

The rail is actually a system. It is not a disconnected series of pieces of rail. And it must be built as a system, a rail and post system, in order to achieve its maximum effectiveness.

Mr. CONSTANDY. So if a 12-cent washer is not acquired, the investment in the rail may not be realized.

Mr. PRISK. I have heard of them costing 12 cents and that statement is correct; yes, sir.

Mr. CONSTANDY. What does guardrail cost, approximately, per foot?

Mr. PRISK. A linear foot of guardrail will run \$2.50 to \$3.50, installed.

Mr. CONSTANDY. Post, guardrail, and washer?

Mr. PRISK. Entire cost; yes, sir.

Mr. CONSTANDY. We are speaking now of W-beam guardrail cost?

Mr. PRISK. Yes. Some other types are cheaper. Some types are a little more expensive.

So we shall consider various types of guardrail. I think in addition to this, with respect to its placement, that it is important to look at how guardrail is used and what situations it is used in, and how it is related to the design of the highway.

One very important consideration is how high this rail is. If a rail is too low, it may be vaulted over or topped. As the vehicle hits it, the vehicle will roll over.

Mr. CONSTANDY. I might say in that connection that during the course of this trip, we viewed a section of guardrail at a point where there had been an accident and there wasn't a scratch in the guardrail. The car completely leaped over the guardrail and the people within it suffered severe injury, or death, I do not know. But that does happen; a car can leap completely over the guardrail.

Mr. PRISK. That is entirely possible. And accident records have substantiated the fact that cars do go over guardrails that are mounted too low. So consideration of rail height is rather important. And we found important variations in rail height among the States.

Another very important fact is the concern of blocking the rail out to the point where the rail will not be in a position that would permit the car wheels to engage with the post.

Mr. CONSTANDY. Could you explain what blocking out means?

Mr. PRISK. Yes. Blocking out refers to placing of a block, a steel or wood block behind the rail and in advance of the post. The post goes into the ground, the rail is actually offset from the post a sufficient amount so that, when a car comes in, the wheel does not get under the rail and attach itself to the post.

Mr. CONSTANDY. So the purpose of the block in the instances is to separate the guardrail from the post to allow sufficient clearance of an automobile wheel sliding along the guardrail to miss the post. Is that correct?

Mr. PRISK. This is the case as far as the normal installation of guardrail is concerned.

There are certain types of guardrail systems where the post is a retarder itself of the vehicle and helps to decelerate the vehicle. In those cases, the post is built light, of light material, in strength, and is intended to collapse. In these cases, contact with the post is not important. In fact contact with the post is a desirable part of its