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Michael Sivak and Brandon Schoettle		SWT-2017-1	
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16. Abstract

Passenger weight is an important parameter in road transportation because it can significantly affect the operational weight of the vehicle. In turn, the operational weight of the vehicle has important consequences for the safe structural design of vehicle components (such as suspension, wheels, and tires), and for the detrimental impact of vehicle operations on pavement longevity. These considerations are especially important for mass-transit vehicles (i.e., those transporting a substantial number of passengers at once) such as buses. Importantly, the weight of the average American adult has increased substantially during the past 50 years, but the assumed average passenger weight has not always been adjusted accordingly. This brief report analyzes the discrepancy between the current actual and assumed passenger weights, with the primary focus on buses.

The analysis indicates that the current average weight of an American adult is 180 lb, while the Federal Transit Administration (FTA) regulations assume an average weight of 150 lb. Consequently, it is recommended that the FTA consider adopting 180 lb as the appropriate assumed weight.

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