If you look at the records provided by the heavy truckers they are talking about 11 percent use and yet, the other people, the 89 percent would be the ones who would bear the greater share of the cost of this accelerated deterioration of our highways for the benefit of the 250,000 truckers.

BRIDGES

Ability of a specific road network to accommodate trucks of a given size is to a great extent, limited by the ability of the bridges to carry the sizes and weights operating over the system.

Even the newest of our bridges, those on the Interstate System which I have heard so much about recently have been designed to accommodate vehicles with axle weights no greater than 18,000 pounds single, and 32,000 pounds tandem.

Bridges designed to lesser than this standard cannot accommodate the 18,000/32,000 pound loads already encountered without overstress which reduces the safety margin design in the bridge.

This testimony before the Senate Public Works Committee on the subject of bridge design by Mr. Frank Turner, Director of the Bureau of Public Roads, indicated that the increase to a 34,000-pound tandem axle from the present limit of 32,000 pounds would over-stress interstate bridges by 32 to 36 percent. That is a 2,000-pound increase—32 to 36 percent overstress!

Mr. Frank Masters, Jr., consulting engineer for the firm of Mojeski and Masters, testified before the same Senate committee that the conservative design of many old bridges incorporates a safety factor which has enabled them, up to now, to carry increased weights and an increased frequency of heavier loads that was forecast when they were built.

However, he noted that the bridges which we are designing today are being limited by specifications and standards to structures with capacities slightly in excess of what is to be expected on the date such spans open.

He also stated:

I understand that legislation now before Congress proposes a new standard of axle weights that will, in effect, permit 76,000 pounds in larger vehicles. This is difficult to comprehend when you consider the fact that almost half the bridges and even fewer highways in the federal aid primary and secondary systems are designed for vehicles of 15 tons.

Earlier this year the AAA conducted a nationwide survey of State highway departments to determine the loading characteristics of bridges on defense requirement routes. These routes are routes for military movements in national emergency. For the most part, these routes are used today for the great bulk of our long-distance truck traffic.

The alarming report by the highway departments of 38 States and the District of Columbia is that more than two-thirds of all these bridges are inadequate for today's heavy truck traffic.

Further, nearly half of these bridges are seriously inadequate. You will note from the tabulation attached to my statement that 67.8 percent of the bridges were reported to have been designed to standards less than H. 20–5.16. This bridge design is the one which will accommodate a 32,000-pound tandem axle load. It is the current standard for