Decreasing Liability with a Sound Grade Crossing Improvement Program

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INTRODUCTION

Although great strides have been made in recent years in improved safety at rail-highway crossings at grade, or grade crossings for short, people still get maimed or killed at grade crossings and the potential for greater tragedy, such as, a school bus hit broadside, a truck carrying hazardous cargo split open, or the possible derailment of a passenger train still exists.

The greatest improvements in these last 14 years have been made on high-type highways, i.e., U.S. routes, state highways and county arterials on the federal aid system. In what has been called by some the most successful highway safety program ever, approximately $1.3 billion has been apportioned for highway-railroad projects in the years since the “Section 203” Grade Crossing Safety Improvement Program was originally enacted in the 1973 Federal Aid Highway Act (FAHA). The Surface Transportation Act of 1982 guaranteed continuation of the program for an additional four years, to 1986, at its current rate of approximately $190 million per year.

The program has always worked on a priority basis, aimed at improving the crossings with the highest potential hazard first. The FAHA of 1973 required that each state conduct and systematically maintain a survey of all highways and identify those rail-highway crossings which may require separation, relocation or improved warning systems, and to establish and implement a schedule of projects for this purpose. The Federal Highway Administration (FHWA) requires that priorities be established on the basis of: (1) a hazard index, (2) an on-site inspection of the crossing, and (3) exposure of people (buses, passenger trains, etc.) and hazardous cargo at the crossing.

A hazard index rating has usually been the most used criteria. This varies from the simple New Hampshire formula used by several states, including Indiana, to some much more complicated ones. The New Hampshire formula is quite simple. As used by Indiana:

Hazard Index = Highway ADT x Rail ADT x Warning Device
Factor divided by 1000, where warning device factor as used by Indiana =

<table>
<thead>
<tr>
<th>Device Description</th>
<th>Factor</th>
</tr>
</thead>
<tbody>
<tr>
<td>None</td>
<td>1.5</td>
</tr>
<tr>
<td>Crossbucks (only)</td>
<td>1.0</td>
</tr>
<tr>
<td>Flashing lights</td>
<td>0.2</td>
</tr>
<tr>
<td>Flashing lights and gates</td>
<td>0.1</td>
</tr>
</tbody>
</table>

There are other versions of this formula which use slightly different values for warning device factor. For example, a more typical value for flashing lights would be 0.58 or 0.6.

The form is similar in all these formulas inasmuch as the highway ADT and rail ADT are generally the most important factors. Thus crossings with high traffic volumes, highway and rail, particularly those with a low level of warning system, were naturally high on priority lists.

In addition, for several years after enactment of the 1973 FAHA, only those grade crossings on Federal Aid routes were eligible. Again this put emphasis on more heavily traveled, higher-type highways.

A few years ago, there was concern that many high-hazard grade crossings, those on local roads and streets not on the federal aid system, were being ignored because they were not eligible for federal funds. An off-system fund was established to address this problem. The Surface Transportation Act of 1982 did away with the separate off-system funds but made “Section 203” funds available to all grade crossings, on or off system.

There is currently concern that because the worse crossings (highest hazard index) have been improved, and because accidents and deaths at grade crossings has decreased greatly in the last decade, interest in the program shows some evidence of waning. Most of the remaining high-hazard grade crossings are on local roads and streets. Local governments throughout the U.S. are usually short of funds for the 10% match required for grade crossing signal projects, and generally feel that they have more pressing problems. However, there are still many high-hazard crossings and many reasons to use the available funds to improve them.

The potential for death and injury exist in all rail-highway crossings at grade. Where school buses or trucks carrying hazardous materials (including gasoline which is common in all localities and anhydrous ammonia which is common in rural areas) use these crossings, even at low-volume roads with few train movements, a potential exists for a catastrophic accident.

Another fact of all highway accidents is that the majority occur near the motorists’ home. This is also true of grade crossing accidents. In fact, one theory of grade crossing accidents is that people who live near a grade crossing and cross it perhaps several times a day without seeing a train, can loose their respect for the potential danger and are
prone to carelessly driving into a train's path. Thus, although deaths at low-volume grade crossings in rural areas and small towns are infrequent, when one does occur there is a high probability that it will be a local resident; possibly a friend or relative.

With a sound, ongoing program, safety at rail-highway crossings at grade can be improved throughout an area or region at relatively low cost. Installing or improving signals is an obvious way to reduce hazard at grade crossings. A local public agency (LPA) is required to pay only 10% of the cost of signal projects. Three other important areas that are specifically the responsibility of the LPA that has jurisdiction over the road and street are the advanced warning sign, sight distance on the approaches and the approaches themselves. These are areas that are in most cases relatively low-cost items to improve.

LIABILITY: GENERAL LIABILITY

I will discuss liability briefly. It has been said that a person who defends himself in court has a fool for a lawyer; and that could apply to engineers who write about liability. But the truth is that in today's society, the sovereign immunity that federal, state and local governments enjoyed for hundreds of years has disappeared or has been seriously eroded in recent years. Highway engineers (along with all engineers and other professionals) appear to be subjected to an ever increasing number of lawsuits for alleged negligence in the performance of their duties. Due to a multitude of different court cases, statutes and common law rules, applicable to state and local governments arising out of negligent highway operations, general rules are difficult to list. States (and local governments) are usually held to have a duty to maintain highways, streets, and sidewalks in a reasonably safe condition for travel. It is common to see language to the effect: (1)

"One traveling on a highway is entitled to assume that his way is reasonably safe, and although a person is required to use reasonable care for his own safety, he is neither required nor expected to search for obstructions or dangers"

Personal liability of professionals is also increasing. Private parties can be held liable for their role in creating or maintaining dangerous highways. For example, if roadside hazards are designed by architects and engineers, despite a knowledge of safer available design, they may be held personally liable to those injured by their unsafe creations. (2).

A March 15th issue of Forbes (the financial magazine) headlines an article on the subject as follows: (3)

"Liberalization and negligence laws and generous juries have made municipal liability insurance hard and expensive to get. Who pays? The taxpayers, of course"
This article details the demise of sovereign immunity and the rise of the citizen as litigator. The article sums up the situation thusly: (3)

"Sue the bastard! has become something of a national mindset, hitting governments as well as companies and individuals"

As citizens and persons with a sense of fairness, we are not displeased with the passing of the old doctrine of sovereign immunity. However, as highway professionals and/or public officials, and taxpayers, we must be concerned with its passing. As put by the same *Forbes* article: (3)

"The issue is tax law or tort claims. Simply put, a tort is a private or civil wrong or injury, independent of contract. It goes by other common names such as personal injury and negligence. It is a very complicated subject. Volumes of books have been written on tort law. Law students are taught tort law; the equivalent of one year of instruction. Numerous attorneys specialize in tort law. Multimillion dollar awards to plaintiffs are not uncommon."

So how should we as highway professionals and officials act to reduce our liability and protect ourselves? First, by concentrating on doing our jobs well, as opposed to concentrating on the law. Concentrating on doing our jobs well should reduce liability as a by product of increasing public safety; concentrating on the law could lead to panic, paranoia, and/or the "Ostrich Syndrome", i.e., sticking our heads in the sand and hoping no one will notice our deficiencies if we ignore them. In the latter case both the motoring public and the taxpayer will eventually suffer. As put by Oliver in a 1971 Road School talk referring to countering the thrust of liability suits; (4).

"We have an opportunity now to turn this colloquium of like-minded people reaching for answers into a tightly meshed and integrated system with a purpose—that purpose being to fulfill the desires of the traveling public and to do so in a safe, orderly and just manner."

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Oliver goes on to say that safety is the part of the highway professionals, order is the part of the public agency administrators and justice is the part of the lawyers and courts.

**KANSAS CASES**

Being from Kansas, I am more familiar with Kansas tort law as it affects state and local government liability. In recent years cities, coun-
ties, townships and the state have been increasingly subjected to suits for liability arising out of injury and property damage arising from conditions which are considered to be defects in streets, highways and bridges under their control. It was felt there was a need to educate local engineers and highway officials on understanding the basic principals of governing the different types of immunities and potential liabilities that they faced and to suggest ways to reduce their liability. To address this need, Dr. Bob L. Smith at Kansas State University, in conjunction with the Kansas Department of Transportation, put together a one day workshop entitled *Safe Streets and Highways: Local Government Liability* (5)

A workshop manual was developed and a series of workshops presented throughout Kansas with assistance from the chief attorney for the Kansas DOT, several attorneys from the Kansas Trial Lawyers Association, legal professionals (5). The workshop manual was in part adopted by permission from “Traffic Improvements — Legal Aspects and Liability,” Institute of Transportation Engineers. The workshops were well received throughout Kansas and quite successful, indicating a need in this area. Several comments that follow regarding local government liability and ways to minimize liability are taken from this workshop manual.

**AVOIDING LIABILITY**

There is no way to guarantee that a public agency can avoid losing a tort liability case. One can find in the literature and in lawyers’ comments, numerous references to the “Deep Pocket” theory. There have been lawsuits in the United States in which plaintiffs have recovered very large judgements, seemingly not justified by any proven negligence on the defendant; but only because the plaintiff was, in fact, injured and because the defendant could afford to pay.

On the other hand, there is support for the concept that the best defense against tort liability is not necessarily an airtight case against the plaintiff. It is the avoidance of negligence by exercising sound judgement and due care—a prevent defense. Or as a summary to a lengthy discussion along these lines in the KSU/KDOT Liability Workshop Manual (5, pg. II-5):

“The long and the short of this discussion is that there is no way to protect against liability short of the following: sound research upon which to establish standards; requirement that the standard be the base minimum; inspection procedures to ensure compliance with the standards; and a maintenance program to achieve speedy rehabilitation of defective conditions”

Even in the years before governmental immunity was dissolved, governmental entities could be sued if they were acting in a proprietary
capacity; i.e. when it engaged in a function capable of being performed by a private individual or for which it charged a fee or made a profit. Thus, a governmental-proprietary distinction had to be made. Currently, another distinction has to be made; that is between discretionary acts and ministerial acts. A discretionary act, still sheltered to some degree by sovereign immunity, involves the exercise of discretion and implies the power and duty to make a choice among valid alternatives. It requires a consideration of alternatives and the exercise of independent judgement. However, it can be ruled that a professional acted in a negligent manner in regard to a discretionary act; for example, choosing a particular design alternative when he knows, or should have known, that another alternative was safer. Ministerial acts, which may create liability, are more likely to involve clearly defined tasks performed with minimum leeway as to personal judgement. Maintenance of roads and streets and installation of road signs are two common areas generally considered ministerial and, as such, often the acts on which many law suits are based.

Although laws of some states permit tort suits of this nature based on general negligence principles as if the state were a private person or corporation, the prevailing trend is to have a tort claims act that authorizes suits only as set forth in the act by the legislature. Typically, these acts include an exemption from liability for negligence in the performance of, or failure to perform discretionary activities. Thus when highway operations are at issue in tort claims, the question usually becomes whether the activity or decision involved falls within the exemption from liability for discretionary functions or duties. In some cases the distinction is unclear and a major point for the court to decide.

COMMON CAUSES OF LIABILITY IN INDIANA

Although design is generally a discretionary function, there can be liability for bad design, as pointed out previously. The Indiana Department of Highways (IDOH) is sued basically on four theories of negligence: (6)

1. Improper construction
2. Improper design
3. Improper maintenance
4. Improper signing

In general, negligent maintenance is least likely to be immune from liability, and courts almost always tend to consider this phase of highway operations to be routine housekeeping necessary in day to day operation (7). In other words, it is clearly a ministerial act.

In Indiana, many lawsuits involve signing and whether or not warn-
ing signs were in place at the time of an accident. It is clear that public agencies in Indiana are required to follow the Indiana Manual (Burns 9-4-2-1). Where the manual has a mandatory requirement that "x" sign be erected at "y" location under "z" conditions, failure to place the sign or any deviation from the required format will most likely result in a liability judgement. However, in the case of a deviation, liability will be dependent upon whether evidence supports a deviation; but, in many cases, the deviation is the result of carelessness or negligence and liability will ensue (5).

In the case where a governmental agency has met standards in the Indiana Manual, but conditions subsequently change such that the manual standards no longer are met, the general guidelines that there is a duty to maintain a roadway in a reasonably safe condition may not be met and the agency may be ruled negligent for not upgrading to higher standards to meet the new conditions.

The above indicates that an ongoing inventory program of signs and signals is very important. Changing road and street conditions must be noted. Also, where signs have been knocked down or vandalized, the agency will generally be held negligent if it has not been replaced in "reasonable time." Sometimes the time is spelled out in state statutes, like a five-day period after notification as specified in the Kansas statutes. What constitutes "notification" is sometimes the basis of a lawsuit. For example, in one case against Kansas, the court ruled that because a missing stop sign was on a route used by a maintenance supervisor, he should have known it was missing and that constituted notification under the law (5).

Keeping records when signs were knocked down and when they were replaced may be the difference in winning or loosing a case. The keeping of complete and accurate records makes any public agency look like they are doing a good job in court. More importantly, they are doing a better job to insure that motorists can travel their roads and streets in a safe, orderly manner.

BASES OF A SAFETY PROGRAM TO DECREASE LIABILITY

Tort liability is here to stay. It is something that the public agencies and their employees engaged in the area of roads and streets must cope with. An article in Better Roads Magazine a few years ago gave some good advice: (8)

"The engineer must be knowledgeable about much more than the design and maintenance of roads. He must also know the legal implications; and repercussions of his actions. Tort liability is a fact in most states. He should familiarize himself with the laws in his state as they apply to sovereign immunity and damage claims."
"He should seek and accept his government attorney's advice on the setting up of record systems so he always has documentation of actions taken to eliminate hazards. Thus, he will always be well prepared for the possibility of court cases—the key to winning court cases is preparation."

"The record systems should reflect priorities and a safety program."

"If corrective actions are supported by proper records, the chances of winning cases are enhanced. Winning a single case can eliminate the possibility of future claims being brought for the same accident characteristics."

The last point brought out by the above section, relates to what Oliver claims to be the second most important lesson learned in law school (the first being deep pocket theory), and that is, "that you should never let the camel get his nose under the tent." (4, pg. 66) Or, to tie that in with the deep pocket theory, once someone gets a nose into the deep pocket, the head is sure to follow.

The above emphasizes the importance of an inventory, a records system and priorities; all tied into a program. It cannot be said that if you have such and such a program you will be immune from tort liability. However, it stands to reason because the best defense against tort liability, mentioned over and over in the literature, involves the same elements of a good safety program: namely, inventory, records, priority, and programming. It was called earlier in this paper—a prevent defense, or the avoidance of negligence by exercising sound judgement and due care. Once again, there is no better way to do this than through a sound safety program.

ARGUMENTS FOR A SOUND SAFETY PROGRAM

In Kansas during the 70's there was some degree of panic and paranoia among state highway officials over federal requirements to inventory, locate and designate hazardous locations. Kansas, like several other states, was reluctant to concede that it had any such locations on its highway system. This technique of denial is sometimes referred to as the "Ostrich Syndrome; i.e. anytime anything new appears, quick, duck your head in the sand." (5 p. 1-10)

In order to insure its share of federal funds, Kansas did submit the required lists of "hazardous" locations. In a subsequent court case, Martin vs. State Highway Commission, (518 p. 2d 582 Kan., 1970) plaintiff placed heavy reliance on the federally mandated program of improving hazardous locations, but the court affirmed the positive aspects of the program in such a way as to alleviate state fears over litigation originating from requirements of the federal program.
The federally funded project called for a three-year program for such items as removal of roadside signs, installing break-away supports, installing guardrail, etc. Plaintiff claimed that the program constituted "notice" of a defect at a location where he went off the road at a location where a guardrail was later installed (after plaintiff's accident) as a part of the program.

The court ruled that there was no question of notice as the state had known all along there was no guardrail at the location. The real thrust of the evidence presented by plaintiff's attorney was to show that the absence of the guardrails was recognized by the state as hazardous, and thus defective. The court said (5 p. I-10):

"But—changing standards and wholly laudable efforts to improve the safety of our highways does not make defective that which has long been considered adequate."

The court also referred to the problem of upgrading and modernizing old designs, and the financial burden if a state had to completely rebuild everything to today's newer, better designs. (5. p. I-10)

"The most important point in this case is that a decision to upgrade a highway system does not render 'defective' those portions which the program has not yet reached."

It is true that railroad companies have borne the brunt of lawsuits for grade crossing accidents. Railroads are deeply concerned over a trend in some states to be assessed punitive damages for "wanton misconduct" and/or charged with criminal liability with little or no justification. This was pointed out by a Santa Fe attorney in recent address at the 1982 Operation Lifesaver, National Symposium (9). Another trend should be of great concern to state and public agencies; namely, the adoption of **comparative negligence** by many states. With comparative negligence, a driver who was negligent in the eyes of the law is still not necessarily prohibited from recovering some of his damages. Juries are asked to decide what percentage of the total negligence is to be assessed to each party in a lawsuit. Under "pure" comparative negligence, a plaintiff who is 99 percent at fault can still collect one percent of his damages (9). Another change that comparative negligence has brought about is the ability of the railroad or any other defendant to bring in other party defendants, such as governmental agencies.

In a recent address James Stapleton, Assistant Chief Counsel, FHWA, gave several examples where public agencies lost lawsuits that resulted from grade crossing accidents. (10) One case involved not following the manual (MUTCD) by improperly placing a speed limit sign between the advance warning sign and the crossing (10). Another case was lost by a county in Michigan because it was ruled that obstruc-
tions on county right of way were in violation of Michigan statutes that call for elimination of visual obstructions at grade crossings (10). In Missouri, in the case of Herbert v. Missouri Pacific Railroad Company and others (including the Highway Department), the Highway Department was found liable in the amount of $477,000 for not installing signals at a crossing where sight distance was obstructed by houses, buildings and trees. In an appeal, it was held by the Appellate court that (10 p. 66):

"____ the trial court was correct in its conclusion that the Highway Department had violated its duty to the public and such negligence was a proximate cause of the accident."

In another case where four people were killed at a grade crossing, a state tried to use the defense that they did not have sufficient money to maintain safety features at the site of the accident, but lost the case (10).

The message of the above is that government agencies can jeopardize their safety program thru an "Ostrich Syndrome" or they can identify the problems and begin an improvement program. Since only a perfect system (impossible) will prevent tort claims, an improvement program is the most defensible posture. The ostrich syndrome, can get very expensive or, as Stapleton expressed it, (10 p. 60):

"With the return of more discretion and control to the States with regard to the use of highway funds, tort liability litigation may become an even more significant safety incentive by making it too expensive not to correct safety hazards."

THE HERPICC BULLETIN

Now that we've made the case that local public officials have a legal and moral obligation to improve safety at dangerous locations, and that a sound program is the best defense against tort liability, a manual to assist local public agencies to develop a grade crossing safety program: Rail-Highway Grade Crossing Warning Systems on Indiana County Road Systems is in the final stages of preparation and should be published by late spring. In late April HERPICC is planning a one-day seminar on grade crossing problems on local roads and streets in Indiana. That is still in the early planning stages, but it is scheduled for April 25, and will use a completed draft of the bulletin as primary reference material and involve federal, state, local and railroad personnel.

The following is a very brief review of the bulletin.

The draft bulletin currently has 10 sections which are essentially self explanatory, but this is subject to change. In the current draft. They are as follows:

1. Introduction
II. Authority and Responsibility for Railroad Crossing Construction Maintenance and Safety.

III. Source of Funds for Railroad Crossing Protection

IV. Procedures for Railroad Projects for Local Public Agency Projects.

V. IDOH—Federal-Aid Funded Surface Reconstruction Procedure

VI. IDOH Procedure for Processing Standard Consultant Agreements and Supplemental Agreements; Local Public Agency Consultants

VII. County Highways—Railroad Grade Crossing Inventory Reports

VIII. Survey of Railroad Crossings for Hazard and Condition

IX. An Example Low-Cost Grade Crossing Safety Improvement Project

X. Suggested Program for Indiana LPA’s

Section I Introduction: This section covers national and state railroad crossing at grade accident statistics and history. It discusses the federal program and local responsibility to initiate the program. It concludes with a discussion on liability.

Section II “Authority and Responsibility for Railroad Company Construction, Maintenance and Safety.” This section primarily covers and discusses applicable Indiana Law relating to grade crossings. It covers Indiana law as it applies to construction, reconstruction, maintenance and apportionment of cost.

Section III, “Source of Funds for Railroad Crossing Protection.” This section starts with the history and current status of the current federal program, initially authorized by the Federal Aid Highway Act of 1973 and continued under subsequent acts; the latest being the Surface Transportation Act of 1983 which continues funding into 1986 at the current level. It discusses state funding categories and availability of funds to Indiana local public agencies. It covers types to projects and project eligibility for certain types of funding categories.

Section IV, “Procedures for Railroad Projects for Local Public Agency Projects.” This section outlines all the steps necessary for a local public agency to apply for available funds through the Indiana Department of Highways—Division of Local Assistance (IDOH-LDA).

Section V, “IDOH—Federal Aid Funded Grade Crossing Surface Reconstruction Procedure”. This section is a short discussion of crossing reconstruction projects covering such things as project eligibility, criteria for selection of crossing types and other general information.
Section VI, "Procedure for Processing Standard Consultant Agreements and Supplemental Agreements by Local Public Agencies". This section summarizes current IDOH procedure and requirements as set forth and required by IDOH.

Section VII, "County Highway—Railroad Grade Crossing Inventory Reports." This section is a comprehensive discussion of the National Inventory Data Base. It discusses the importance and uses of the national data base, items contained in the base, input form, and types and availability of output. It also discusses the IDOH use of the data base to develop priorities based on the states hazard index rating and availability of this data.

Section VIII, "Survey of Railroad Crossings for Hazard and Condition". This section discusses procedures LPA's should undertake to develop a short- and long-range grade crossing improvement program. It briefly discusses the attributes of an ideal or good crossing at grade and suggests a check list for LPA's to determine deficiencies at crossings under their jurisdiction. It also covers such things as signing and signal requirements and adequate sight-distance.

Section IX, "An Example Low-Cost Grade Crossing Safety Improvement Project." This section is a section adapted from a USDOT/FHWA slide/tape show that documents a demonstration project where needed improvements were considered and made as part of one contract on southern Railway Company's main line from Bellville to Fairfield, Illinois.

Section X, "Suggested Program for Indiana LPA's." This is a summary section which suggest several low-cost improvements that will increase the safety of motorists at grade crossings.

A DEMONSTRATION PROJECT

Safety at rail-highway crossings at grade can be improved throughout an area or region at relatively low cost. An approach that looks at several crossings in one or more counties or cities along some length of rail line is referred to as a systems approach or corridor approach. This approach can affect a great, overall safety improvement at relatively low cost. An example, from an FHWA slide and tape show that describes a demonstration corridor project in Illinois, follows.

The project involved two federal agencies, two state agencies, three cities, three counties and a railway company. Time saving procedures were used to accelerate the project including blanket approval for work at several crossings, no detailed plan preparation or submittals and the use of agreed upon lump-sum prices.

By reviewing an entire corridor of this nature, similar low cost improvements can be lumped together into a single project, usually re-
sulting in lower unit costs. A comprehensive corridor approach that analyzes all crossings along a section of railroad to determine improvements, involve all interested parties, and seek out various funding sources, can be an effective means of arriving at significant improvements for as little as $5000 per crossing. Available federal funds usually cover 90-100% of these costs. For this demonstration project, funding came from regular federal aid, federal aid rail highway crossing funds, federal demonstration project funds, state, local and railroad funds. It should be kept in mind that available federal funds can be used for most costs associated with a project of this type. Also there have been many cases of corridor projects were railroads have been willing to pay the LPA matching costs for improved signals at certain grade crossings in return for an agreement to close one or more other grade crossings. Although closure is usually an emotional issue, there usually are benefits to be gained by this approach in a community with several grade crossings, particularly when one considers all crossings as a unit; i.e., a corridor approach.

CONCLUSION:

In conclusion I would like to leave three thoughts. The first is that to make the best use of available funds to achieve greater safety at railroad grade crossings, LPA’s need to initiate projects where hazardous conditions exist. It appears that they have a moral and legal obligation to do so. Three things LPA’s are definitely responsible for are; advance warning, sight obstructions on their approach roadways and hazardous conditions on the approach roadway itself. Railways are generally much more cooperative than they are given credit for when it comes to correcting hazardous conditions most railroads will attempt to initiate action to improve a dangerous crossing but as a general rule, they are not going to initiate projects on any large scale in Indiana, neither is the state. That leaves the issue of further improvement of local road and street grade crossings squarely with the local government officials.

Secondly, since it is the nature of all highway accidents, and true of grade crossing accidents, that the majority of victims are from the general area where the accident occurred, you are protecting your own “public”, friends, relatives and possibly yourself.

Also we have just come through an economic depression in the U.S. Rail traffic and, to a lessor extent, highway traffic, have been depressed. Although government funding programs together with Operation Lifesaver have been primarily responsible for record low accidents at grade crossings in recent years, this decreased traffic has probably been a factor. Now that the county is recovering from this recession, increased traffic can be expected. If we are not on our guard to as all we
can toward creating safe conditions at grade crossings, we may see accidents shoot up along with the increased traffic.

Finally, I happened to hear Dr. Lou Sabin, world renowned immunologist on a TV talk show recently. Asked what two things he'd like to accomplish in the rest of his lifetime if he could, his answer was eliminate polio and small pox from the earth forever. Science has provided the means to do this but because people no longer fear these diseases as they did years ago, epidemics keep reappearing in areas which have become complacent about vaccination programs. Grade crossing accidents are analogous to that. We have knowledge and an excess of federal funds for programs to reduce accidents, deaths, and injuries at grade crossings to a really insignificant figure. But if we get complacent, and stop working at it we'll see the epidemic of accidents, deaths and injuries return.

Instead of sitting back and resting on our laurels, it is time to sit up and take notice of what still needs to be done—what still can be done—in further reducing the risk at rail-highway crossings at grade. Accidents are analogous to that. We have knowledge and federal funds to reduce accidents, deaths, and injuries to a really insignificant figure. But if we get complacent, and stop working at it we'll see the epidemic of accidents, deaths and injuries return.

REFERENCES

2. "Personal Liability of State Highway Department Officers and Employer" Research Results Digest—#79 TRB, Washington, D.C. September 1975
9. Hoferer, Paul G., "Liability Implications of Grade Crossing Accidents as