

SUMMARY REPORT 264-1F(S)

**IMPACT BEHAVIOR OF THIN-WALL STEEL
TUBE SIGNPOSTS AND DELINEATION POST**

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Impact Behavior of Thin-Wall Steel Tube Signposts and Delineator Post

by

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Initial and maintenance costs of small, single-post sign installations to the Texas State Department of Highways and Public Transportation (SDHPT) are substantial. A recent survey found that costs of routine sign maintenance exceeded 11 million dollars in 1976. Also, the hazard potential of small roadside sign installations can no longer be disregarded, especially in light of the increasing use of small vehicles. The SDHPT has over 900,000 such installations.

With a view toward reduced costs and improved safety, the SDHPT undertook a study to evaluate the economics and safety of thin-wall steel tube signposts and delineator posts. The report summarized in this publication describes a full-scale crash test program conducted to evaluate the impact behavior of several sizes of thin-wall steel tube signposts and delineator posts. All installations were the single-post type. Tests were conducted in accordance with nationally recognized test procedures, and the results were evaluated in terms of American Association of State Highway and Transportation Officials (AASHTO) impact performance specifications. In terms of AASHTO specifications, the following was found:

1. A 3.50 in. (8.89 cm) O.D. by 0.083 in. (0.17 cm) and a 2.875 in. (7.30 cm) O.D. by 0.120 in. (0.30 cm) signpost in a concrete footing do not satisfy specifications.
2. A 2.875 in. (7.30 cm) O.D. by 0.120 in. (0.30 cm) signpost with sleeve and base in concrete is marginally acceptable.
3. A 2.875 in. (7.30 cm) O.D. by 0.065 in. (0.17 cm) and a 2.375 in. (6.03 cm) O.D. by 0.109 in. (0.28 cm) signpost in a concrete footing satisfy specifications.
4. A 1.66 in. (4.22 cm) O.D. by 0.047 in. (0.12 cm) delineator post and a 1.90 in. (4.83 cm) O.D. by 0.065 in. (0.17 cm) mile marker post satisfy specifications.

Analysis of costs of the thin-wall tube as a sign support and as a delineator post was not within the scope of this study. Per-

sons interested in the economics of this system should contact Texas State Department of Highways and Public Transportation (SDHPT) officials.

The published version of the report may be obtained by addressing your request as follows:

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