [ROUTE] CLOSED AHEAD/ USE EMERGENCY ROUTE [NEXT RIGHT or EXIT XX] may be used in advance of the emergency route entrance to inform road users of the closure and require exiting the primary route and use of the emergency route (see Figures 2D-37 and 2D-38).

10 The End Emergency Route (M4-12) sign may be used at a point along the emergency route just prior to the junction where traffic is to reenter the primary route past the closed section of roadway (see Figures 2D-37 and 2D-38).

SIGNING AT AIRPORTS

Section 2D.60 Signing at Airports

Support:

- 01 Many roadways within airport facilities (including terminal curbside roadways) are considered to be conventional roads because they typically have frequent driveways and at-grade intersections and might have pedestrian activity along and/or across them.
- 02 Some airport roadways have full or partial control of access and operating speeds higher than 45 mph and thus would be classified as freeways or expressways for signing purposes (see Chapter 2E). Freeway or expressway conditions typically exist on the approaches to the airport from other highways; on the approaches to access points to terminals, parking, and other patron facilities; and on roadways that provide exits from the airport facility to connect with the local or regional highway network.
- 02a Requirements for Exit Gore signs and Exit Number plaque on State highways are provided in Sections 2E.22, 2E.23, 2E.25, 2E.26, and 2M.09.
- 03 Roadways within airports and other similarly contained roadway networks with multiple closely-spaced access points to multiple destinations (such as terminals, parking facilities, rental car facilities, and other airport services) often present challenges for the application of guide signing. Closely-spaced signs, excessive sign messaging either co-located or in succession, and the resulting excessive informational load imposed on the road user are of particular concern for such roadways. The Transportation Research Board's Airport Cooperative Research Program Report 52, "Wayfinding and Signing Guidelines for Airport Terminal and Landside," contains additional information on the application of traffic control devices to the unique geometrics and roadway environment that are typical of airports.
- 04 An example of major guide signing on the approaches to and within an airport facility roadway network is shown in Figure 2D-39.

Guidance:

- 05 *If adequate sign spacing cannot be provided due to the site and roadway characteristics of an airport or similar facility, then measures should be taken to reduce the speeds of vehicles on the roadway to provide road users with adequate time to comprehend and respond to the sign messages. Consideration should also be given to increasing the sign letter heights to provide greater viewing distances and decision times. Where a single terminal serves a large number of airlines, the airline information should be displayed on separate signs that appear in sequence to limit the number of airlines displayed on a single sign or at a single location. Changeable message signs (see Chapter 2L) should not be used to rotate the display of airlines to an approaching road user.*

Support:

- 06 There are various methods that can be used to help reduce vehicle speeds, including roadway geometric changes, implementing traffic calming measures, and increased enforcement. Provisions on setting speed limits are found in Section 2B.21.

Section 2D.101(CA) Intersection Number (G98A(CA)) Sign

Option:

- 01 The Intersection Number (G98A(CA)) sign (refer to Figure 2D-101(CA)) may be installed on any section of a highway route to number an intersection in order to assist road users in estimating their progress and identifying specific locations along the highway.
- 02 Intersection numbering may follow either a reference location numbering or consecutive numbering system.

Support:

- 03 Reference location numbering is preferred over consecutive numbering for two reasons:
- A. If new intersections are added to the route, the highway agencies do not need to revise the existing numbering sequence.
 - B. Reference location numbering helps road users estimate destination distances and travel mileage more effectively.
- 04 The G98A(CA) signs provide a simple and effective method for tourists to navigate safely and efficiently along a highway route that features a high concentration of tourist destinations, either directly on or in close proximity to the route.

Guidance:

- 05 *If used, the G98A(CA) signs should be ground-mounted or mounted on traffic signal poles at signalized intersections.*

Standard:

- 06 **The G98A(CA) signs shall not be installed on a highway unless the intersection numbers are published in a tourist map.**

Figure 2D-1. Examples of Color-Coded Destination Guide Signs



Figure 2D-2. Examples of Uses of Abbreviations on Guide Signs

A – Cardinal directions and orientations



"South" is the street name and shall not be abbreviated.

"EAST" is the cardinal direction of travel and shall not be abbreviated.

"Avenue" is the street name descriptor with a recognizable abbreviation* and should be abbreviated.



"South" is a cardinal direction and may be abbreviated. **

"EAST" is the cardinal direction of travel and shall not be abbreviated.

"Road" is the street name descriptor with a recognizable abbreviation* and should be abbreviated.

B – Quadrant and cardinal directions



"Southeast" is a quadrant cardinal orientation and should be abbreviated.

"Boulevard" is the street name and shall not be abbreviated.



"Southeast" is the street name and shall not be abbreviated.

"Boulevard" is the street name descriptor with a recognizable abbreviation* and should be abbreviated.

C – Other descriptors within proper names



"Peak" is a geographical feature as a descriptor within a proper name. When a geographical feature descriptor does not have a recognizable abbreviation, it shall not be abbreviated.



OR

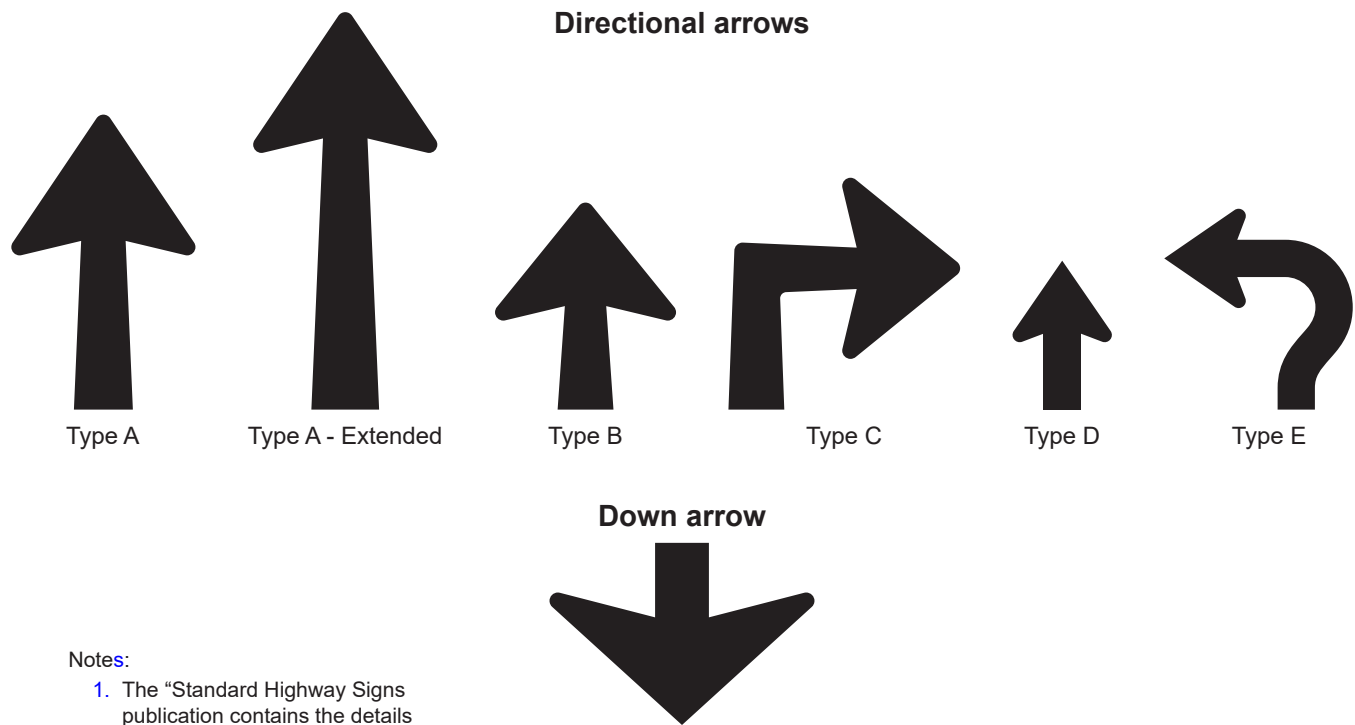


"Mount" is a geographical feature as a descriptor within a proper name. When a geographical feature descriptor has a recognizable abbreviation, it may be abbreviated.

* See Tables 1D-1 and 2D-3 for the abbreviations that are acceptable for use on signs and see Tables 2D-4 for abbreviations that are not acceptable for use on signs.

** Refer to FHWA's List of Known Errors for error. Refer to Section 1A.04 for more details.

Figure 2D-3. Arrows for Use on Guide Signs



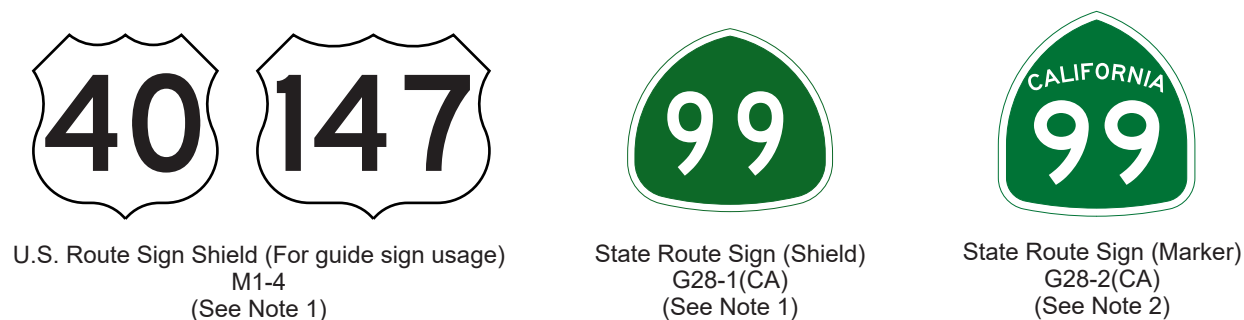
Notes:

1. The "Standard Highway Signs publication contains the details of these arrow designs.
2. [Refer to Section 2D.08 for information and guidance.](#)

Figure 2D-4. Route Signs



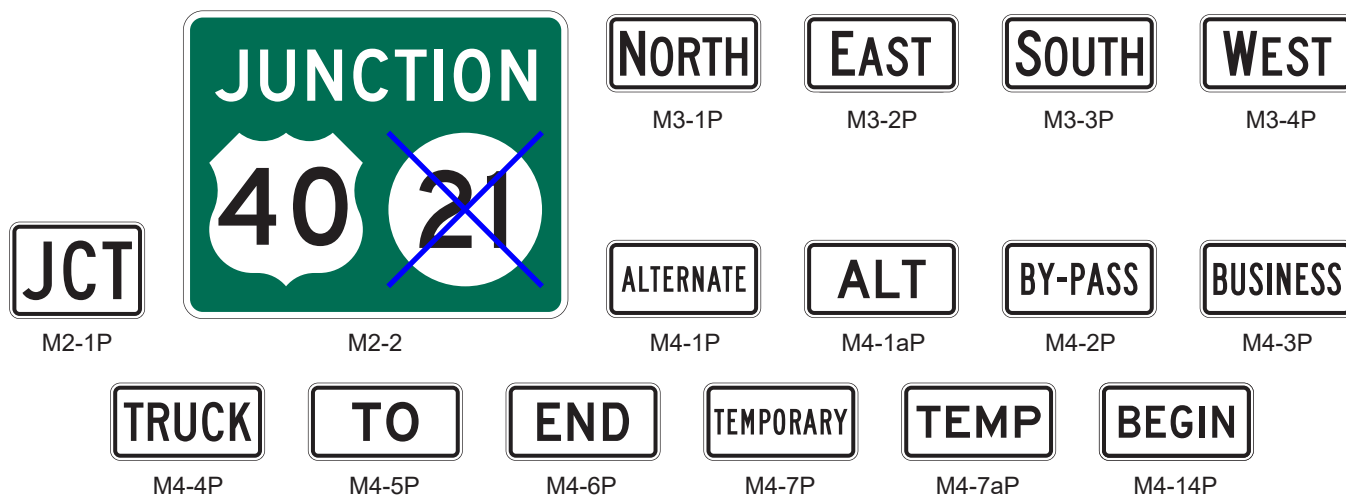
Figure 2D-4(CA). California Route Signs



Notes:

1. For guide sign use
2. For independent use
3. For guide sign and independent use

Figure 2D-5. Route Sign Auxiliary Plaques and Combination Junction Sign



Note: Refer to Figure 2D-4 and 2D-4(CA) for appropriate route shield and/or marker selection.

Figure 2D-5(CA). California Route Sign Auxiliaries and Combination Junction Sign



G76(CA)

Figure 2D-6. Advance Turn and Directional Arrow Auxiliary Plaques

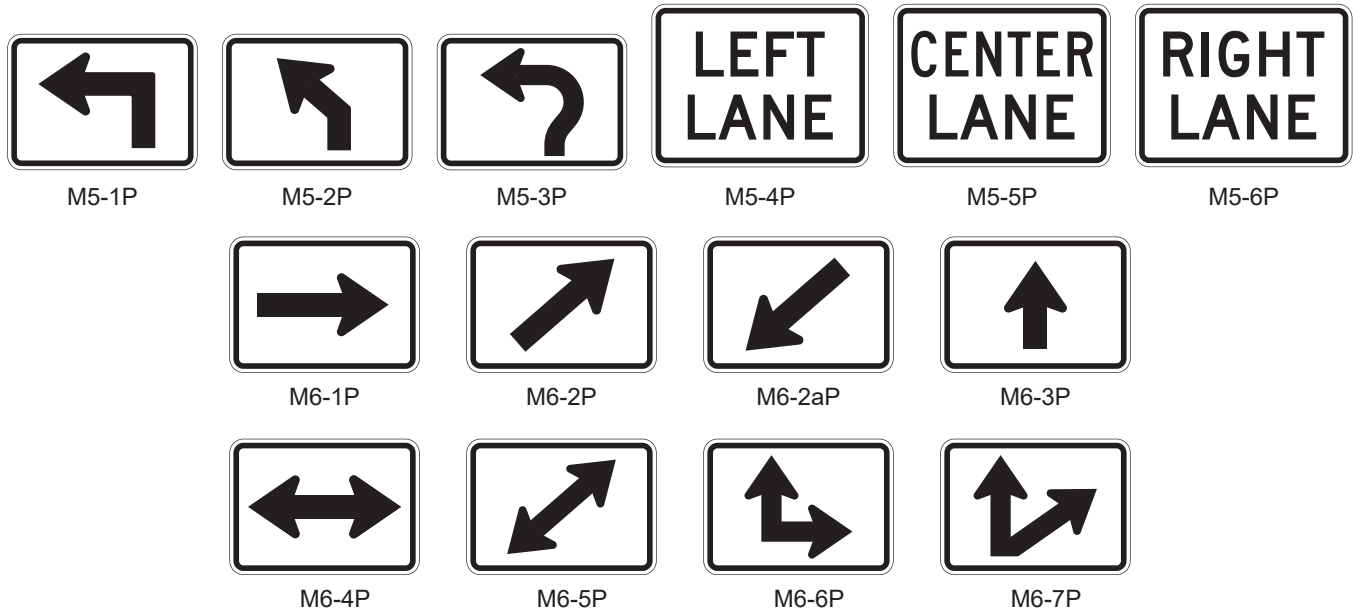
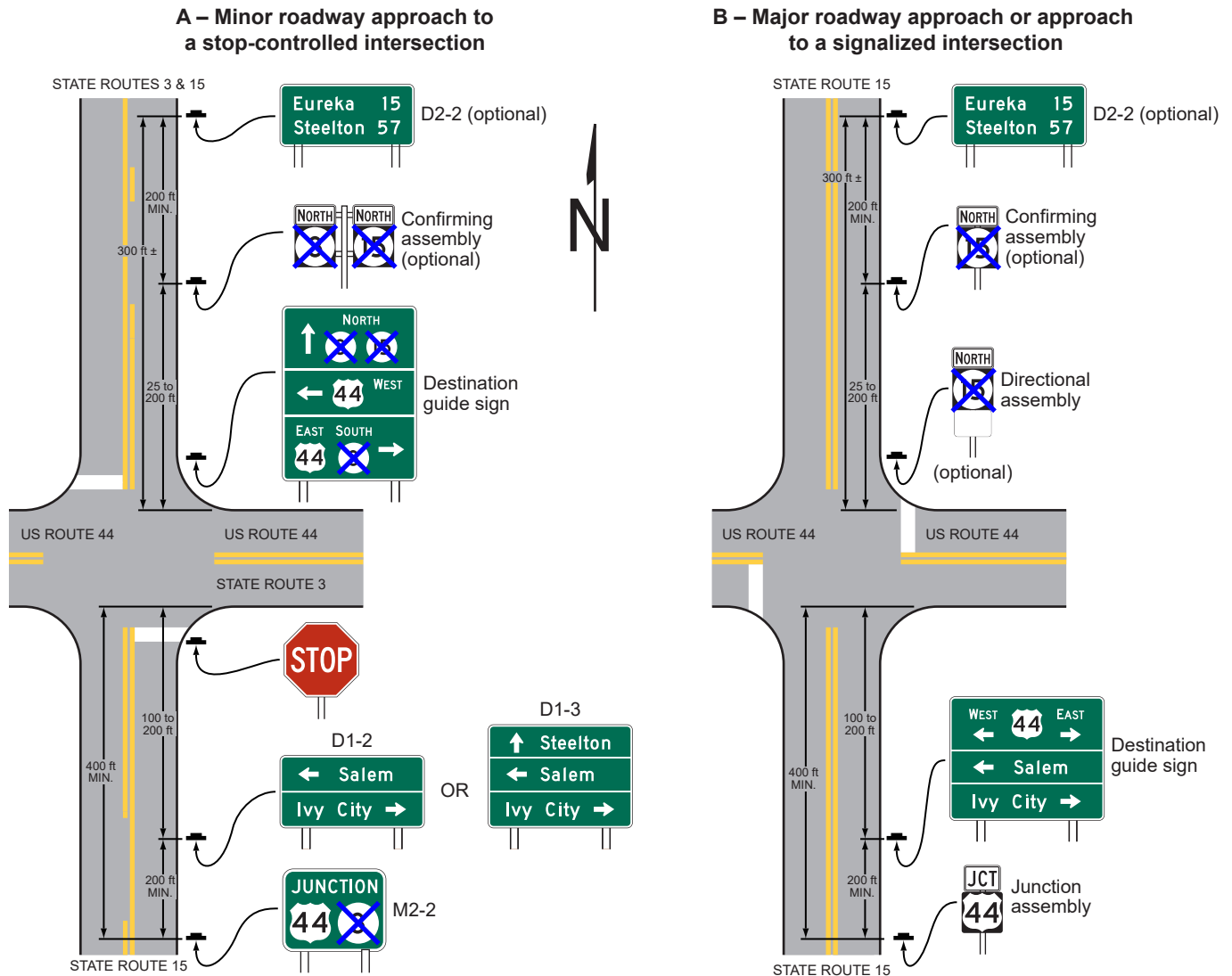


Figure 2D-6(CA). California Advance Turn and Directional Arrow Auxiliary Plaques



Figure 2D-7. Examples of Consolidation of Route Sign Assemblies into Guide Signs (Sheet 1 of 2)

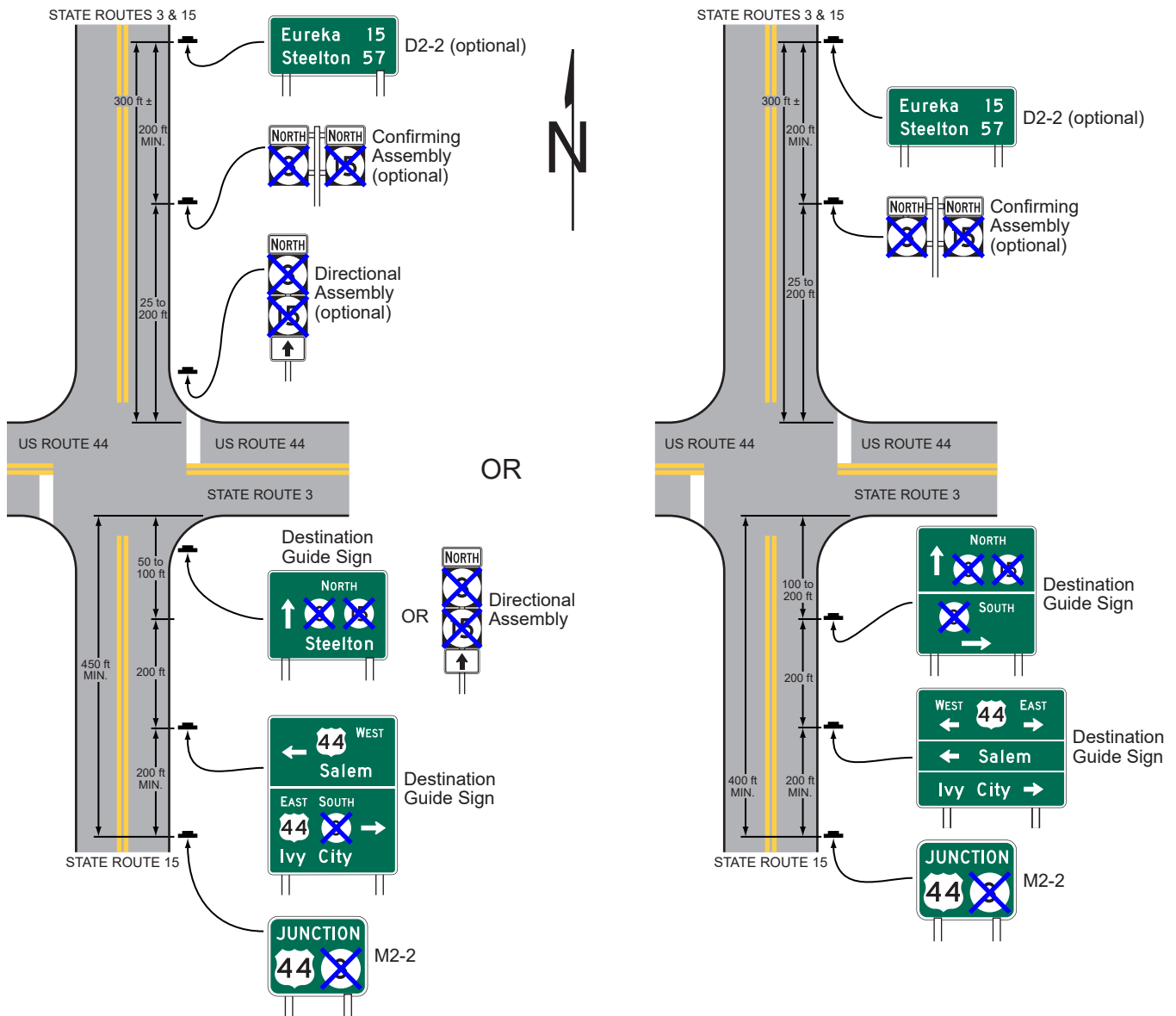


Notes:

1. Only one direction of travel and associated signs shown.
2. The spacings shown on this figure are for rural intersections. See Sections 2D.29, 2D.30, 2D.31, 2D.32, 2D.33, 2D.42, and 2D.44 for low-speed and/or urban conditions.
3. Refer to Figure 2D-4 and 2D-4(CA) for appropriate route shield and/or marker selection.

Figure 2D-7. Examples of Consolidation of Route Sign Assemblies into Guide Signs (Sheet 2 of 2)

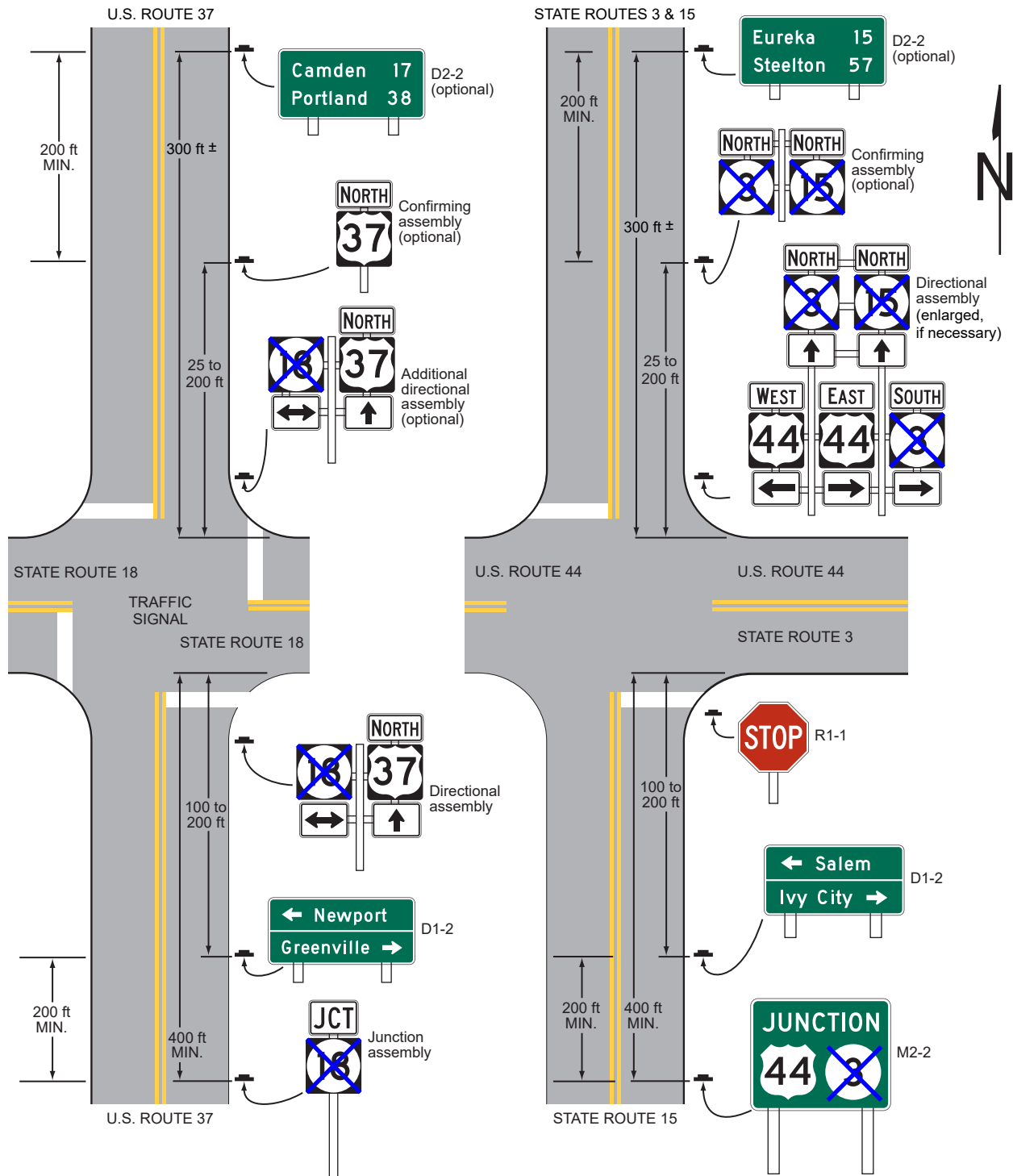
C – Major roadway approach or approach to a signalized intersection where overlapping routes join or separate



Notes:

1. Only one direction of travel and associated signs shown.
2. The spacings shown on this figure are for rural intersections. See Sections 2D.29, 2D.30, 2D.31, 2D.32, 2D.33, 2D.42, and 2D.44 for low-speed and/or urban conditions.
3. Refer to Figure 2D-4 and Figure 2D-4(CA) for appropriate route shield and/or marker selection.

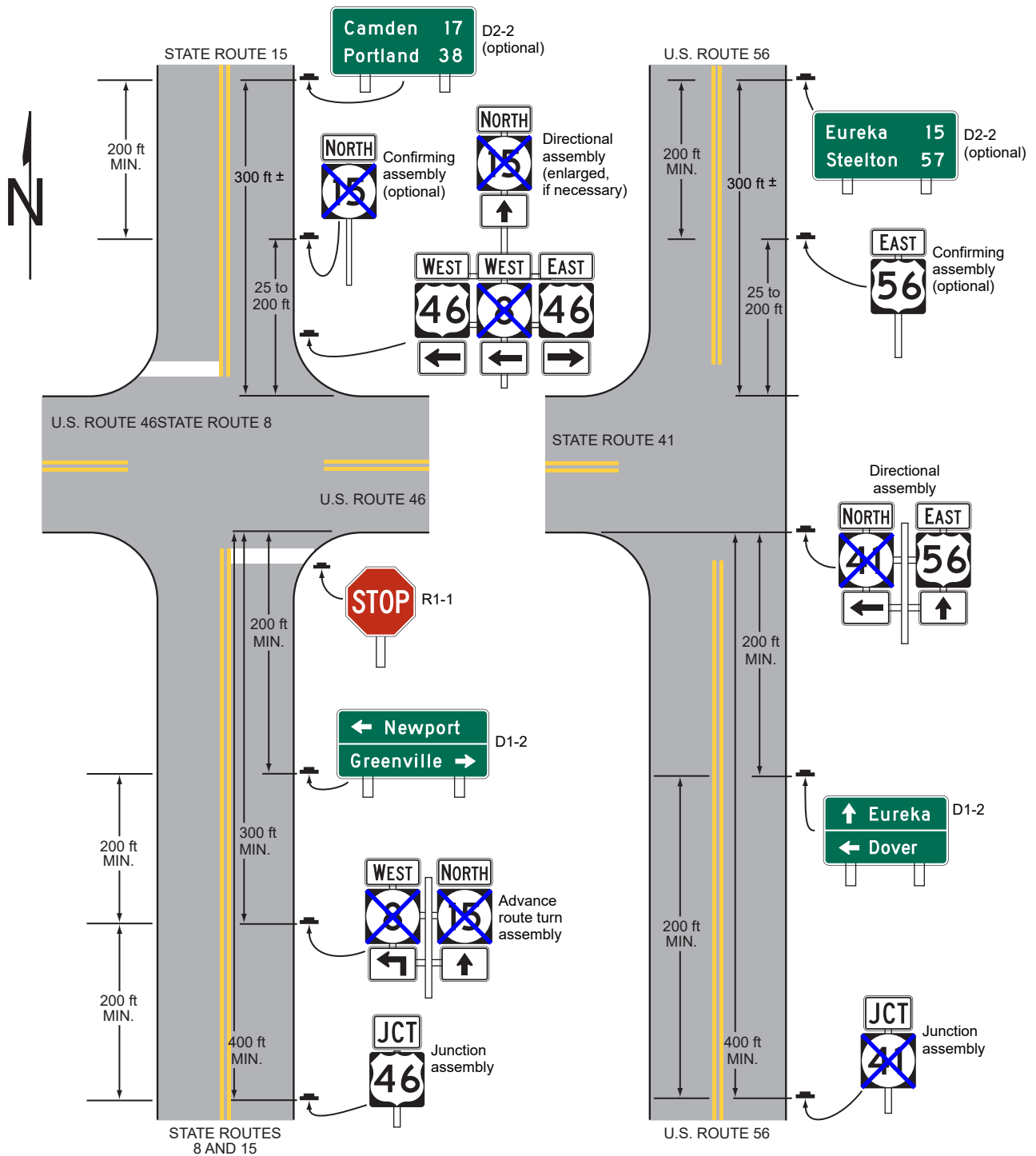
Figure 2D-8. Illustration of Directional Assemblies and Other Route Signs (Sheet 1 of 4)



Notes:

- Only the signs associated with the northbound direction of travel are shown on this figure.
- The spacings shown on this figure are for rural intersections. See Sections 2D.29, 2D.30, 2D.31, 2D.32, 2D.33, 2D.42, and 2D.44 for low-speed and/or urban conditions.
- Refer to Figure 2D-4 and Figure 2D-4(CA) for appropriate route shield and/or marker selection.

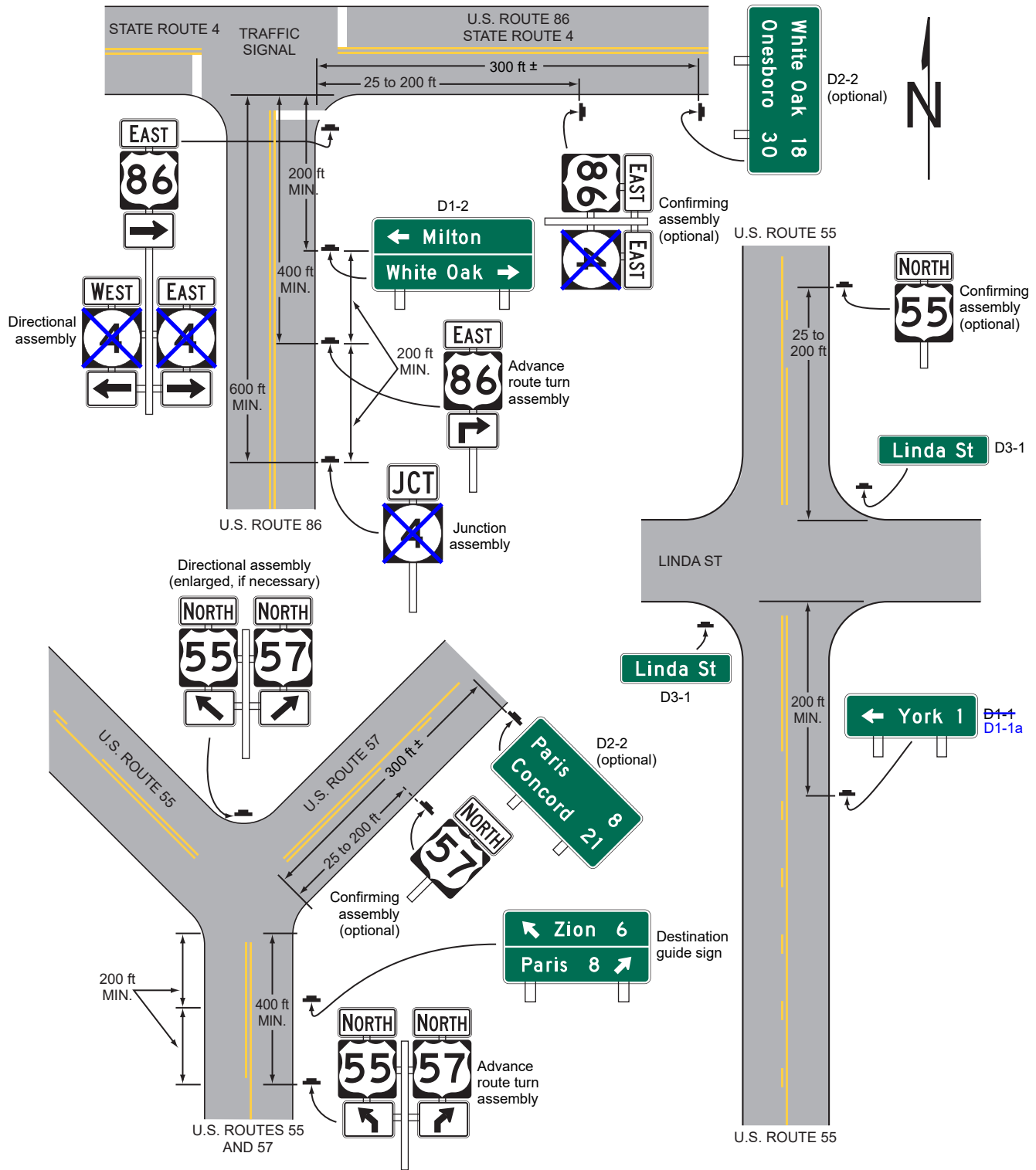
Figure 2D-8. Illustration of Directional Assemblies and Other Route Signs (Sheet 2 of 4)



Notes:

1. Only the signs associated with the northbound direction of travel are shown on this figure.
2. The spacings shown on this figure are for rural intersections. See Sections 2D.29, 2D.30, 2D.31, 2D.32, 2D.33, 2D.42, and 2D.44 for low-speed and/or urban conditions.
3. See Figures 2D-4 and 2D-4(CA) for appropriate route shield and/or marker selection.

Figure 2D-8. Illustration of Directional Assemblies and Other Route Signs (Sheet 3 of 4)



Notes:

1. Only the signs associated with the northbound direction of travel are shown on this figure.
2. The spacings shown on this figure are for rural intersections. See Sections 2D.29, 2D.30, 2D.31, 2D.32, 2D.33, 2D.42, and 2D.44 for low-speed and/or urban conditions.
3. Refer to Figure 2D-4 and Figure 2D-4(CA) for appropriate route shield and/or marker selection.

Figure 2D-8. Illustration of Directional Assemblies and Other Route Signs (Sheet 4 of 4)

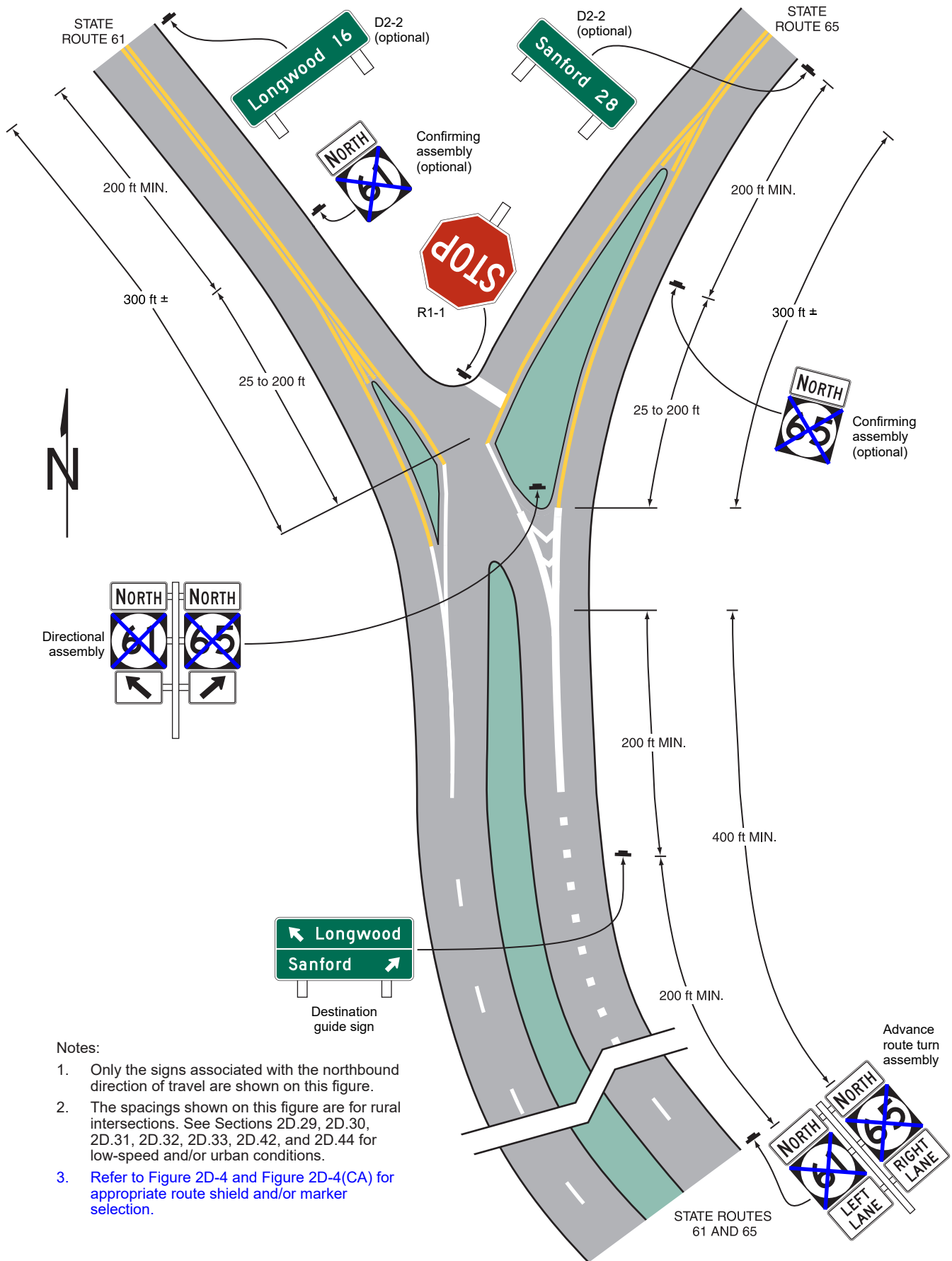


Figure 2D-9. Destination and Distance Signs

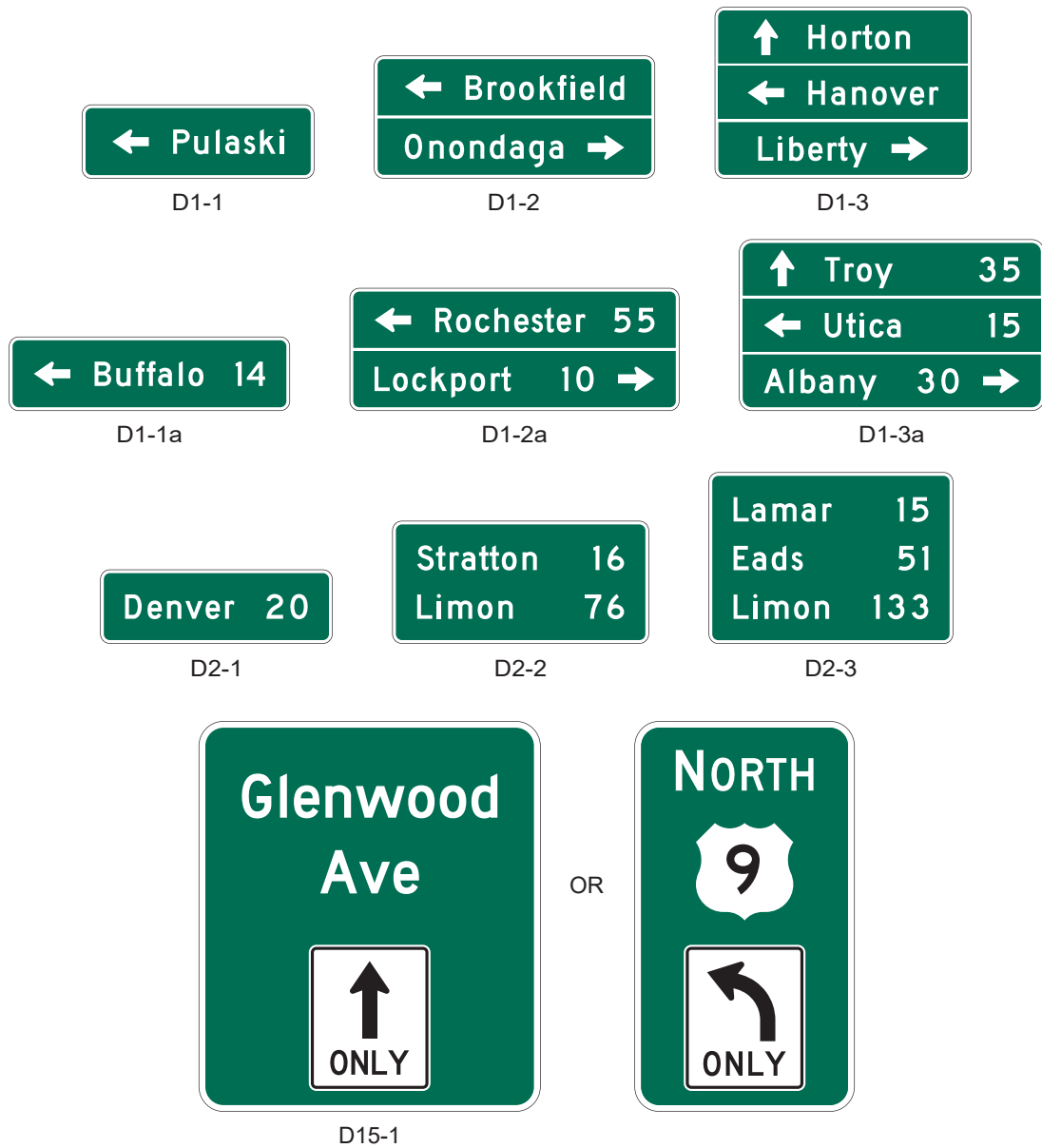


Figure 2D-9(CA). California Destination and Distance Signs

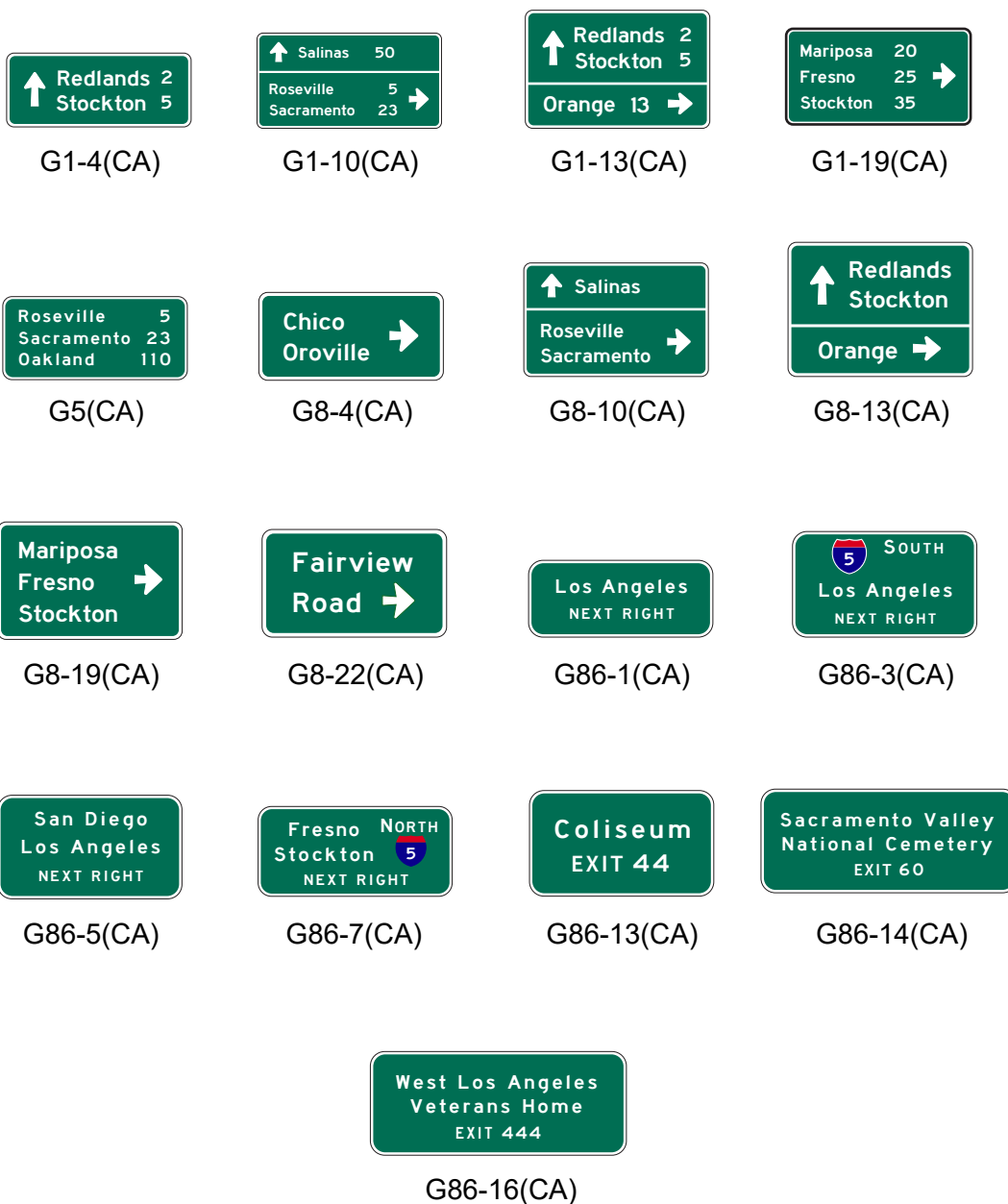


Figure 2D-10. Examples of Overhead Signs at an Intersection (Sheet 1 of 3)

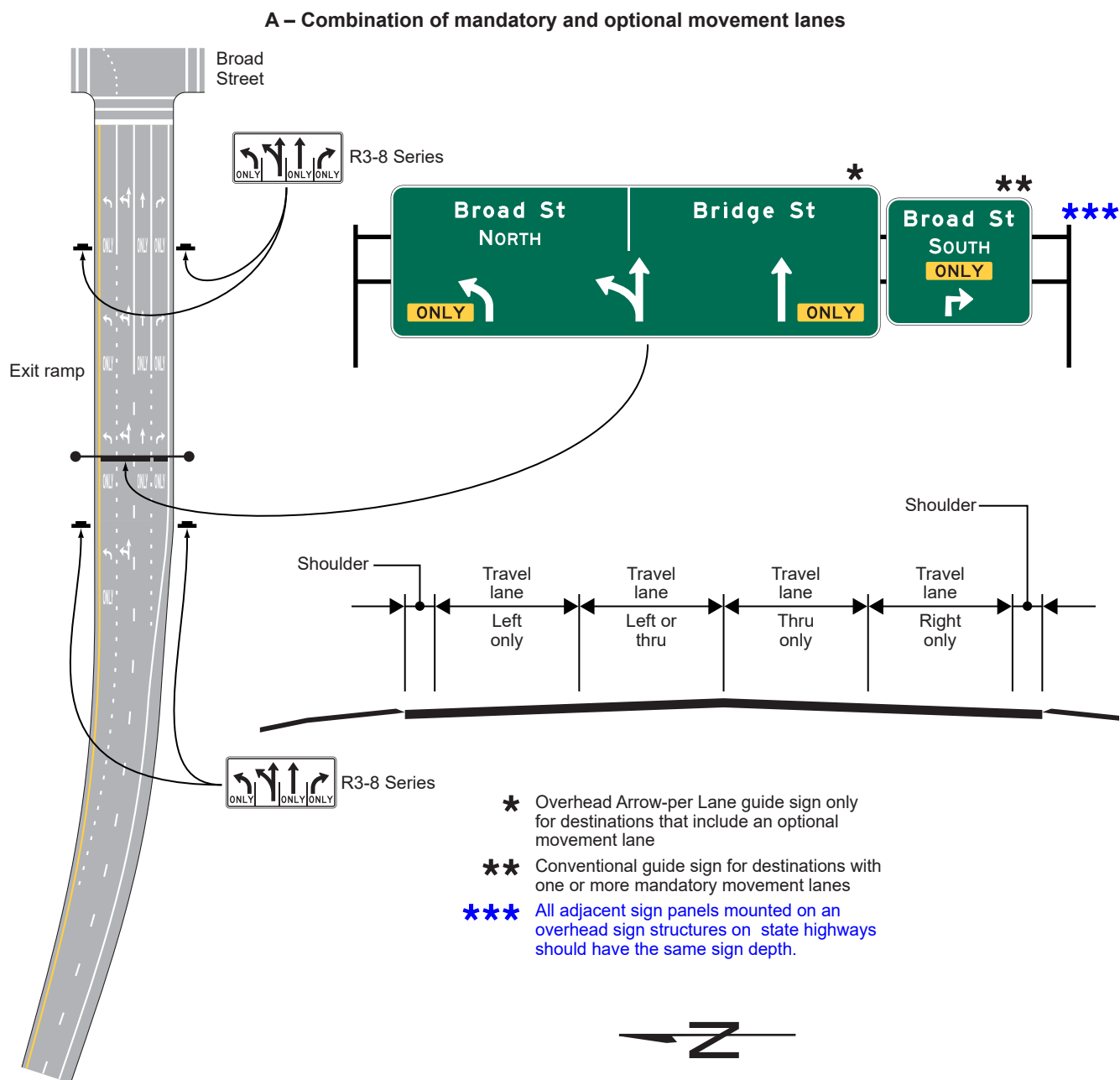


Figure 2D-10. Examples of Overhead Signs at an Intersection (Sheet 2 of 3)

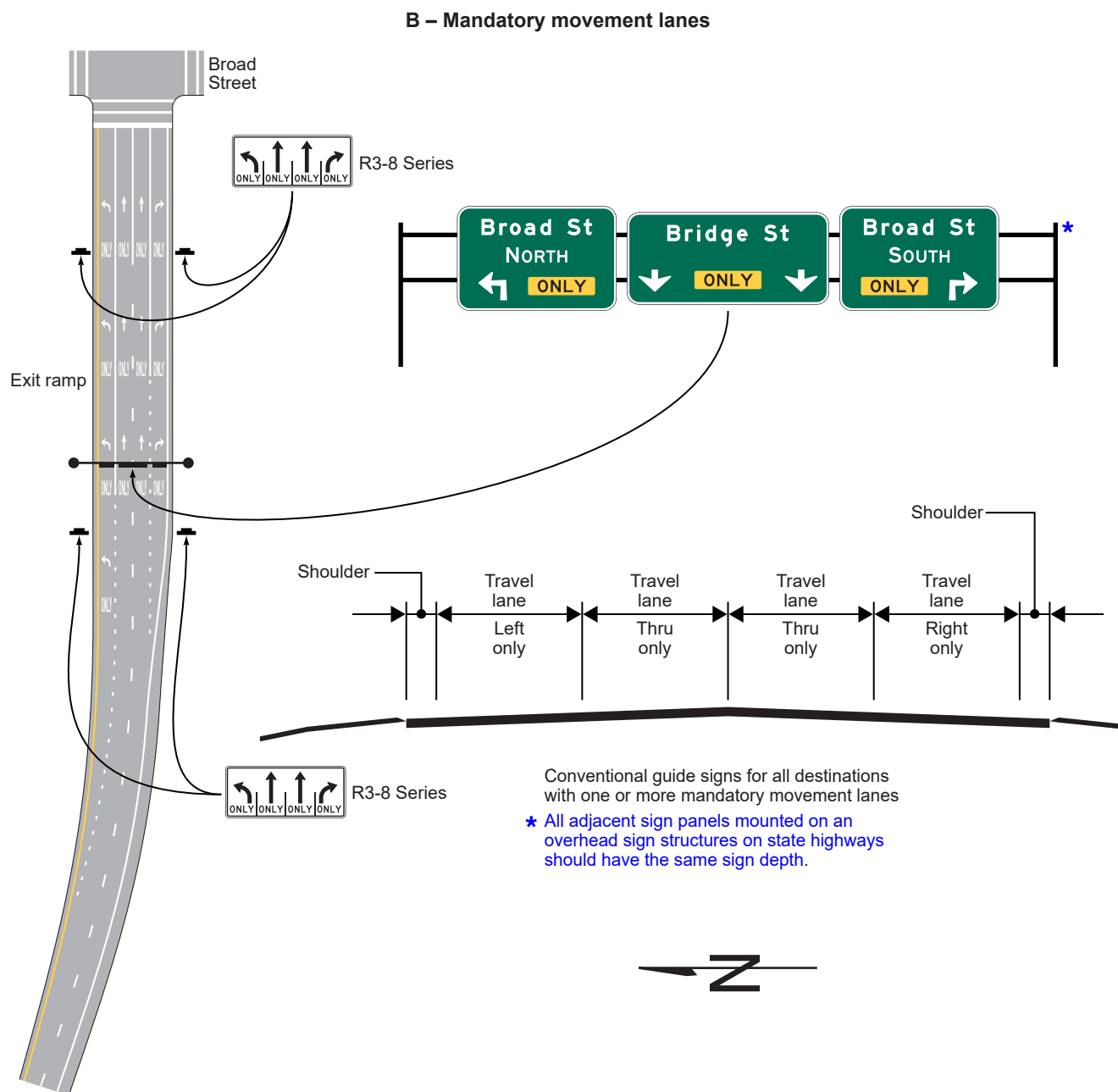


Figure 2D-10. Examples of Overhead Signs at an Intersection (Sheet 3 of 3)

C – Mandatory movement lanes with dual turn lanes

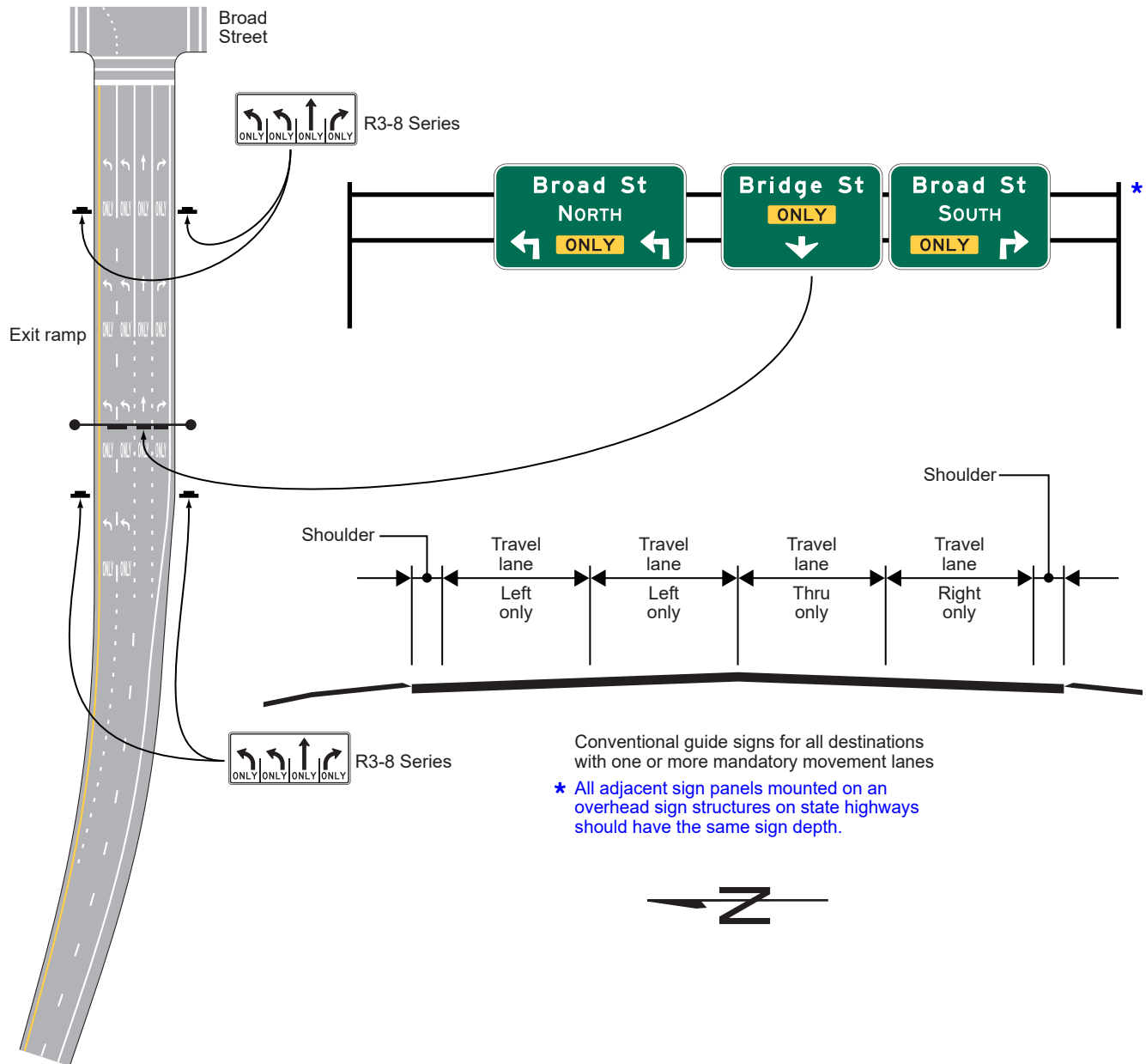
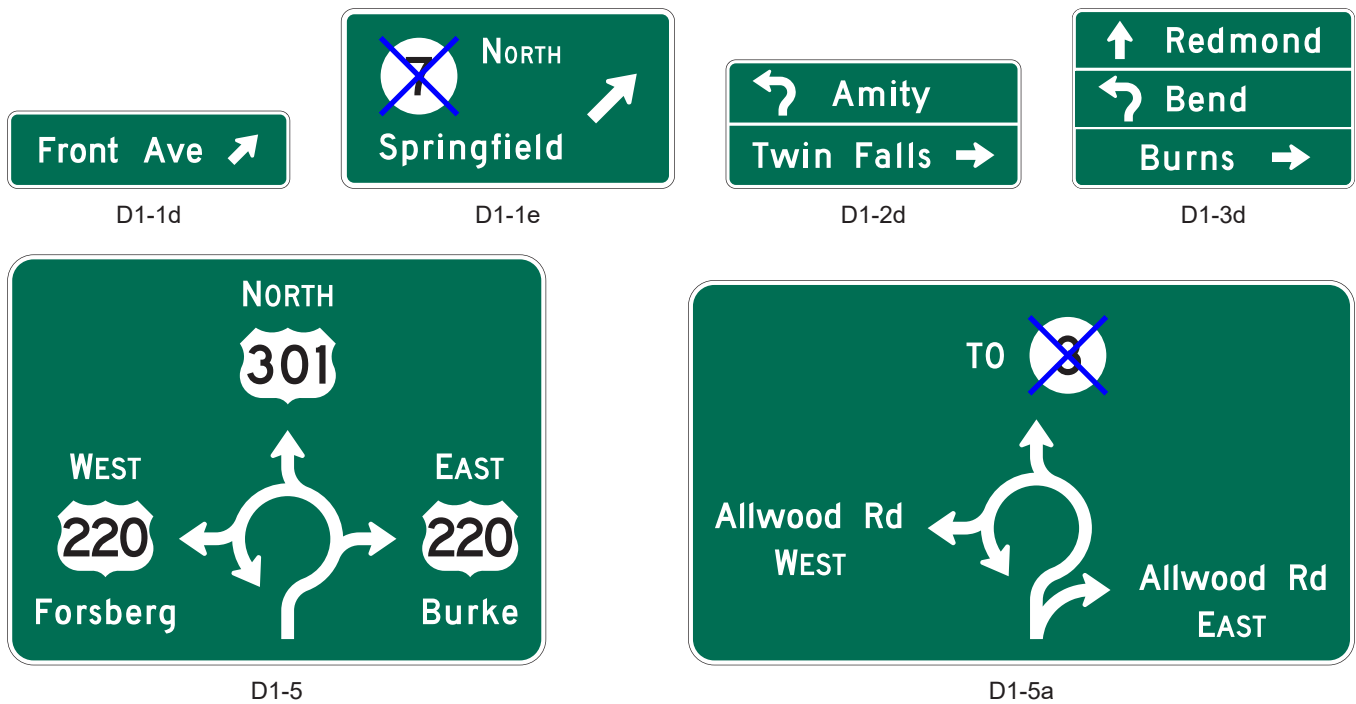


Figure 2D-11. Destination Signs for Circular Intersections



Note: Refer to Figure 2D-4 and Figure 2D-4(CA) for appropriate route shield and/or marker selection.

Figure 2D-12. Examples of Guide Signs for Circular Intersections (Sheet 1 of 4)

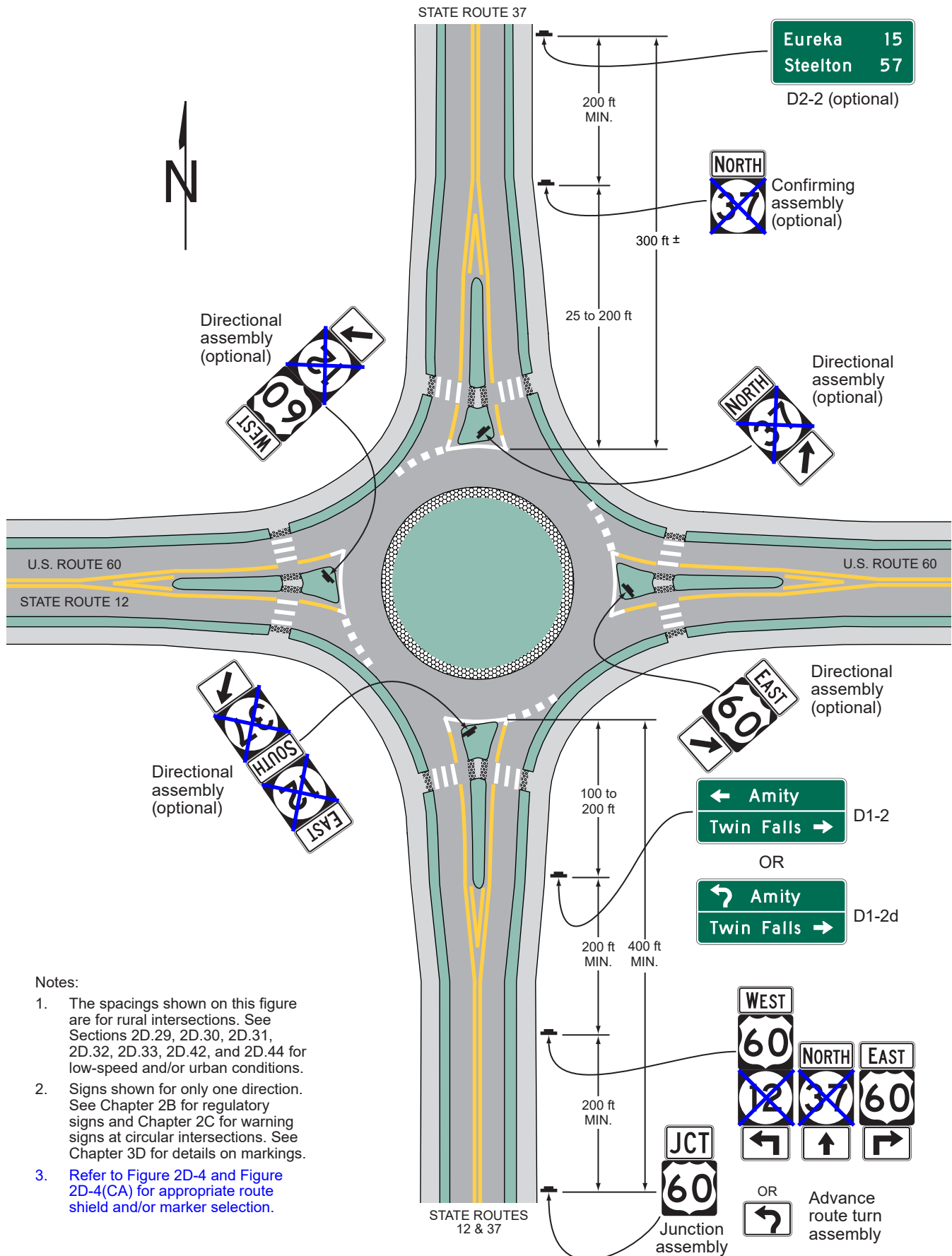
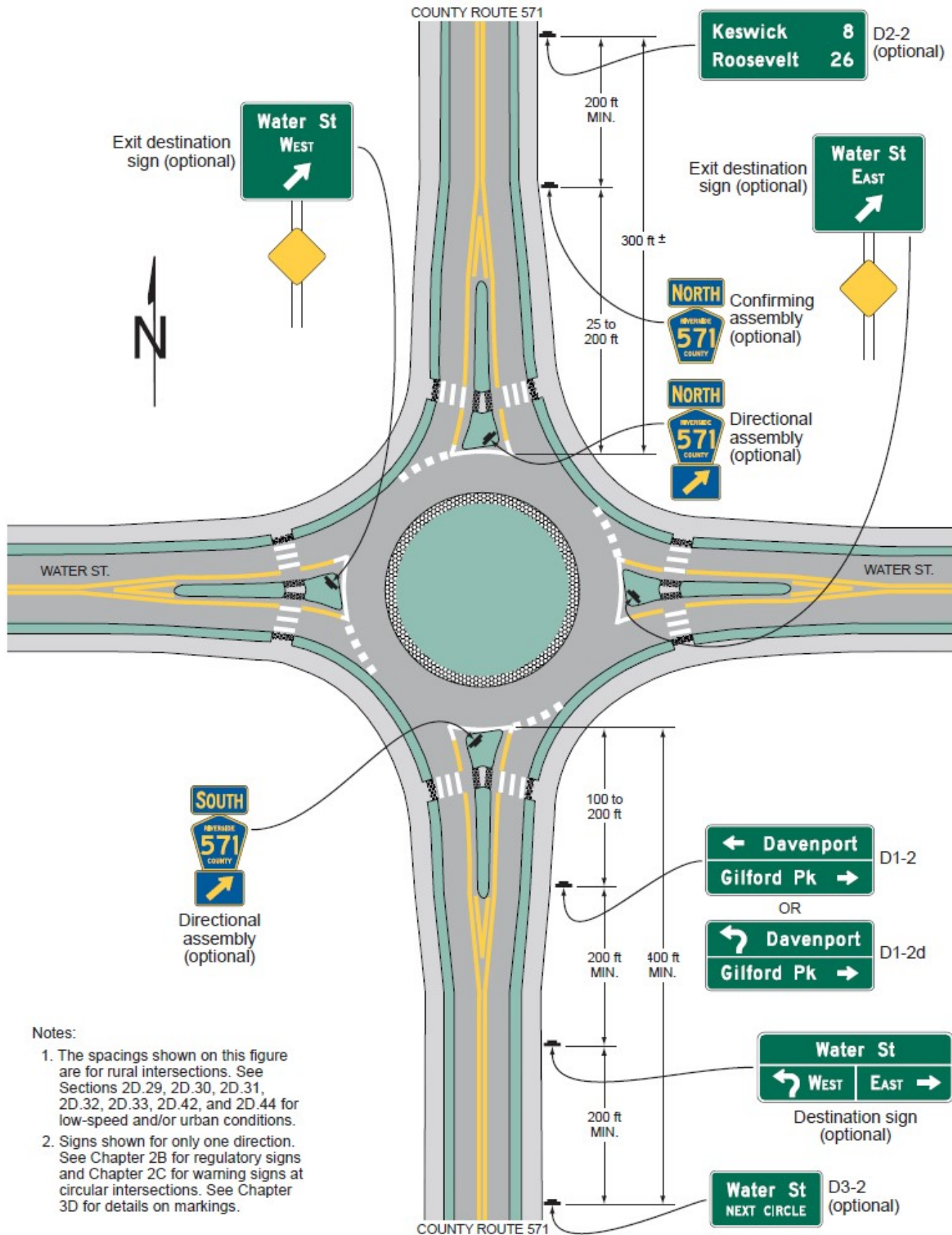


Figure 2D-12. Examples of Guide Signs for Circular Intersections (Sheet 2 of 4)



Notes:

1. The spacings shown on this figure are for rural intersections. See Sections 2D.29, 2D.30, 2D.31, 2D.32, 2D.33, 2D.42, and 2D.44 for low-speed and/or urban conditions.
2. Signs shown for only one direction. See Chapter 2B for regulatory signs and Chapter 2C for warning signs at circular intersections. See Chapter 3D for details on markings.

Figure 2D-12. Examples of Guide Signs for Circular Intersections (Sheet 3 of 4)

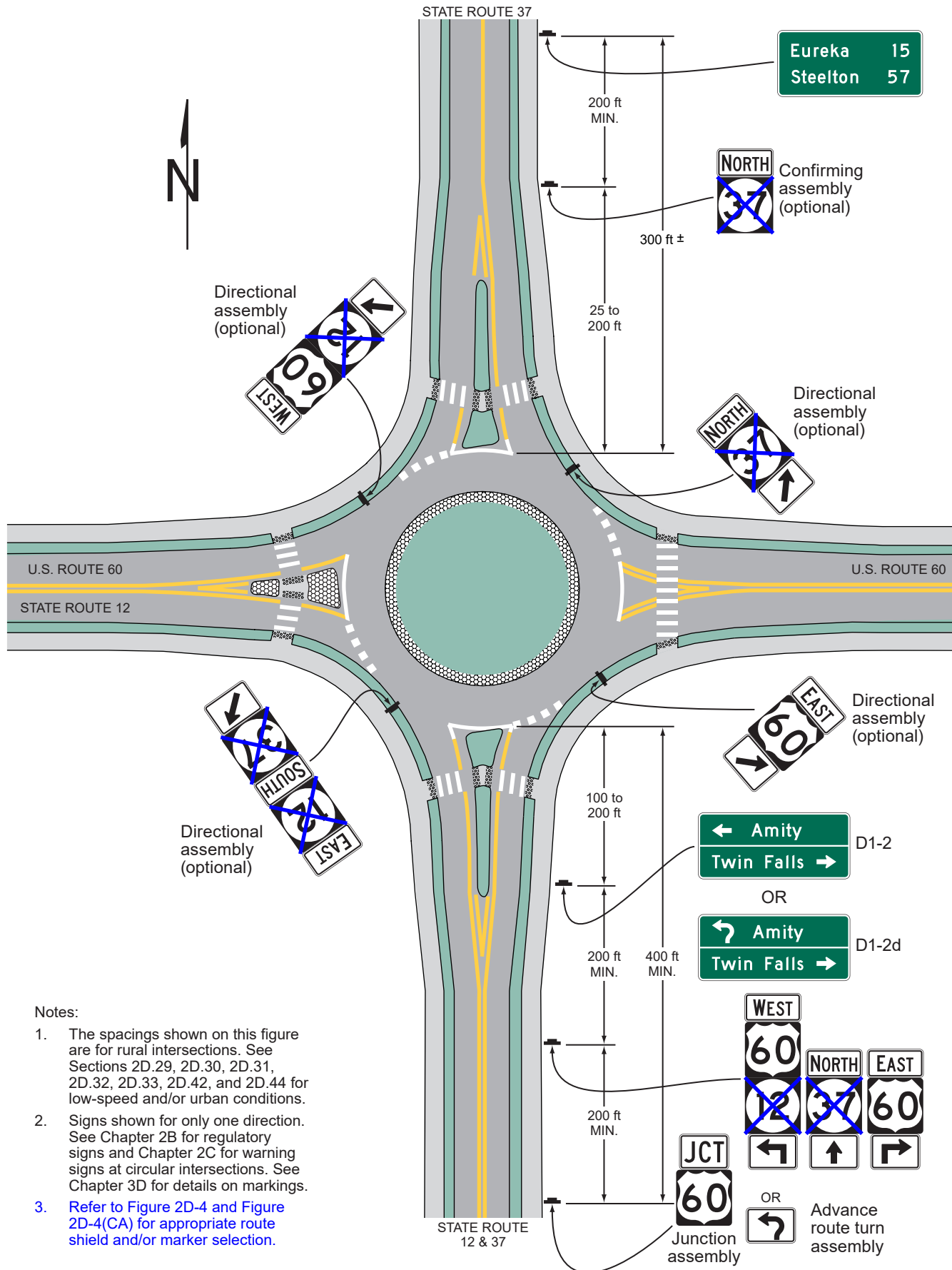
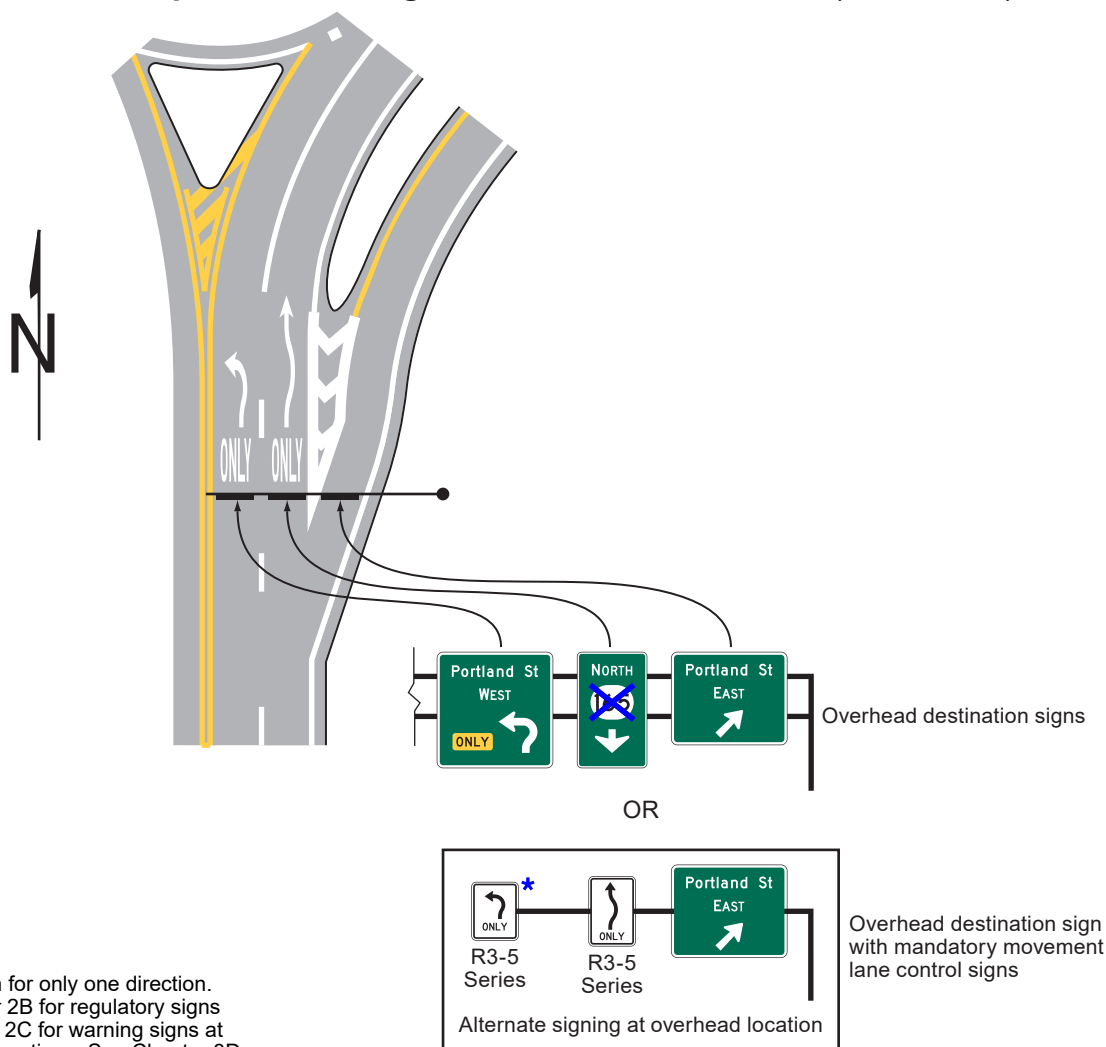


Figure 2D-12. Examples of Guide Signs for Circular Intersections (Sheet 4 of 4)

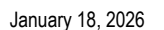


Notes:

1. Signs shown for only one direction. See Chapter 2B for regulatory signs and Chapter 2C for warning signs at circular intersections. See Chapter 3D for details on markings.
2. Refer to Figure 2D-4 and Figure 2D-4(CA) for appropriate route shield and/or marker selection.

* See Figure 2B-5 for intersection lane control sign arrow options.

A – Intercepted crossroad with left turns prohibited



B – Intercepted crossroad with left turns prohibited

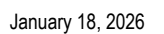


Figure 2D-13. Examples of Signing for Intersections with Indirect Left Turns (Sheet 3 of 3)

C – Continuous flow intersection

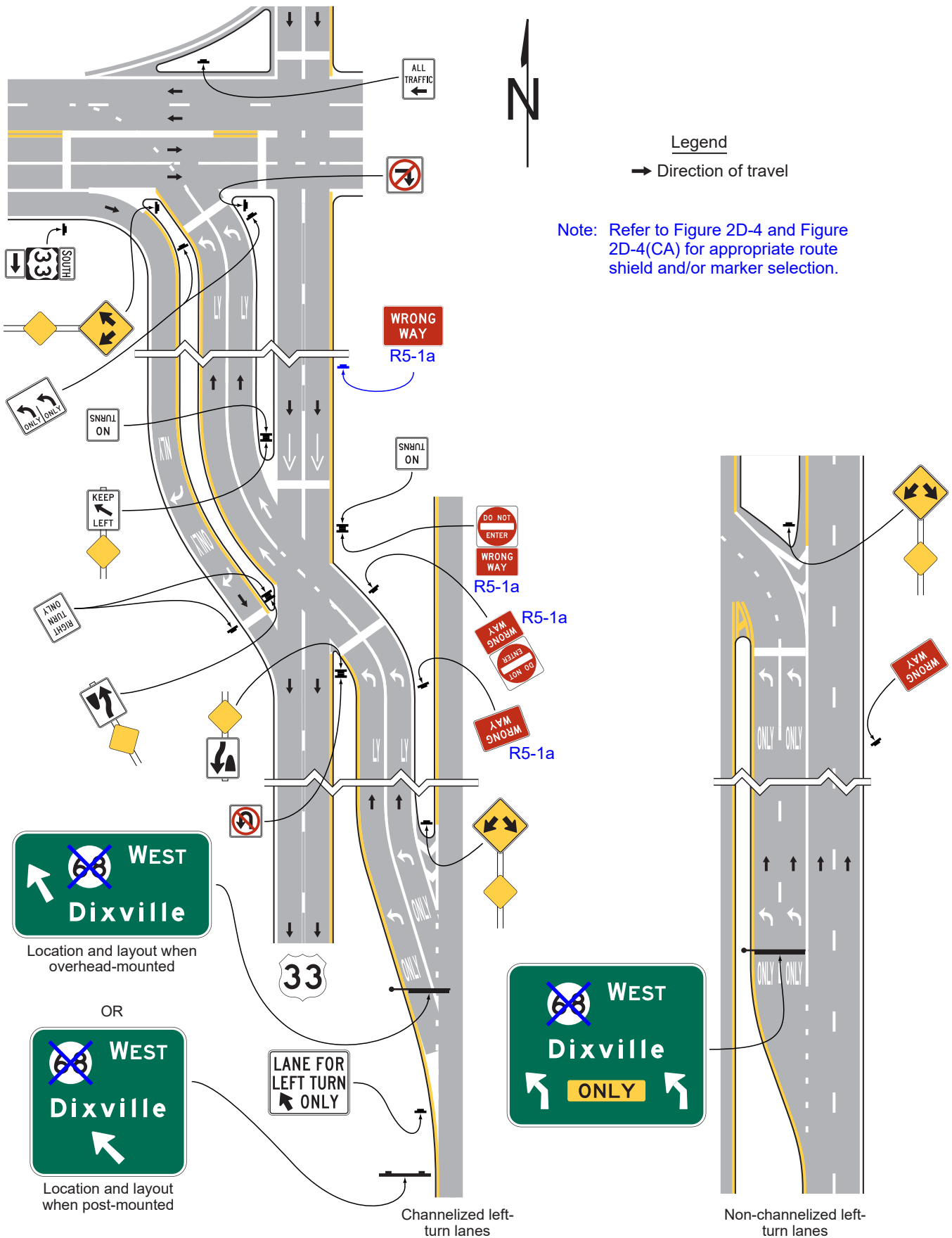
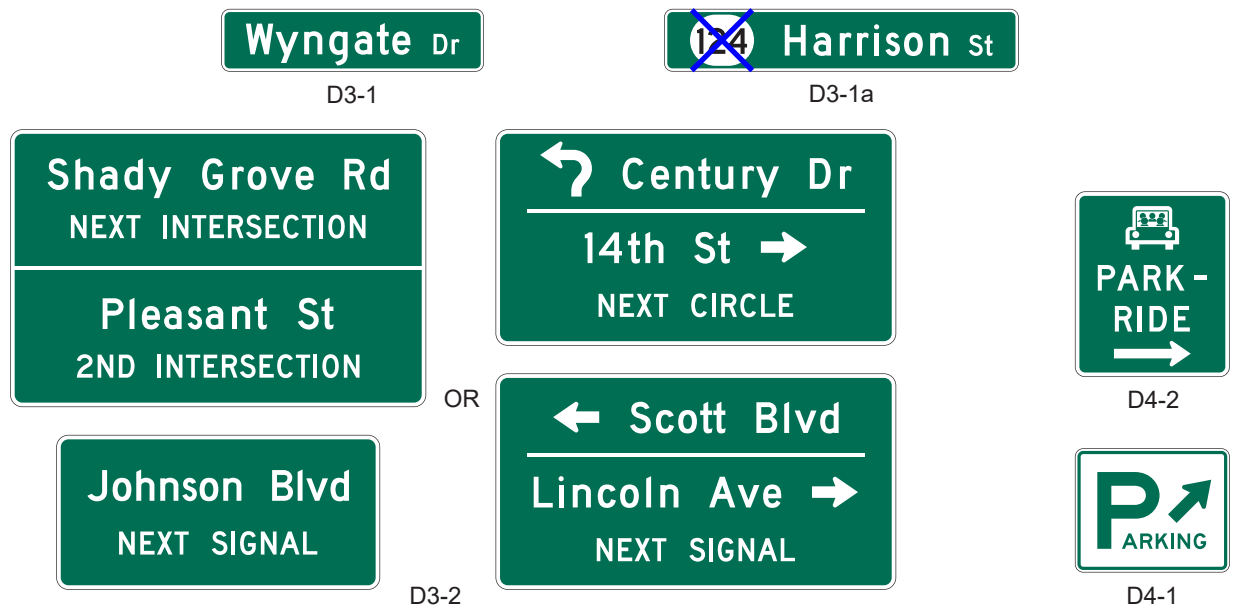


Figure 2D-14. Street Name and Parking Signs



Note: Refer to Figure 2D-4 and Figure 2D-4(CA) for appropriate route shield and/or marker selection.

Chapter 2D – Guide Signs – Conventional Roads (Figures)

Part 2 Signs

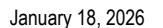
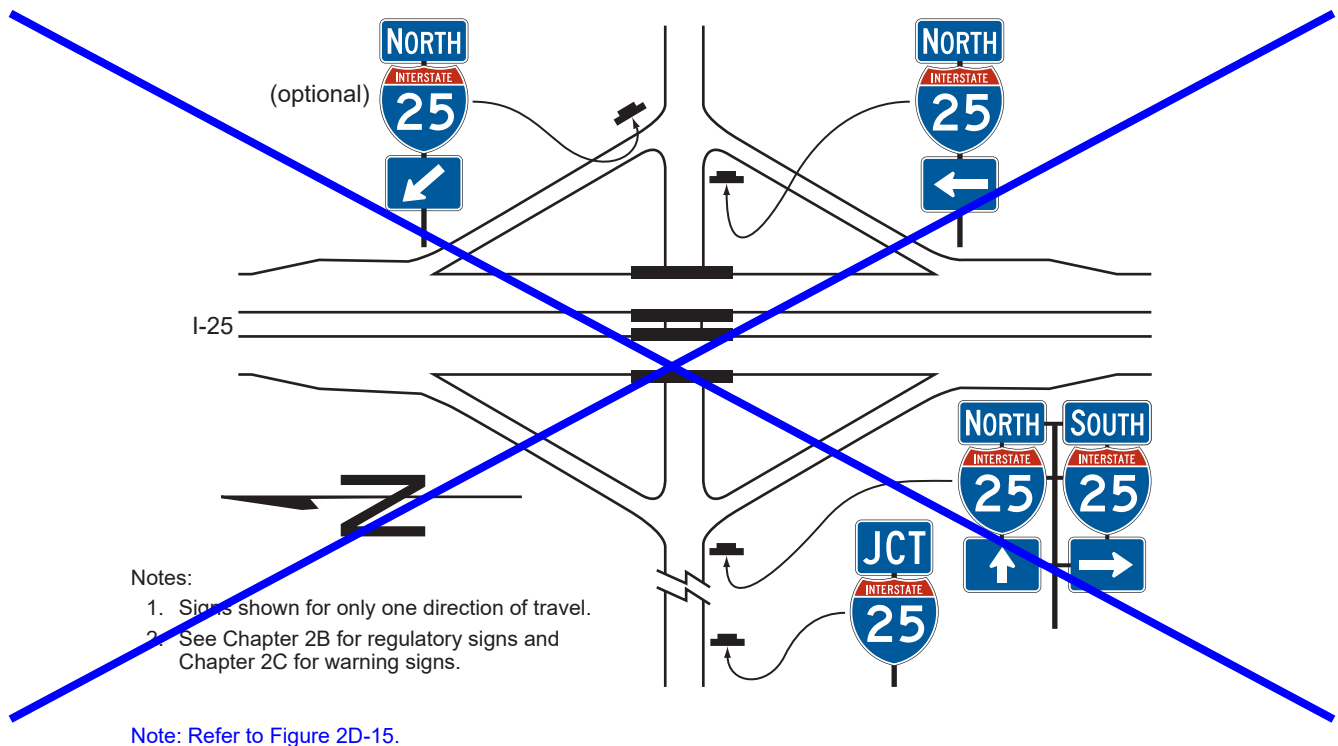


Figure 2D-16. Example of Minor Interchange Crossroad Guide Signing



[illegible]

Figure 2D-18. Examples of Multi-Lane Crossroad Guide Signing for a Partial Cloverleaf Interchange

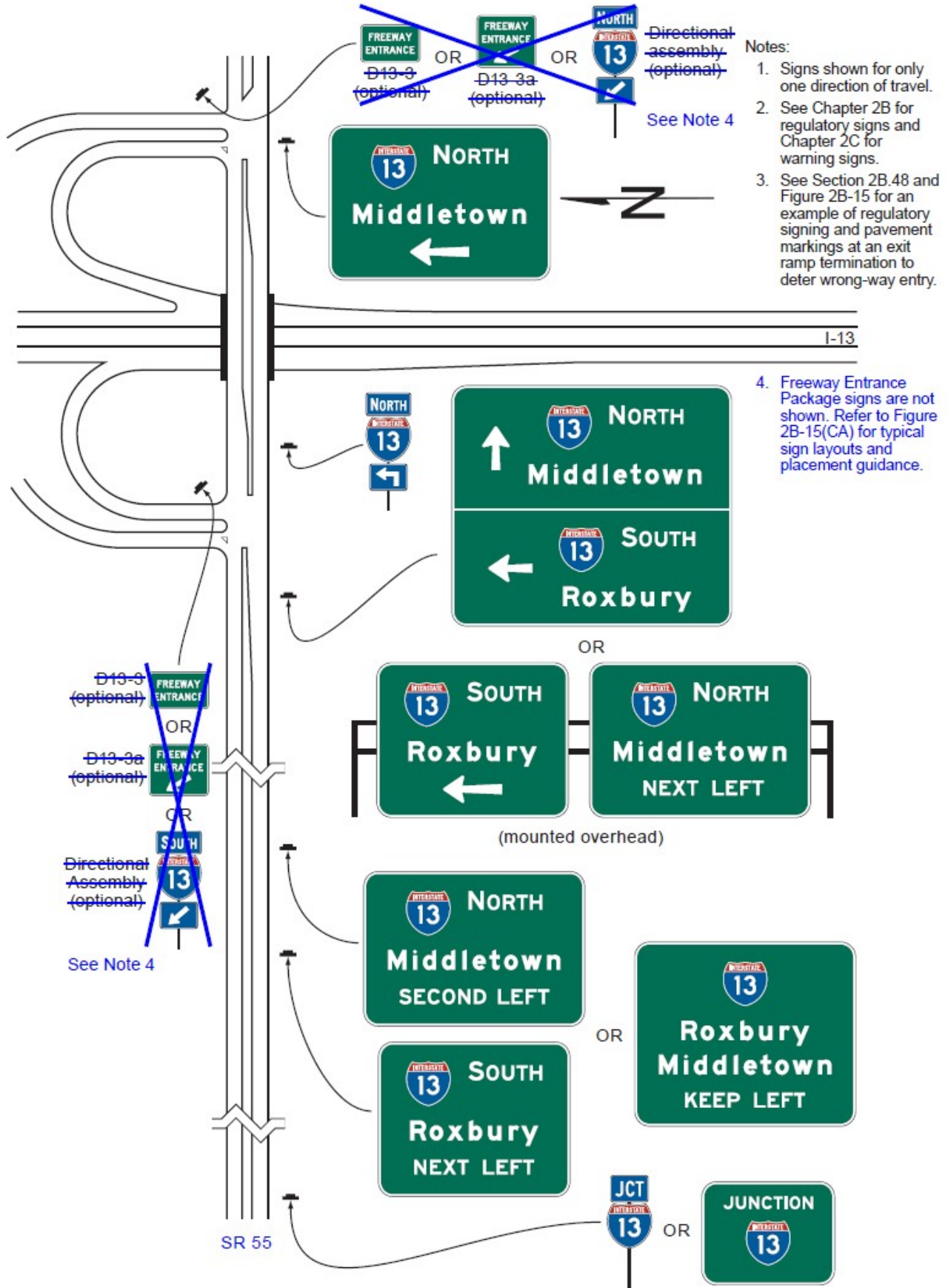
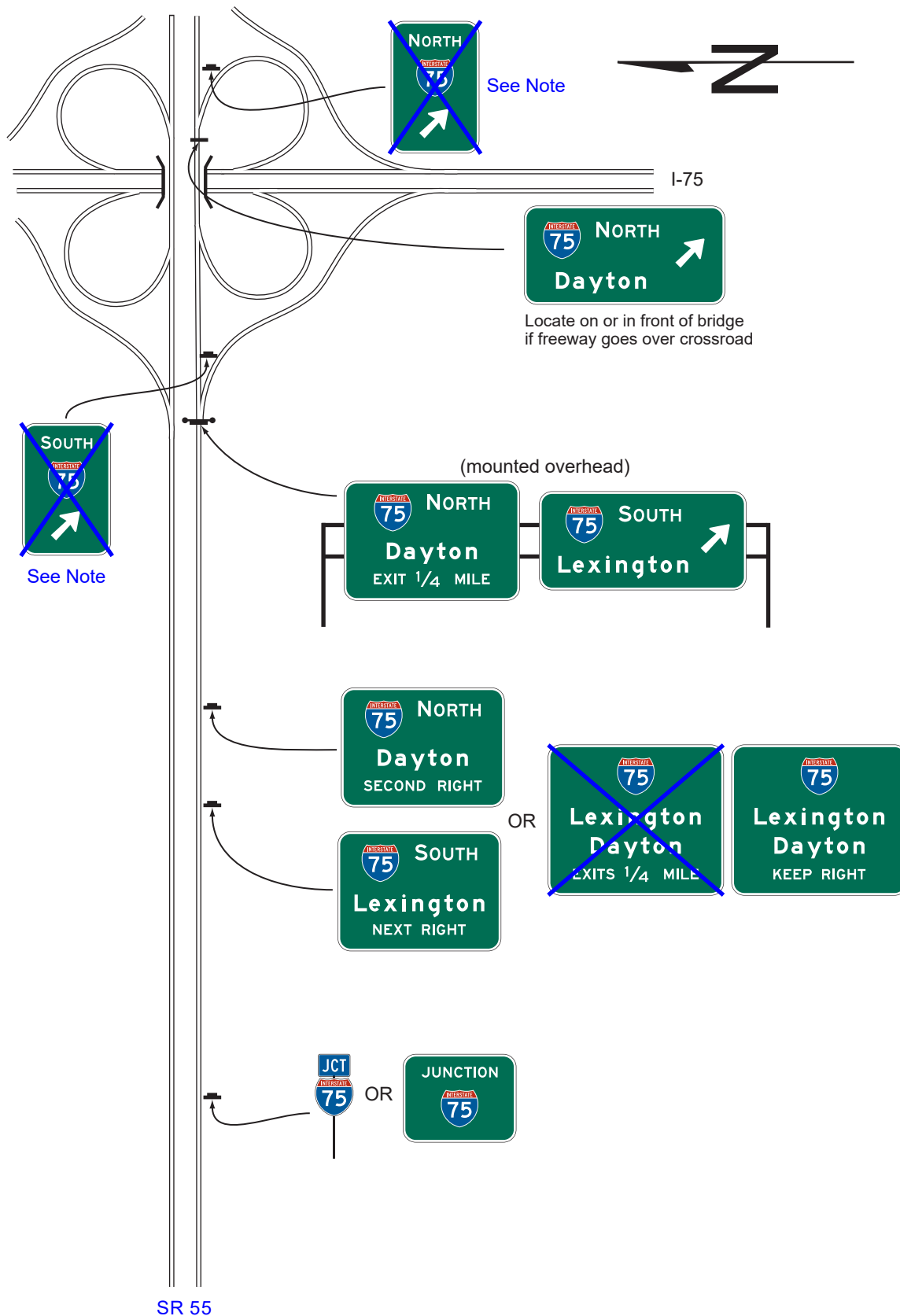
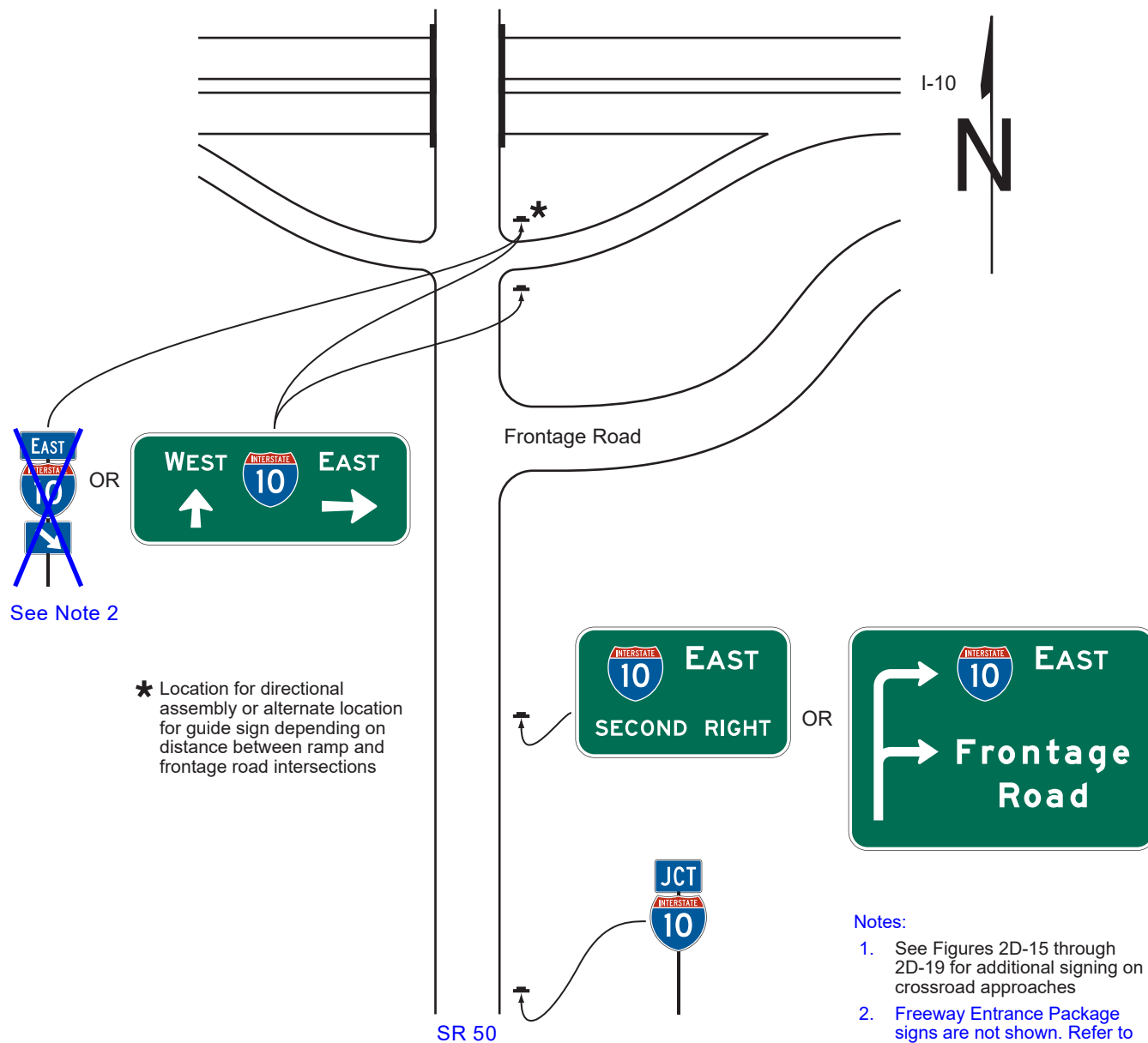


Figure 2D-19. Examples of Multi-Lane Crossroad Signing for a Cloverleaf Interchange



Note: Freeway Entrance Package signs are not shown. Refer to Figure 2B-15(CA) for typical sign layouts and placement guidance.

Figure 2D-20. Example of Crossroad Guide Signing for an Entrance Ramp with a Nearby Frontage Road



* Location for directional assembly or alternate location for guide sign depending on distance between ramp and frontage road intersections

Notes:

1. See Figures 2D-15 through 2D-19 for additional signing on crossroad approaches
2. Freeway Entrance Package signs are not shown. Refer to Figure 2B-15(CA) for typical sign layouts and placement guidance.

Figure 2D-21. Example of Transposed Alignment Crossroad Guide Signing at a Diamond Interchange

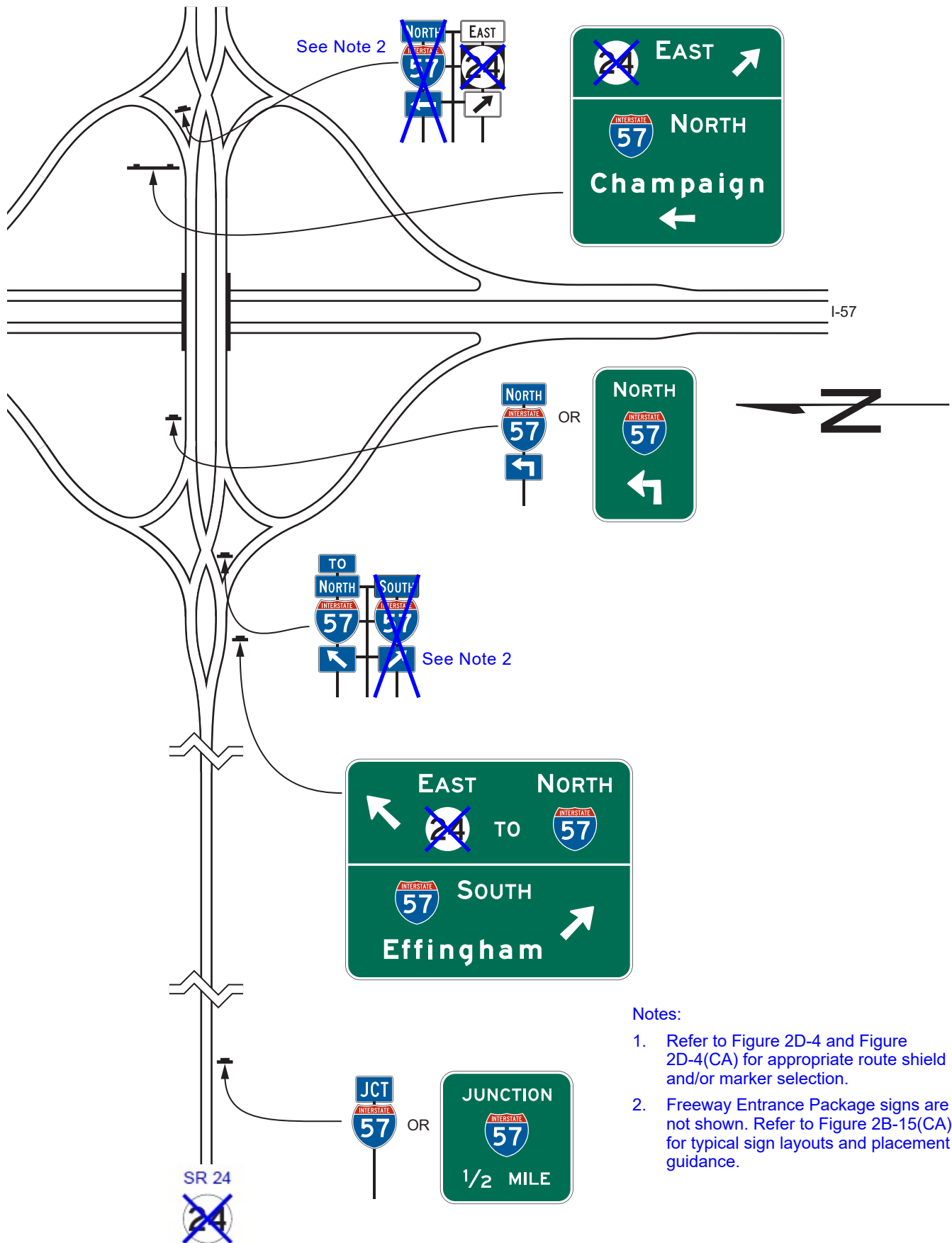


Figure 2D-22. Example of Crossroad Intersection Guide Signs for a Single-Point Urban Interchange

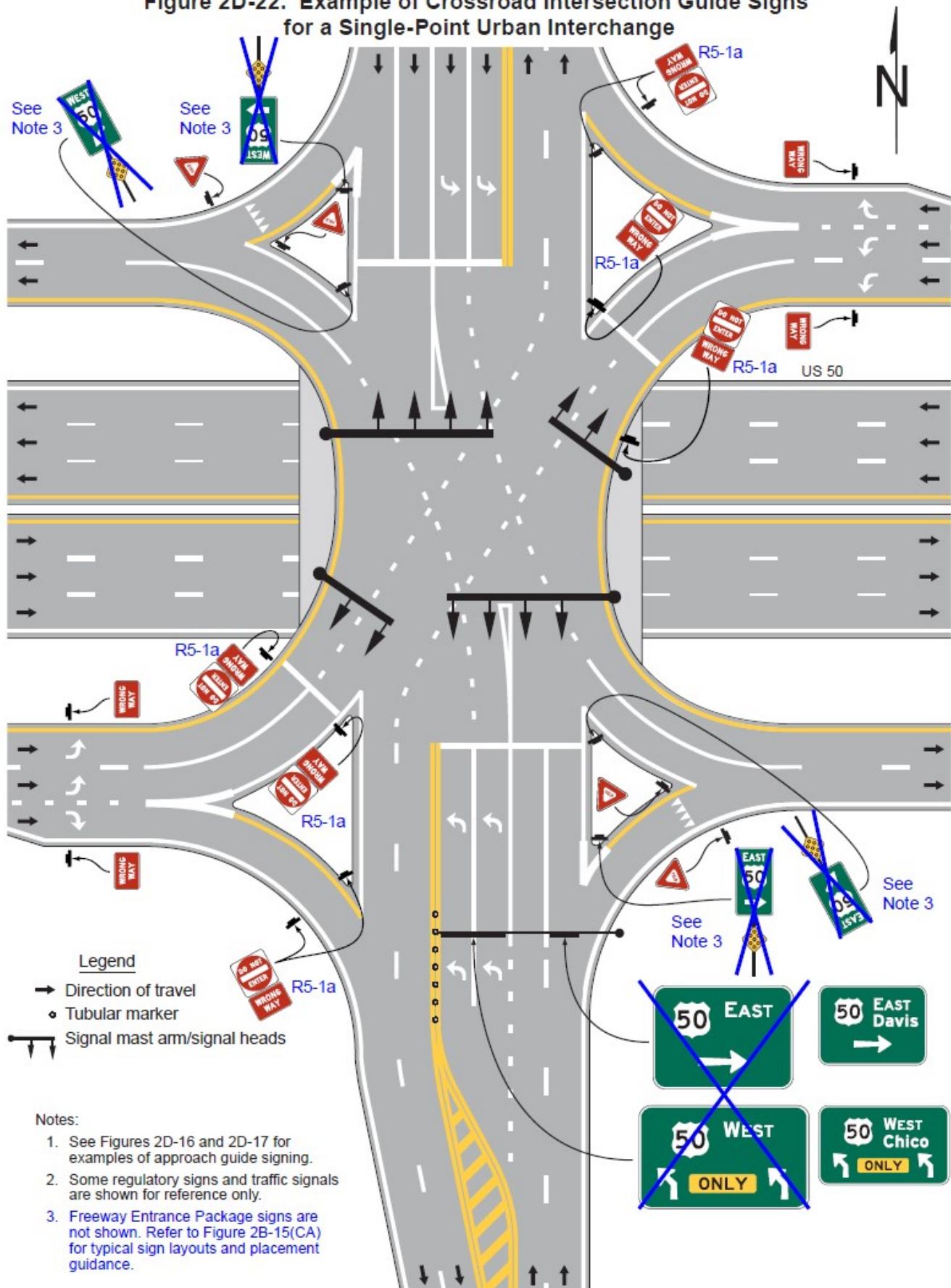


Figure 2D-23. Example of Weigh Station Signing – Conventional Road

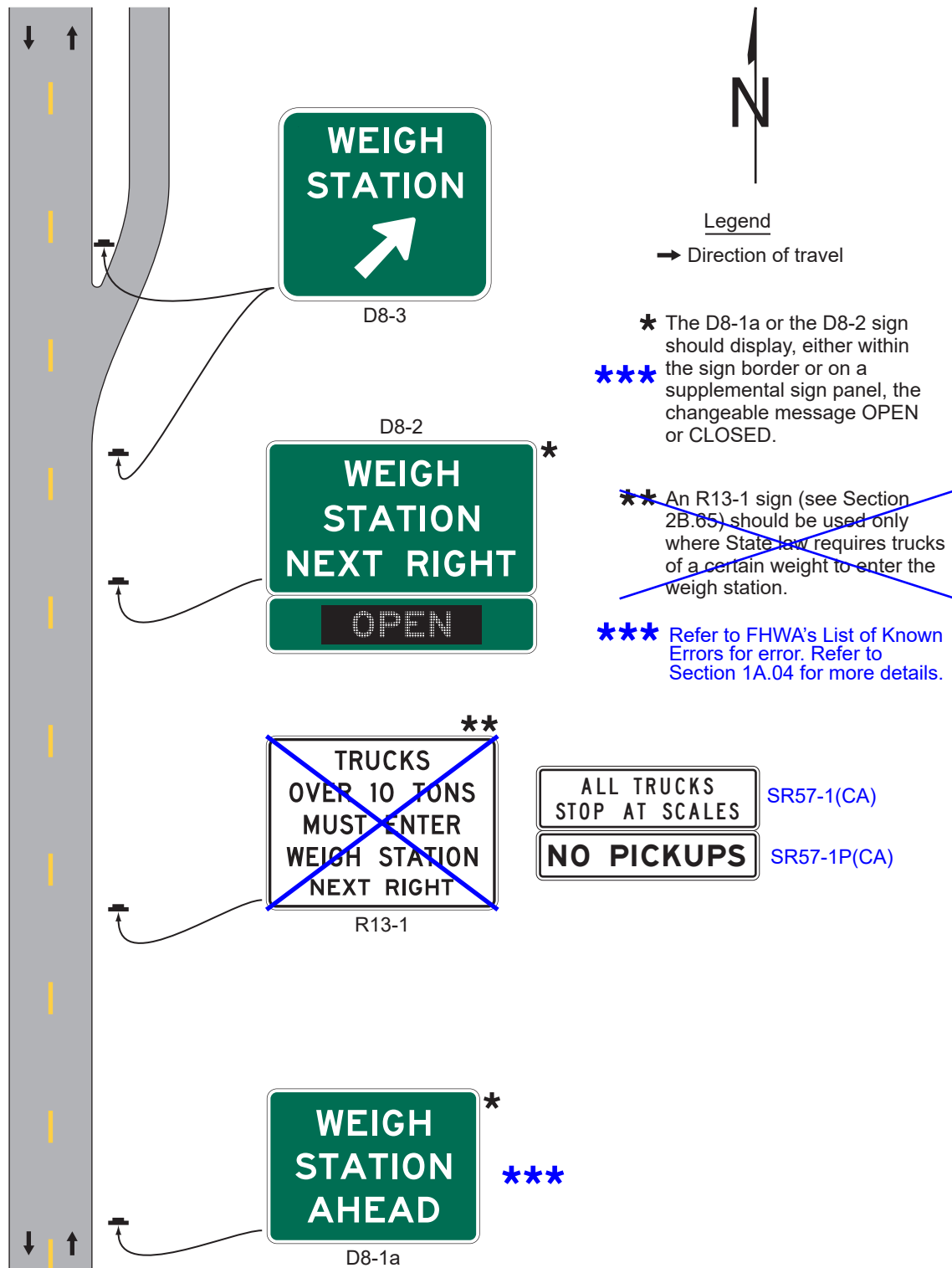


Figure 2D-24. Crossover Signs



D13-1



D13-2

Figure 2D-25. Truck and Passing Lane Signs



Figure 2D-26. Example of Signing for a Truck Lane

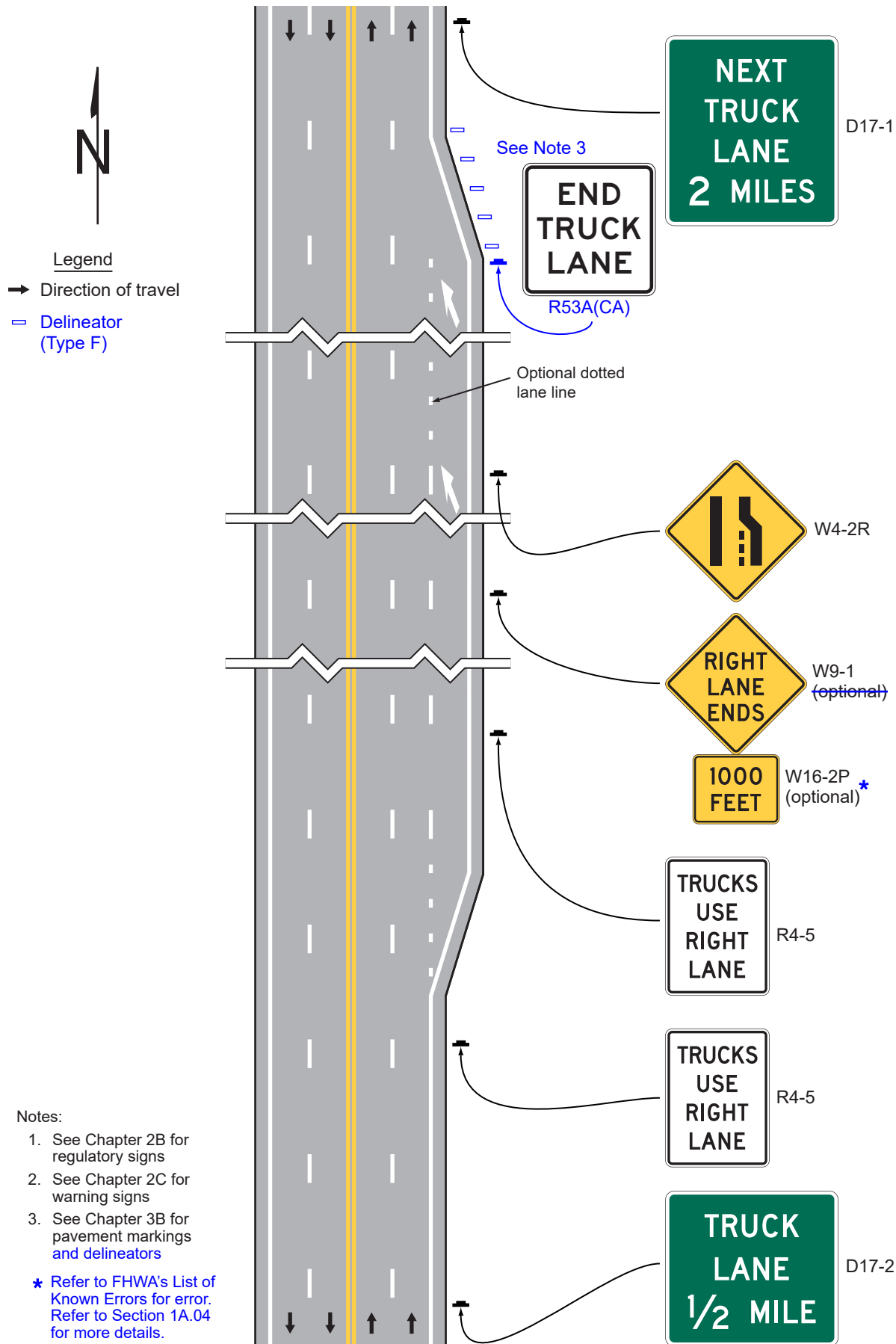


Figure 2D-27. Example of Signing for an Intermittent Passing Lane

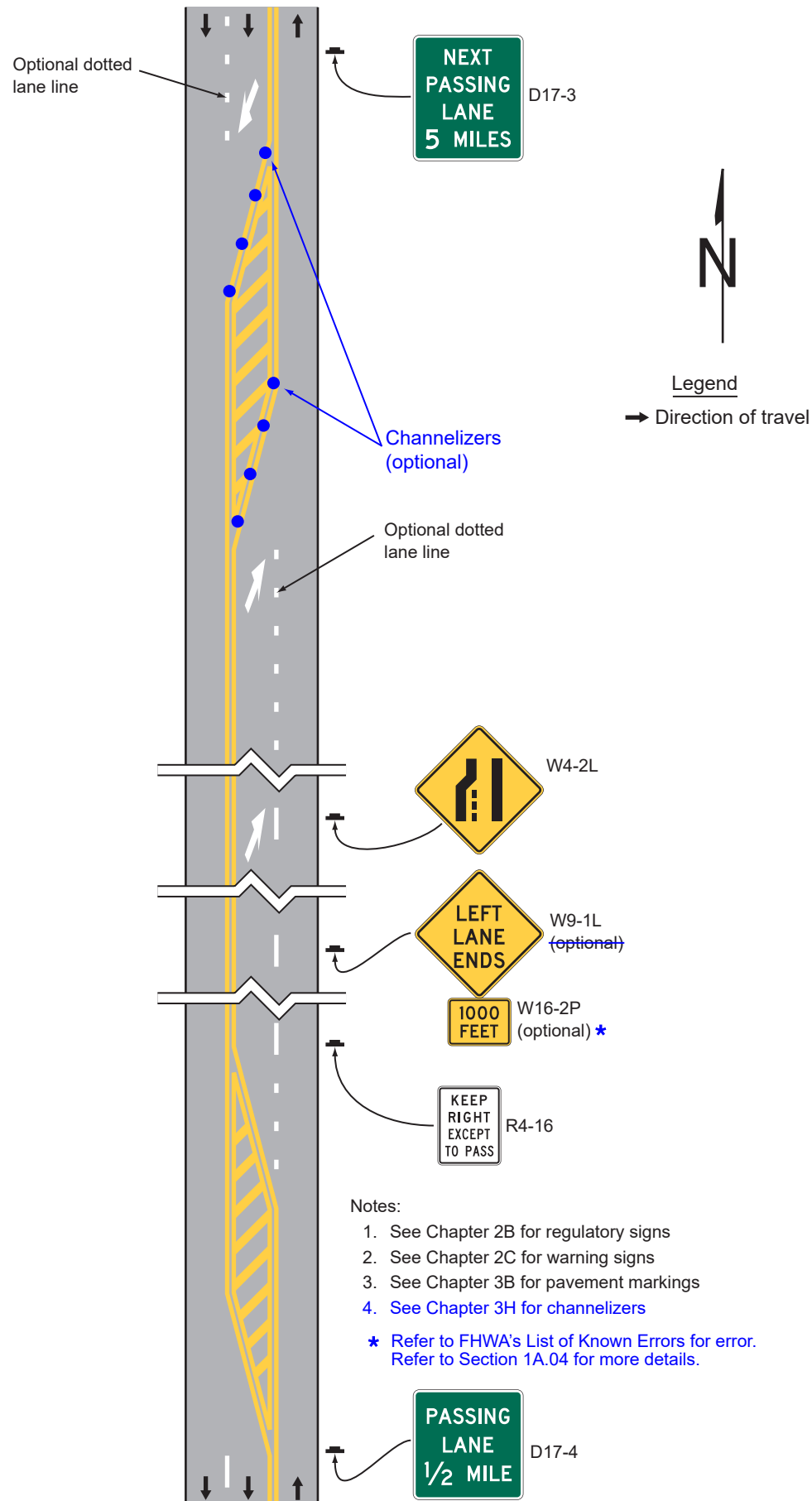


Figure 2D-28. Emergency and Slow Vehicle Turn-Out Signs



D17-5



D17-6



D17-7

Figure 2D-29. Example of Signing for an Emergency Turn-Out

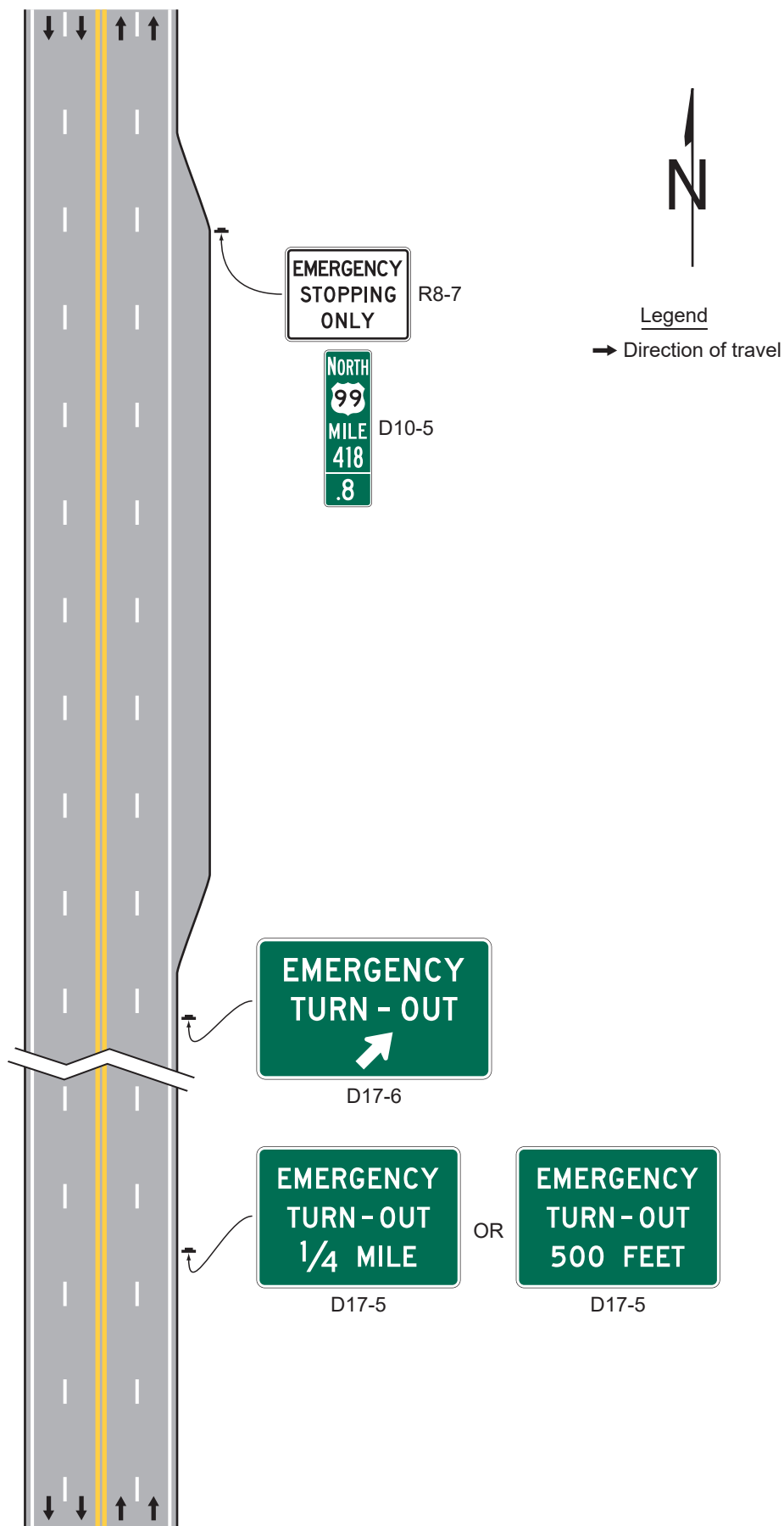


Figure 2D-30. Examples of Community Wayfinding Guide Signs



**Figure 2D-31. Example of a Community Wayfinding Guide Sign System
Showing Direction from a Freeway or Expressway**

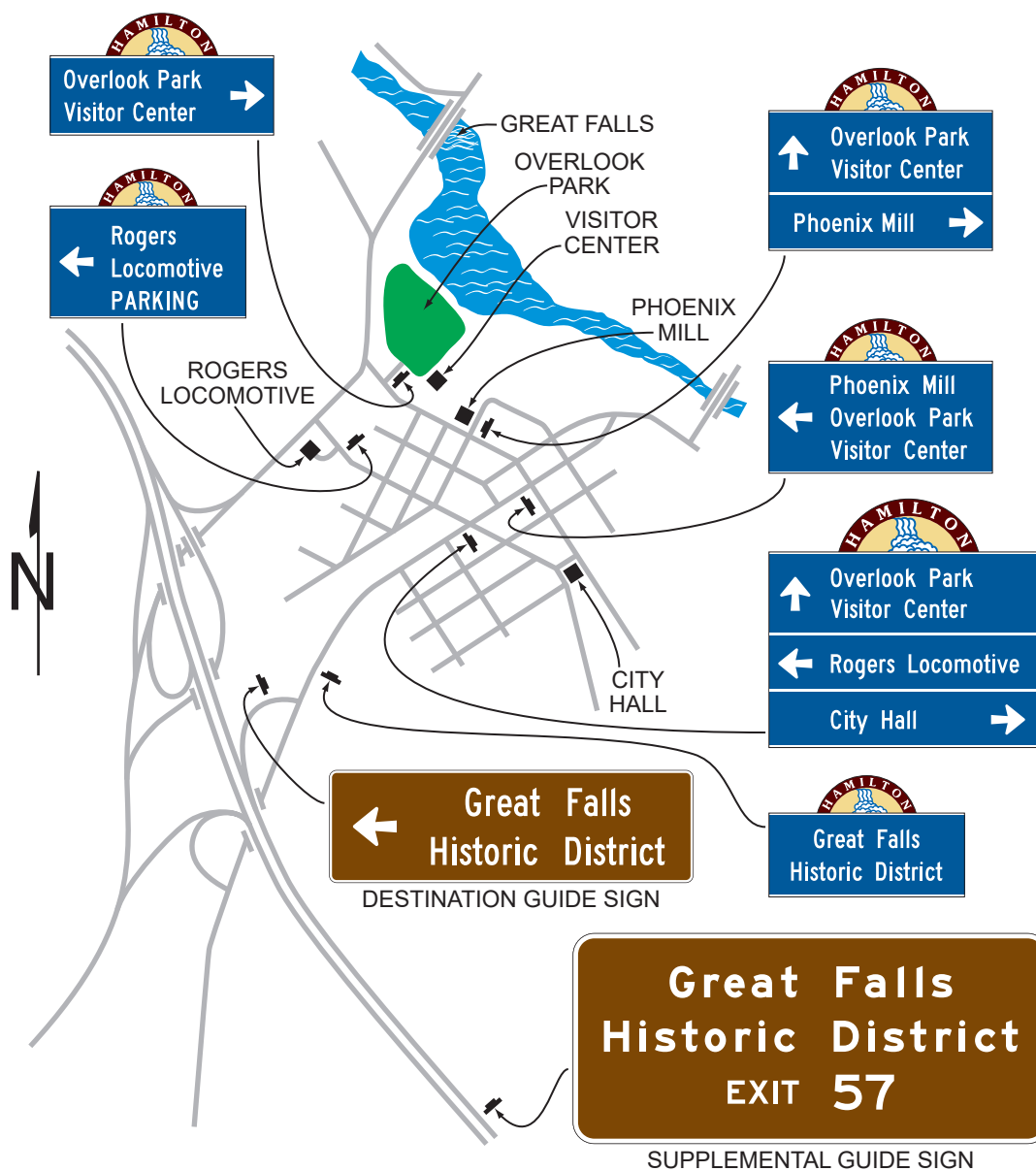


Figure 2D-32. Example of a Color-Coded Community Wayfinding Guide Sign System

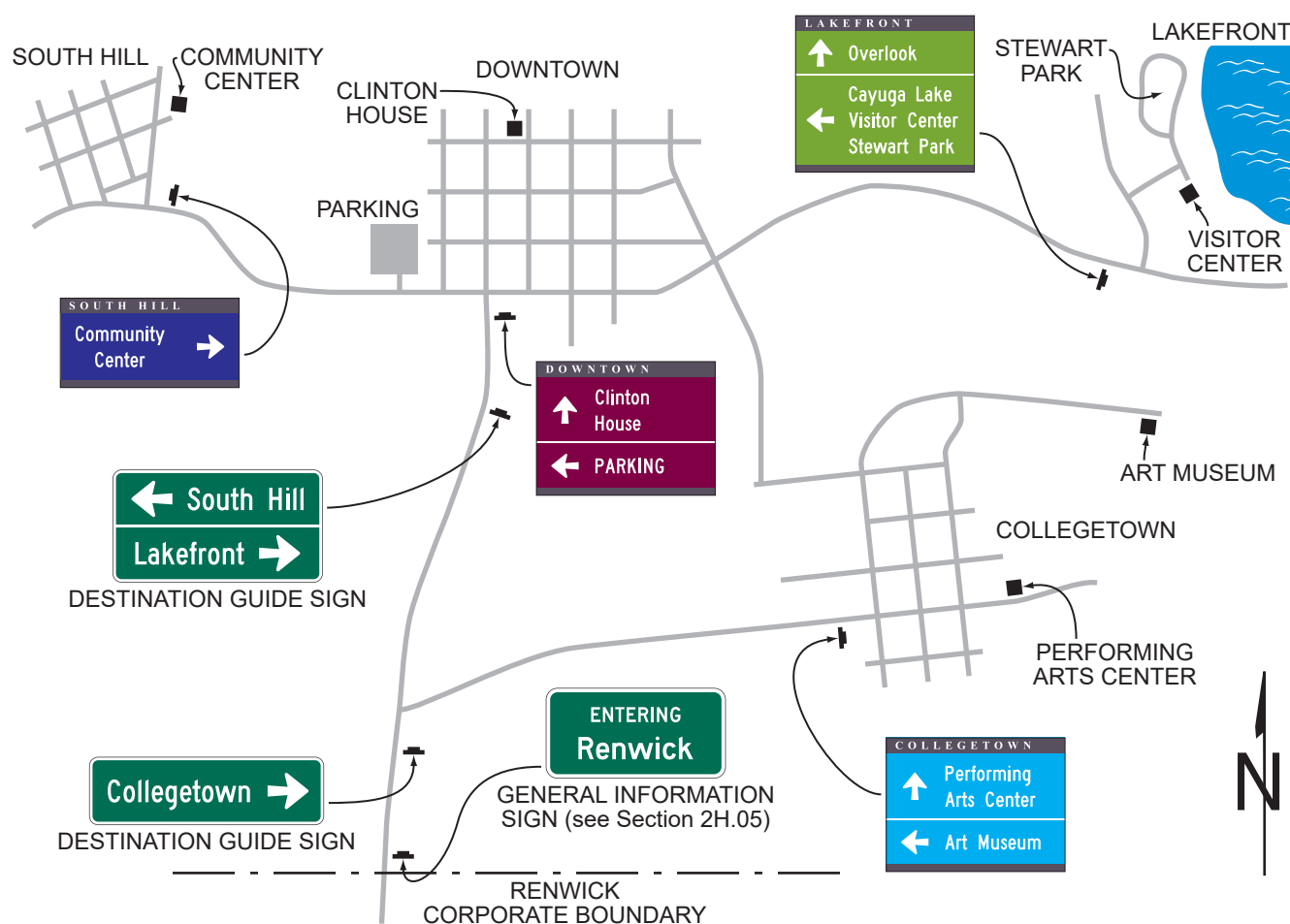


Figure 2D-33. National Scenic Byways Sign and Plaque, and Examples of Use

A – National Scenic Byways sign and plaque



M10-1



M10-1aP

B – Examples of use of the National Scenic Byways sign and plaque



Independent
Directional
assembly



Independent
Confirming
assembly

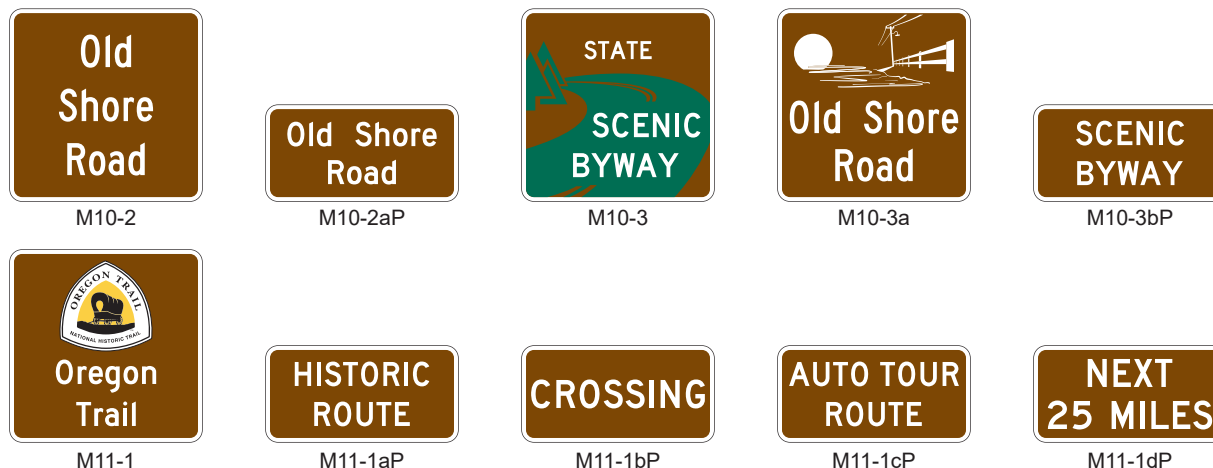


Confirming
assembly

Note: Refer to Figure 2D-4 and Figure 2D-4(CA) for appropriate route shield and/or marker selection.

Figure 2D-34. Byway Identification, State Scenic Byway, and National Historic Trail Signs and Plaques, and Examples of Use

A – Byway Identification, State Scenic Byway, and National Historic Trails signs and plaques



B – Examples of Directional assemblies for National and State Scenic Byways

Byway identification emphasized



Byway system emphasized



C – Examples of Directional and Confirming assemblies for National Historic Trails



Figure 2D-35. Example of Guide and Directional Signing for a National Historic Trail

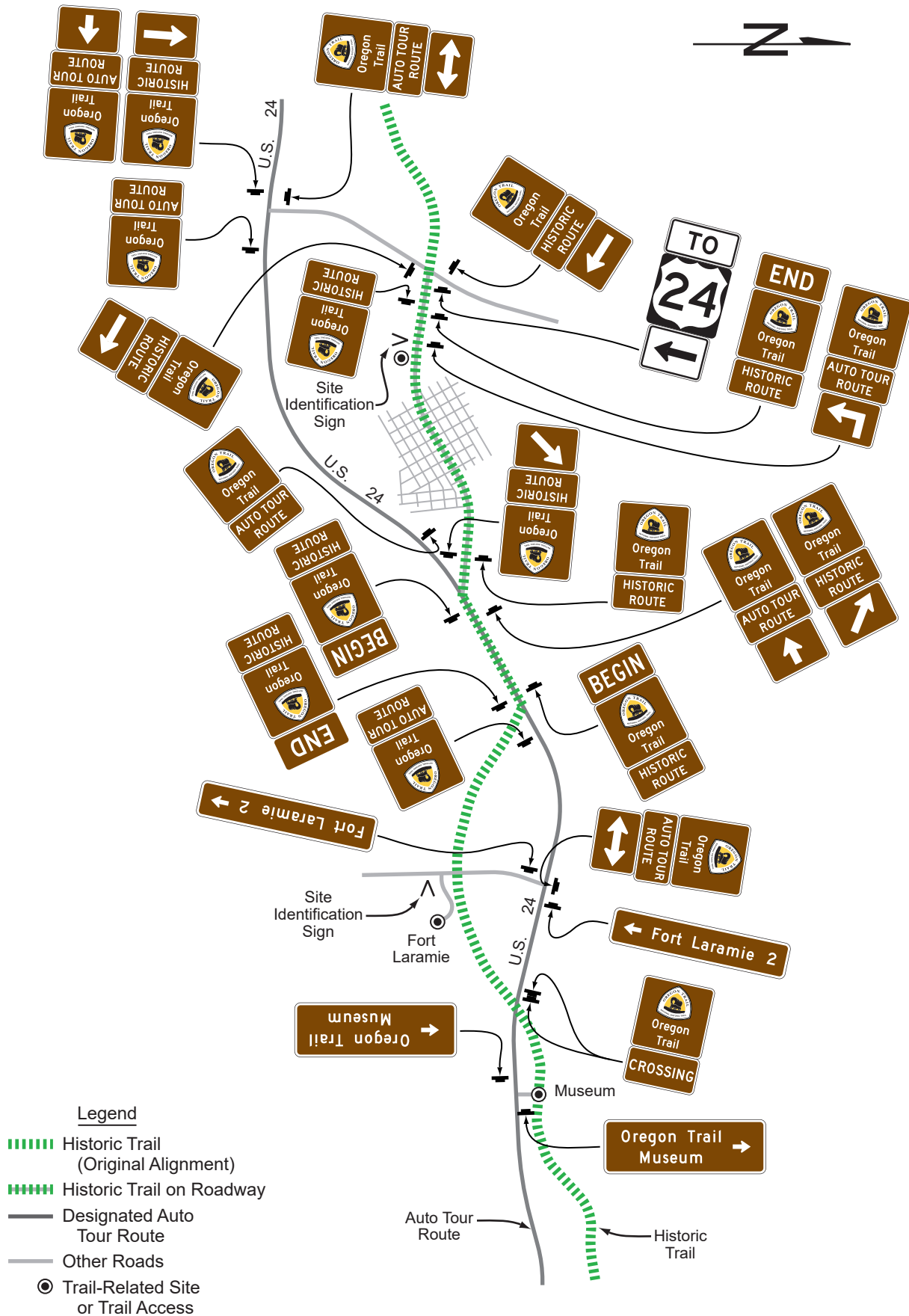


Figure 2D-36. Example of Historic Trails Signing from an Expressway or Freeway

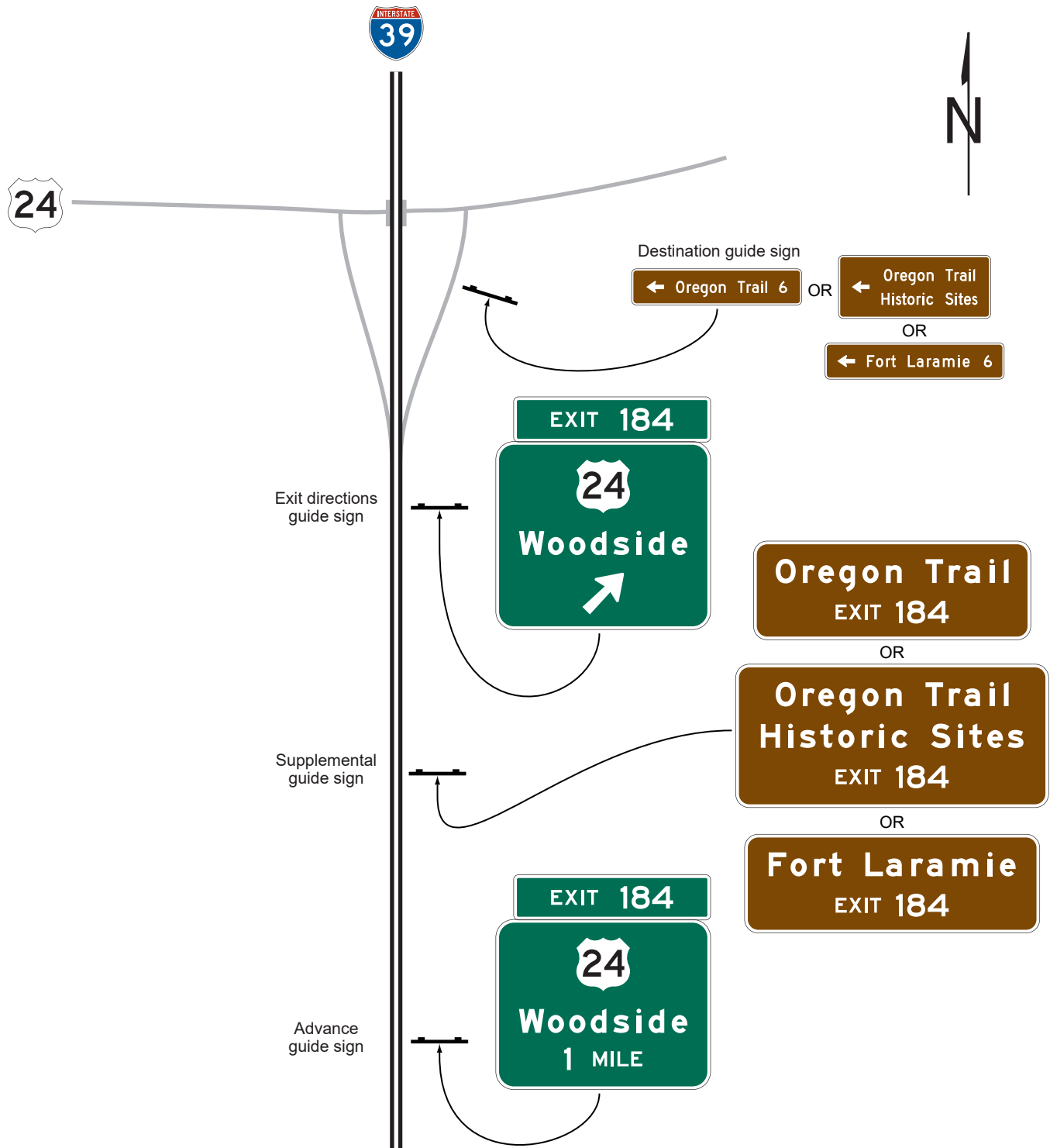
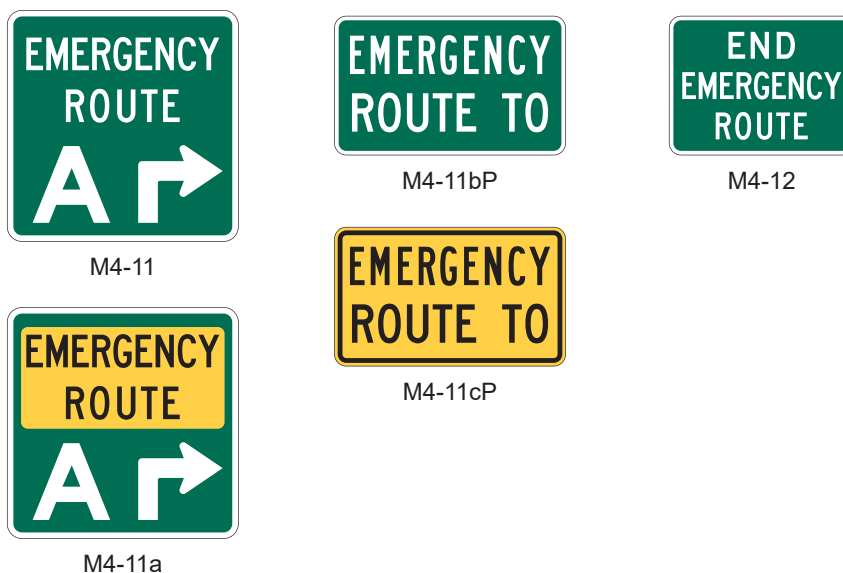
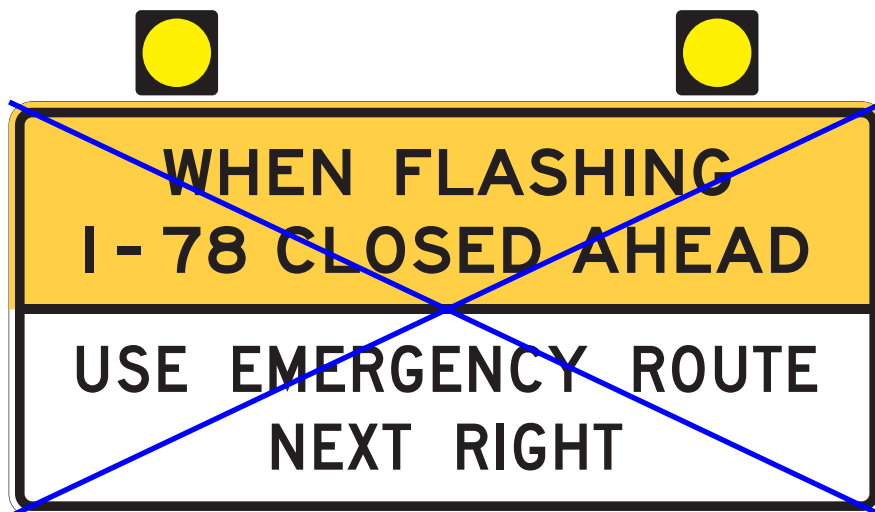


Figure 2D-37. Signs and Plaques for Rerouting Because of Traffic Incidents



Examples of guide signs for rerouting



Example of advance sign for rerouting

Figure 2D-38. Example of Permanent Guide Signing for Rerouting Because of Traffic Incidents

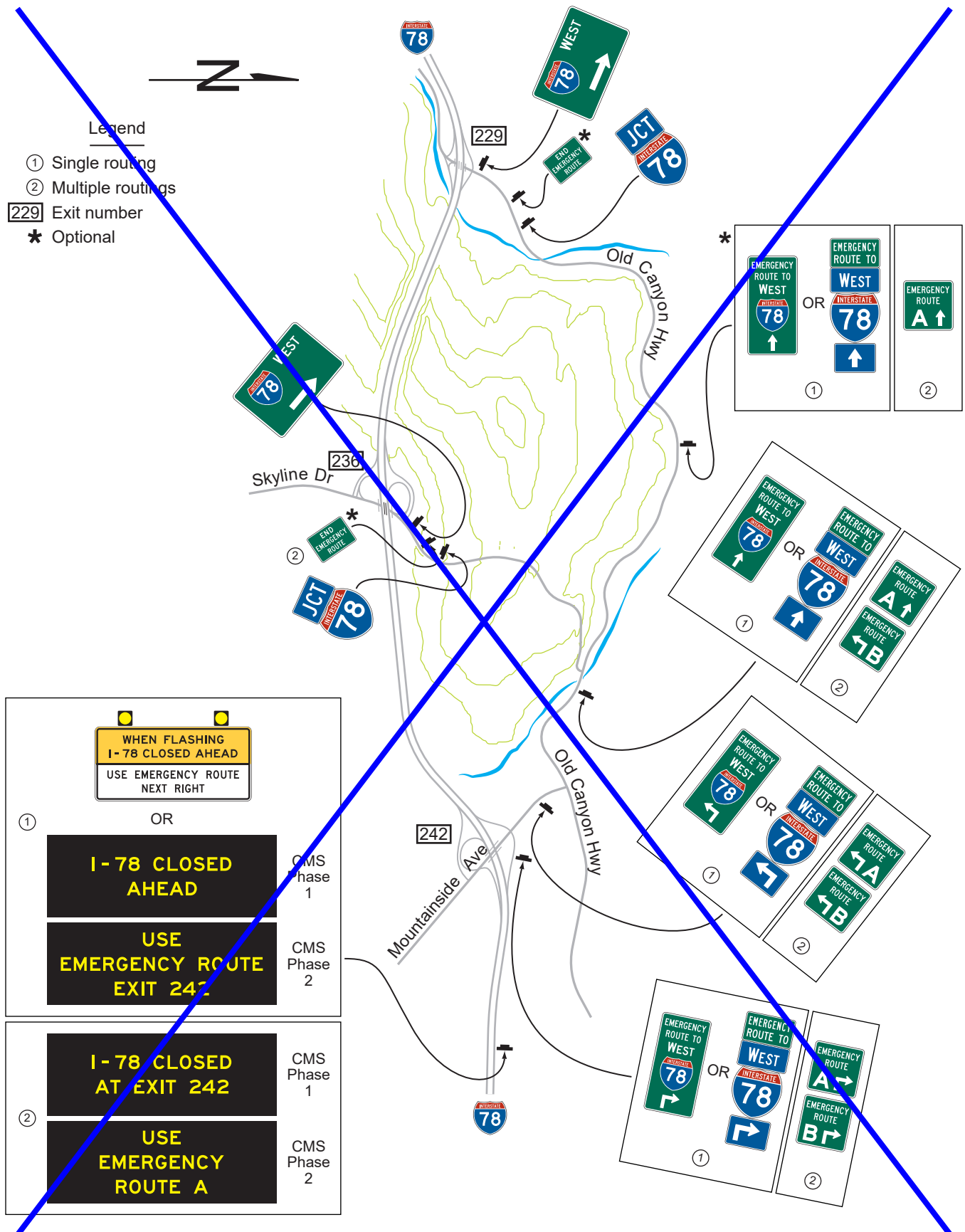


Figure 2D-39. Example of a System of Major Guide Signs for an Airport Roadway Network (Sheet 1 of 3)

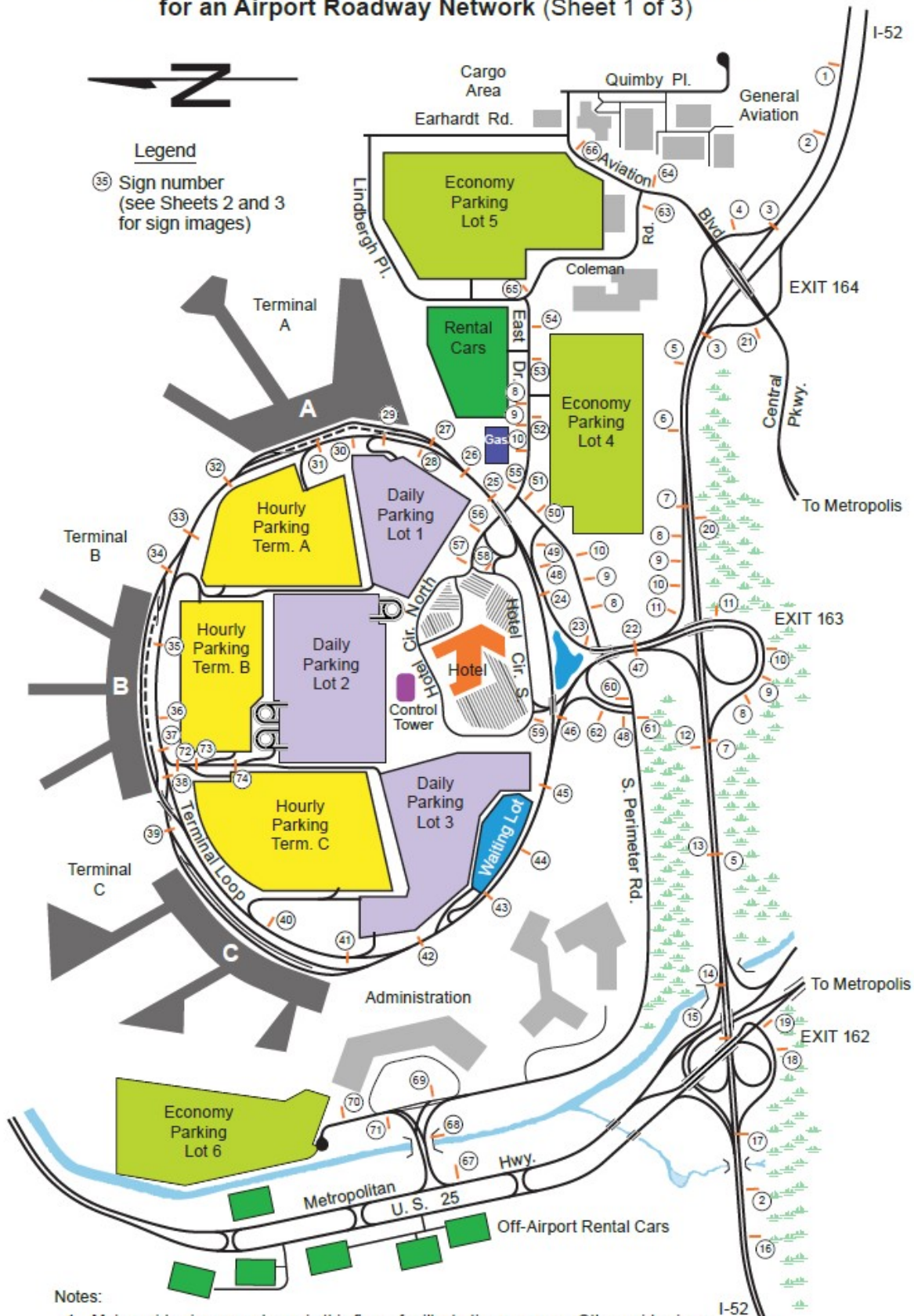


Figure 2D-39. Example of a System of Major Guide Signs for an Airport Roadway Network (Sheet 2 of 3)



Figure 2D-39. Example of a System of Major Guide Signs for an Airport Roadway Network (Sheet 3 of 3)

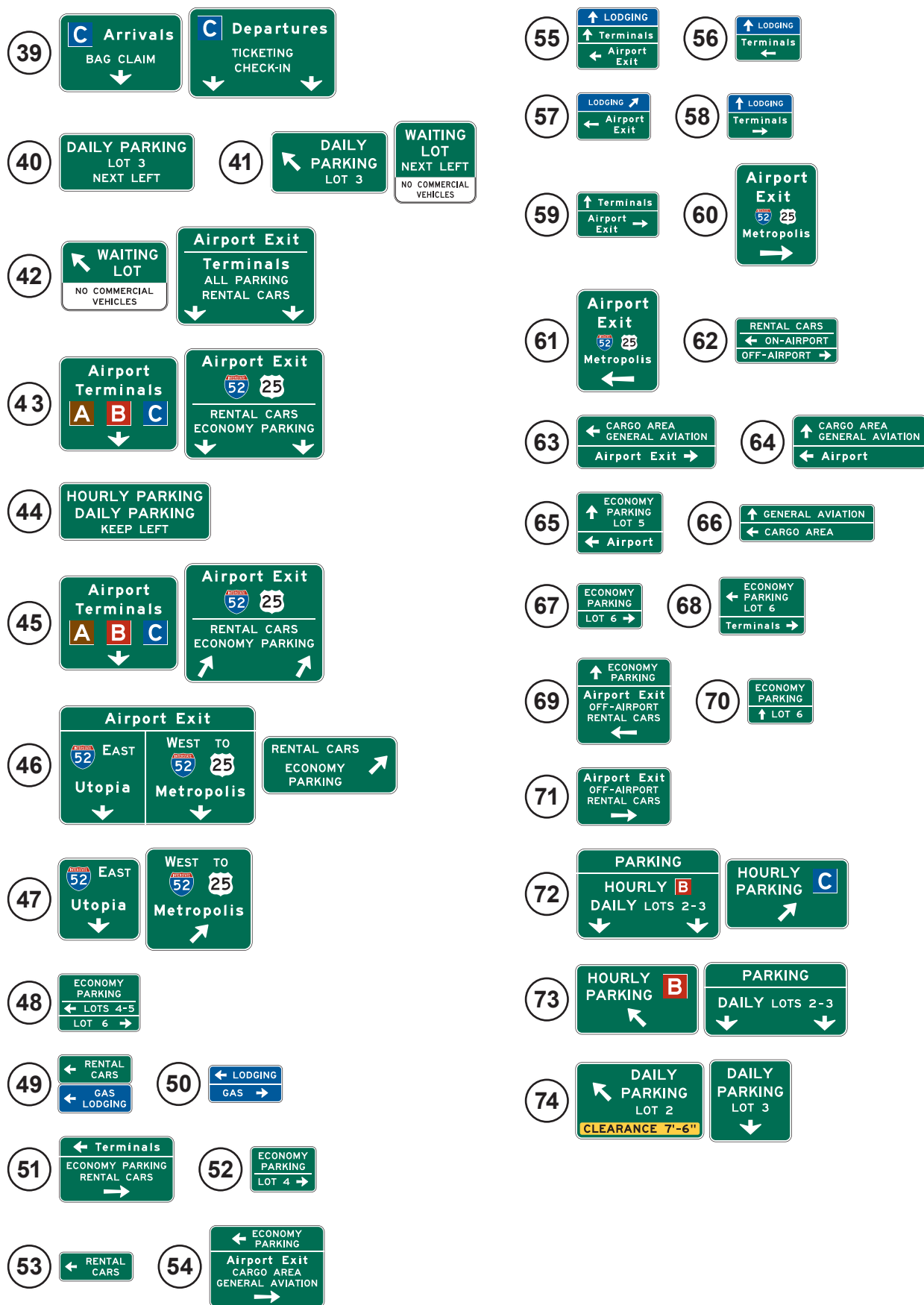


Figure 2D-101(CA). California Miscellaneous Guide Signs



G30(CA)



G30aP(CA)



G30bP(CA)



G68(CA)



G98A(CA)



SG1(CA)

Table 2D-1. Conventional Road Guide Sign and Plaque Sizes (Sheet 1 of 2)

Sign or Plaque	Designation	Section	Conventional Road	Minimum	Oversized
Interstate Route (1 or 2 digits) (Shield -1, Marker -1a)	M1-1,1a	2D.11	24 x 24	—	36 x 36
Interstate Route (3 digits) (Shield -1, Marker -1a)	M1-1,1a	2D.11	30 x 24	—	45 x 36
Off-Interstate Route (1 or 2 digits) (Shield or Marker)	M1-2,3	2D.11	24 x 24	—	36 x 36
Off-Interstate Route (3 digits) (Shield or Marker)	M1-2,3	2D.11	30 x 24	—	45 x 36
U.S. Route (1 or 2 digits) (Shield or Marker)	M1-4	2D.11	24 x 24	—	36 x 36
U.S. Route (3 digits) (Shield or Marker)	M1-4	2D.11	30 x 24	—	45 x 36
State Route (1 or 2 digits)	M1-5	2D.11	24 x 24	—	36 x 36
State Route (3 digits)	M1-5	2D.11	30 x 24	—	45 x 36
County Route (Shield or Marker)	M1-6	2D.11	24 x 24	—	36 x 36
Forest Route (Shield or Marker)	M1-7	2D.11	24 x 24	18 x 18	36 x 36
Junction (plaque)	M2-1P	2D.13	21 x 15	—	30 x 21
Combination Junction (2 route signs)	M2-2	2D.14	60 x 48*	—	—
Cardinal Direction (plaque)	M3-1P,2P,3P,4P	2D.15	24 x 12	—	36 x 18
Alternate (plaque)	M4-1P,1aP	2D.17	24 x 12	—	36 x 18
By-Pass (plaque)	M4-2P	2D.18	24 x 12	—	36 x 18
Business (plaque)	M4-3P	2D.19	24 x 12	—	36 x 18
Truck (plaque)	M4-4P	2D.20	24 x 12	—	36 x 18
To (plaque)	M4-5P	2D.21	24 x 12	—	36 x 18
End (plaque)	M4-6P	2D.22	24 x 12	—	36 x 18
Temporary (plaque)	M4-7P,7aP	2D.24	24 x 12	—	36 x 18
Emergency Route	M4-11	2D.59	30 x 30	—	—
Emergency Route	M4-11a	2D.59	30 x 30	—	—
Emergency Route To (plaque)	M4-11bP, 11cP	2D.59	30 x 18	—	—
End Emergency Route	M4-12	2D.59	24 x 18	—	—
Begin (plaque)	M4-14P	2D.23	24 x 12	—	36 x 18
Advance Turn Arrow (plaque)	M5-1P,2P,3P	2D.26	21 x 15	—	30 x 21
Lane Designation (plaque)	M5-4P,5P,6P	2D.27	24 x 18	—	36 x 24
Directional Arrow (plaque)	M6-1P,2P,2aP,3P,4P,5P,6P,7P	2D.28	21 x 15	—	30 x 21
National Scenic Byway	M10-1	2D.57	24 x 24	—	—
National Scenic Byway (plaque)	M10-1aP	2D.57	24 x 12	—	—
Byway Identification	M10-2	2D.58	24 x 24	—	—
Byway Identification (plaque)	M10-2aP	2D.58	24 x 12	—	—
State Scenic Byway System	M10-3	2D.58	24 x 24	—	—
State Scenic Byway - Simple Graphic and Byway Identification	M10-3a	2D.58	24 x 24	—	—
Scenic Byway (plaque)	M10-3bP	2D.58	24 x 12	—	—
National Historic Trail - Identification	M11-1	2D.58	24 x 24	—	—
National Historic Trail - Historic Route (plaque)	M11-1aP	2D.58	24 x 12	—	—
National Historic Trail - Crossing (plaque)	M11-1bP	2D.58	24 x 12	—	—
National Historic Trail - Auto Tour Route (plaque)	M11-1cP	2D.58	24 x 12	—	—
National Historic Trail - Distance (plaque)	M11-1dP	2D.58	24 x 12	—	—
Destination (1 line)	D1-1	2D.36	Varies x 18	—	—
Destination and Distance (1 line)	D1-1a	2D.36	Varies x 18	—	—
Circular Intersection Destination (1 line)	D1-1d	2D.39	Varies x 18	—	—
Circular Intersection Departure Guide	D1-1e	2D.39	Varies x 42*	—	—
Destination (2 lines)	D1-2	2D.36	Varies x 30	—	—
Destination and Distance (2 lines)	D1-2a	2D.36	Varies x 30	—	—
Circular Intersection Destination (2 lines)	D1-2d	2D.39	Varies x 30	—	—

Table 2D-1. Conventional Road Guide Sign and Plaque Sizes (Sheet 2 of 2)

Sign or Plaque	Designation	Section	Conventional Road	Minimum	Oversized
Destination (3 lines)	D1-3	2D.36	Varies x 42	—	—
Destination and Distance (3 lines)	D1-3a	2D.36	Varies x 42	—	—
Circular Intersection Destination (3 lines)	D1-3d	2D.39	Varies x 42	—	—
Circular Intersection Diagrammatic Destination	D1-5	2D.39	Varies x 72*	—	—
Circular Intersection Diagrammatic Destination, Right-Turn Bypass	D1-5a	2D.39	Varies x 78*	—	—
Distance (1 line)	D2-1	2D.43	Varies x 18	—	—
Distance (2 lines)	D2-2	2D.43	Varies x 30	—	—
Distance (3 lines)	D2-3	2D.43	Varies x 42	—	—
Street Name (1 line)	D3-1,1a	2D.45	Varies x 12	Varies x 8	Varies x 18
Overhead Street Name (1 line)	D3-1,1a	2D.45	Varies x 24	—	—
Street Name (2 lines)	D3-1,1a	2D.45	Varies x 24	Varies x 15	Varies x 33
Overhead Street Name (2 lines)	D3-1,1a	2D.45	Varies x 48	—	—
Advance Street Name (2 lines)	D3-2	2D.46	Varies x 30	—	—
Advance Street Name (3 lines)	D3-2	2D.46	Varies x 42	—	—
Advance Street Name (4 lines)	D3-2	2D.46	Varies x 54	—	—
Parking Area Directional	D4-1	2D.47	30 x 24	18 x 15	—
Park - Ride	D4-2	2D.48	30 x 36	24 x 30	36 x 48
Advance Weigh Station Distance	D8-1	2D.51	78 x 60	60 x 48	96 x 72
Weigh Station Ahead	D8-1a	2D.51	66 x 48	48 x 36	—
Weigh Station Advance Direction	D8-2	2D.51	84 x 72	66 x 54	108 x 90
Weigh Station Entrance Direction	D8-3	2D.51	66 x 60	48 x 42	84 x 78
Crossover	D13-1,2	2D.52	60 x 30	—	78 x 42
Freeway Entrance	D13-3	2D.50	48 x 30	—	—
Freeway Entrance (Directional)	D13-3a	2D.50	48 x 42	—	—
Combination Lane Use / Destination	D15-1	2D.38	Varies x 96	—	—
Next Truck Lane	D17-1	2D.53	42 x 48	—	60 x 66
Advance Truck Lane	D17-2	2D.53	42 x 42	—	60 x 54
Next Passing Lane	D17-3	2D.53	42 x 48	—	60 x 66
Advance Passing Lane	D17-4	2D.53	42 x 42	—	60 x 54
Advance Emergency Turn-Out	D17-5	2D.54	60 x 36	—	78 x 54
Emergency Turn-Out (Directional)	D17-6	2D.54	60 x 36	—	78 x 60
Advance Slow Vehicle Turn-Out	D17-7	2D.54	72 x 36	—	96 x 54

Table 2D-1(CA). California Conventional Road Guide Sign Sizes

Sign or Plaque	Sign Designation	Section	Conventional Road	Minimum	Oversized
Destination	G1-4(CA)	2D.35	VAR x 30	VAR x 18	VAR x 42
Destination	G1-10(CA)	2D.35	VAR x 48	VAR x 30	VAR x 60
Destination	G1-13(CA)	2D.35	VAR x 48	VAR x 30	VAR x 60
Destination	G1-19(CA)	2D.35	VAR x 42	VAR x 30	VAR x 54
Distance	G5(CA)	2D.44	VAR x 42	VAR x 30	VAR x 54
Destination and Street Name with Arrow	G8-4(CA)	2D.35, 2D.44, 2D.46	VAR x 30	VAR x 18	VAR x 42
Destination and Street Name with Arrow	G8-10(CA)	2D.35, 2D.44, 2D.46	VAR x 48	VAR x 30	VAR x 60
Destination and Street Name with Arrow	G8-13(CA)	2D.35, 2D.44, 2D.46	VAR x 48	VAR x 30	VAR x 60
Destination and Street Name with Arrow	G8-19(CA)	2D.35, 2D.44, 2D.46	VAR x 42	VAR x 30	VAR x 54
Destination and Street Name with Arrow	G8-22(CA)	2D.35, 2D.44, 2D.46	VAR x 30	VAR x 18	VAR x 42
Advance Lane Assignment	G21-1(CA)	2D.31	VAR x 60	VAR x 60	VAR x 72
Advance Lane Assignment	G21-3(CA)	2D.31	VAR x 90	VAR x 90	VAR x 108
Advance Turn	G22(CA)	2D.26	VAR x 48	—	—
State Route (Shield)	G28-1(CA)	2D.11	28 x 25	21 x 18	36 x 36
State Route (Marker)	G28-2(CA)	2D.11	28 x 25	21 x 18	36 x 36
Scenic Route	G30(CA)	2D.58	48 x 26	—	—
Scenic Route (plaque)	G30aP(CA)	2D.58	12 x 18	12 x 18	18 x 27
Scenic Route (plaque)	G30bP(CA)	2D.58	18 x 18	18 x 18	24 x 24
Directional Arrow Auxiliary (plaque)	G33-1P(CA)	2D.28	24 x 6	18 x 5	30 x 8
DIVIDED ROAD (X MILES AHEAD)	G68(CA)	2D.53	114 x 60	—	—
Interchange Guide	G77-1(CA)	2D.31	VAR x 48	VAR x 48	VAR x 72
Interchange Guide	G77-4(CA)	2D.31	VAR x 54	VAR x 54	VAR x 72
Interchange Guide	G77-7(CA)	2D.31	VAR x 54	VAR x 54	VAR x 72
Interchange Guide	G77A(CA)	2D.31	VAR x 66	VAR x 66	VAR x 90
Interchange Guide	G78-1(CA)	2D.31	VAR x 42	VAR x 42	VAR x 54
Interchange Guide	G78-4(CA)	2D.31	VAR x 42	VAR x 42	VAR x 48
FREEWAY with Arrow	G82(CA)	2D.31	42 x 12	42 x 12	54 x 15
Supplemental Destination	G86-1(CA)	2D.35, 2D.36	VAR x 54	VAR x 54	VAR x 66
Supplemental Destination	G86-3(CA)	2D.35, 2D.36	VAR x 96	VAR x 96	VAR x 110
Supplemental Destination	G86-5(CA)	2D.35, 2D.36	VAR x 90	VAR x 90	VAR x 108
Supplemental Destination	G86-7(CA)	2D.35, 2D.36	VAR x 90	VAR x 90	VAR x 96
Exit Numbered Supplemental Destination	G86-13(CA)	2D.35, 2D.36	VAR x 78	VAR x 78	VAR x 90
Veterans National Cemetery Sign	G86-14(CA)	2D.35, 2D.36	VAR x 66	—	—
Veterans Home of California	G86-16(CA)	2D.35, 2D.36	VAR x 66	—	—
Intersection Number	G98A(CA)	2D.101(CA)	18 x 12	—	—
Named State Highway	SG1(CA)	2D.56	VAR x 20	—	VAR x 30

**Table 2D-2. Recommended Minimum Letter and Numeral Sizes for
Conventional Road Guide Signs According to Speed* (Sheet 1 of 2)
A - Post-Mounted Signs**

Type of Sign	Single-Lane			Multi-Lane		
	Less than 30 mph	30-40 mph	Greater than 40 mph	Less than 30 mph	30-40 mph	Greater than 40 mph
Interstate or Off-Interstate Business Route Signs						
1- or 2-Digit Shields	18 x 18	24 x 24	36 x 36	24 x 24	24 x 24	36 x 36
-						
U.S. or State Route Signs						
1- or 2-Digit Shields	18 x 18	24 x 24	36 x 36	24 x 24	24 x 24	36 x 36
-						
County Route Signs						
1-, 2-, or 3-Digit Shields	18 x 18	24 x 24	36 x 36	24 x 24	24 x 24	36 x 36
Numerals & Letters	8	12	15	10	12	15
First Letter - Upper-Case	6	8	10	8	8	10
-						
Auxiliary and Alternative Route Legends (Examples: JCT, TO, ALT, BUSINESS)						
-						
Names of Destinations or Roads (Examples: Springfield, Main St, 2nd Ave)						
-						
Following Lower-Case Letters or Ordinals**	4.5	6	8	6	8	10
Distance Numerals	6	6	8	6	8	10
Distance Words - Upper-Case	4.5	4.5	6	4.5	6	8
-						
B. Destination and Other Guide Signs						
Leading Upper-Case Letter or Numerals	4	6	8	6	8	10.67
-						
Distance or Action Messages (Examples: 2 MILES, 1/2 MILE, KEEP RIGHT)						
Distance Fraction Numerals ****	4	4.5	6	4	4.5	6
-						
Action Message Words - Upper-Case ****	5	6	8	6	6	8

Table 2D-2. Recommended Minimum Letter and Numeral Sizes for Conventional Road Guide Signs According to Speed* (Sheet 2 of 2)
B - Overhead-Mounted Signs

Type of Sign	Less than 35 mph	35-55 mph	Greater than 55 mph ****
A. Intersection or Interchange Advance Guide Signs and Entrance Direction Guide Signs			
Interstate, U.S., State, or Off-Interstate Business Route Signs ****			
Numerals**	6	9	14
1- or 2-Digit Shields	18 x 18	24 x 24	36 x 36
3-Digit Shields	22.5 x 18	30 x 24	45 x 36
U.S. or State Route Signs			
Numerals	9	12	18
1- or 2-Digit Shields	18 x 18	24 x 24	36 x 36
3-Digit Shields	22.5 x 18	30 x 24	45 x 36
County Route Signs			
Numerals	6	8	10
1-, 2-, or 3-Digit Shields	18 x 18	24 x 24	36 x 36
U.S. or State Route Text Identification (Examples: U S 56, Md 2)			
Numerals & Letters	8	12	15
Cardinal Directions (NORTH, SOUTH, EAST, WEST)			
First Letter - Upper-Case	6	8	12
Rest of Word - Upper-Case	5	6	10
Auxiliary and Alternative Route Legends (Examples: JCT, TO, ALT, BUSINESS)			
Words - Upper-Case	5	6	10
Names of Destinations or Roads (Examples: Springfield, Main St, 2nd Ave)			
Leading Upper-Case Letter or Numerals	6	8 (min.) 10.67 (des.)	13.33 (min.) 16 (des.)
Following Lower-Case Letters or Ordinals**	4.5	6 (min.) 8 (des.)	10 (min.) 12 (des.)
Distance or Action Messages (Examples: 2 MILES, 1/2 MILE, KEEP RIGHT)			
Distance Numerals	6	6 (min.) 8 (des.)	12 (min.) 15 (des.)
Distance Fraction Numerals ****	4.5	4.5 (min.) 6 (des.)	10 (min.) 12 (des.)
Distance Words - Upper-Case ****	4.5	4.5 (min.) 6 (des.)	10 (min.) 12 (des.)
Action Message Words - Upper-Case ****	6	6 (min.) 8 (des.)	12 (min.) 15 (des.)
B. Destination and Other Guide Signs			
Names of Destinations or Roads (Examples: Springfield, Main St, 2nd Ave)			
Leading Upper-Case Letter or Numerals	6	8 (min.) 10.67 (des.)	13.33 (min.) 16 (des.)
Following Lower-Case Letters or Ordinals**	4.5	6 (min.) 8 (des.)	10 (min.) 12 (des.)
Distance or Action Messages (Examples: 2 MILES, 1/2 MILE, KEEP RIGHT)			
Distance Numerals	6	6 (min.) 8 (des.)	12 (min.) 15 (des.)
Distance Fraction Numerals ****	4.5	4.5 (min.) 6 (des.)	10 (min.) 12 (des.)
Distance Words - Upper-Case ****	4.5	4.5 (min.) 6 (des.)	10 (min.) 12 (des.)
Action Message Words - Upper-Case ****	6	6 (min.) 8 (des.)	12 (min.) 15 (des.)

* Except as provided otherwise in this Manual

** Minimum size listed for 3-digit shields. Larger numeral sizes used for 1-digit, some 2-digit, and some 3-digit shields. See the Standard Highways Signs publication for more information on Route Sign numeral heights and Standard Alphabet series.

*** Lower-case letter height (loop height) is determined by the initial upper-case letter height (see Sec. 2A.08)

**** Refer to FHWA's List of Known Errors for errors in row. Refer to Section 1A.04 for more details.

- Notes: 1. Sizes are shown in inches and where applicable are shown as width x height
2. For Street Name (D3-1 Series) signs, see Table 2D-6
3. The 18-inch route shield size is not for independent use, such as in Directional or Confirmation Assemblies.

Table 2D-3. Acceptable Abbreviations for Street Name Descriptors

Descriptor	Standard Abbreviation	Descriptor	Standard Abbreviation
Avenue	Ave	Northwest	NW*
Boulevard	Blvd	Parkway	Pkwy
Bypass	Byp	Place	Pl
Causeway	Cswy	Plaza	Plz
Circle	Cir	Road	Rd
Corner	Cor	Route	Rte
Court	Ct	South	S*
Crescent	Cres	Southeast	SE*
Drive	Dr	Southwest	SW*
East	E*	Square	Sq
Expressway	Expwy	Street	St
Extension	Ext	Terrace	Ter
Freeway	Fwy	Thruway	Thwy
Highway	Hwy	Trafficway	Trfwy
Lane	La, Ln	Trail	Tr
Landing	Lndg	Turnpike	Tpk
North	N*	West	W*
Northeast	NE*		

* For pre-directional or post-directional designations or cardinal orientations, such as E Main St or 3rd St SW

Table 2D-4. Street Name Descriptors Not Acceptable for Abbreviation

Descriptor	Descriptor
Alley	Oval
Belt	Pass
Beltway	Passage
Close	Path
Cove	Ridge
Edge	Row
Gate	Run
Green	Trace
Grove	Turn
Hill	View
Loop	Vista
Mews	Walk

Table 2D-5. Overhead Arrow-per-Lane Arrow Height Based on Principal Legend Letter Height

Principal Legend Letter Height	Straight Arrow	Turn Arrow
10.67 - 13.33 *	32	24
8 *	24	18

Note: Letter and arrow heights are shown in inches.

* Refer to FHWA's List of Known Errors for errors in row. Refer to Section 1A.04 for more details.

Table 2D-6. Minimum Letter Heights on Street Name Signs

Type of Mounting	Type of Street or Highway	Speed Limit	Recommended Minimum Letter Height *	
			Initial Upper-Case	Lower-Case
Overhead	All types	All speed limits	12 inches	9 inches
Post-mounted	Multi-lane	More than 40 mph	8 inches	6 inches
Post-mounted	Multi-lane	40 mph or less	6 inches	4.5 inches
Post-mounted	2-lane	All speed limits	6 inches**	4.5 inches**

* Letter heights shown are for the street name. Descriptors or other supplementary legend may be displayed in smaller lettering of at least 3 inches.

** On two-lane local streets with speed limits of 25 mph or less, 4-inch initial upper-case letters with 3-inch lower-case letters may be used.

Table 2D-101(CA). Criteria for Supplemental Destination Signs

Type of Destination	Specific Criteria	Major Metropolitan Areas	Urbanized Areas	Rural Areas
Post Secondary School, Public or Private	Minimum Enrollment:			
	Single Campus Locations (See Note 5)	1,000	1,000	1,000
	Maximum Miles from a Freeway (See Note 6)	2	4	5
State Special School	Maximum Miles from Highway (See Notes 2, 6, and 8)	5	5	5
Zoo, Stadium, or Sports Arena	Public Owned and Non-Profit:			
	Minimum Annual Attendance	1,000,000	500,000	200,000
	Maximum Miles from Highway (See Note 2)	2	2	3
Museum	Public Owned and Non-Profit:			
	Minimum Annual Attendance	50,000	50,000	50,000
	Maximum Miles from Highway (See Notes 2 and 9)	5	5	5
Convention Center	Public Owned and Non-Profit:			
	Minimum Annual Attendance	500,000	250,000	—
	Maximum Miles from Highway (See Note 2)	3	—	—
National Guard Armory	Only Emergency Center in the Area. Easy Access to Primary Evacuation Route (See Note 2)	—	—	—
Fairgrounds	Publicly Owned and Operated. Temporary sign only, unless there are year-round activities.			
	Minimum Annual Attendance	500,000	200,000	200,000
	Maximum Miles from Highway (See Note 2)	2	4	5
Federal or State Hospitals, Prisons, National Cemeteries, and Veteran Homes	Maximum Miles from Highway (See Note 2)	1	3	5
Government Centers	Number of Employees	5,000	2,000	1,000
	Maximum Miles from Highway (See Note 2)	2	3	2
California Welcome Centers	Easy Access from Nearest State Highway (See Notes 2 and 7)	—	—	—
Airports	Maximum Miles from Highway (See Note 2)	1	3	5
Rail and Light Rail Stations	Easy Access from Nearest State Highway (See Note 2)	—	—	—

- NOTES: 1. Meeting the above criteria does not guarantee placement of a sign. Limitations on the spacing between signs and the number of messages permitted, specified in Section 2A.08, 2D.05, and 2D.42, shall be observed. Eligible destinations must qualify for signing based on traffic service.
2. Any required follow-up signing shall be installed by local agencies before signs are placed on the State Highway.
3. If a stadium is located on a school campus for which signs already exist, a separate stadium sign will not be installed.
4. Definitions of Area Classifications:
- A. MAJOR METROPOLITAN AREA – An urbanized area, population density of at least 1,000 inhabitants per 2.6 km² (1 mi²), not necessarily related to county boundaries, with a total population of at least 1,000,000 and an included central city with a population of at least 250,000.
- B. URBANIZED AREA – A geographic area with a total population of at least 50,000 and an included central city any population size.
- C. RURAL AREA – All areas outside of an urbanized area.
5. A public or private postsecondary education institution must have either 1,000 or more full-time students or an equivalent in part-time students. Refer to CVC Section 21375.
6. Signs directing motorists to a school will not be installed until private funding is obtained to cover fabrication and installation. If a school that previously had signs relocates for purposes deemed to improve the school (as determined by Caltrans), signs will be installed at the new location at no cost to the school.
7. Caltrans will bill the Welcome Center directly for sign fabrication and installation on the State Highway. Installation costs on local roads are the responsibility of the Welcome Center and the relevant local agency.
8. See California Streets and Highway Code, Division 1, Chapter 1, Article 3, Section 101.21.
9. See California Streets and Highway Code, Division 1, Chapter 1, Article 3, Section 101.18.