

in this area is only 5 miles long; it is a bypass system, and it has some beautiful offroad areas where serious concentrations, I think, were given; also right next to them are some of the worst hazards possible if you can say that.

Mr. W. MAY. Doctor, as I understand it, you have analyzed some 200 fatal accidents since November 1961?

Dr. HUELKE. Yes, sir.

Mr. W. MAY. In which 270 people were killed in those accidents?

Dr. HUELKE. Yes.

Mr. W. MAY. In addition to that, you have analyzed some 300 non-fatal accidents?

Dr. HUELKE. That is correct.

Mr. W. MAY. Were there injuries in each of those?

Dr. HUELKE. Yes. All injury accidents in those 300.

Mr. W. MAY. In your study as it existed up to and as of January 1, 1965, you made some analysis. You submitted a paper to the Highway Research Board?

Dr. HUELKE. Yes, sir.

Mr. W. MAY. I was struck with some sections of your report. You say:

As of January 1, 1965, we investigated 111 accidents in which 146 occupants were killed. No motorcyclists, trucks, or truck accidents were included in that.

Later you say:

If an individual is going to lose control of his vehicle for any reason, the roadway must be designed to prevent cross-median accidents and obstacles must be removed from the roadside so that serious or fatal injuries will not occur. In this study, 84 percent of the accidents were nonintersectional collisions, with a majority, 60 percent, being single-car, off-road collisions.

That is a pretty high percentage when you consider that the accidents that you have analyzed occurred on all types of roads?

Dr. HUELKE. Yes.

Mr. W. MAY. Expressways, rural type roads, primary type roads?

Dr. HUELKE. I think the point to emphasize here is that it is not always a two-car collision, but more frequently a single car off the road. And in this day and age with the traffic safety movement, I think that no matter how much or how many types of safety specifications Dr. Haddon gets through the legislature onto the vehicle, that many of these safety features will be useless when you put a car into a bridge pier or into a tree, or a retaining wall, that is close to the road edge.

If we are truly sincere in trying to save lives on the highway, we not only have to approach the vehicle, but we must do a concentrated effort on the highway system, lest the vehicle strike these things anyway.

(At this point Mr. McCarthy assumed the chair.)

Mr. W. MAY. Yes. Also as a point of interest, later in your report you mentioned, in 21 cases, more than one roadway hazard that should be considered important. Most obvious hazards are indicated in the first. However, other obstacles or design factors play an important part in fatal accidents. For example, you treat "ditch combination" situations which you showed earlier.

You have made a couple of tables captioned "Type of Fatal Accidents, Objects Causing Fatalities." These are all single-car collisions.