Following that, we did some—or we are currently engaged in some experimental research with a slip base lighting pole which is a take-off or a continuation from our breakaway sign support.

Now, we have a film this morning which is a series of excerpts from some of our test films. It is not narrated. I will provide the narration myself. But it will be developed further into a narrated film, with its purpose being to disseminate information concerning the impact behavior of lighting poles.

If I can have that film now, we will proceed.

(An untitled film was shown with Dr. Rowan providing the narration.)

This first scene is an installation which caused real concern. This is a steel transformer base, the red object under the pole is a steel transformer base weighing something on the order of 150 pounds. On top of it is a 40-foot steel pole which meets the current design standards of the Texas Highway Department. This is indeed a lethal object. It is nonyielding, is the best way to describe it.

When we get over these long scenes, we will see exactly what it can do to an automobile. I might mention, these are no longer installed in Texas on the State highways.

The penetration of the front of the automobile in this scene was approximately 3 feet. This pushed the engine back up into the driver's lap or within the front seat. The seat mountings were broken, the steering wheel was pushed up near the top of the automobile.

This is a high-speed film shot at 1,000 pictures per second. The clock is turning at 30 revolutions per second. That will give you some idea of the speed. The speed of the vehicle was between 35 and 40 miles per hour.

This would indicate falsity of the normal assumption that speeds on an urban street are safe. At 35 miles per hour, I think this is a good indication that there is considerable hazard in fixed objects in urban areas where your speeds are lower.

I would like to emphasize that point, that we have problems in urban areas the same as we do on highways where our speed limits are on the order of 60 to 70. It is not an isolated problems by any means.

This, gentlemen, is a light base that is now included as a standard design in the State of Texas on Interstate highways. This is a cast aluminum base. It weighs approximately 50 pounds.

We have the same steel pole atop this base. Here you will see a compact vehicle weighing 2,100 pounds striking the pole at 45 miles per hour, and with good results.

This vehicle traveled some 300 to 400 feet beyond the pole and finally became entangled in a fence.

The speed reduction was something on the order of 1 to 3 miles per hour. Now, note whenever the vehicle strikes, you will see the base break diagonally. It functions in two ways. You get, on one side, a breakage due to the frangible nature of this cast aluminum. Then on the other side of the base you get the slip action which we have in our sign supports.

When the pole comes down, you will note that the top of the pole lands approximately at the foundation. The pole itself goes in the direction of the automobile.