

Comprehensive Costs of Highway-Rail Grade Crossing Crashes



Client

National Cooperative Highway Research
Program, Transportation Research Board
(TRB)

Facts

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For the National Cooperative Highway Research Program (Report 755) EDR Group (now EBP) as a subcontractor to DecisionTek, Inc.

The objectives of this research were to develop (a) a categorization scheme for comprehensively describing costs associated with highway-rail at-grade crossing collisions; (b) estimates of the cost magnitudes in recent experience; and (c) an analytical framework for developing a model or set of models for forecasting these costs, considering the characteristics of a crossing and the rail and highway traffic using it. Costs to be considered included those incurred by railroads, highway agencies, shippers, travelers, businesses, and public service agencies, and others as a consequence of a collision and interruption of traffic flow. The research team reviewed pertinent literature and current practices on measuring and estimating costs of highway-rail collisions and collision-related interruptions in shipments of goods. The team considered the full range of costs incurred by railroads, businesses, public agencies, shippers, passengers, and the public at large. Assess the availability, accuracy, and reliability of data on collision costs as they may be reported by public agencies, railroads, or other sources; and reviewed currently used models and analysis tools for forecasting crossing-collision and service-interruption costs. Based on this work, the team developed a cost framework and cost-forecasting modeling strategies.

The final report describes the approach to cost forecasting and recommended strategy. A spreadsheet-based tool to facilitate use of the cost estimation process is available online.

Contact Persons