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**NATIONAL TRANSPORTATION SAFETY BOARD**  
WASHINGTON, D.C.

ISSUED: May 22, 1981

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Forwarded to:

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National Association of Towns and Townships  
1526 16th Street, N.W.  
Washington, D.C. 20036

SAFETY RECOMMENDATION(S)

H-81-23

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The Safety Board has concluded a special study <sup>1/</sup> which examined vehicles colliding into trees. The Safety Board initiated this study due to the number and severity of these types of accidents. According to the National Highway Traffic Safety Administration's (NHTSA) Fatal Accident Reporting System (FARS) data, about 2,900 fatal vehicle accidents with trees are occurring annually and over 50 percent of these accidents occur on county, local, or other rural streets. Typically, these accidents occur on curves at night. In some accident locations investigated by the Safety Board, roads were in need of warning signs and pavement markings.

The accident statistics and reports indicate that quite often these accidents, which may occur close to home, involve young males and alcohol. Recent research suggests that using edgelines results in less driver weaving and greater centrality of vehicle position in the driving lane, especially on curves. This research used 21- to 28-year-old male subjects with alcohol contents as high as 0.08 BAC. This research would indicate that some accidents with trees could probably be eliminated if improved signing and markings were available at curves.

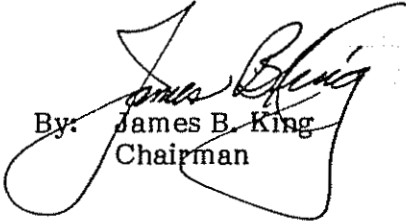
Data from the State of North Carolina indicated that on roads with speed limits of 35 mph or less, 46.5 percent of the accidents with trees occur within 10 feet of the edge of the road. Additional data and accidents reviewed and investigated as part of the study indicated that fatal accidents with trees can result at speeds (as determined by deformation) as low as 20 to 25 mph when an occupant is unrestrained. Thus, as occupants traverse tree-lined arterial streets, they are continuously exposed to potential fatal accidents. To reduce the potential for tree accidents in the future, trees should not be planted immediately adjacent to curbs or just off shoulders.

Therefore, the National Transportation Safety Board recommends that the National Association of Towns and Townships:

<sup>1/</sup> For more detailed information, read Special Study—"Motor Vehicle Collisions With Trees Along Highways, Roads, and Streets: An Assessment" (NTSB-HSS-81-1).

Encourage the development of local programs and policies to reduce the number of accidents with trees. Programs should emphasize improvement of roadway curves and locations where trees have been struck previously through delineation, signing, and removal or shielding of trees. Policies should be developed to prevent the future placement of trees that grow large enough to become a hazard, 4 inches or more in diameter, within the warranted clear recovery areas. (Class III, Longer Term Action) (H-81-23)

KING, Chairman, McADAMS, and GOLDMAN, Members, concurred in this recommendation. DRIVER, Vice Chairman, and BURSLEY, Member, did not participate.

By:   
James B. King  
Chairman