



U.S. Department
of Transportation

**Federal Highway
Administration**

Memorandum

2003-07-11-116-94-5

Subject: **INFORMATION:** Diameter of Instrumented Pole
for Side Impact Tests

Date: **11 JUL 2003**

From: Michael F. Trentacoste *Michael F. Trentacoste*
Director, Office of Safety Research and Development

Reply to
Attn. of:

HRDS-04

To:

Mr. William Tom Hollowell
Director, Office of Vehicle Safety Research, NRD-10
National Highway Traffic Safety Administration

This is in response to Ms. Randa Radwan Samaha's request for information on the reason why the Federal Highway Administration selected a 254-mm (10-in) diameter for our instrumented rigid pole in order to conduct our roadside safety research.

Collisions with trees and utility poles continue to be a major roadside safety problem. There are an estimated 80 million timber utility poles in the roadside environment. Class 4, 12m (40-ft) long, utility poles are the most common size. At the time we designed our instrumented rigid pole, these poles were required to have a minimum circumference of 851 mm (33.5-in) at groundline. A perfectly circular pole with this circumference would have a diameter of 270 mm (10.66-in) at groundline. Since these timber poles are tapered, they have a diameter of approximately 254 mm (10-in) at mid-height of the doors of passenger vehicles. This is why we selected 254 mm (10-in) as the diameter for our instrumented rigid pole.

I hope that this information will be helpful to you. If you have any questions, please call me or Mr. Charles F. McDevitt at (202) 493-3313.

