

TRAFFIC AND SAFETY MANUAL

Chapter 18 – Miscellaneous Topics 18A – Rumble Strips

Rumble Strips at Stop Signs

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General

Rumble strips are generally used in rural areas in advance of locations where primary highway traffic must stop at a Stop sign. A rumble strip panel consists of a series of grooves in the surface to provide a tactile and audible awareness for the driver that may not be fully aware of the other devices in advance of the Stop sign. They are not generally used where the speed limit is less than 55 miles per hour or where the sound would be obtrusive to nearby residences or businesses. When it is decided not to use rumble strips where the speed limit is 55 miles per hour or more, alternative measures may be taken, such as installation of beacons, placement of flags on existing signs, installation of signs on both sides of the road, or use of larger signs. Rumble strips may be installed at locations where the speed limit is less than 55 miles per hour if indicated by a traffic engineering study for that location. The State Traffic Engineer will provide assistance at the request of the District Office.

Location

Typical rumble strip panel locations are shown on Figure 9 of [Section 2A-10](#) of the Traffic and Safety Manual and Figure 1 of [Section 6A-7](#) of the Design Manual

Former standards called for three panels, with the first one being 200 feet in advance of the Stop Ahead sign, the third one 300 feet in advance of the Stop Line and the center one midway between those two. Current design requires only two panels with the first rumble strip panel located 200 feet in advance of the Stop Ahead sign and the second rumble strip panel located 75% of the distance from the Stop sign to the Stop Ahead sign, in advance of the stop bar. Where bridges, railroad crossings or other such features make it impossible to place the rumble strips in their standard locations, they may be moved in consideration of site conditions.

Design

Each rumble strip panel is 24 feet in length, consisting of 25 grooves placed at one-foot intervals perpendicular to centerline. An 18-inch width of pavement at the outside edge of the lane and a 12-inch width of pavement on the center line of the lane are left uncut. When cut in portland cement concrete or hot mix asphalt concrete, the grooves are 3/8-inch deep and 4 inches wide. When cast in plastic portland cement concrete, the grooves are 3/4-inch deep, four inches wide at the top and one inch wide at the bottom. These design details are shown on [Standard Road Plan PV-10](#). It is critical that the design details be adhered to so that the proper tactile and audible awareness is achieved without being too rough or noisy.

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