This is a half- or five-eighth-inch bolt, simply run through the contrete at one point. This is what you start to get, cracking developing, and some of these have pulled loose. Certainly it could not stand very much impact.

Mr. CONSTANDY. Mr. Skeels, you seem to have a reaction to this.

Mr. SKEELS My reaction was that they tried to do something but the solution is inadequate. To this—the size of this single bolt is wholly inadequate to develop the strength available in the guardrail. The tensile strength.

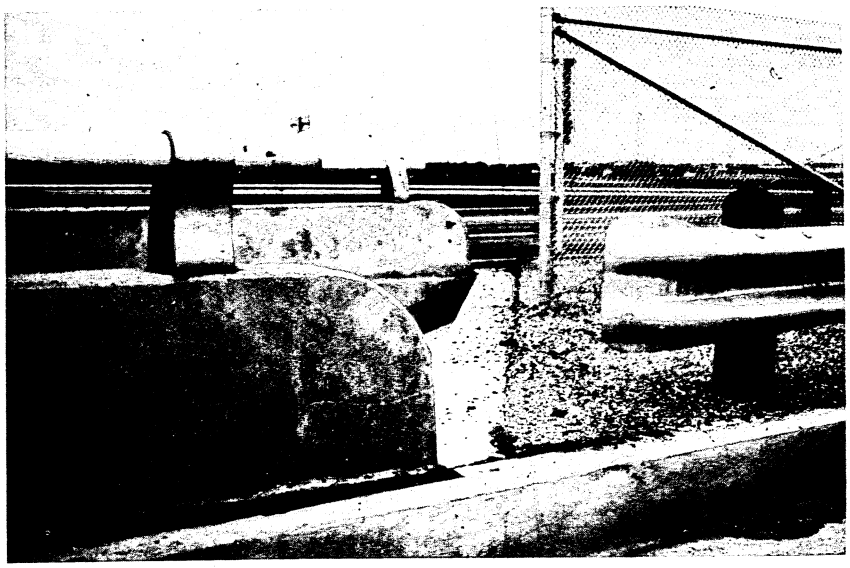
Mr. GRAY. Who designed this particular guardrail?

Mr. CONSTANDY. We don't know.

Mr. PRISK. Under the supervision of the Oklahoma Department of Highways.

Mr. GRAY. Probably someone in the district office, would you guess? District highway office instead of Oklahoma?

Mr. PRISK. Possibly so. It could have been done by a consultant. We just do not have that information.



It is rather interesting on this same structure, that six of the eight possible points of contact of rail and structure have been fastened in the manner that we were just looking at in the previous slide. But two of them have not; on this side here is a place that is fastened and on this side it is not.

Mr. CONSTANDY. So the concept is three-quarters correct?

Mr. PRISK. So it is just a start.

You see here they have even drilled—I do not know that you can make it out but there are two holes through here, Mr. Skeels; maybe they intended to put two bolts through there and for some reason did not put a second one through. I think there is only one place you can put a bolt through, anyway.