

Guidance:

³¹ *The 6 inch bike lane stripe should be dropped 100 feet prior to the ramp intersection as shown in Figure 9C-103(CA) to allow for adequate weaving distance.*

Option:

³² Figure 9C-103(CA) may also be used where the preferred designation is a Class III Bikeway (Bike Route), with the Bike Lane (R81(CA)) signs being replaced with Bike Route (D11-1) signs and the bike lane delineation eliminated. A 4 inch stripe may be used to delineate the shoulder through out the bike route designation.

Standard:

³³ **Signing and striping as shown in Figure 9C-103(CA) shall be repeated at additional onramps within the interchange.**

Guidance:

³⁴ *Where the onramps intersect at the local road at or near 90°, the striping should be per Figure 9C-4(CA).*

Standard:

³⁵ **The shoulder width shall not be reduced through the interchange area. The minimum shoulder width shall match the approach roadway shoulder width, but not less than 4 feet, or with not less than 3 feet of pavement if a gutter exists. If the shoulder width is not available, the designated bike lane shall end at the previous local road intersection.**

Bicycle Lane Treatment Where Vehicle Parking is Prohibited/Permitted

Support:

³⁶ *Markings for a bike lane where vehicle parking is prohibited or permitted are shown in Figure 9C-102(CA).*

Standard:

³⁷ **Where motorist right turns are permitted, the solid bike lane shall either be dropped entirely, or dashed (Refer Bike Intersection lane, Detail 39A, shown in Figure 9C-101(CA)) beginning at a point between 100 feet and 200 feet in advance of the intersection.**

Option:

³⁸ *In areas where parking stalls are not necessary (because parking is light), a 4 inch solid white stripe may be painted to fully delineate the bike lane. This may be advisable where there is concern that motorists may misconstrue the bike lane to be a traffic lane.*

BIKE LANE Pavement Markings

Standard:

³⁹ **The BIKE LANE pavement markings shall be placed on the far side of each intersection.**

Option:

⁴⁰ *The BIKE LANE pavement markings may also be placed at other locations as desired.*

Support:

⁴¹ *Examples of BIKE LANE pavement markings are shown in various figures in this chapter.*

Option:

⁴² *Optional word, arrow and symbol markings with details as shown in Figure 9C-3 may be used.*

Buffered Bicycle Lanes

Support:

⁴³ *Markings for buffered bike are shown in Figure 9C-104 (CA).*

⁴⁴ *Buffered Bicycle Lane is a bicycle lane that is separated from the adjacent general-purpose lane or parking lane by a pattern of standard longitudinal markings. The buffer area might include chevron or diagonal markings.*

Support:

⁴⁵ *Pavement markings can designate a buffer area between a bicycle lane and adjacent general purpose lane and/or parking lane. A buffer area provides a greater separation between the bicycle lane and adjacent lanes than is provided by a single normal or wide lane line.*

Option:

⁴⁶ *A bicycle lane buffer area may be used to separate a bicycle lane from an adjacent general-purpose lane and/or parking lane.*

Standard:

⁴⁷ **If used, a buffer between a bicycle lane and general-purpose lane or parking lane shall be delineated by standard normal width longitudinal pavement markings.**

Guidance:

48 Consideration should be given to installing chevron or diagonal markings as appropriate in a bicycle lane buffer area. The use of chevron or diagonal markings in a bicycle lane buffer area should be based on engineering judgment and the Standards and Guidance in Section 3B. 24.

49 If used, interior chevron or diagonal markings should consist of 4" lines angled at 30 to 45 degrees and striped at intervals of 10 to 40 feet.

50 If used, the buffer should be marked with 2 solid lines. If there is a parking on the right side of the buffered bike lane, then right stripe of two solid lines should be broken. With no parking, buffered lines should be solid and for clarity, consider dashing the buffer boundary where cars are expected to cross at driveways.

51 End buffer on approach to intersection of side streets or major commercial driveways.

Option:

52 Increased interior diagonal marking frequency may increase motorist compliance.

53 The chevron or diagonal markings may be omitted from narrow bicycle lane buffer areas less than 4 feet wide.

Contraflow Bicycle Lanes

Support:

54 Markings for contraflow bike lanes are shown in Figure 9C-105 (CA).

55 A contraflow bicycle lane is an area of the roadway designated to allow for the lawful use by bicyclists to travel in the opposite direction from traffic on a roadway that allows traffic to travel in only one direction.

Guidance:

56 Where used, a contraflow bicycle lane should be marked such that bicyclists in the contraflow lane travel on their right-hand side of the road in accordance with normal rules of the road, with opposing traffic on the left.

Standard:

57 Where used, a contraflow bicycle lane shall be separated from opposite-direction travel by use of a solid double yellow center line marking, or a painted or raised median island.

58 Where intersection traffic controls along the street exist, (e.g., stop signs, flashing light signals, or traffic signals), appropriate devices shall be oriented toward bicyclists in the contraflow lane.

Guidance:

59 A buffer per Section 3B.24 or an island should be used to separate the contraflow lane from adjacent travel lanes at posted speeds of 40 mph and above.

Option:

60 A bicycle lane for travel in the same direction as the general purpose lanes may be placed on the left hand side of the general purpose lanes.

Guidance:

61 Where signs are provided to regulate turns from streets or driveways that intersect with a roadway that has a contraflow bicycle lane, One Way (R6-1 or R6-2) signs should not be used. Turn Prohibition signs (R3-1 or R3-2) with supplemental Except Bicycles plaques (R ## (CA) should be used. If DO NOT ENTER signs (R5-1) are used, an Except Bicycle plaque should be placed under the DO NOT ENTER sign. See Figure 9C-105 (CA).

Support:

62 Contraflow bicycle travel can be unexpected by motorists crossing the contraflow bicycle lane when entering, exiting, or crossing the roadway. Consideration of additional signalization, signing and/or marking treatments is appropriate for intersections, alleys, grade crossings, and driveways.

Option:

63 At locations where a contraflow bicycle lane is provided across an intersection or a driveway entrance, pavement markings that inform intersection or driveway traffic of the presence of the bicycle facility and the direction of permitted bicycle traffic may be placed within the contraflow bicycle lane across the intersection or driveway opening.

Bicycle Lane Line Extensions through Intersections

Support:

64 Markings for bike lane line extensions through intersections are shown in Figure 9C-106 (CA).

Option:

65 Bicycle lane markings may be extended through intersections consistent with the provisions of Section 3B.08.

66 Green colored pavements may be used in conjunction with the extension of bicycle lanes through intersections, consistent with (the Section that the IA is finalized within).

⁶⁷ White markings as depicted in Figure 9C-9 but omitting the bicycle symbol, or bicycle lane markings, may be used within the boundaries of bicycle lane extensions.

Section 9C.05 Bicycle Detector Symbol

Option:

⁰¹ A symbol (see Figure 9C-7) may be placed on the pavement indicating the optimum position for a bicyclist to actuate the signal.

⁰² An R10-22 sign (see Section 9B.13 and Figure 9B-2) may be installed to supplement the pavement marking.

Support:

⁰³ Section 4D.105(CA) and Figure 4D-111(CA) contain information on bicycle detectors and their locations.

Section 9C.06 Pavement Markings for Obstructions

Guidance:

⁰¹ In roadway situations where it is not practical to eliminate a drain grate or other roadway obstruction that is inappropriate for bicycle travel, white markings applied as shown in Figure 9C-8 should be used to guide bicyclists around the condition.

Section 9C.07 Shared Lane Marking

Option:

⁰¹ The Shared Lane Marking shown in Figure 9C-9 may be used to:

- A. Assist bicyclists with lateral positioning in a shared lane with on-street parallel parking in order to reduce the chance of a bicyclist's impacting the open door of a parked vehicle,
- B. Assist bicyclists with lateral positioning in lanes that are too narrow for a motor vehicle and a bicycle to travel side by side within the same traffic lane,
- C. Alert road users of the lateral location bicyclists are likely to occupy within the traveled way,
- D. Encourage safe passing of bicyclists by motorists, and
- E. Reduce the incidence of wrong-way bicycling.

Guidance:

⁰² *Except as provided in Paragraph 02a, The Shared Lane Marking should not be placed on roadways that have a speed limit above 35 mph.*

Option:

^{02a} The Shared Lane Marking may be placed on roadways that have a speed limit above 35 mph, where there is bicycle travel and there is no marked bicycle lane and the right-hand traffic lane is too narrow to allow motor vehicles to safely pass bicyclists.

Standard:

⁰³ **Shared Lane Markings shall not be used on shoulders or in designated bicycle lanes.**

Guidance:

⁰⁴ *If used in a shared lane with on-street parallel parking, Shared Lane Markings should be placed so that the centers of the markings are at least 11 feet from the face of the curb, or from the edge of the pavement where there is no curb.*

⁰⁵ *If used on a street without on-street parking that has an outside travel lane that is less than 14 feet wide, the centers of the Shared Lane Markings should be at least 4 feet from the face of the curb, or from the edge of the pavement where there is no curb.*

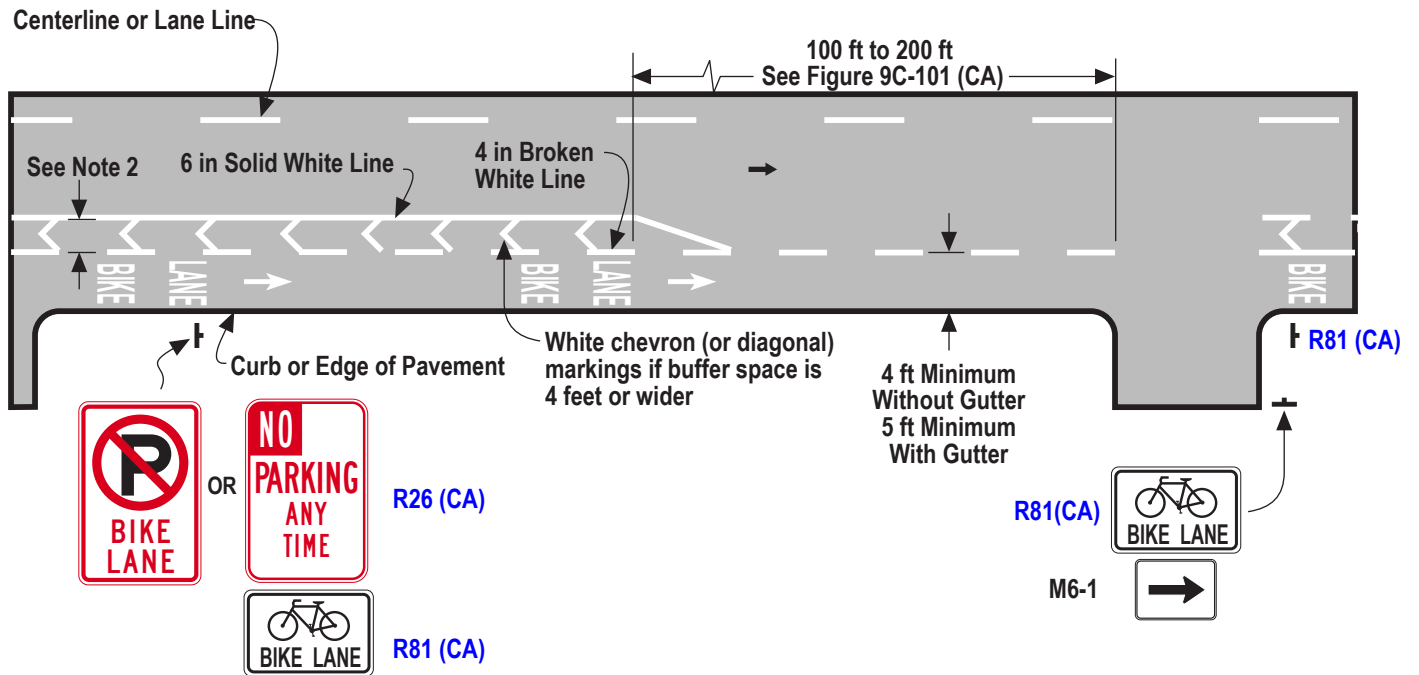
⁰⁶ *If used, the Shared Lane Marking should be placed immediately after an intersection and spaced at intervals not greater than 250 feet thereafter.*

Option:

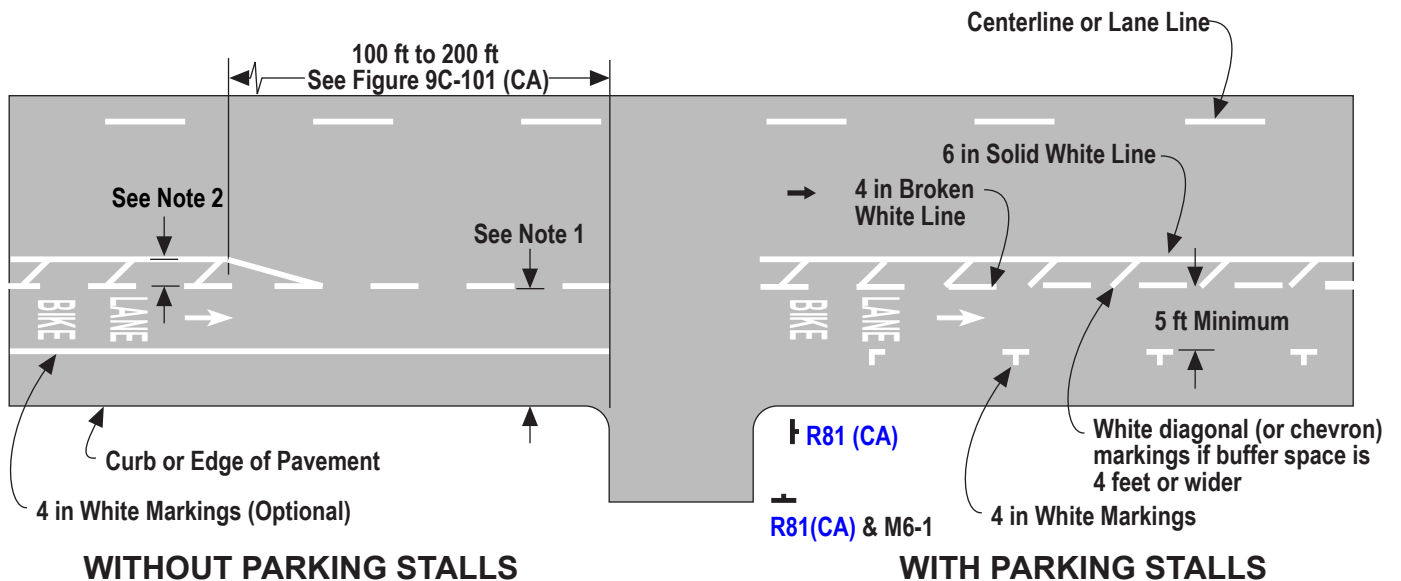
⁰⁷ Section 9B.06 describes a Bicycles May Use Full Lane sign that may be used in addition to or instead of the Shared Lane Marking to inform road users that bicyclists might occupy the travel lane.

Figure 9C-104 (1 of 2) (CA). Examples of Markings for Buffered Bicycle Lanes

BUFFER BETWEEN BICYCLE LANE AND GENERAL PURPOSE LANE WHERE VEHICLE PARKING IS PROHIBITED



BUFFER BETWEEN BICYCLE LANE AND GENERAL PURPOSE LANE WHERE VEHICLE PARKING IS PERMITTED

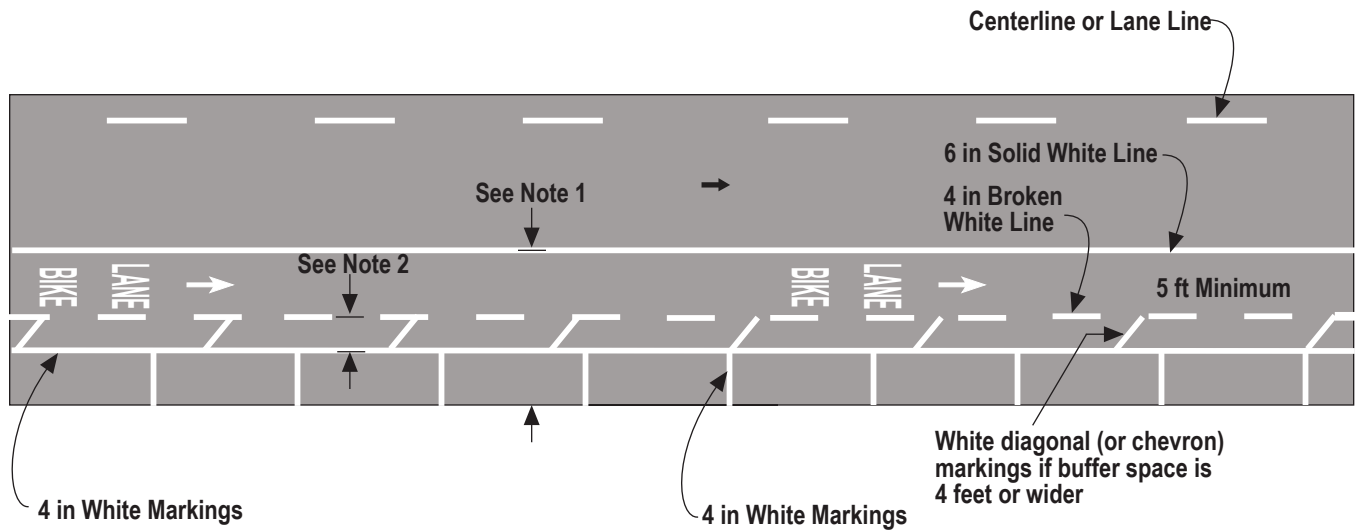


NOT TO SCALE

- NOTE 1:** 11 ft Minimum for Rolled Curb
12 ft Minimum for Vertical Curb
- NOTE 2:** 18 in Minimum for Buffered Lane Width

Figure 9C-104 (2 of 2) (CA). Examples of Markings for Buffered Bicycle Lanes

BUFFER BETWEEN BICYCLE LANE AND PARKING LANE



WITH PARKING STALLS

NOT TO SCALE

- NOTE 1: 11 ft Minimum for Rolled Curb
12 ft Minimum for Vertical Curb**
- 2: 18 in Minimum for Buffered Lane Width**

Figure 9C-105 (CA). Example of Contraflow Bicycle Lanes

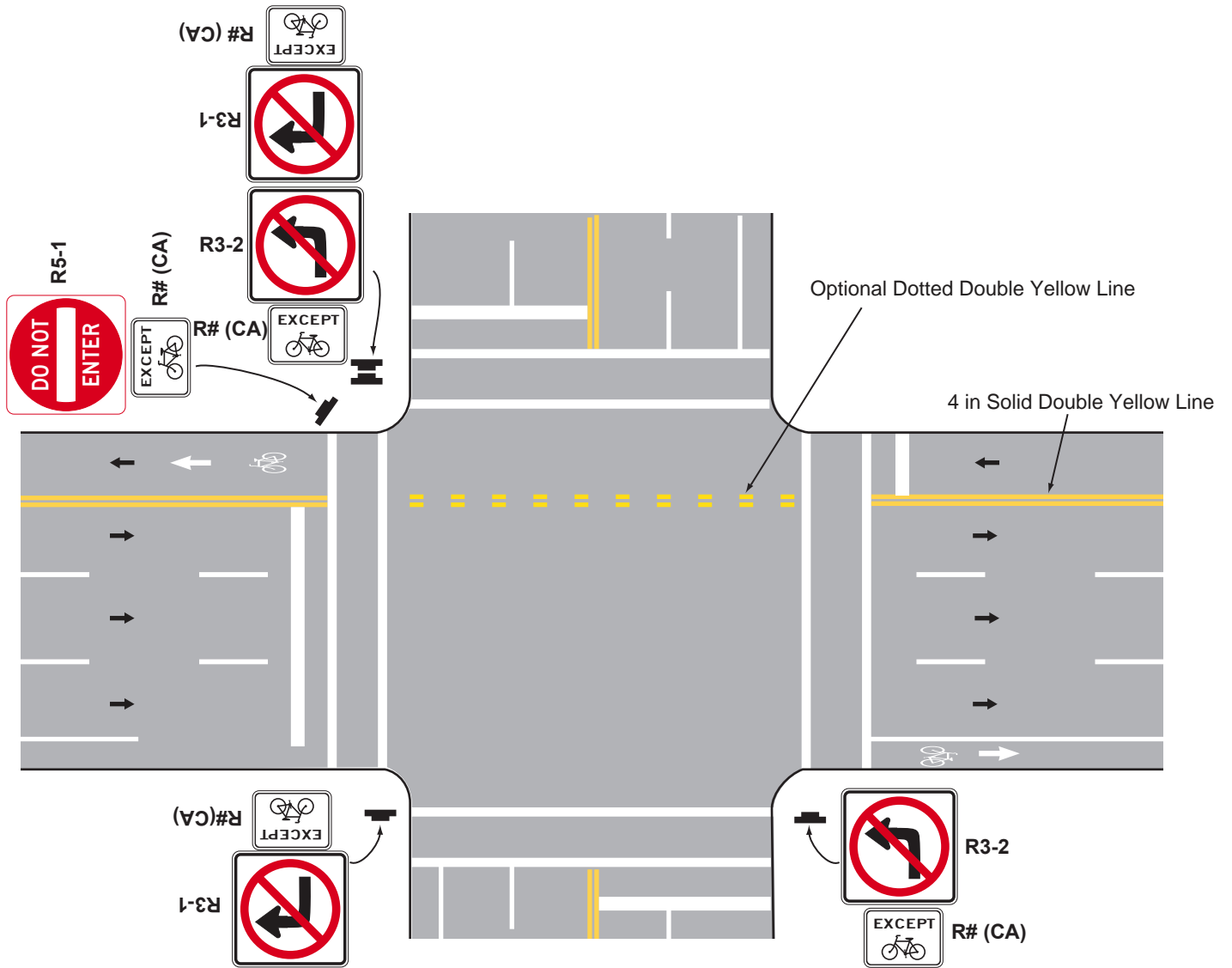


Figure 9C-106 (1 of 2) (CA). Examples of Bicycle Lane Extensions Through Intersection

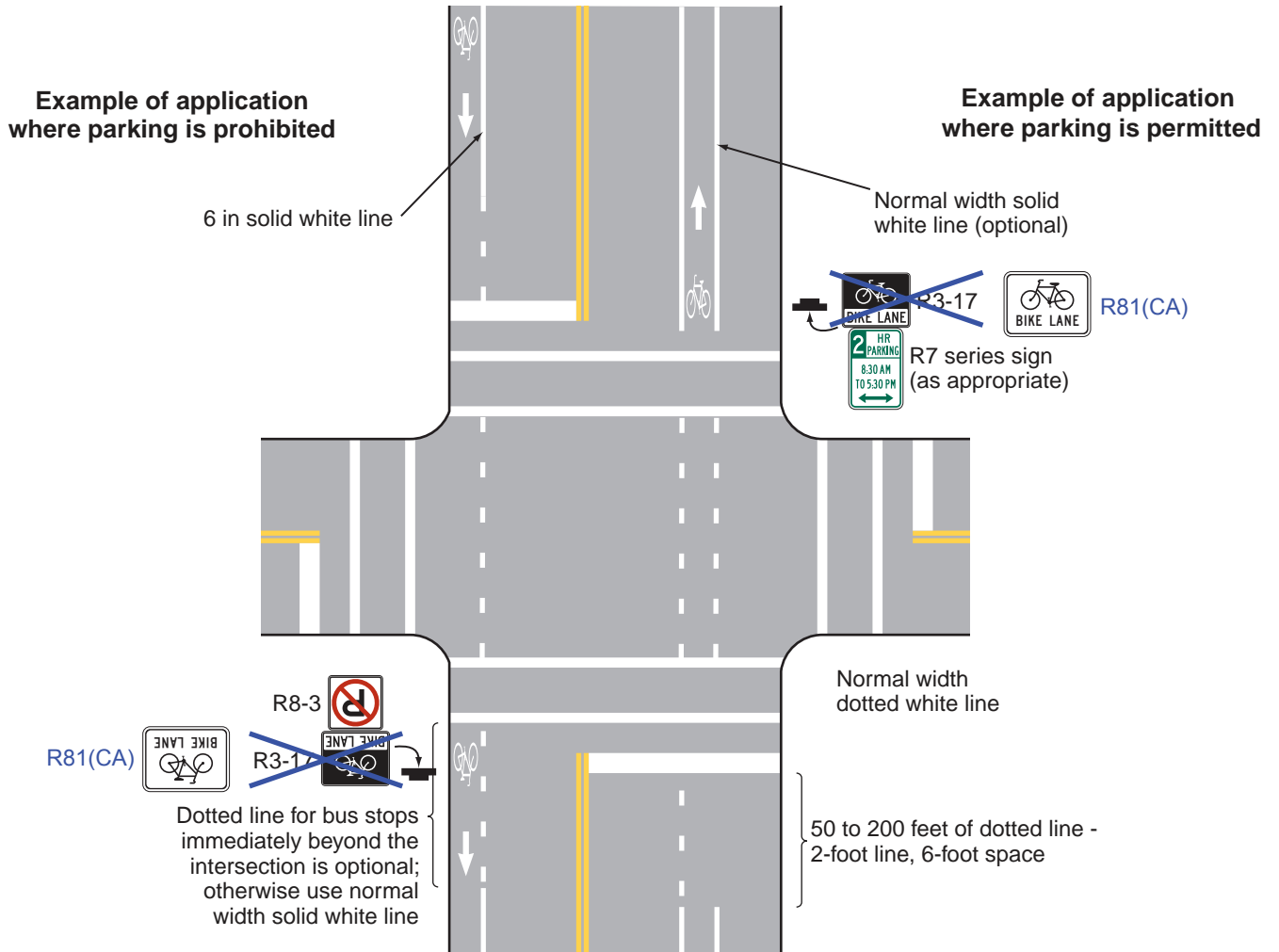


Figure 9C-106 (2 of 2) (CA). Examples of Bicycle Lane Extensions Through Intersection

