



National Committee on Uniform Traffic Control Devices

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Markings No. 1

TECHNICAL COMMITTEE: Markings
TOPIC: Edge line transition at ramps and bays
STATUS: Approved by Markings, January 2012
Distributed as sponsor ballot, Spring 2012
Appvd by Markings June 2012
Appvd by NCUTCD Council June 22, 2012
ORIGIN OF REQUEST: External request to MTC
AFFECTED PORTIONS OF MUTCD: Section 3B.04

Summary:

The MTC chair received a question by email asking why the break in an edge line was so sharp (see Figures 3B-8, 3B-9, and 3B-10 for examples). The MTC discussed the issue at its January 2012 meeting. Based on the recognition that many agencies actually stripe the edge onto an exit ramp with a curve, the MTC determined a need to revise the MUTCD language to recognize this practice as an option.

Recommendation:

Based on the discussion within the committee, the Markings Technical Committee determined that the option language shown in lines 108-111 should be added to Section 3B.04, White Lane Line Pavement Markings and Warrants. There are no changes to any of the figures associated with Section 3B.04.

Recommended Changes to the MUTCD:

The proposed changes to Section 3B.04 are shown in the following pages. Additions are indicated by blue underline, ~~deletions~~ are indicated by red double strikethrough.

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

2 **Standard:**

3 **When used, lane line pavement markings delineating the separation of traffic lanes that have**
4 **the same direction of travel shall be white.**

5 **Lane line markings shall be used on all freeways and Interstate highways.**

6 *Guidance:*

7 *Lane line markings should be used on all roadways that are intended to operate with two or more*
8 *adjacent traffic lanes in the same direction of travel, except as otherwise required for reversible lanes.*
9 *Lane line markings should also be used at congested locations where the roadway will accommodate*
10 *more traffic lanes with lane line markings than without the markings.*

11 *Support:*

12 Examples of lane line markings are shown in Figures 3B-2, 3B-3, and 3B-7 through 3B-13.

13 **Standard:**

14 **Except as provided in Paragraph 6, where crossing the lane line markings with care is**
15 **permitted, the lane line markings shall consist of a normal broken white line.**

16 **A dotted white line marking shall be used as the lane line to separate a through lane that**
17 **continues beyond the interchange or intersection from an adjacent lane for any of the following**
18 **conditions:**

- 19 **A. A deceleration or acceleration lane,**
- 20 **B. A through lane that becomes a mandatory exit or turn lane,**
- 21 **C. An auxiliary lane 2 miles or less in length between an entrance ramp and an exit ramp, or**
- 22 **D. An auxiliary lane 1 mile or less in length between two adjacent intersections.**

23 **For exit ramps with a parallel deceleration lane, a normal width dotted white lane line shall be**
24 **installed from the upstream end of the full-width deceleration lane to the theoretical gore or to the**
25 **upstream end of a solid white lane line, if used, that extends upstream from the theoretical gore as**
26 **shown in Drawings A and C of Figure 3B-8.**

27 *Option:*

28 For exit ramps with a parallel deceleration lane, a normal width dotted white line extension may be
29 installed in the taper area upstream from the full-width deceleration lane as shown in Drawings A and C
30 of Figure 3B-8.

31 For an exit ramp with a tapered deceleration lane, a normal width dotted white line extension may be
32 installed from the theoretical gore through the taper area such that it meets the edge line at the upstream
33 end of the taper as shown in Drawing B of Figure 3B-8.

34 **Standard:**

35 **For entrance ramps with a parallel acceleration lane, a normal width dotted white lane line**
36 **shall be installed from the theoretical gore or from the downstream end of a solid white lane line, if**
37 **used, that extends downstream from the theoretical gore, to a point at least one-half the distance**
38 **from the theoretical gore to the downstream end of the acceleration taper, as shown in Drawing A**
39 **of Figure 3B-9.**

40 *Option:*

41 For entrance ramps with a parallel acceleration lane, a normal width dotted white line extension may
42 be installed from the downstream end of the dotted white lane line to the downstream end of the
43 acceleration taper, as shown in Drawing A of Figure 3B-9.

44 For entrance ramps with a tapered acceleration lane, a normal width dotted white line extension may
45 be installed from the downstream end of the channelizing line adjacent to the through lane to the
46 downstream end of the acceleration taper, as shown in Drawings B and C of Figure 3B-9.

47 **Standard:**

48 **A wide dotted white lane line shall be used:**

- 49 **A. As a lane drop marking in advance of lane drops at exit ramps to distinguish a lane drop**
50 **from a normal exit ramp (see Drawings A, B, and C of Figure 3B-10),**
- 51 **B. In advance of freeway route splits with dedicated lanes (see Drawing D of Figure 3B-10),**
- 52 **C. To separate a through lane that continues beyond an interchange from an adjacent**
53 **auxiliary lane between an entrance ramp and an exit ramp (see Drawing E of Figure 3B-**
54 **10),**
- 55 **D. As a lane drop marking in advance of lane drops at intersections to distinguish a lane drop**
56 **from an intersection through lane (see Drawing A of Figure 3B-11), and**
- 57 **E. To separate a through lane that continues beyond an intersection from an adjacent**
58 **auxiliary lane between two intersections (see Drawing B of Figure 3B-11).**

59 *Guidance:*

60 *Lane drop markings used in advance of lane drops at freeway and expressway exit ramps should*
61 *begin at least 1/2 mile in advance of the theoretical gore.*

62 *On the approach to a multi-lane exit ramp having an optional exit lane that also carries through*
63 *traffic, lane line markings should be used as illustrated in Drawing B of Figure 3B-10. In this case, if the*
64 *right-most exit lane is an added lane such as a parallel deceleration lane, the lane drop marking should*
65 *begin at the upstream end of the full-width deceleration lane, as shown in Drawing C of Figure 3B-8.*

66 *Lane drop markings used in advance of lane drops at intersections should begin a distance in*
67 *advance of the intersection that is determined by engineering judgment as suitable to enable drivers who*
68 *do not desire to make the mandatory turn to move out of the lane being dropped prior to reaching the*
69 *queue of vehicles that are waiting to make the turn. The lane drop marking should begin no closer to the*
70 *intersection than the most upstream regulatory or warning sign associated with the lane drop.*

71 *The dotted white lane lines that are used for lane drop markings and that are used as a lane line*
72 *separating through lanes from auxiliary lanes should consist of line segments that are 3 feet in length*
73 *separated by 9-foot gaps.*

74 **Support:**

75 Section 3B.20 contains information regarding other markings that are associated with lane drops, such
76 as lane-use arrow markings and ONLY word markings.

77 Section 3B.09 contains information about the lane line markings that are to be used for transition
78 areas where the number of through lanes is reduced.

79 **Standard:**

80 **Where crossing the lane line markings is discouraged, the lane line markings shall consist of a**
81 **normal or wide solid white line.**

82 **Option:**

83 Where it is intended to discourage lane changing on the approach to an exit ramp, a wide solid white
84 lane line may extend upstream from the theoretical gore or, for multi-lane exits, as shown in Drawing B
85 of Figure 3B-10, for a distance that is determined by engineering judgment.

86 Where lane changes might cause conflicts, a wide or normal solid white lane line may extend
87 upstream from an intersection.

88 In the case of a lane drop at an exit ramp or intersection, such a solid white line may replace a
89 portion, but not all of the length of the wide dotted white lane line.

90 Support:

91 Section 3B.09 contains information about the lane line markings that are to be used for transition
92 areas where the number of through lanes is reduced.

93 *Guidance:*

94 *On approaches to intersections, a solid white lane line marking should be used to separate a through*
95 *lane from an added mandatory turn lane.*

96 *Option:*

97 On approaches to intersections, solid white lane line markings may be used to separate adjacent
98 through lanes or adjacent mandatory turn lanes from each other.

99 Where the median width allows the left-turn lanes to be separated from the through lanes to give
100 drivers on opposing approaches a less obstructed view of opposing through traffic, white pavement
101 markings may be used to form channelizing islands as shown in Figure 2B-17.

102 Solid white lane line markings may be used to separate through traffic lanes from auxiliary lanes,
103 such as an added uphill truck lane or a preferential lane (see Section 3D.02).

104 Wide solid lane line markings may be used for greater emphasis.

105 [A curved transition may be used where an edge line, channelizing line, or dotted extension line](#)
106 [changes direction.](#)

107 [Support:](#)

108 [Examples of locations where a curved transition can have value include freeway exit and entrance](#)
109 [ramps, and turn lanes.](#)

110

111 **Standard:**

112 **Where crossing the lane line markings is prohibited, the lane line markings shall consist of a**
113 **solid double white line (see Figure 3B-12).**

114

115 **Council Vote on 7/22/12: Unanimous approval**