gineering research program, showing distance where the cars left the road where people were injured or killed. We have recently reported a study on Route 66, a seven-State study of injury and fatal accidents, and this curve shows the distance where these people went off the existing highways. And we have another 70—we have this dashed line which was recorded, a study by Hutchinson, on median encroachment. A particular type of divided highway, the number of instances where the people have gone into the median, leaving the road on the left side, and we found distribution like this.

Now there was no record as to whether there were injuries. There were cases where a number of these vehicles did strike obstacles in the median. Fifteen percent of the cases went over on the opposite concrete line, across the median line.

In all cases, on the proving ground, it was where obstacles were in the road.

Mr. CONSTANDY. Could you make some conclusions from that, Mr. Stonex?

Mr. STONEX. We conclude that if there had been no obstacles along any of these other roadsides, that probably these people would have followed a distribution somewhat like our proving ground drivers did.

Mr. CONSTANDY. Would this suggest clear roadsides of at least 30 feet?

Mr. STONEX. We think 30 feet is a very practical measurement; it would be safe for a very great proportion of the accidents and the cost is reasonable.

Mr. CONSTANDY. You would not object to more than 30 feet?

Mr. STONEX. Not at all. The more the better.

Mr. CONSTANDY. As a matter of fact, you relate back to something Mr. Lundstrom said, that if we are speaking of 30 feet, might we not be speaking in terms of minimums?

Mr. STONEX. Yes, certainly.

Mr. CONSTANDY. Minimum values from design standards, but relatively safe highways.

Mr. STONEX. Yes. That is right.

Mr. CONSTANDY. Do you want to add something, Mr. Lundstrom, at this point?

Mr. LUNDSTROM. Well, typically I would say use the right-of-way, at least if available. And on the Interstate System, we do have, generally speaking, enough right-of-way to go beyond the 30-foot figure. And obviously it is on these roads where we have a higher speed traffic and the need for greater roadway width.

On lower speed roads, where the traffic might be 35 miles per hour, proportionately narrower escape routes would have been adequate. But the thing that the designer needs to look at is what is available to him to work with to make maximum use of his resources.

Mr. CONSTANDY. Yes. And we may even question the level of service which is desirable. We may desire greater right-of-way widths within which to work.

Do you want to continue, Mr. Stonex?

Mr. STONEX. We have reported additional development of this concept from time to time which I will not go into in the interest of time this morning. However, I would like to discuss a paper which I pre-