

U.S. DOT STUDY DATA DEMONSTRATES SAFETY & EFFICIENCY OF HEAVIER SIX-AXLE TRUCKS

The technical findings from the U.S. DOT's Comprehensive Truck Size & Weight Limits Study show positive performance for six-axle trucks travelling at both 91,000 and 97,000 pounds, while also confirming reduced logistics costs, pavement life-cycle costs, fuel costs, vehicle miles traveled, congestion, and emissions associated with these configurations as compared to the five-axle, 80,000 pound control vehicle.

Importantly, state-level Interstate System data shows the six-axle configurations resulted in fewer fatal crashes, and the findings indicate that their use would result in only a nominal level of modal shift from freight rail to trucks.

Safety: No Change in Handling & Performance and Fewer Fatal Crashes

The study found no appreciable maneuvering difference between the five and six-axle configurations, and state-level empirical data shows that crashes involving the six-axle configuration less frequently produced fatalities or injuries (indicating a lower severity of crashes).

- Turning and braking for both the 91,000 and 97,000 pound six-axle vehicles were shown to be comparable to the control vehicle, and below the 250-foot federal stopping distance requirements for large trucks. (Vol. II, "Highway Safety," pp 60-65).
- Heavier six-axle vehicles operating on Interstate Highways in both Washington and Idaho during the period studied were involved in no fatal crashes—less than the five-axle control (Vol. II, "Highway Safety," Tables 12-13, p 32).
- Crashes involving heavier six-axle trucks less frequently involved injury than crashes involving the 80,000 pound, five-axle control vehicle (Vol. II, "Highway Safety," Tables 12-13, p 32).
- Vehicle configuration was "not a significant predictor" of the likelihood for violations (Vol. II, "Highway Safety," p 90).

Efficiency: Reduced Logistics Costs, Vehicle Miles Traveled & Pavement Costs

Truck weight reform would reduce logistics costs, pavement lifecycle costs and vehicle miles traveled.

- Trucks with six axles weighing 97,000 pounds and 91,000 pounds yield significant logistics savings and reductions in vehicle miles traveled compared to the 5 axle control vehicle at 80,000 pounds, with greater savings from the 97,000 pound configuration (Vol. I, p ES-11).
- Bridge fatigue costs for steel bridges are "small" relative to bridge program costs (Vol. II, "Bridge Structure," p ES-8).
- The use of six-axle trucks weighing 91,000 and 97,000 pounds would yield significant decreases in predicted pavement Life Cycle Costs (LCC) from the base scenario (Vol. I, p ES-11).
- Only 3.3 percent and 4.6 percent of Interstate bridges require posting for trucks weighing 91,000 pounds and 97,000 pounds, respectively (Vol. II, "Bridge Structure," p ES-7).
- The study's modest estimated one time bridge costs for the six-axle configurations (in lieu of posting) represent an "extreme upper bound" of possible costs, indicating that costs are likely lower (Vol. II, "Bridge Structure," p ES-7).

Modal Shift: No Significant Shift from Rail to Truck

Truck weight reform would have only a nominal impact on modal shift.

- The U.S. DOT calculated that six-axle vehicles weighing 97,000 pounds and 91,000 pounds would divert \$562 million and \$196 million, respectively, from rail—an industry worth \$70 billion (Vol. I, p ES-6, 39).
- Overall freight is projected to grow at nearly 2 percent per year (45 percent by 2040), indicating that freight growth would be greater than rail diversion (Vol. I, p ES-5).

