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MICHIGAN
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CONCERNING CHANGES IN SENATE BILL NUMBER 102
RELATIVE TO MOTORBUSES

By

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Research Project 39 F-7 (1)

Research Laboratory
Testing and Research Division
Report No. 66
February 21, 1945

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From the text of Senate Bill No. 102 it is understood that three changes in motor bus operations are proposed, they are:

1. To increase the length from 35 to 40 feet.
2. To increase the width from 96 to 102 inches.
3. Establish a maximum gross weight, including load of 40,000 pounds. This load to be distributed over 2, 3, 4, or 5 axles.

The proposed changes in items 1 and 2 have no significant bearing upon the design of the slab or life of highway surfaces, therefore they will not be considered herein.

Item 3 as worded removes the 18,000 pound axle load restriction from motorbuses. The proposed changes state that the 40,000 pounds could be distributed over two axles. It would seem impractical to design a vehicle with an even distribution of 20,000 pounds per each axle. Furthermore, the law would permit axle loads of any possible combination exceeding 18,000 pounds such as 30,000 and 10,000. The proposed change should be definitely reworded to comply to the regular axle load restriction of 18,000 pounds now in force.

Data from weighing stations indicate that busses now in use average 33 feet in length and weigh loaded approximately 27,000 pounds. In most cases the rear axles are loaded between 15,000 and 18,000 pounds each and occasionally they run over 18,000 pounds. The average distance between axles is 22 feet.

From the standpoint of stresses in the pavement our present design is based upon an 18,000 pound axle load. In the design of post-war pavements we are considering 1 percent of axle loads to be over 18,000 pounds to take

care of overloaded vehicles. In conformance with the opinion of most highway departments the 18,000 pound axle load should not be increased. Most Departments are in favor of the specifications set up by the National Interregional Highway Committee as given in Table II.

A change in axle loading from 18,000 to 20,000 pounds would mean increasing the thickness of new slabs approximately 8 to 10 percent. Our older pavements would require more maintenance to withstand the heavier axle loads.