TRAFFIC AND SAFETY MANUAL

Warning Signs - General

Revision Date: 10-20-2025

General

The use of warning signs shall be based on an engineering study or on engineering judgment.

The use of warning signs should be kept to a minimum since unnecessary use can lead to disrespect for all signs. If a condition is seasonal or temporary, the warning signs should be removed or covered when the condition does not exist.

Design of Warning Signs

Unless specifically designated otherwise, all warning signs shall be diamond-shaped with a black legend and border on a yellow background. A rectangular shape may be used for overhead installations or for signs that are larger than 48” x 48”.

Warning signs and their supplemental plaques regarding schools, school buses, pedestrians, bicyclists, and playgrounds shall have a black legend and border on a fluorescent yellow-green background.

When standard warning signs do not cover the conditions that may be encountered, special word message warning signs other than those specified in the MUTCD may be developed and installed. Traffic Engineering Section staff may be contacted for assistance in such cases.

Size of Warning Signs and Plaques

The other 2C sections of the TAS Manual contain sign size tables for certain warning signs and supplemental plaques. Sizes for signs not listed in these sections can be found in Table 2C-1 of the MUTCD. Definitions for the facility type headings used in the sign size tables are located in Section 2A-1 of the TAS Manual.

In some situations, it may be helpful to install the same sign on both the right-hand and left-hand sides of the roadway to improve visibility or indicate greater importance.

- Both signs should be the same size to maintain consistency and visibility.
- If there are space or site limitations on the left-hand side of the roadway, the left-side sign may be reduced in size.
- The reduced sign shall not be smaller than the size listed in the Single-Lane Conventional Road column of the sign size tables.

For diamond-shaped warning signs facing traffic on exit and entrance ramps at interchanges, the sizes listed in the Expressway and Freeway column of the sign size tables should be used.

Placement of Warning Signs

Warning signs should be placed so that they provide adequate time for the driver to detect, recognize, decide, and react. This total time is called the Perception-Response Time (PRT). The PRT can vary from 2.5 seconds for simple maneuvers to 14.5 seconds for more complex driving situations.

Tables 1 and 2 (adapted from Table 2C-3 of the MUTCD) provide recommended warning sign locations based on PRT. If necessary, the distances shown in Tables 1 and 2 can be adjusted for roadway features, for other signing, or to improve visibility. However, the signs should not be placed too far in advance of a condition since drivers might forget the warning due to other driving distractions. For warning signs with less than a 6-inch legend or with more than four words, a minimum of 100 feet should be added to the advance placement distance listed in Table 1 or Table 2 to provide adequate legibility of the sign.

Table 1 should be used in situations where the driver must decelerate to an advisory speed or to a stop. Typical signs for advisory conditions are Turn, Curve, Reverse Turn, or Reverse Curve. Typical signs for a stop condition are Stop Ahead, Yield Ahead, Signal Ahead, and Intersection Warning signs.

Table 2 should be used in situations where the driver must use extra time to adjust speed and change lanes in heavy traffic. Typical signs are Merge and Right Lane Ends.

Table 1: Advance Placement of Warning Signs – Deceleration to the Listed Advisory Speed

Posted or 85th Percentile Speed	Stop (0 mph)	10 mph	15 mph	20 mph	25 mph	30 mph	35 mph	40 mph	45 mph	50 mph	55 mph	60 mph	65 mph
20 mph	115 ft	N/A	N/A	--	--	--	--	--	--	--	--	--	--
25 mph	155 ft	N/A	N/A	N/A	--	--	--	--	--	--	--	--	--
30 mph	200 ft	N/A	N/A	N/A	N/A	--	--	--	--	--	--	--	--
35 mph	250 ft	N/A	N/A	N/A	N/A	N/A	--	--	--	--	--	--	--
40 mph	305 ft	100 ft	100 ft	100 ft	N/A	N/A	N/A	--	--	--	--	--	--
45 mph	360 ft	125 ft	115 ft	100 ft	100 ft	100 ft	N/A	N/A	--	--	--	--	--
50 mph	425 ft	200 ft	190 ft	175 ft	150 ft	125 ft	115 ft	100 ft	N/A	--	--	--	--
55 mph	495 ft	275 ft	250 ft	225 ft	215 ft	200 ft	165 ft	125 ft	100 ft	N/A	--	--	--
60 mph	570 ft	350 ft	340 ft	325 ft	300 ft	275 ft	240 ft	200 ft	150 ft	100 ft	--	--	--
65 mph	645 ft	450 ft	425 ft	400 ft	375 ft	350 ft	315 ft	275 ft	240 ft	200 ft	150 ft	100 ft	--
70 mph	730 ft	525 ft	515 ft	500 ft	475 ft	450 ft	415 ft	375 ft	325 ft	275 ft	215 ft	150 ft	100 ft

Note: N/A means that no suggested distance is provided for that speed. An alignment warning sign may be placed anywhere from the point of curvature up to 100 feet in advance of the curve.

Table 2: Advance Placement of Warning Signs – Merging and Lane Reduction Situations

Posted or 85th Percentile Speed	Advance Placement Distance
20 mph	225 ft
25 mph	325 ft
30 mph	460 ft
35 mph	565 ft
40 mph	670 ft
45 mph	775 ft
50 mph	885 ft
55 mph	990 ft
60 mph	1100 ft
65 mph	1200 ft
70 mph	1250 ft

Warning signs that advise road users about conditions that are not related to a specific location, such as Horse-Drawn Vehicles, can be installed in an appropriate location, based on engineering judgment.

Guidance for typical spacing between signs is located in Section 2A-3 of the TAS Manual.

Revision History

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