

axle weights for a preselected period of time. Most structures built over the past decade for the primary highway systems are intended to accommodate greater vehicle standards and provide better serviceability than those built in the decade following World War II. The initially selected period of service life of highway structures is also the basis for the programming of funds which the public makes available whether obtained from bond issues, user charges, dedicated tax revenues, or other sources. *Increases in vehicle standards which occasion greater capacity or strengthening of highway structures, or accelerated deterioration of their serviceability, cannot be justified unless corresponding increases are provided in the revenues required to meet the costs of highway widening, resurfacing, reconstruction, and maintenance which they entail.*

"Balance is also desirable in the application of vehicle standards both as to their scope and timing. Through annual model changes automotive vehicles can be transformed from one to another dimension and weight standard very quickly. The upgrading of an entire highway system cannot be so easily provided. *Prior to their construction, highway structures must be designed to meet capacity and strength requirement anticipated over their lifetime. Any abrupt change in vehicle standards could possibly bring about wasteful obsolescence of technically and economically sound structures and weaken the public's continuing high investment in highway systems. Further, while in the interests of uniformity it is desirable to have only one vehicle standard for all highway systems, it is not possible at this time as a practical economic, technical, or legislative matter.* On the other hand, neither is it feasible to establish Federal vehicle standards for certain highways unless as a minimum they comprise a very considerable mileage of connected routes forming an interstate system." [Emphasis added.] (House Document No. 354, 88th Congress, 2nd Session, page 2.)

TEN-YEAR RESURFACING COSTS

Table 32 gives, for each of the 38 States and the District of Columbia, the estimated cost of all resurfacing required in the 10 year period 1963-72, for the present and the hypothetical higher axle weight limits, according to the calculations made in the pavement evaluation survey. Again, the States are divided into four groups according to the present axle weight limits. Ratios of cost for the higher limits to those for the present axle weight limits are also given.

"Of the 28 States with limits at or near 18,000 and 32,000 pounds, an increase of the limit to 20,000 and 35,000 pounds would increase the 10-year resurfacing cost by 20 percent or less in 16 States. In nine of these States, the increase would be from 20 to 40 percent; in two of them, from 40 to 60 percent; and in one of them, from 60 to 80 percent. An increase to the 22,000- and 38,000-pound limit would increase costs from 20 to 40 percent in 11 States, 40 to 60 percent in five States and 60 to 80 percent in five States. For axle weight limits of 24,000 and 42,000 pounds the scatter is rather wide. It will be noted, however, that 16 of the 28 States give values of the ratio between 1.4 and 2.0." (House Document No. 354, 88th Congress, 2nd Session, page 121.)

House Document No. 354 reports, in addition, that in the 28 States reporting and having present axle load limits of 18,000 pounds single and 32,000 pounds tandems, the average remaining life of primary system pavements, before resurfacing, under present limits would be 7.4 years. An increase in weight to 20,000 pounds single and 35,000 pounds tandems would reduce the expected remaining life by 1.2 years. The cost of the resurfacing under present load limits would approximate \$3,330,000,000 over the period 1963-1972, while under an increase to 20,000 pounds single and 35,000 pounds tandems this cost would increase to approximately \$4,264,000,000, or an increase attributable to the increased load of \$934,000,000.

Remembering that the reporting States account for only 67.5 percent of the total primary State highway mileage in the 50 States, it could logically be presumed that the total additional cost of resurfacing under the increased axle loads proposed by S. 2658 could easily approximate \$1,500,000,000 in the ten-year period.

"The system travel characteristics of intercity buses and most types of freight-carrying combinations are conspicuously in contrast to those of single-unit trucks and automobiles. Tractor-semitrailer combinations travel 30 to 41 percent of their mileage on the Interstate System and 83 to 90 percent on the combined Federal-aid systems. For intercity buses the score is 31 percent on the Interstate System and 85 percent on all Federal-aid systems.