

The bridge formula is not only important in developing a maximum allowable gross weight for the vehicle, but also must be used to control intermediate axle groupings under the vehicle because of the effect of such group loadings on bridge floor design, and especially the effects on negative moments on the large number of continuous bridges that are in use.

In a study undertaken by the AASHO Bridges and Structures Committee in 1964, the following results were noted:

PERCENTAGE OF AREA OF BRIDGE DECKS DESIGNED FOR LOADINGS

[In percent]

System	H-15 or less	H-16 to H-20	HS-20 or greater
Interstate.....	6.7	4.4	88.9
ABC.....	53.3	24.0	22.7

We want to point out that there is no easy or economical way to upgrade an existing bridge structure for either increased axle or gross loads.

Generally, such bridges of low structural capacity must be replaced if the gross or axle weight allowances are substantially increased. Of course, when a section of highway is rebuilt to modern standards, sub-standard bridges that are either structurally or functionally obsolete are replaced as part of the project.

The bridge investment in our highway system is indeed a large figure running about 25 to 30 percent of the total highway investment.

There are two factors that appear in our new policy for the first time. One has to do with maximum allowable tire inflation pressures. This is included because of some tire developments that could cause extensive damage to certain types of pavements. The specified maximum tire inflation pressure that appears in the AASHO recommended policy does not affect any tires currently in operation.

The other factor has to do with weight-horsepower ratio of vehicles to discourage the use of grossly underpowered vehicles that would impede traffic. This part of our recommended policy was developed from discussions with truck manufacturers and truck operators.

We wish to make one point very clear. Specified maximum axle and gross weight limitations must be all inclusive for we have found too many enforcement problems in attempting to allow tolerances in addition to so-called maximum weights.

In reviewing S. 2658, as passed by the Senate, it is our opinion that the 34,000-pound, tandem-axle weight is the maximum that we can accept. We must, however, disagree with the so-called grandfather clause provision which would establish January 1, 1968, in place of the July 1, 1956, date originally specified in section 127 of United States Code 23. This action, instead of encouraging uniformity in vehicle sizes and weights, would add encouragement to further escalation.

We recommend the provision contained in our recommended policy of 1968, which would require all vehicles in operation to conform with the so-called maximum weights and sizes by July 1, 1975.