

ASSESSING THE IMPACTS OF INCREASING TRUCK WEIGHTS IN IDAHO

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ABSTRACT

In 1998 the Idaho legislature allowed higher weight trucks to operate on two pilot project routes in Idaho. The maximum gross vehicle weight (GVW) allowed on these routes was increased from 47.9 Mg (105,500 lb) to 58.5 Mg (129,000 lb). This study examines the impacts of this legislation on Idaho's pavements and bridges. It also illustrates a method of estimating future truck traffic from actual truck weight data.

The authors developed two traffic scenarios. The first assumes that higher weight trucks are not allowed (baseline scenario), and the second assumes that higher weight trucks are allowed (future scenario). Performance of two selected pavement segments and seven bridges on the pilot routes was compared under both scenarios.

Results of the pavement analyses for the two sites indicated that the future traffic scenario leads to an increase in pavement damage of 3% and 10%, which reduced the pavement lives by comparable values. The majority of the bridges evaluated had spans less than 30 m (98 ft). As a result, most rating factors increased by 5% to 15%, with some increasing as much as 20%, indicating an increased ability to carry these trucks. However, longer span bridges experienced a decrease in rating factors of 11% to 19%.

The results of this study were also compared to those of the Comprehensive Truck Size and Weight Study, which was recently conducted by the USDOT. Both studies used similar principals but results differed based on the assumed diversion scenarios.