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MISSISSIPPI DEPARTMENT OF TRANSPORTATION
Inter-Departmental Memorandum

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INFORMATION COPY TO:

COUNTY:

NCHRP REPORT 537
RECOMMENDED GUIDELINES FOR CURB AND CURB-BARRIER INSTALLATION

Summary

The results of the study indicated that the most significant factor influencing the trajectory and vehicle stability of tracking vehicles transversing curbs where guardrails are not present is the height of the curb. When curbs must be used on high speed roads, the study recommends the shortest possible curb height and flattest slope should be used to minimize the risk of tripping the vehicle in a non-tracking collision.

Recommended guidelines for use of curbs in conjunction with guardrails include that any combination of a sloping-faced curb that is 150-mm (6 inches) or shorter and a strong-post guardrail system can be used where the curb is flush with the face of the guardrail up to an operating speed of 85 km/hr (53 mph). For operating speeds between 85 to 90 km/hr (53 to 55 mph) guardrails should only be used with 100-mm (4 inches) or shorter sloping faced curbs, placed with the curb flush with the face of guardrail. For operating speeds above 90 km/hr (55 mph) the sloping face of the curb must be 1:3 or flatter and must be 100-mm (4 inches) or shorter.

For locations where the guardrail is placed behind the curb, the following recommendations are made. For roadways with an operating speed of 70 km/hr (43 mph) or less, guardrails may be used with 150-mm (6 inches) or shorter sloping faced curbs as long as the face of the guardrail is located at least 2.5 m (8.2 feet) behind the curb. For operating speeds between 71 and 85 km/hr (43 and 53 mph), a lateral distance of at least 4m (13 feet) is recommended.