

At the last annual meeting of the association in Salt Lake City, it was the recommendation of the transport committee that the State highway departments have another opportunity of voting on a 34,000-pound, tandem axleload limitation.

This was the top figure that came out of our studies at the test road, that would give more liberalized use of the highways in transporting goods, but still get an acceptable remaining life of the highway investment.

In this most recent balloting, more than half of the States approved of the 34,000-pound figure, but it lacked a few votes getting the necessary two-thirds approval to become an AASHO policy; therefore, our official position remains at the 32,000-pound, tandem-axle figure.

Very often you hear the statement that the structural capacity of a highway can be beefed up relatively easy by adding some resurfacing to an existing pavement.

This is not as simple as it might sound, for these additional layers of resurfacing do not develop nearly the additional pavement strength that they would have if they had been incorporated as a monolithic part of the original pavement design and construction.

Also, the effective and serviceable life of such resurfacing or overlays is hard to predict, but generally the history of their effectiveness is limited to about 10 years.

Using the information that we had learned from the test road, the AASHO transport committee made a survey in 1962, in which 28 States participated, for evaluating the remaining life of representative existing highways, and the effects of increasing load increments on them. The survey resulted in a cost estimate of resurfacing the major below-strength highways at a billion dollars, if tandem axleloads were increased to 35,000 pounds. It was assumed that such an expenditure would be spread over a 10-year period.

In other words, such a program would require at least two-tenths of our present ABC authorizations. To increase the strength or beef up the pavements by resurfacing to accommodate 22,000-pound, single- and 38,000-pound, tandem axleloads would run the cost to about 2 billion, and could be expected to be a recurring cost every 10 years until the road could be rebuilt.

In developing the bridge formula at the AASHO road test project, it was assumed that because of the rather conservative allowable stresses assigned to concrete and steel at the time that our H-15 design bridges were built, which is the predominant bridge on the State highway systems, we could probably overstress these structures up to about 30 percent and still be safe, but with a sacrifice in remaining life of the structure.

After 1942, bridges on major highways were designed for an H-20 loading and a modification of this, the HS-20 loading, has been used in designing the bridges for the Interstate System. but the allowable design stresses are nearer the yield strengths and do not have the built-in safety factor of the older H-15 structures. These loadings assume a maximum axle loading of 32,000 pounds, so anything in excess of this would, in effect, be overstressing these bridges. The H-15 bridge was designed for a maximum axle loading of 24,000 pounds.