Houston Chronicle - July 16, 2004

Other side of story: good news about rail crossings

Drivers are safer then ever, despite rising traffic, and the three E's are reasons why

By IAN SAVAGE

Buried in the Chronicle's coverage of the freight railroad industry's safety record ("Deaths at rail crossings often lead to cover-up / Probe discovers reporting delayed, evidence destroyed," Page One, July 11) is the unassailable fact that grade crossings are safer than they have ever been.

Nobody can downplay the human costs incurred when cars and trains collide, but the facts are worth revisiting.

There are 50 percent fewer motor vehicle-versus-train grade crossing incidents than in 1990 and 75 percent fewer than in 1975. This is despite a doubling in highway traffic in the past 30 years. This is good news for drivers, not bad news.

My extensive research in this area has indicated there are several reasons for this remarkable progress.

Safety has improved on all parts of the highway system. A reduced incidence of drunken driving, advances in automotive technology and increased effectiveness of emergency medical response have as much effect at highway-rail intersections as they do at highway-highway intersections. I find these factors account for about two-fifths of the safety improvement at grade crossings.

However, safety has improved faster at grade crossings than it has elsewhere on the highway system. The reasons can be categorized as the three E's: engineering, education and enforcement.

The most visible engineering change has been the installation of gates and/or warning lights at many of the 153,237 public crossings, approximately 11,580 of which are in Texas. Previously, numerous crossings were only marked by signs. The vast majority of the funding for these installations has come from the federal government under a 1973 initiative referred to as the Section 130 Program. My research finds that this modest program, which has cost about $8.5 billion at current prices over 30 years, accounts for about a fifth of the reduction in risk. Using commonly accepted dollar valuations for deaths, injuries and property damage averted, I find that the Section 130 Program generates $2 of public benefits for every dollar spent. The program has been remarkably successful, and has led to a real saving of life and serious injury at a relatively modest cost.

A more recent engineering initiative has improved the ability of motorists to see oncoming locomotives. Trials in the early 1990s led to a federal rule, effective from 1998, requiring that the traditional single headlight be augmented by two additional lights lower down on the front of the locomotive. These lights provide added illumination of the sides of the track, and, more importantly, the triangular pattern provides highway users with a greater perception of an approaching trains

speed and distance from the crossing. I find that these lights are very effective in reducing risk at crossings without lights or gates and account for about a seventh of the total reduced risk.

A similar reduction in risk can be attributed to improved education combating the perpetual problem of highway users' poor perception of grade crossing dangers. Drivers are tempted to drive around lowered gates and ignore the flashing lights. At crossings without lights or gates, the conduct expected of drivers in observing for an approaching train is ill-defined.

Consequently, in each state, the railroad industry worked with highway safety advocates to establish nonprofit organizations called Operation Lifesaver to promote education and awareness of railroad-related hazards.

The first program was established in Idaho in 1972, and it spread across most of the nation by 1986. These organizations exist on shoestring budgets and primarily rely on volunteers to make presentations to schools and community groups. My results suggest that without Operation Lifesaver, there would be 500 more collisions each year and 75 more deaths.

Another aspect of Operation Lifesavers' work has been to encourage more enforcement at grade crossings. Operation Lifesaver urges police departments to be more aggressive in ticketing drivers who deliberately ignore flashing lights and the lowering of gates. In some places, photo enforcement has been tried. Unfortunately, there is insufficient data available to quantify the effect of increased enforcement on the overall reduced risk.

While more can be done, there is a remarkable success story to be told.

The federal government, railroads, highway engineers, police departments and the volunteers of Operation Lifesaver have worked together over the past 30 years to save — by my research estimates — approximately 10,000 lives.

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