

TRANSIT COOPERATIVE RESEARCH PROGRAM

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TCRP Synthesis 13

**Risk Management for Small and
Medium Transit Agencies**

A Synthesis of Transit Practice

**Transportation Research Board
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Synthesis of Transit Practice 13

Risk Management for Small and Medium Transit Agencies

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TRANSIT COOPERATIVE RESEARCH PROGRAM

The nation's growth and the need to meet mobility, environmental, and energy objectives place demands on public transit systems. Current systems, some of which are old and in need of upgrading, must expand service area, increase service frequency, and improve efficiency to serve these demands. Research is necessary to solve operating problems, to adapt appropriate new technologies from other industries, and to introduce innovations into the transit industry. The Transit Cooperative Research Program (TCRP) serves as one of the principal means by which the transit industry can develop innovative near-term solutions to meet demands placed on it.

The need for TCRP was originally identified in *TRB Special Report 213--Research for Public Transit: New Directions*, published in 1987 and based on a study sponsored by the Federal Transit Administration (FTA). A report by the American Public Transit Association (APTA), *Transportation 2000*, also recognized the need for local, problem-solving research. TCRP, modeled after the longstanding and successful National Cooperative Highway Research Program, undertakes research and other technical activities in response to the needs of transit service providers. The scope of vice configuration, equipment, facilities, operations, human resources, maintenance, policy, and administrative practices.

TCRP was established under FTA sponsorship in July 1992. Proposed by the U.S. Department of Transportation, TCRP was authorized as part of the Intermodal Surface Transportation Efficiency Act of 1991 (ISTEA). On May 13, 1992, a memorandum agreement outlining TCRP operating procedures was executed by the three cooperating organizations: FTA, the National Academy of Sciences, acting through the Transportation Research Board (TRB), and the Transit Development Corporation, Inc. (TDC), a nonprofit educational and research organization established by APTA. TDC is responsible for forming the independent governing board, designated as the TCRP Oversight and Project Selection (TOPS) Committee. Research problem statements for TCRP are solicited periodically but may be submitted to TRB by anyone at anytime. It is the responsibility of the TOPS Committee to formulate the research program by identifying the highest priority projects. As part of the evaluation, the TOPS Committee defines funding levels and expected products.

Once selected, each project is assigned to an expert panel, appointed by the Transportation Research Board. The panels prepare project statements (requests for proposals), select contractors, and provide technical guidance and counsel throughout the life of the project. The process for developing research problem statements and selecting research agencies has been used by TRB in managing cooperative research programs since 1962. As in other TRB activities, TCRP project panels serve voluntarily without compensation.

Because research cannot have the desired impact if products fail to reach the intended audience, special emphasis is placed on disseminating TCRP results to the intended end-users of the research: transit agencies, service providers, and suppliers. TRB provides a series of research reports, syntheses of transit practice, and other supporting material developed by TCRP research. APTA will arrange for workshops, training aids, field visits, and other activities to ensure that results are implemented by urban and rural transit industry practitioners.

The TCRP provides a forum where transit agencies can cooperatively address common operational problems. TCRP results support and complement other ongoing transit research and training programs.

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The members of the technical advisory panel selected to monitor this project and to review this report were chosen for recognized scholarly competence and with due consideration for the balance of disciplines appropriate to the project. The opinions and conclusions expressed or implied are those of the research agency that performed the research, and while they have been accepted as appropriate by the technical panel, they are not necessarily those of the Transportation Research Board, the Transit Development Corporation, the National Research Council, or the Federal Transit Administration of the U.S. Department of Transportation.

Each report is reviewed and accepted for publication by the technical panel according to procedures established and monitored by the Transportation Research Board Executive Committee and the Governing Board of the National Research Council.

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PREFACE

A vast storehouse of information exists on many subjects of concern to the transit industry. This information has resulted from research and from the successful application of solutions to problems by individuals or organizations. There is a continuing need to provide a systematic means for compiling this information and making it available to the entire transit community in a usable format. The Transit Cooperative Research Program includes a synthesis series designed to search for and synthesize useful knowledge from all available sources and to prepare documented reports on current practices in subject areas of concern to the transit industry. This synthesis series reports on various practices, making specific recommendations where appropriate but without the detailed directions usually found in handbooks or design manuals. Nonetheless, these documents can serve similar purposes, for each is a compendium of the best knowledge available on those measures found to be successful in resolving specific problems. The extent to which these reports are useful will be tempered by the user's knowledge and experience in the particular problem area.

FOREWORD

*By Staff
Transportation
Research Board*

This synthesis will be of interest to general managers of small and medium-sized transit agencies, as well as to risk management professionals in both the public and private sectors and to insurers. This synthesis provides information on how small and medium-sized transit agencies can evaluate various approaches to risk management and can access risk management services at reasonable cost.

Administrators, practitioners, and researchers are continually faced with issues or problems on which there is much information, either in the form of reports or in terms of undocumented experience and practice. Unfortunately, this information often is scattered or not readily available in the literature, and, as a consequence, in seeking solutions, full information on what has been learned about an issue or problem is not assembled. Costly research findings may go unused, valuable experience may be overlooked, and full consideration may not be given to the available methods of solving or alleviating the issue or problem. In an effort to correct this situation, the Transit Cooperative Research Program (TCRP) Synthesis Project, carried out by the Transportation Research Board as the research agency, has the objective of reporting on common transit issues and problems and synthesizing available information. The synthesis reports from this endeavor constitute a TCRP publication series in which various forms of relevant information are assembled into single, concise documents pertaining to a specific or closely related issue or problem.

This report of the Transportation Research Board addresses risk management practices, their systematic application, and the measurement of program results. It emphasizes liability and workers' compensation risks and insurance, but the discussion applies to property risks and insurance, as well. It contains information on differing transit agencies' risk management experiences. Three bus transit agency approaches to financing risk and the size of areas they serve are discussed in more detail, based on the

results of a survey. Case study examples describe programs currently used at the Regional Transportation Commission of Reno, Nevada; the City of Jackson, Michigan Transportation Authority; and the Baldwin Rural Area Transit System of Robertsdale, Alabama.

To develop this synthesis in a comprehensive manner and to ensure inclusion of significant knowledge, available information was assembled from numerous sources, including a number of public transportation agencies. A topic panel of experts in the subject area was established to guide the researchers in organizing and evaluating the collected data, and to review the final synthesis report.

This synthesis is an immediately useful document that records practices that were acceptable within the limitations of the knowledge available at the time of its preparation. As the processes of advancement continue, new knowledge can be expected to be added to that now at hand.

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The Principal Investigators responsible for the conduct of the synthesis were Sally D. Liff, Manager, Synthesis Studies, and Donna L. Vlasak, Senior Program Officer. This synthesis was edited by Linda S. Mason, assisted by Rebecca B. Heaton

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Information on current practice was provided by many transit agencies. Their cooperation and assistance were most helpful

RISK MANAGEMENT FOR SMALL AND MEDIUM TRANSIT AGENCIES

SUMMARY

Public transit was among several industries that were particularly hard hit by the insurance market of the mid 1980s. As insurance prices escalated by hundreds of percent and limits plummeted during this period, transit systems looked for relief. Many implemented self-insurance programs or joined self-insurance consortiums, called pools, with other agencies. Virtually all agencies enhanced loss prevention practices in an effort to reduce costs.

No longer could insurance be viewed as a comprehensive treatment of accidental losses arising from transit operations. Transit systems instead had to employ the broad discipline of risk management that seeks to avoid risks of loss where practical, prevent losses through a variety of improved operating practices, manage claims that do occur to reduce costs, and finance losses (through insurance or other means) as efficiently as possible.

In recent years, the liability insurance market has changed considerably: liability insurance costs have decreased and available coverage limits have increased. Although workers' compensation costs escalated rapidly in the early 1990s, by mid-decade they have stabilized in most parts of the country.

Transit systems are still vulnerable, however, to a generally litigious society, seeking large recoveries from public transit systems thought to have deep pockets. Although legislative initiatives seek tort liability reform, transit systems will continue to operate in the judicial environment thought to be the most generous to plaintiffs in the world.

The purpose of this synthesis is to report how small and medium transit agencies approach risk management and access risk management services to make the most efficient use of the risk cost dollar. This synthesis addresses:

- What risk treatment methods are available,
- How they can be applied in a systematic fashion, and
- How to measure program results.

A survey conducted for the synthesis indicates that small and medium transit agencies:

- Place responsibility for risk management with their General Managers,
- Most often seek general advice on risk and insurance from insurance agents and brokers,
 - Choose risk financing programs primarily based on price, price stability, and claims-handling service quality,
 - Purchase insurance as the favored risk financing technique over self-insurance and risk retention pools,
 - Are serious about hiring, training, and operating practices designed to prevent losses, and
 - Have lower risk costs per mile driven as transit system size increases.

Based on the survey responses and discussions with system personnel, the crisis of the mid 1980s is long over and other priorities are consuming attention. Risk costs are under control because the insurance market has improved considerably for consumers, self-insurance and pools have been successfully implemented, and loss prevention has been well-integrated into day-to-day operations.

Notwithstanding the favorable risk management advances made by transit systems, the industry might take steps now to secure its gains and look for future improvements. Better risk cost data collection and tabulation mechanisms need to be developed. These could be facilitated by further refinements to the National Transit Data Base Reporting System. A separate national risk cost data base entity is being formed which might offer an opportunity for the transit industry to collect risk cost data, as well.

Future research might address the recommended content and format of comprehensive risk cost data collection efforts with research results given to one or both of the collections systems discussed in the previous paragraph. Such data can be useful for establishing standards and analyzing trends. Research might also be conducted to determine the effectiveness of various loss prevention practices and programs. With cost/benefit data, systems will be better equipped to spend their risk control dollars more efficiently.

The transit industry responded swiftly and effectively to the risk management crises of the past. The industry will be even more effective with comprehensive data to guide its efforts.

CHAPTER ONE

INTRODUCTION

IMPORTANCE OF RISK MANAGEMENT

Risk management is a structured process for reducing uncertainty about risks of accidental loss. This process includes identifying and evaluating risks and developing methods to deal with identified risks. Done correctly, this process also includes implementing a system that measures performances and provides feedback.

Ubiquitous exposure to catastrophes threatens the financial viability of an organization and its continued ability to perform its essential purpose. Under the shadow of these infrequent but life-threatening accidents, an organization's risk management program must find ways to reduce and avoid losses and comfortably finance, through insurance or another method, those that do occur. The ideal risk management program produces the lowest risk cost and keeps these costs stable from year to year.

PROJECT SCOPE

This synthesis provides information on how small and medium, urban and rural transit systems approach risk management and access risk management services. The report emphasizes liability and workers' compensation risks and insurance, but most of what is discussed applies to property risks and insurance as well. Systems of this size generally cannot afford to devote significant in-house resources to risk management. They are often dependent on risk management services that are packaged with the insurance or pooled coverage they buy or on services from a parent or sibling entity. This synthesis is designed to explain how these systems cope in this environment. Though not part of the study group, the concepts

and issues presented in the synthesis apply to paratransit operations and other community transit service providers as well.

METHODOLOGY

A survey was developed to obtain risk management and general demographic data from bus transit systems. The survey was mailed to 100 agencies of various sizes around the United States. Table 1 in Chapter 3 displays the characteristics of the survey group. A copy of the survey form is in Appendix A and Appendix B lists responding agencies. The resultant data were assembled and analyzed. Follow-up phone calls were made to each agency surveyed to encourage responses where none were received and to clarify ambiguities in the data that were submitted. Comments from the transit systems reveal that insurance and related issues are not demanding as much attention as other transit issues. Accordingly, it was difficult, where possible at all, for system employees to justify time to complete the survey form. The low response rate and incompleteness of surveys received confirm the validity of the comments. To gauge the validity of the collected data and supplement it, published literature on risk management in transit systems was analyzed and risk services vendors regularly serving transit agencies were contacted.

To provide examples of risk management practices currently used, one transit agency from each size group was chosen for a case study. The case study agencies include one that relies heavily on a self-insurance program, one that participates in a pool, and one that purchases commercial insurance through an affiliated entity. This provides differing risk management experiences from which to draw a more balanced understanding of risk management in a transit setting.

PURPOSE OF RISK MANAGEMENT

The purpose of risk management is to:

- Protect the organization from severe financial disruption due to accidental losses, and
 - Do so at a cost that is affordable and does not fluctuate significantly from year to year.
- Underlying risk management objectives include protecting assets from loss or destruction, creating a safe work environment for employees, and reducing the likelihood of injuring or damaging a customer or other third party.

THE RISK MANAGEMENT PROCESS

Classic descriptions of management (of any type) refer to a five-step process. These five steps are identifying, defining, and measuring the problem, analyzing possible solutions, selecting and implementing the best solutions, and monitoring results and making alterations. The management process is continuous, never ceasing to improve the selected solutions.

Risk management is founded on these same principles. It consists of five phases: risk identification, risk measurement and evaluation, analysis of risk treatment solutions, selection and implementation of the most effective treatment methods, and monitoring performance of the selected methods and making alterations as necessary. With each round of alterations, the risk management process is renewed, and effectiveness enhanced with modified risk treatment methods. Figure 1 is a graphical representation of the risk management process.

To better understand these five phases, each is broken down into a main question, as follows:

- *Risk identification*--What types of accidental losses can the organization incur?
- *Risk measurement and evaluation*--How likely is a loss to occur and how much will the damage be?
- *Analysis of risk treatment methods*--How can the organization protect itself from these losses at an affordable and stable cost?
- *Selection and implementation of treatment method(s)*--What combination of risk avoidance, control, and financing will yield the best result?
- *Monitoring performance of treatment methods*--Are the methods performing properly, and if not, what alterations can be made to raise their performance?

Risk Identification

In a transit system, the influence and results of risk management are prominent. The most visible risks in transit systems originate from bus operations. That is to say that injuries and damages for which a transit system is responsible are

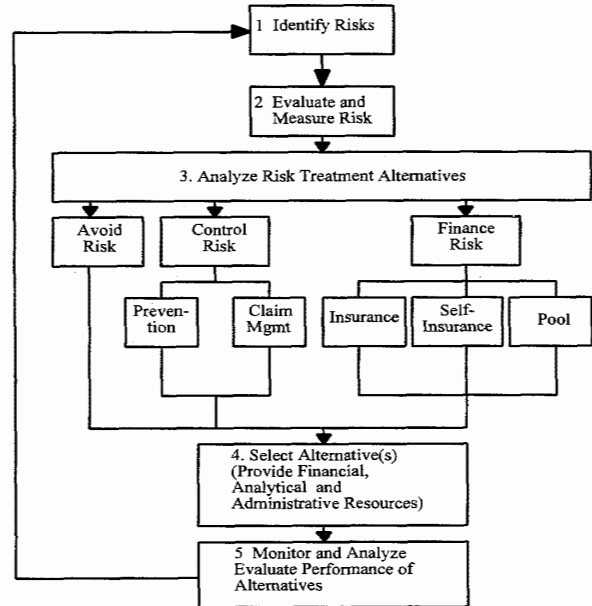


FIGURE 1 The risk management process.

most likely to occur from bus operations. Supporting bus operations are typically maintenance facilities and personnel, a few administrative staff, and some passenger shelters or other minor structures along the bus routes. Support facilities and personnel can generate accidental losses, but not with the frequency and severity of bus operations. Bus operations generate risks of accidental losses of the following types:

- Bodily injury to:
 - Employees (workers' compensation),
 - Passengers (liability),
 - Occupants of other involved vehicles (liability),
 - Pedestrians (liability).
- Property damage to:
 - The bus (vehicle physical damage),
 - Another vehicle (liability).
 - Other types of property belonging to others (liability).
- Consequential loss, such as:
 - Loss of income if service is interrupted (business interruption),
 - Expense of replacement vehicle (extra expense),
 - Expense of replacement driver for injured employee (overhead),
 - Administrative expenses and time related to filling out accident reports, handling media inquiries, and conducting investigations (overhead).

This list of potential losses is developed during the first phase of the risk management cycle. The key risks for bus operations have been identified. It is imperative to identify as many risks as possible to reduce the likelihood that the system will receive a financial surprise.

Risk Measurement and Evaluation

Phase two, risk measurement and evaluation, is a significant factor in the success of the risk management program. This step provides the information necessary to determine the likelihood and amount of loss that could arise from the identified risk. In doing so, the organization learns whether the risk is financially significant, and if so, how much insurance or other financial resource is needed to respond to a loss.

To measure risk, one attempts to estimate the probable maximum loss that would result from an accident of a particular type. Determining the value of the probable maximum loss can be a relatively simple and objective task, such as when estimating the replacement value of a bus that may be totally destroyed in a serious accident. It also includes more speculative tasks, like estimating the number of people who may be injured in a transit coach accident, the seriousness of their injuries and the expected settlement costs (which hinge primarily on the cost of required medical services, the income lost by the plaintiffs due to their injuries and the associated legal fees) should the system's operator be judged negligent. In its most sophisticated forms, risk measurement can include engineering science, probability, regression, and other formal mathematical techniques to project loss outcomes.

Generally, such formal techniques are unavailable or impractical for small and medium transit systems. These systems, like other small enterprises, tend to develop loss scenarios and assign probable maximum loss values from published and unpublished anecdotes about the losses of others, rules of thumb, and simple common sense estimation techniques.

For example, a transit manager is faced at least annually with deciding what limit of liability insurance to purchase. The system cannot afford to purchase all of the insurance available in the world market, currently about \$300 million. Yet, the system must attempt to carry sufficient limits to discharge its liability obligations if it has a serious accident. The manager considers system ridership characteristics, including the maximum number of riders on a bus and the current and future income-earning characteristics of the riders.

The manager also considers the traffic conditions during peak load, the likely speed at which the coach is operating, the possibility of adverse weather conditions, and other factors in the system's operating environment. From the manager's experience base, supplemented by the experiences of professional colleagues, the manager develops a range of accident scenarios, including the number of serious injuries or deaths that could result from an accident. The manager contacts legal counsel and the system's insurance agent to obtain input on the likely range of damages per injured person that might be learned from similar accidents in the system's legal jurisdiction. The manager then multiplies the expected number of injured persons (e.g., 20) by the estimated average amount of damages per person (e.g., \$100,000) to yield a probable maximum liability loss (e.g., \$2,000,000). The manager then tests this result with the system's management

team, legal counsel, insurance agent, and others in his or her network. Finally, an insurance limit is selected after quotes are obtained with alternatives at, above, and below the maximum probable loss level.

A key factor in measuring liability loss potential in some states is the existence of a statutory maximum tort liability limit for which a governmental entity can be held liable. Accordingly, if a public transit system is protected by such a limit, its probable maximum liability loss is capped at the statutory maximum, which is usually only several hundred thousand dollars instead of several million dollars.

Other factors in the legal environment that affect liability estimates include the status of the doctrine of joint and several liability, comparative versus contributory negligence, the existence of no-fault liability laws, the record of the judiciary in interpreting law on liability cases, and the status of any tort reform initiatives that may be underway. The most informed estimates of maximum probable liability loss will be made only after advice on these areas is sought from qualified legal counsel.

When all the analysis is completed, the transit manager must recognize that the resulting estimate is just that--an estimate. The selection of a limit of liability coverage has to consider the resulting uncertainty this creates.

Analysis of Risk Treatment Options and Risk Solutions

Phase three determines whether certain risks of loss can be avoided. Of the unavoidable risks, what techniques can be applied to prevent losses and what loss mitigation methods can be used after a loss? Finally, how can losses that do occur be most efficiently financed.

Risk Avoidance

After evaluating an operation or a facility, the transit system may decide that it presents risks not worth taking. The system would then avoid the risk completely by withdrawing from this aspect of its operations. For example, if running bus service after midnight produces a disproportionate number of accidents, the transit system can avoid the risk by ceasing the late-night service. Of course, it is not practical to stop all operations just to avoid risk. Transit operations have inherent risks that cannot be avoided. Therefore, the next available solution is to find ways of controlling or minimizing both the severity and frequency of accidental losses potentially arising from essential operations.

Risk Control

Risk control can be split into two categories: pre-loss and post-loss. Effective risk control involves everyone in the organization. Management can not produce the best result without the involvement of all employees, and employee attempts at risk control will be ineffective without top management commitment to controlling risks.

Pre-loss risk control tries to prevent the type of accidents from occurring in the first place. Examples of pre-loss risk control techniques currently used include:

- Hiring practices geared to employ only qualified personnel;
- Training to assure new employees understand how to perform their jobs, interact with the public, and react in emergencies; and
- Maintaining equipment to make sure that it operates with as few failures as possible.

Specific pre-loss risk control activities for transit systems can also include:

- Pre-trip bus inspections,
- Employee disciplinary codes that consider accident records and safety violations,
- Provisions requiring labor's participation in risk control activities in system labor agreements,
- Service route visual inspections,
- Financial incentives to employees to reward safe work,
- Establishing a labor/management safety committee,
- Safety consideration in scheduling, routing, and bus stop design,
- Written minimum standards, such as drivers wearing seat belts, and
- Bus operator monitoring (ride checks, street supervision, complaint follow-up).

Post-loss risk control is concerned with reducing the loss once it has occurred. For example, a simple option might be keeping a fire extinguisher readily available to the driver in case of a small fire. Instead of the entire bus burning and thereby incurring a large loss, the fire is quickly extinguished and only minimal damage occurs. Other post-loss risk control examples include:

- Prompt, efficient, and professional response to all incidents that may generate claims brought by employees or third parties;
- Cooperation between claims professionals and the involved management and operating personnel of the organization;
- Speedy resolution and payment of losses for which the organization is liable;
- Management of services provided by involved healthcare and legal professionals;
- Organized and firm defense against meritless allegations;
- Periodic independent management audits of the claim handling function; and
- An active accident review committee, composed of labor and management.

For the small and medium transit systems that most often use insurance or pools, pre-loss activities are often integrated into management practices and are supplemented with advice from external consultants, often tied to the risk financing program on which the organization is most focused. Insurers that have chosen to specialize in transit often have loss control consultants on staff who are experienced in helping systems address their unique needs in this area.

Post-loss activities are even more linked to the risk financing mechanism in the form of claims adjusting services. These services require only limited interface from the transit system. They can be provided by:

- Insurance company
- Self-insurance pool

- Independent adjuster
- In-house personnel
- Insurance agent.

If the entity is insured (with or without a deductible), claim adjusting is either provided by the insurer's employees or a third-party administrator (TPA), a contract claim adjusting firm engaged by the insurer. Seldom does an insured entity have significant voice in the insurer's decision about claim service quality and claim payment or denial.

An agency participating in a pool typically has more participation in claim service quality and claim payment decisions. Nonetheless, the pool participant must accept the pool's decisions, which are usually based on a consensus of the participants. Pools provide the claim service through TPAs or their employed staff as decided by the pool's participants.

Self-insured agencies typically have the most autonomy in this claims service area. Most often claims are handled by system employees or TPAs. The only major limitation arises when the agency buys excess or stoploss insurance over the self-insured retention. Insurers affording this type of coverage typically demand veto power over the decisions of claims personnel, whether TPA or system employees. Such insurers often exert influence over claim payment decisions on losses approaching, or larger than, the self-insured retention.

Insurance agents/brokers also become involved in providing claims services. Usually, their services are advisory or supplementary to claim services performed by others, or their services address a less complicated type of claim such as automobile physical damage.

Risk Financing

The risk treatment technique, risk financing, concerns itself with paying for the losses that are unprevented. The three primary methods of financing risks are:

- Insurance,
- Self-insurance, and
- Risk retention pools.

Insurance is the most commonly used and widely known risk financing tool. Buying insurance transfers the financial responsibility for the adverse effects of a risk to another party. The insurance company accepts responsibility for paying any losses incurred by the organization in return for a premium. The insurance policy is the contract outlining the terms and conditions of the transfer.

Today, commercial insurance is readily available for most risks of accidental loss faced by transit organizations, including the following major categories:

- General liability
- Automobile liability
- Public officials/directors and officers liability
- Automobile physical damage
- Building and contents
- Workers' compensation.

Often an agency will choose conventional insurance over self-insurance or pooling, and even pay more. It will pay a

risk premium (the difference between the cost of insurance and the low-cost alternative) to avoid unlikely but possible adverse cost fluctuations in self-insurance or pool results. Organizations most likely to choose insurance are small, cannot afford the year-to-year cost fluctuations of self-insurance, and do not have a risk retention pool available to them.

Self-Insurance, the second main financing option, is the conscious and intentional decision by the organization to pay for its own losses and the associated costs, including legal defense and adjusting expenses. An organization may elect to pay all of the costs associated with a particular type of loss, or it may pay only up to a particular dollar limit (e.g., \$25,000; \$50,000; \$100,000) above which it buys excess insurance. Self-insurance is chosen when an organization determines that the combined cost of losses, expenses necessary to handle claims and otherwise replace the services an insurer provides, plus an allowance for contingencies is likely to be less than the cost of conventional insurance. Because the system is accepting a significant level of, if not full, fiscal responsibility for losses, the size and number of which can only be estimated, a self-insured agency is subject to severe fluctuations in annual loss costs. To reduce the impact of extreme losses, excess insurance is often obtained by the self-insured agency. Another approach used to take the financial sting out of a particularly adverse loss year is for the self-insured agency to designate a portion of its operating reserves for the contingency that self-insured losses may be significantly greater than expected.

Other advantages cited for self-insurance over conventional insurance or pools are:

- The self-insuring agency has greater autonomy in claim payment and settlement decisions.
- When insurance is difficult or expensive to acquire, costs can be more stable under self-insurance than insurance.
- Claim management and risk control service quality can be more tightly controlled by the self-insured agency than by those buying insurance or joining a pool. The self-insuring agency can establish quality standards for these services, monitor results, and change the service provider(s) without disrupting the entire program.

Risk Retention Pool, the third major risk financing option, is a cooperative of several entities, usually in the same industry, which agree to jointly fund losses of a particular type. Participants make contributions to the pool, which, in turn, pays losses. The pool typically handles the administrative functions, provides claims management, and promotes loss prevention. The pool retains losses to a certain level. Excess insurance is often purchased by the pool for losses above this level.

Pools are used to provide coverage to organizations (usually governmental entities) for a variety of insurance coverages including:

- General liability,
- Automobile liability,
- Public officials/directors and officers liability,
- Property,
- Automobile physical damage, and
- Workers' compensation.

In the 1980s, transit system pools were formed in several states, including California, Michigan, Virginia, Washington, and Wisconsin. In addition, other states have pools that provide coverage to transit systems as well as other types of entities. Although in the late 1980s and early 1990s the conventional insurance market stabilized and even became friendly to transit providers, there has not been a mass exodus of pool participants returning to the commercial insurance marketplace.

Pools are chosen by most entities to obtain the cost savings of self-insurance, without the cost instability that usually occurs in an individual self-insurance program or that often occurs in an insurance program. A pool participant also attains greater input on claim payment decisions and service quality than under an insurance program, although not as much as under an individual self-insurance program.

Factors in Selecting a Risk Financing Method

The relative advantages and disadvantages of the three major risk financing methods discussed are displayed in terms of their acceptability (low, medium, or high) to the user of the method in Figure 2.

Alternatives	Availability	Cost	Cost Stability	Control Over Risk Control Service	Claim Handling Decision Voice
Conventional Insurance	Moderate	High	Moderate	Low	Low
Individual Self-Insurance	High	Low	Low	High	High
Pooled Self-Insurance	High	Moderate	High	Moderate	Moderate

FIGURE 2 Risk financing methods.

Availability: Conventional insurance has a moderate level of availability across the entire spectrum of coverage. Its availability is affected by recurring market cycles. During the hard portion of the cycle, insurers abandon certain coverages or classes of policyholders. Hence, coverages are not readily available to the agency pursuing coverage. Desired coverage limits may have to be scaled back. Those unable to find an insurer willing to provide coverage may be forced into assigned risk programs, most often used for automobile liability and workers' compensation exposures. Briefly, an assigned risk program is an insurer-of-last-resort, usually operated and often subsidized by the insurance companies doing business in a particular state.

Individual self-insurance has high availability because any agency can institute a self-insurance program. Whether or not this is feasible or a safe option has no bearing on its availability. A limitation on self-insurance in some jurisdictions exists for automobile liability and workers' compensation. A transit system seeking to become self-insured may have to apply to a state agency and prove that it has the financial resources and administrative capabilities to be self-insured. Although local governmental entities are often exempted from or given favored treatment under self-insurance regulations, private entities must always comply. The applicability of such standards must be determined for any agency considering the self-insurance option.

Risk retention pools have high availability as well, because local governments can form pools for all lines of coverage in most jurisdictions. The determining factor for an agency considering this option is whether or not there is a pool operating in the transit system's geographic area. Where no pool exists, forming one is no simple task. Typically, the need for and interest in a pool must be documented, the financial and legal feasibility determined and the permission of the potential participants' governing bodies obtained before such a venture can begin. This process often takes 12 to 24 months and tens of thousands of dollars to complete.

Cost: The cost of conventional insurance is expressed as a premium. Although the market experiences downward price swings, the premiums required over time are almost always more than the cost of self-insurance or pools. Insurers must not only collect premiums sufficient to pay losses and adjusting expenses, but also to pay premium taxes, profits to stockholders, and other expenses not replicated in pools and self-insurance programs. Thus, over time insurance will have a cost disadvantage versus the other two options.

Pool cost is rated moderate. Participants' pool contributions must include an amount for the pool's contingency reserves, which prudent risk retention pools fund in advance of the contingency. Self-insurers are not required to and frequently do not fund such a contingency reserve.

Self-insurance is the least expensive option, effectively costing only what is required to discharge claim obligations, the costs of administering the claims, loss prevention costs, and excess insurance premiums, if such coverage is part of the program's design. There may be other costs of self-insuring in a particular jurisdiction, but such costs are nominal.

Cost Stability: Cost stability is an important factor in choosing a risk financing method. Conventional insurance provides only moderate cost stability. The problem with conventional insurance at times is that an insurer can decide the

risks of insuring a certain industry are too high and will cancel all policyholders in that industry. Further, when the insurance companies act in concert, an exaggerated market swing occurs. Adverse (to the insurance buyer) swings result when one insurer decides to stop underwriting a particular industry and other insurers follow suit. This creates an insurance shortage. Costs are artificially driven up and coverage terms are narrowed.

Early in the 1980s, insurance was readily available to transit systems. With many insurers competing premiums were driven down. Interest rates were high, providing insurers with greater returns on their investments. Insurer surplus levels grew, giving insurers confidence to expand coverages into higher-risk areas and to lower premiums. However, in 1984 the largest accumulated industrywide losses since 1906 (2) were experienced. Interest rates declined, insurers fled high-risk areas, and had to use part of their surplus to cover losses that exceeded their premium collections. As a result, fewer insurers sought certain types of accounts and premiums skyrocketed. Transit systems with renewals after July 1, 1985 reported premium cost increases of 334 percent (2). Although rates were high and coverage limits declined, insurance was still obtainable for the majority of transit systems.

Some insurers are less reactionary and attempt not to follow strategies of severe price increases and coverage curtailment when the market cycles create the opportunity. Although it is difficult to know which insurers are sincere and will live up to promises of stable coverage and prices, such insurers should be sought. A beneficial practice of some commercial insurance buyers is to competitively bid their programs and seek a 3-year rate guarantee from the successful insurer.

Risk retention pools, many of them formed in response to the mid 1980s crisis described previously, are given the most acceptable cost stability of the three risk financing methods. The pool charges each of its members a premium for an equitable share of the pool's expected losses plus operating expenses. The reason pools are effective at stabilizing cost is that they spread the annual cost fluctuations among many entities, not just one as with self-insurance. Conventional insurance is also supposed to operate on this principle, but other forces seem to create unacceptable anomalies from time to time. If a pool member incurs a large loss, the cost of the loss is spread among its members.

For example, a certain pool has 10 members that jointly self-insure the risk of the first \$1 million of loss. Their current reserves stand at \$35 million, and the pool purchases \$4 million of excess insurance above the pool's \$1 million self-insured retention. A loss of \$250,000 is incurred by one of the members. The member incurring the loss in this pool is required to pay before the rest of the cost is spread out among the balance of the members. In this case, the member has to pay \$50,000, so a cost of \$200,000 is charged to the pool. There are 10 members, so the cost to each member is \$20,000. This loss is significantly less than paying the entire \$250,000 as in a self-insured program.

In addition to the charges for individual claims, members typically are assessed a premium as their share of expected pooled losses and expenses. Refunds or assessments are made to pool members once actual costs are known. This practice varies significantly from conventional insurance in

this respect. A conventional insurer keeps any extra from the premium or bears any financial loss from insufficient premiums.

Individual self-insurance generally has the greatest cost instability of the three financing methods. Over time, losses are 80 percent or more of a self-insured program's cost. The individual agency's smaller statistical base operates to increase the annual variability in the number and cost of loss-causing incidents. Pools and insurers, conversely, who use losses to set their prices, have a broader statistical base and experience less variability in losses because of it.

Control Over Risk Control Service Quality: Input into risk control service quality (loss prevention and claim adjusting) in transit systems is one of the more important factors. Conventional insurers allow policyholders little direction in risk control services. The transit system gets the specialist that the insurer assigns. The problem is that the risk control specialist's time is not devoted to transit systems. The insurer may use the specialist on a broad array of accounts, such as department stores or steel mills. Hence, they may be blind to the more subtle aspects of transit system risk control. A few insurers specialize or have separate units that specialize in transit. This practice strengthens their service quality to transit systems versus the average insurer.

With self-insurance, it is often possible to have a risk control specialist on staff. This produces the best results. Transit system pools typically employ or contract with risk control consultants who specialize in transit systems. Nonetheless, any single agency's dissatisfaction with pool service quality can be acted on only after other pool members agree to change.

Claim Handling Decision Voice: The voice an agency has in claim handling decisions is similar to the control it has over risk control service quality. Under conventional insurance, the insured agency has no voice whatsoever. It must use the insurer's claim handling facility, and has little or no input into litigation decisions. Self-insured entities have the greatest control, because they can choose which claim facility to use, and they make a completely internal decision about litigation and settlement. Members of risk retention pools have moderate control over claims handling decisions. Each member of the pool has input into claim decisions. However, a pool consensus is required if the member and the pool claim manager disagree.

Assembling a Risk Financing Program

Several techniques are used by small and medium transit systems to construct risk financing programs that are best suited to their needs.

Choosing the Right Vendors: Insurers, agents, brokers, claims adjusting firms, and consultants are all vendors that may be involved in servicing a transit system's risk financing needs. Those vendors experienced in transit will most benefit the transit system. The selection of an insurer or other risk service vendor must include consideration of criteria other than service cost. To make this selection, transit systems often use a process that includes the following steps:

1. Identify qualified vendors through discussions with other transit system operators, state transit association, department of transportation and others.

2. Develop a request for proposal (RFP) providing background data on the transit system, a description of the services (or insurance coverages) desired and soliciting the vendor's unique qualifications to provide such services, and its conceptual plan for doing so.

3. Mail the RFP to vendors identified in step 1. Many also advertise the solicitation in appropriate publications and mail RFPs to ad respondents.

4. Receive written conceptual proposals and select the firms submitting the best proposals for interview.

5. Interview finalist firms, select one or two for further discussions, and negotiate a services contract.

If insurance is the service sought using the above process, step 5 would conclude by sending one or more insurance agents to the marketplace to solicit firm insurance bids. If more than one agent is to solicit bids on the transit system's behalf, each agent should be assigned exclusive access to designated insurers. This assignment step is needed so that no insurer is approached by more than one agent—a development that often reduces an insurer's appetite for an account and can cause it to decline bidding. Because even when market cycles favor consumers, the number of insurers interested in transit is limited, losing a potential insurer unnecessarily should be avoided.

Transit systems are also better served in this area by developing long-term relationships with their insurers and risk services providers. Those agencies that annually bid insurance are the most vulnerable to being cancelled when the insurers become scarce or the agency is hit with adverse loss experience. Generally, 3- to 5-year relationships should be sought.

Program Sharing: A move that saves transit management time is to participate in an affiliated agency's program. Small and medium transit systems often have the opportunity to finance property, liability, and casualty risks with a city or county government that may own the system. The larger size of the affiliated agency can help to save money through its greater leverage in procuring insurance and other risk services. In addition, savings can be achieved by the small system by gaining access to a self-insurance program that the system would be too small to establish on its own.

The affiliated agency may also have a risk manager who can apply his or her expertise to the risks of the transit system. This may obviate the need for the system to procure such services from a vendor or to staff for the function.

Transit management must be aware that participating in an affiliate's programs does not always produce an efficient result. Allocations of cost may not always be equitable. It may not be possible to gain access to the risk manager. The affiliate's vendors may be perfectly matched to the needs and operations of the affiliate, but not be a good choice for the transit system. Accordingly, system management must be involved to some extent in evaluating the quality of the affiliate's programs and services.

COST OF RISK

The fifth phase in the risk management process, monitoring performance of the selected options and making alterations, is the key to an effective risk management program. It

provides the connection between the current programs and innovations and revisions to the system. Monitoring the selected options is best accomplished by using a measurement called the cost of risk. The cost of risk is the sum of:

- Accidental loss payments (and reserves) not reimbursed by insurers or pools,
- Insurance premiums or payments to pools,
- Risk control expenditures,
- General administrative costs associated with risk management.

Figure 3 is a sample cost of risk display. The resultant figures, measured over time, should be reduced to a rate per unit of activity, such as per \$1,000 of operating budget, per 1,000 vehicle revenue miles or per \$1,000 of payroll. The cost

Retained Losses		
--Workers' Comp	\$0	
--Liability	50,000	
--Property	<u>5,000</u>	
Total		\$55,000
Insurance Premiums		
--Workers' Comp	\$85,000	
--Liability	100,000	
--Property	<u>45,000</u>	
Total		\$230,000
Risk Control		
--Workers' Comp	\$4,000	
--Liability	6,000	
--Property	<u>1,000</u>	
Total		\$11,000
Administrative Costs		\$24,000
Total Cost of Risk		\$320,000

FIGURE 3 Sample annual cost of risk display.

of risk can be measured for an organization's entire risk management program or by individual type of risk (e.g., liability). Appendix C is a sample 10-year display.

One reason that a cost of risk measurement is so effective is because it allows the risk management team to see directly whether the cost of risk is decreasing. Such a trend would indicate that the risk management programs are effective in reducing risk costs. An increase in the cost of risk would indicate that a re-evaluation of the current programs is necessary. Extreme fluctuations, such as a temporary spike in the cost of risk, would indicate a series of large losses or a single catastrophic loss. In such a case, an analysis would prompt the risk management team to take a closer look at these losses and look for ways to reduce or eliminate them.

Benchmarking in risk management is as popular as it is in other management disciplines. Sources of reliable risk cost data have not been readily available. Perhaps the most useful data on benchmarking in risk management are available to those systems that participate in pools. Because transit pools have only been in existence for 10 years, the body of data is just now developing the maturity that makes it very useful. Presently, Form 405 from the National Transit Data Base reporting package is used to collect transit safety and security information (see Appendix D). Looking to the future, there is hope that a national data collection agency for self-insured and pooled risk retention will be established. The California Institute for Public Risk Analysis (CIPRA) is collecting and publishing data on risk financing programs of the state's local governmental agencies and their pools. Based in Sacramento, CIPRA's mission is to serve as the reporting agency for the collection of workers' compensation and tort liability claims data for self-insured public entities in California. It began publishing data in 1993.

Development of a national data base for self-insured governmental agencies, including those providing transit services, has begun. Funding for the project was obtained as part of the settlement of a multi-state attorneys general antitrust suit against several large commercial insurers. Based on the California model, this agency could develop substantial benchmarking information for use by transit systems. Since the agency has just begun its formation and business planning meetings, it's too soon to tell what data it will be able to provide.

CHAPTER THREE

STATE OF THE PRACTICE

A survey of small and medium transit agencies was made to learn how they approached risk management and secured pertinent services. Of the 100 transit systems surveyed, 34 percent responded. The survey group was divided according to size of population served. Where significant, practice variations among the groups are reported. Table 1 displays the distribution of respondents among the three groups; demographic data for the three groups are also displayed. Questionnaire responses were most often incomplete and should not be considered statistically valid. They do, however, offer insight to the groups' risk management practices.

In addition to mailing the survey, all systems surveyed were contacted at least once by phone to try to elicit more responses. It became clear that insurance and risk management issues were not as high as other issues in the priorities of transit system employees. Programs were stable and operating smoothly. Overall funding for transit and other issues were demanding more time than subjects addressed in this synthesis.

GENERAL RISK MANAGEMENT**Staffing**

Prudent management would dictate that a transit agency designate an employee to be responsible for risk management practices. Small and medium entities tend to place that responsibility on a manager who has other responsibilities as well. A few have a full-time risk manager accountable for all risk financing and control activities.

Survey respondents report only five full-time risk managers on staff. Unexpectedly, none are employed by agencies in Group 1. The most frequent placement of risk management responsibility is with the general manager (40 percent) followed by the risk manager (15 percent) and finance director (10 percent).

Advisory Services

With few full-time risk management professionals on staff, those responding to the survey depend on outsiders for general

TABLE 1
DEMOGRAPHICS OF THE SURVEY SAMPLE

	Size of Area (Population)	Number Surveyed	Number of Respondents
Survey Group 1 (Large)	200,000 to 400,000	13	5
Survey Group 2 (Medium)	50,000 to 200,000	67	23
Survey Group 3 (Small)	Under 50,000	20	6

		Operating Expenditures	Revenue Miles	Passengers Served	Vehicles	Employees
Group 1	Min.	\$4,383,350	1,297,700	753,600	67-130	43-230
	Max.	14,454,500	3,627,300	8,143,700		
Group 2	Min.	\$799,400	252,800	116,700	10-222	19-150
	Max.	3,387,000	3,000,000	4,485,000		
Group 3	Min.	\$380,000	389,500	4,900	20-76	22-120
	Max.	2,644,300	950,000	2,400,500		

insurance and risk management advice. Only one respondent reported not seeking such advice. Transit systems surveyed most commonly (almost 45 percent) go to their insurance agents or brokers for general risk management and insurance advice. Pools and independent consultants were the next most likely advisory source at 14 percent each.

RISK FINANCING

Survey respondents were asked which risk financing methods they used from among the following:

- *Conventional Insurance*--The purchase of commercial insurance from a traditional insurer.
- *Self-Insurance*--Planned acceptance of losses and related expenses by the transit entity. This method could include a deductible program, where the insurer advances the money for a loss and seeks reimbursement from the transit system or a self-insured retention program, where the system must fund the loss when it is payable.
- *Pools*--Joint self-insurance with other agencies in a pool or mutual insurance company owned by the agencies.

Figure 4 shows the percentages across the survey group. For the purposes of this graph, only three general areas are compared:

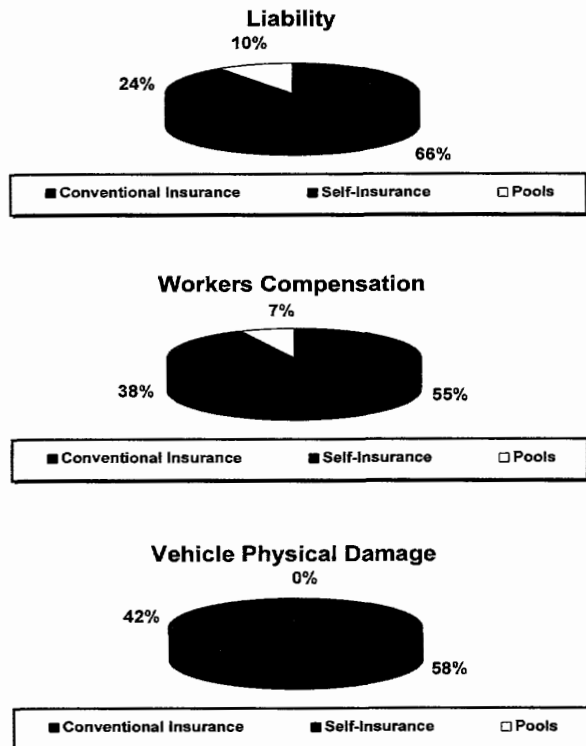


FIGURE 4 Percent of respondents in each type of risk financing alternative.

- Liability--composed of vehicle liability, public officials liability, and general liability;
- Workers' Compensation; and
- Vehicle Physical Damage.

Conventional insurance is the preferred risk financing technique for each coverage area. This is to be expected given the small size of the transit agencies and the relatively favorable insurance market conditions that exist. Self-insurance is used most for vehicle physical damage risks. Because the probable maximum loss is generally limited to the cost of a single vehicle, one would expect to see self-insurance frequently in this risk area for a group of this size. Pools are used most frequently for liability but have entered the workers' compensation area as well.

When a transit agency sets out to select a risk financing method, certain factors are considered. The importance of these factors varies with line of coverage and agency size. Survey participants rated the importance (on a scale of 1 to 5, with 5 being the most important) of factors in their choice of risk financing methods. The factors that participants were asked to rate were:

- Overall program stability,
- Price,
- Price stability,
- Good claims services,
- Voice in claims,
- Good loss prevention services,
- Broad coverage terms, and
- Keeping money in the local community.

Overall, the top three factors in selecting a risk financing method are price, price stability, and good claims services. Figure 5 displays the order of the three most important factors by survey group for each of the three risk categories focused on by this study.

CLAIMS ADJUSTING

Good claims services ranked near the top of the most important factors influencing choice of a risk financing method. The widespread use of conventional insurance indicates that, while conventional insurance does not allow any control over claims services, the insurers chosen are able to deliver claims services of sufficient quality to satisfy the transit system. Accordingly, a system considering two or more insurance bids will choose the insurer with a reputation for superior claims services. A few insurers encourage input and involvement from their policyholders in the claims settlement process and are preferred coverage sources when they are otherwise competitive.

High-quality claims services include the following key elements:

- Prompt response to the claims situation,
- Thorough investigation of all the facts that surround the incident,

Liability			
Factor Rank	Survey Group 1 (Large)	Survey Group 2 (Medium)	Survey Group 3 (Small)
1	Price	Good Claim Services	Price Stability
2	Good Claim Services	Price	Price
3	Price Stability	Overall Program Stability	Good Claim Services

Workers' Compensation			
Factor Rank	Survey Group 1	Survey Group 2	Survey Group 3
1	Overall Program Stability	Good Claim Services	Price Stability
2	Price	Overall Program Stability	Price
3	Good Claim Services	Price	Good Claim Services

Vehicle Physical Damage			
Factor Rank	Survey Group 1	Survey Group 2	Survey Group 3
1	Overall Program Stability	Price	Price
2	Price	Good Claim Services	Price Stability
3	Good Claim Services	Overall Program Stability	Good Claim Services

FIGURE 5 Important factors in selecting a risk financing method.

- Good communication among the transit system, the agent or broker (if insured), and the claims handler, and
- A willingness to firmly resist claims that are without merit and are clearly not the responsibility of the transit agency.

All adjusters are ultimately governed by the fair claims practices statutes that exist in virtually every state. Failure to follow such practices can produce punitive damages awards of significant value. Accordingly, it is important that professional adjusters be used.

LOSS PREVENTION

If losses are low to a self-insured agency, the savings are obvious and direct. But even if insured, an agency with a favorable loss history will pay lower premiums than one with a record of high losses. The most effective means of keeping risk costs low is preventing losses from occurring.

As important as cost savings, is the issue of public image. A transit system frequently in the media spotlight for accidents will quickly lose public trust and riders and public funding support along with it.

Organizations have available to them an array of loss prevention measures that risk and insurance professionals have developed over time. Each organization must choose one or more such measures and decide the level of resources to devote to the chosen loss prevention exercise. This can be a difficult choice because there is a shortage of objective information on the cost and benefit of these measures.

Hiring Practices

Losses and related expenses can be reduced if proper hiring practices are employed. The practices encompass a check of

applicants' motor vehicle records, and the status of their commercial driver's license. Such checks are used to protect the system from drivers with poor accident histories. For example, a driver with no previous accidents or violations on his or her record is only about half as likely to be involved in a future accident as one with two previous accidents or violations (3).

Accordingly, checking an applicant's motor vehicle record is a sound screening step. Another important component in these hiring practices is a physical examination. Transit systems need drivers in good health to work in the sometimes stressful environment. Pre-employment physical exams are given by 84 percent of the survey respondents.

Drug tests are administered by 89 percent of those surveyed. The Federal Department of Transportation requires drug and alcohol testing for drivers, effective January 1, 1995 for systems with 50 or more employees, and January 1, 1996 for others. The survey seems to suggest few compliance problems ahead. These tests further protect the transit system from unsafe drivers and employees.

Another hiring practice, performing background and reference checks, is used by approximately 85 percent of the responding transit systems in screening applicants. Figure 6 displays the hiring practices of survey participants.

Figure 7 shows the strong participation of transit systems in training new drivers. Once an employee has been hired, new driver training practices help to play a part in risk control. Training in safe vehicle operations, equipment inspection, defensive driving, and accident reporting are a part of 85 percent or greater of transit systems' programs.

Instruction in passenger relations, transportation of senior citizens and handicapped persons, as well as emergency procedures are used by 95 percent of the transit systems surveyed. The least used training component--bus operation under adverse conditions--is reportedly used by 85 percent of the

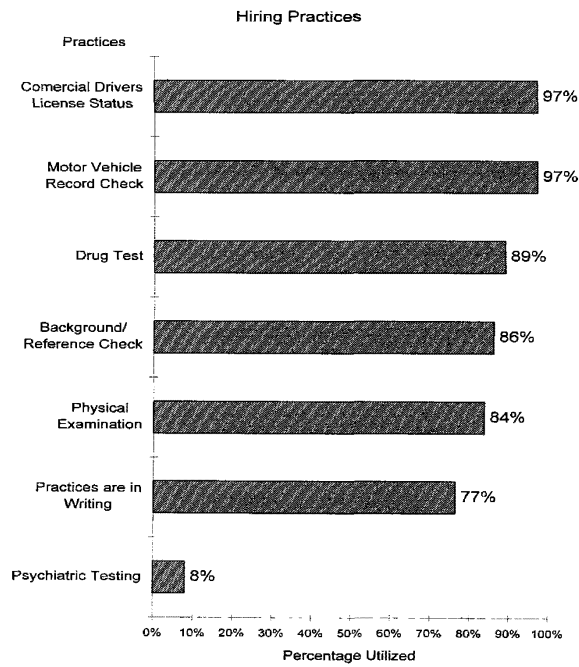


FIGURE 6 Transit system hiring practices

respondents. Interestingly, all transit systems in Group 3 use all of the aforementioned practices.

Scheduled Retraining

After a few years of service, some of the training that drivers received may have faded. To ensure that every driver is current on transit system policies and procedures, scheduled retraining is often implemented. For the entire survey group, retraining in all of the areas discussed above varies between 50 percent and 79 percent.

Loss Control Practices

There are several other devices that do not deal directly with training, but which, when properly implemented, can be very effective in improving both driver performance and loss control. Their popularity among the survey respondents is displayed in Figure 8.

On average, 76 percent of the sample have implemented a financial award or incentive program. Under such programs, the transit system maintains a policy that drivers who have no accidents over a certain period of time receive a reward (e.g. extra day off, salary bonus, sporting event tickets). Other measurements include a system used by bus inspectors to rate driver performance and bus interiors. There are established forms that could be more widely used for this evaluation.

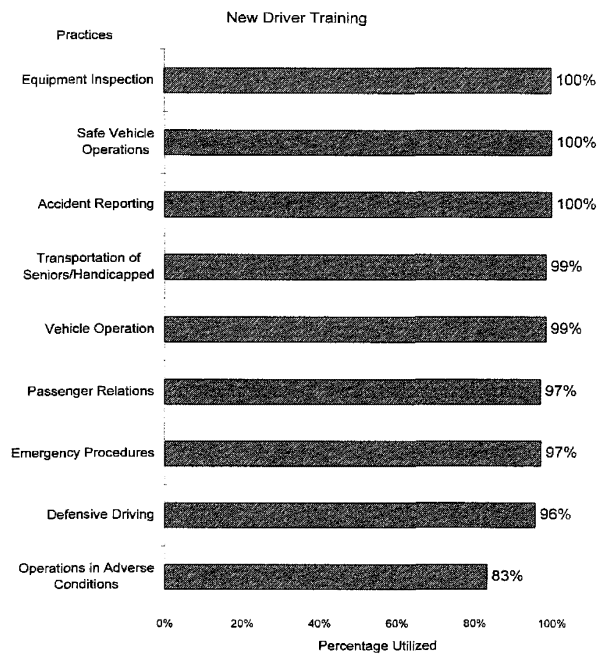


FIGURE 7 Transit system new driver training

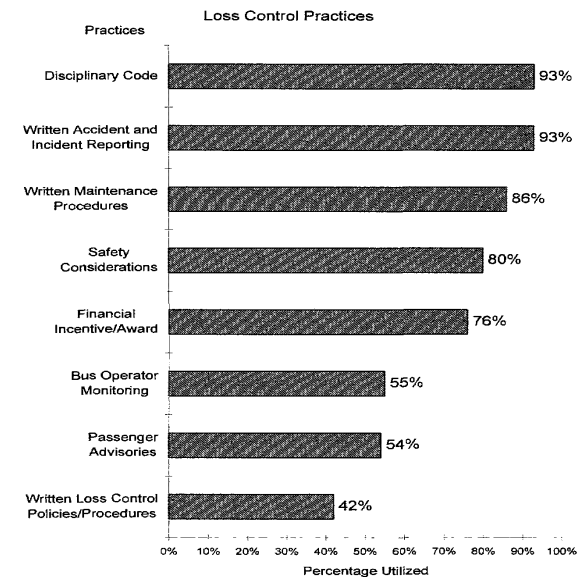


FIGURE 8 Transit system loss control practices.

Examples of these forms are in Appendix E. Passenger complaints and commendations can be used as measures of performance, as can tracking and rewarding ideas that promote

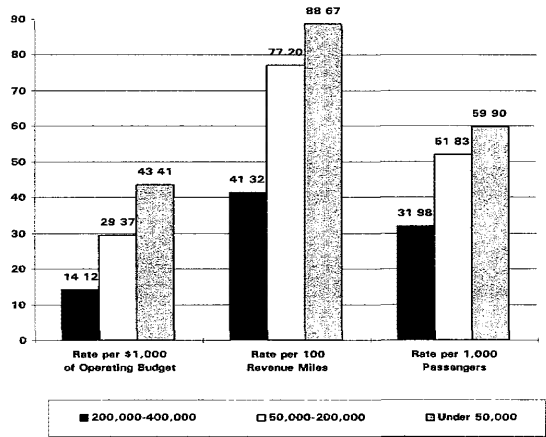


FIGURE 9 Liability cost of risk.

bus occupant safety. Such incentives induce drivers to perform safety practices consistently.

One loss control practice that is used by 52 percent of the survey group is bus operator monitoring. Undercover riders observe the habits of the bus operator and rate the driver's performance. Such monitoring is often used in concert with the disciplinary code and an incentive program. The transit system receives active feedback on driver performance, as well as passenger relations.

Passenger advisories such as signs and literature are also used as loss control practices, averaging 53 percent among the total survey group. Written policies and procedures, accident and incident reporting procedures, and vehicle maintenance procedures are used on average by 75 percent of responding transit systems.

COST OF RISK

Few respondents gave sufficient information to develop an organization total cost of risk. Accordingly, a cost of risk

exhibit as appears in Chapter 2 could not be constructed. However, enough respondents provided information on individual lines of coverage (or types of risk) to provide cost comparisons. The coverage and risk categories compared include:

- Liability,
- Vehicle Physical Damage, and
- Workers' Compensation.

Liability

Figure 9 displays the cost of risk for liability coverage across the survey sample. Group 1 has low cost of risk for liability coverages, followed by Groups 2 and 3. This is expected, since Group 1 relies less on conventional insurance and has more buying power when it does purchase insurance. Conventional insurance is usually more expensive than self-insurance or pools.

Vehicle Physical Damage

Group 3 respondents have the lowest cost of risk (per vehicle) for automobile physical damage followed by Group 1 and Group 2.

Smaller agencies could be expected to rely more heavily on conventional insurance, usually a more expensive alternative for automobile physical damage. However, only two agencies in Group 3 provided cost of vehicle physical damage coverage; one is self-insured. This naturally lowered the average cost of risk. Another explanation may be that systems in Groups 1 and 2 operate larger, more expensive vehicles with higher corresponding loss rates. Based on experience with other transit systems, these statistics do not appear to reflect current industry practices.

Workers' Compensation

The average cost of risk for workers' compensation was reported at about \$1,100 per employee. This figure did not vary by transit agency size.

CHAPTER FOUR

CASE STUDIES

This chapter discusses risk management programs currently used by three transit agencies. The agencies are the Regional Transportation Commission (Reno, Nevada), the City of Jackson Transportation Authority (Jackson, Michigan) and the Baldwin Rural Area Transit System (Robertsdale, Alabama). These three agencies were chosen to illustrate different approaches to financing risk in service areas of different sizes.

REGIONAL TRANSPORTATION COMMISSION

Organization: Regional Transportation Commission (RTC),
Reno, Nevada
Size of Urbanized Area: 200,000 to 400,000 population
Annual Operating Revenue: \$12,152,680
Annual Miles: 3,470,401
Annual Boardings: 8,143,714

Current Insurance Program: Self-insured liability with commercial excess liability insurance. Workers' compensation exposures are insured with an agency of the State of Nevada.

Risk Financing

Before 1986, RTC purchased commercial liability insurance coverage with no deductible. After 1986, RTC moved to a self-insured program with a \$50,000 retention. In 1992 this retention was increased to \$100,000. Workers' compensation coverage, as required by state law of all employers, is purchased from the Nevada State Industrial Insurance System (SIIS), a monopolistic state fund.

Factors affecting the choice of RTC's risk financing methods are:

- Overall program stability
- A voice in claims handling
- Pricing
- Quality claims service
- Price stability
- Broad coverage.

Loss prevention service quality and keeping money in the local community are not major factors in RTC's decision in choosing a risk financing approach. The liability program has met the above objectives since self-insurance began in 1986.

General Risk Management

Two individuals provide general risk management services to RTC. They are:

- The finance director who is responsible for choosing the mix of insurance and self-insurance, and
- The transit manager (a contract employee) who is responsible for loss prevention and claims handling activities.

RTC's insurance agent/broker obtains bids and reviews insurance proposals to determine if they meet bid specifications.

Claims Administration

RTC uses a third-party claims administrator to handle its liability claims. SIIS administers all workers' compensation claims.

Using a third-party claims administrator, in conjunction with monitoring of claims handling activities by the transit manager, improved the liability claims handling quality for RTC. They believe they have greater control over claims settlement decisions and the quality of claims handling personnel assigned to their account. RTC has no input into the workers' compensation claims handling process.

Loss Control

The system has always used loss control procedures and activities queried in the survey form. However, while the system was purchasing first dollar insurance coverage, such activities were less extensive. Since the implementation of the self-insurance program, RTC has appreciated the fact that its ability to reduce losses directly impacts its risk related costs. Loss control receives considerably more attention now. The major impacts of the increased loss control practices are:

- Improvement in the quality of drivers (RTC currently hires approximately 10 percent of applicants),
- A reduction in incidents involving moving vehicles,
- A reduction in claims costs,
- More attention to safety by upper management, and
- A better relationship with (excess) insurers.

The net result of changes in management practices is a risk cost savings of approximately \$50,000 per year (approximately \$400,000 since 1987).

While the safety program has received more attention from upper management, development of the program was assisted greatly by the contract transit manager, who has access to company risk management guidelines and policies. The transit manager is responsible for monitoring the success of the loss control program and developing new loss control activities. RTC employs a full-time safety manager who provides loss control training and performs safety activities.

Emerging Issues

RTC's major concerns are future cost increases and the availability of excess liability coverage. In the past, this has not caused many problems. But RTC is aware that, with the uncertainty of the future insurance market, it must maintain a high loss prevention profile as increased risk retention may be the only way to mitigate future excess insurance cost increases. Other areas of concern include:

- Claims arising from Americans With Disabilities Act (ADA),
- Employment practices claims,
- Having sufficient funds to enhance loss prevention programs,
- Environmental lawsuit claims from underground storage tanks and other environmental exposures,
- Drug and alcohol testing suits, and
- Fraudulent liability claims.

CITY OF JACKSON TRANSPORTATION AUTHORITY

Organization: City of Jackson Transportation Authority (JTA), Jackson, Michigan

Size of total urbanized area: 50,000 to 200,000 population
 Annual Operating Revenue: \$2,562,377
 Annual Miles: 831,192
 Annual Boardings: 872,780

Current Insurance Program: Participates in a self-insurance pool for vehicle and general liability and vehicle physical damage. Purchases conventional commercial insurance for public officials liability and workers' compensation.

Risk Financing

Before 1986, JTA purchased commercial insurance for all liability, vehicle physical damage, and workers' compensation coverages. In 1986, JTA found liability and physical damage insurance less available and prices substantially increased. JTA, along with other Michigan transit agencies, formed a group self-insurance pool called Michigan Transit Pool (MTP). MTP provides general and vehicle liability up to a limit of \$1 million and vehicle physical damage coverage. JTA initially had a \$25,000 "deductible" in the pooled program. In later years, this deductible increased to \$50,000.

Public officials liability and workers' compensation coverages remained insured with the commercial insurance market on a first dollar/low deductible basis.

Participation in the self-insurance pool meets JTA's insurance needs in the following areas:

- Program stability
- Voice in claims handling decisions
- Price
- Quality claims and loss prevention services
- Broad coverage terms.

Keeping money in the local community is not an important factor to JTA.

General Risk Management

Risk management and insurance matters are primarily the responsibilities of the operations director. Safety is a primary objective of the organization. This is due to JTA's participation in the self-insurance pool, which has a large emphasis on safety, and the deductible currently used by JTA. Attention to the importance of safety starts at the top at JTA and is viewed as the responsibility of all JTA employees.

Before 1987, JTA had only one person responsible for insurance and risk related issues. Currently, three people share responsibility for general insurance and safety practices at JTA.

Claims Handling

MTP provides claims adjusting for vehicle liability, vehicle physical damage, and general liability coverages for JTA. JTA has a voice in the settlement decisions for claims held by MTP. The quality of MTP's claims handling practice is very good.

Public officials liability and workers' compensation claims are handled by the insurer and the insurance broker/agent. JTA has little voice in the handling of these claims.

Loss Control

Before 1986 JTA undertook, on a limited basis, all the loss control activities included in the survey. However, since joining MTP, JTA has enhanced its safety program. Major reasons for this enhancement include: responsibility for the first \$25,000 (now \$50,000) of loss and emphasis from MTP on members controlling losses to reduce overall pool liability. Hiring practices and activities are codified. This has resulted in an improvement in the quality of new drivers.

Training, although always available, is now more thorough. More attention is given to completing accident reports to determine the cause of loss and the prevention of future incidences. Generally, the increase in training has resulted in a reduction of accidents and an improved ability to defend JTA from liability claims. JTA believes a major reason for improvement in the safety program comes from penalties given to drivers (pay reductions) who have accidents that could be avoided. These pay penalties are written in the union contract. MTP, the self-insurance pool, also places an importance on safety. MTP's safety committee (of which JTA's general manager is the Chair) performs comprehensive audits of its members. These audits result in recommendations for improvement in safety. MTP's focus on safety has trickled down to its members.

JTA's savings from the MTP program are estimated at \$300,000 to \$500,000 since program inception in 1987. This savings was reduced by JTA's contribution to fund its share of the start-up costs and operating capital of MTP.

Emerging Issues

The existence of MTP eliminated most concerns about vehicle liability, vehicle physical damage, and general liability coverages. However, JTA is concerned about the future cost of workers' compensation and public officials liability coverages. Other major concerns are the erratic nature of employment practice claims, the shrinking operating dollars available to address safety issues, environmental lawsuits, the solvency and related uncertainty about the Michigan underground storage tank program, and the basic nature of drug and alcohol testing.

BALDWIN RURAL AREA TRANSIT SYSTEM

Organization: Baldwin Rural Area Transit System (BRATS), Robertsdale, Alabama.

Size of Urbanized Area: Under 50,000 population

Annual Operating Revenue: \$380,000

Annual Miles: unavailable

Annual Boardings: 280,000

Current Insurance Program: Purchases conventional insurance through another agency, (County). BRATS is a department of the county government.

Risk Financing

BRATS purchases all conventional insurance through the county as part of the county insurance program, and is included as an insured entity on all county policies. The county bids insurance annually. All coverages are purchased on a first dollar basis.

The major decisions affecting the purchase of insurance are:

- Price
- Claims service
- Price stability.

Keeping money in the local community is the lowest rated factor. The transportation director for BRATS said that pricing has been relatively stable since 1986.

General Risk Management

Individuals primarily responsible for general risk management insurance matters at BRATS are the Director of

Transportation (General Manager) and the Finance Director. They are responsible for making sure that exposures are accurately reported to the insurance carrier and for paying premiums, respectively. BRATS also obtains some risk management and insurance advice from the conventional insurer and from the Community Transit Association of America (CTAA). CTAA provides manuals and risk management training seminars.

Claims Administration

Claims adjusting services are provided by the conventional insurers providing insurance coverages. BRATS' staff and insurance agents or brokers are involved in some investigating and claims reporting. Although BRATS indicated that voicing an opinion in claims handling decisions is fairly important, the current method of purchasing does not provide them any voice in claims settlements.

Loss Control

BRATS undertakes almost all the control activities listed in the survey for new driver training, hiring practices, and loss control practices. These activities have been elevated in the last several years. In the last year and a half BRATS has hired a full-time safety manager who provides training. The training consists of course work with a financial incentive for completion. Retraining is performed annually.

The Director of Transportation (General Manager) and the Safety Director are primarily responsible for planning safety activities; however, BRATS relies on assistance from its insurance agent and the CTAA, which provides training and loss control material.

Emerging Issues

The predominant concerns BRATS has about its insurance program are future cost increases, service quality, and coverage adequacy. It is also concerned with the availability of coverage and insurer stability. However, these issues are not currently causing problems.

Other specific areas of concern are claims arising from the Americans With Disabilities Act (ADA), employment practices claims, drug and alcohol testing suits, and the shrinking operating budget available to address safety.

CHAPTER FIVE

CONCLUSIONS

Since the mid 1980s, the majority of small and medium transit agencies reduced their reliance on conventional insurance and became self-insured, either on their own or in a pool with others. Those that relied on conventional insurance enjoyed a favorable insurance market for more than 6 years. Today, more than 50 percent of survey respondents said that the General Manager is responsible for risk management, indicating that this topic receives the attention of top management personnel. Costs are under control, and transit management appears to have turned to other issues.

Further analysis of synthesis survey responses reveals that agency risk and insurance management practices have stabilized. In fact, small and medium transit agencies report smooth operations. Specifically, it is was found common for agencies to:

- Seek general guidance on risk and insurance from insurance agents and brokers,
- Choose risk financing programs based on price, price stability, and claims-handling service quality,
- Use insurance as the favored risk financing technique over self-insurance and risk retention pools, and
- Design hiring, training, and operating practices to prevent losses.

Most small and medium transit systems have incorporated risk management as a regular element of their operating practices. The case studies suggest that safety has received increased attention from upper management in recent years. These transit systems have recognized that their ultimate risk costs depend on their ability to control losses.

Increasingly, the cost of risk is being accepted as the criterion by which to measure risk management performance. Yet few transit entities capture consistent data on the cost of their insurance, self-insured losses, and risk control expenditures that would permit a balanced analysis over time. Further, only a small amount of data from the few useable, published risk cost data sources is available for benchmarking performance to industry norms.

In addition, there is very little information on what safety, training, or other risk control activity is most effective. Research on the effectiveness of various loss control techniques in reducing the cost of risk over time could help all transit agencies to identify techniques with the greatest potential for reducing future losses. Other efforts could be made to determine the status of risk management practices and of transit system risk costs nationwide. All the limited responses to this survey--which focused on small and medium-sized transit agencies--do not provide a basis for definitive conclusions. It appears that further investigation might be beneficial to transit risk management in the areas of:

- Developing standardized report forms for risk cost and related demographic data that could be used by the Federal Transit Administration and/or the risk data collection agency that is now being formed.
- Quantifying the effect of various safety programs and practices on accidents and injuries and their associated costs.
- Instituting data collection efforts on risk costs, effective risk control activities, and the status of risk management practices nationwide.

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GLOSSARY

Adjuster--A person who settles claims. An adjuster may be an employee of an insurer, an independent contract claim administration firm or any entity that is self-insured.

Agent--A representative of an insurer who has the authority to obligate or bind the insurer in some situations. This binding authority is limited by contract and law, however. An agent may be an independent contractor or an employee of the insurer, is compensated by the insurer, and is licensed by the state.

Assessment--A correction to a premium undercharge made by a risk retention pool on one or all of its participants.

Broker--An independent representative who can negotiate coverage on behalf of an insured. Typically, a broker does not have the authority to bind an insurer that an agent does, but is compensated by the insurer and licensed by the state.

Business Interruption--Refers to the loss of revenue that results when an accident impairs an entity's ability to operate.

Claim--Notice of an incident where someone alleges money is owed them for injuries to their person or damage to their property.

Claim Adjusting--The process of investigating, negotiating, and settling a claim.

Conventional Insurance--Coverage provided by a recognized insurance company.

Cost of Risk--The sum of any enterprise's insurance costs, self-insured losses, risk control expenditures and pertinent administrative costs.

Excess Insurance--Excess insurance provides coverage after that of an underlying policy has been exhausted. It can also be written to apply above a self-insured retention. Excess coverage is designed to respond to large but infrequent losses.

Exposure--A situation or condition that lays one open to loss or to the possibility of an accidental loss.

First Dollar Insurance Coverage--Insurance written with no deductible or a small deductible, generally \$1,000 or less.

General Liability--Refers to the normal liability of an enterprise emanating from its operations, facilities and employees, except for that arising from motor vehicle operation, director's and officer's actions and professional errors and omissions.

Insurance Policy--A contract that transfers risks of financial loss from one entity to an insurer. The policy describes the terms and conditions of the transfer.

Liability--Exposure of people or property to legal risk of loss or damage as a result of a negligent act by some party or the failure of that party to act prudently.

Loss--Any reduction or disappearance of value or a cost incurred as the result of an accident.

Loss Prevention--Any activity taken to reduce the likelihood of a future loss causing event.

Maximum Potential Loss--The amount of loss that could possibly occur given total obliteration of property or life

Maximum Probable Loss--The amount of loss that one could foresee, given a reasonably likely loss scenario.

Pool--An organization of transit systems or other businesses through which particular types of risk of the participants are jointly financed.

Premium--The consideration charged by an insurance company for insuring a particular risk.

Public Officials Policy--Coverage for the governing board of an entity that is a governmental agency.

Reserve--An amount set aside to cover the expected amount of loss, or a fund set up as a contingency to cover future losses.

Risk--The chance or possibility of accidental loss.

Risk Control--The functions related to prevention of loss and reduction of its cost after it occurs.

Risk Control Specialist--One trained in loss prevention, claims management, or a similar discipline.

Risk Evaluation--The process of assigning an economic value to a particular loss exposure.

Risk Financing--The process of structuring a financial plan to pay for losses.

Risk Identification--The process of locating possible losses to which an entity is exposed.

Risk Management--The process of controlling the chance or possibility of financial loss.

Risk Measurement--The process of assigning a loss value to a particular loss exposure.

Risk Retention Pool--See pool.

Risk Treatment Method--A method employed to address a potential loss exposure. Includes risk control, risk financing, or risk avoidance measures.

Self-Insurance--Assuming risks through the maintenance of reserves or some other plan instead of through the purchase of insurance.

Self-Insured Retention--The level of financial risk that a self-insured entity pays for out of its own funds.

Stoploss Insurance--See Excess Insurance.

Third Party--Someone other than the insured and the insurer

Third Party Administrator (TPA)--A business enterprise that sells claims adjusting services to self-insureds and insurers.

Vehicle Physical Damage--Collision and comprehensive coverages.

Workers' Compensation--The statutory system prescribed by law for employers to provide medical care and loss of income benefits to employees sustaining injuries on the job.

APPENDIX A

Survey

**SURVEY
TCRP SYNTHESIS SG-1
RISK MANAGEMENT FOR SMALL/MEDIUM URBAN
AND RURAL BUS SYSTEMS
June, 1994**

General Information

1. Date: ___/___/___
2. Transit system name: _____
3. City: _____ State: _____
4. Person completing survey (questions 13-28): (Name) _____
(Title) _____ (Phone) () _____

Transportation Operating Information

5. Annual operating expenditures last fiscal year: \$ _____
6. Total revenue miles operated last fiscal year: _____ miles
7. Current number of active vehicles in fleet:
 - a. Revenue vehicles _____
 - b. Non-revenue vehicles _____
 - c. Total vehicles _____
8. Type of transit service provided (check all that apply):

	✓	Approximate Percentage of Revenue Miles
a. Fixed route		%
b. Demand responsive		%
c. Charter		%

9. Types of passengers served:

	✓	Approx. Percentage
a. Fixed route		%
b. Demand responsive		%
c. Charter		%

10. Number of passengers served last fiscal year: _____
11. Number* of employees: _____ Drivers
 *please state in full time _____ Mechanics
 equivalents (i.e., a 1/2-time _____ Other
 employee equals .50 _____ Total
 employee)
12. Please provide a copy of your system's latest Section 15 report.

Insurance Practices

13. How does your transit system receive coverage for each of the following lines of coverage? (Check (✓) appropriate method for each line of coverage.)

Method of Coverage	Line of Coverage				
	Vehicle Liability ¹	Vehicle Physical Damage ²	Public Officials Liability ³	General Liability	Workers' Compensation
a. Conventional commercial insurance					
b. Through another agency (i.e., city or county)					
c. Assigned risk plan insurance					
d. State fund or other state assisted plan					
e. Own self-insurance program					
Self-insured retention or deductible level	\$	\$	\$	\$	\$
f. Other insurance or risk financing arrangement (see question 14)					

1. Bodily injury and property damage liability, no-fault, uninsured motorists and medical payments coverages
2. Collision, comprehensive and similar coverages.
3. Also called directors and officers liability

APPENDIX A (Continued)

14. If you checked "F" above, which other risk financing arrangement is used? (Check (✓) current arrangement for each coverage indicated in f.)

Arrangement	Line of Coverage				
	Vehicle Liability	Vehicle Physical Damage	Public Officials Liability*	General Liability	Workers' Compensation
a. Pool (joint powers or interlocal agency)					
b. Joint purchase from commercial insurer					
c. Captive insurer or risk retention group					
d. Other (describe):					

*Also called directors and officers liability.

15. Please rate on a scale of 1 to 5 the importance of the following factors in your system's choice of the method chosen for each line of coverage. The higher the number the more your system values that factor.

Arrangement	Line of Coverage				
	Vehicle Liability	Vehicle Physical Damage	Public Officials Liability*	General Liability	Workers' Compensation
a. Overall program stability					
b. Voice we have in claim handling decisions					
c. Price					
d. Good claim services					
e. Price stability					
f. Good loss prevention (safety) services					
g. Broad coverage terms					
h. Keeps S in local community					

*Also called directors and officers liability.

16. Our latest complete fiscal year included the following expenditures/accruals:

	Liability	Vehicle Damage	Workers' Compensation	Other	Total
Conventional Commercial Insurance Premiums (primary and/or excess)	\$	\$	\$	\$	\$
Contributions to Self-Insurance Pools					
Self-Insured Losses					
Contract Claim Administration Fees					
Contract Loss Prevention Services					
Contract Legal Defense					
Other Risk Services, describe:					
Total	\$	\$	\$	\$	\$

General Risk Management

17. The system's employee primarily responsible for risk management and insurance matters (e.g., insurance buying, safety, claim reporting) is (check one):

- a. ___ General manager b. ___ Fleet manager c. ___ Risk manager
- d. ___ Finance director e. ___ Personnel manager f. ___ Safety manager
- g. ___ Purchasing manager h. ___ Other (specify title) _____

18. Estimated number of employees with risk management/insurance responsibilities

_____*

*please state in full time equivalents (i.e., a 1/2-time employee equals 50 employee)

APPENDIX A (Continued)

19 We also obtain general risk management and insurance advice from *(check only the primary source)*:

- a ___ Independent risk management or insurance consultant
- b ___ Our insurance agent/broker
- c ___ Contract transit management firm
- d ___ Insurance company
- e ___ Insurance/self-insurance pool
- f ___ Other *(please specify)*: _____
- g ___ No outside source

Claims Administration

20. Claims adjusting is provided by *(check one for each coverage)*:

Arrangement	Line of Coverage				
	Vehicle Liability	Vehicle Physical Damage	Public Officials Liability*	General Liability	Workers' Compensation
a. Our insurer					
b. The pool we participate in					
c. A claim administration firm we contract with					
d. Our own staff					
e. Our insurance broker/agent					
f. Other <i>(describe)</i> :					

* Also called directors and officers liability.

Loss Control

21 The system's hiring practices include the following *(check any that apply)*:

- a ___ Check of driver-applicant's motor vehicle record.
- b ___ Check of driver-applicant's possession of a commercial drivers license status.
- c ___ Requiring all applicants to pass physical exam as a condition of employment.
- d ___ Pre-hire physical exam includes drug test.
- e ___ Pre-hire psychiatric testing.
- f ___ General background/reference check of all applicants.
- g ___ Practices are in writing

22. Newly hired drivers are trained in the following *(check any that apply)*:

- a ___ Rules for safe vehicle operation
- b ___ Equipment inspection
- c ___ Defensive driving
- d ___ Passenger relations (passenger assistance and passenger sensitivity training)
- e ___ Operating in adverse environmental conditions
- f ___ Accident reporting
- g ___ Vehicle operation (on-the-road)
- h ___ Transporting senior citizens or handicappers
- i ___ Emergency handling procedures

21. Retraining is conducted on some or all of the above subjects at least *(check one)*:

	<u>Annually</u> <u>years</u>	<u>Every 2</u> <u>years</u>	<u>Every 3</u> <u>years</u>	<u>Never</u>	<u>As needed</u>
a. Rules for safe vehicle operation	_____	_____	_____	_____	_____
b. Equipment inspection	_____	_____	_____	_____	_____
c. Defensive driving	_____	_____	_____	_____	_____
d. Passenger relations (passenger assistance and passenger sensitivity training)	_____	_____	_____	_____	_____
e. Operating in adverse	_____	_____	_____	_____	_____

APPENDIX A (Continued)

environmental conditions

- f. Accident reporting _____
- g. Vehicle operation (on-the-road) _____
- h. Transporting senior citizens or handicappers _____
- i. Emergency handling procedures _____

24 Our loss control practices include (check any that apply):

- a. ___ Disciplinary code that considers accidents and safety violations
- b. ___ Financial incentive/award or recognition program that considers accidents and safety violations
- c. ___ Safety considerations in scheduling, routing and bus stop design
- d. ___ Passenger advisories (e.g., signs, literature) that promote safety
- e. ___ Written loss control policies/procedures
- f. ___ Written accident and incident reporting procedures
- g. ___ Written accident investigation procedures
- h. ___ Bus operator monitoring (ride checks, street supervision, complaint follow-up)
- i. ___ Written maintenance procedures

25 The system employee primarily responsible for safety is (check one):

- a. ___ General manager
- b. ___ Fleet manager
- c. ___ Safety director/officer/manager
- d. ___ Risk manager
- e. ___ Other (specify title): _____

26. We also obtain safety services and advice from (check only the primary source):

- a. ___ Contract safety consultant
- b. ___ Contract transit management firm
- c. ___ Insurance company
- d. ___ Our insurance agent/broker
- e. ___ Insurance/self-insurance pool
- f. ___ Other (please specify): _____
- g. ___ No outside source

Emerging Issues

27 The coverage areas causing us the biggest concern (rate 1 to 5, with 5 being the biggest concern) in the last three years are:

Area of Concern	Line of Coverage				
	Vehicle Liability	Vehicle Physical Damage	Public Officials Liability*	General Liability	Workers' Compensation
a. Cost increases					
b. Coverage availability					
c. Insurer stability					
d. Service quality					
e. Coverage adequacy					

* Also called directors and officers liability.

28. Other concerns in the area of risk management and insurance are (check any that are significant):

- a. ___ Claims arising from ADA
- b. ___ Employment practices claims (e.g., wrongful termination, discrimination, sexual harassment)
- c. ___ Shrinking operating \$ available to address safety
- d. ___ Environmental lawsuits/claims
- e. ___ Drug/alcohol testing suits/claims
- f. ___ Other: _____

APPENDIX B**SURVEY RESPONDENTS****TRANSIT NAME****200,000 to 400,000**

Central Arkansas Transit
 Corpus Christi Regional
 Cumberland-Dauphin-Harrisburg
 Reno-Regional Transportation
 Space Coast Area Transit

50,000 to 200,000

Abilene City Link Transit
 Alexandria TRANS
 Annapolis ADPT
 Appleton Valley Transit
 Boise Urban Stages
 Chatham Area Transit
 Five Seasons Transportation
 Greater Lynchburg Transit
 Greater Portland Transit
 Hamilton City Lines

Iowa City Transit
 Jackson, City of Transit
 Lake Charles, City of Transit
 Municipal Transit of Black Hawk
 Muskegon Area Transit System
 Napa Valley Transit
 St. Joseph Express
 Santa Fe Trails
 Santa Maria Area Transit
 Sheboygan Transit System
 Sioux City Transit
 Washington County Transit
 Yakima Transit

Under 50,000

Ames Transit Agency
 Baldwin Rural Area Transit
 Central FL Regional Transit
 Choanoke Public Transit
 Park City Municipal Transit
 Rides Mass Transit

APPENDIX C

Ten-Year Cost of Risk Comparison

TEN-YEAR COST OF RISK COMPARISON

	1981-82	1982-83	1983-84	1984-85	1985-86	1986-87	1987-88	1988-89	1989-90	1990-91	Ten-Year Total
Workers' Compensation											
Losses	0	0	563,600	898,800	260,200	670,900	484,800	599,900	842,000	939,800	5,260,000
Insurance Premiums	500,000	605,000	22,300	23,500	24,700	30,900	38,000	45,400	54,300	65,000	1,409,100
Administration Costs	0	0	40,200	44,000	46,900	49,000	51,500	54,900	59,100	63,400	409,000
Risk Control Costs	0	0	30,500	32,400	34,500	36,700	39,000	41,500	44,200	47,000	305,800
Subtotal	500,000	605,000	656,600	998,700	366,300	787,500	613,300	741,700	999,600	1,115,200	7,383,900
Liability											
Losses	845,000	652,000	713,600	455,000	1,369,000	1,195,900	1,143,700	604,500	631,700	1,101,600	8,712,000
Insurance Premiums	216,500	240,600	267,300	297,000	670,000	248,600	305,500	365,000	436,200	520,800	3,567,500
Administration Costs	30,100	34,100	37,000	39,100	42,400	46,100	48,500	52,300	56,400	60,000	446,000
Risk Control Costs	24,600	26,200	27,900	29,700	31,600	33,600	35,700	38,000	40,400	43,000	330,700
Subtotal	1,116,200	952,900	1,045,800	820,800	2,113,000	1,524,200	1,533,400	1,059,800	1,164,700	1,725,400	13,056,200
Property											
Losses	7,500	2,000	2,500	5,000	12,000	9,000	2,000	5,000	20,000	15,000	80,000
Insurance Premiums	97,700	102,900	108,300	114,000	120,000	114,000	120,000	126,400	133,000	140,000	1,176,300
Administration Costs	2,800	3,100	3,500	3,900	4,300	4,800	5,300	5,900	6,600	7,300	47,500
Risk Control Costs	2,900	3,000	3,200	3,400	3,700	3,900	4,200	4,400	4,700	5,000	38,400
Subtotal	110,900	111,000	117,500	126,300	140,000	131,700	131,500	141,700	164,300	167,300	1,342,200
Total Costs	1,727,100	1,668,900	1,819,900	1,945,800	2,619,300	2,443,400	2,278,200	1,943,200	2,328,600	3,007,900	21,782,300
Expenditures (excluding capital expenditures)	71,166,600	76,523,300	82,283,100	88,476,400	95,135,900	102,296,700	109,996,500	118,275,800	127,178,200	136,750,800	1,008,083,300
Total Costs as a Percent of Expenditures	2.4%	2.1%	2.2%	2.2%	2.8%	2.4%	2.1%	1.6%	1.8%	2.2%	2.2%

APPENDIX D

National Transit Data Base Form 405

Transit Safety and Security (Page 1)
Form (405)

10: 0099 Mode: DR Service: D0
Hamlet Transit Agency

Safety Items	Incidents	Fatalities			Injuries		
		Patrons	Empls.	Others	Patrons	Empls.	Others
COLLISIONS							
01 Collision with other vehicle (at-grade crossing)	{ }	{ }	{ }	{ }	{ }	{ }	{ }
02 Collision with objects (at-grade crossing)	{ }	{ }	{ }	{ }	{ }	{ }	{ }
03 Collision with people (at-grade crossing)	{ }	{ }	{ }	{ }	{ }	{ }	{ }
03a (at-grade crossing)	{ }	{ }	{ }	{ }	{ }	{ }	{ }
03b (attemp/successful suicides)	{ }	{ }	{ }	{ }	{ }	{ }	{ }
NON-COLLISIONS							
04 Derailments	{ }	{ }	{ }	{ }	{ }	{ }	{ }
Derailment/bus going off road	{ }	{ }	{ }	{ }	{ }	{ }	{ }
Personal casualties							
05 Parking facility							
06 Inside vehicle							
07 On right-of-way							
08 Boarding & alighting vehicle							
08a (associated with lifts)	{ }	{ }	{ }	{ }	{ }	{ }	{ }
09 In stations/bus stop	{ }	{ }	{ }	{ }	{ }	{ }	{ }
09a (associated w/ escalators)	{ }	{ }	{ }	{ }	{ }	{ }	{ }
09b (associated w/ elevators)	{ }	{ }	{ }	{ }	{ }	{ }	{ }
Fires (no thresholds)							
10 Inside vehicles							
11 In stations							
12 Right-of way & others							
13 Total transit property damage	\$						

Date Prepared/Updated: 10/13/95 Report Year 1995

Transit Safety and Security (Page 2)
Form (405)

10: 0099 Mode: Service:
Hamlet Transit Agency

Security Items		In Vehicle	In Station	Other Transit Prop.
Part I Offenses (Reports)				
Violent Crime				
01 Homicide	Patrons			
02	Employees			
03	Others			
04 Forcible Rape	Patrons			
05	Employees			
06	Others			
07 Robbery	Patrons			
08	Employees			
09	Others			
10 Aggravated Assault	Patrons			
11	Employees			
12	Others			
Property Crime				
13 Larceny/Theft	Patrons			
14	Employees			
15	Others			
16 Motor Vehicle Theft	Patrons			
17	Employees			
18	Others			
19 Burglary				
20 Arson				
Part II Offenses (Arrests)				
21 Other Assaults				
22 Vandalism				
23 Sex Offenses				
24 Drug Abuse Violations				
25 Driving Under the Influence				
26 Drunkenness				
27 Disorderly Conduct				
28 Trespassing				
29 Fare Evasion				
30 Curfew and Loitering Laws				
31 TOTAL TRANSIT PROPERTY DAMAGE	\$			

Date Prepared/Updated: 10/13/95 Report Year 1995

APPENDIX E

Sample Driver Inspection Forms

TRANS-161 LOS ANGELES COUNTY METROPOLITAN TRANSPORTATION AUTHORITY
 REV 11/91 **REQUEST FOR SERVICE INSPECTOR CHECK** NO.

DIV. _____ REQUEST DATE ____/____/____ DAYS OFF ____ ____ ____ BADGE _____

LINE	BR	ON	OFF	
_____	_____	_____	_____	REGULAR
_____	_____	_____	_____	EXTRA BOARD
_____	_____	_____	_____	PART-TIME OPERATOR

INSPECTOR TRIP NO. _____ INSPECTOR _____ DATE ____/____/____ LINE ____ BR ____ BUS ____

LOCATION ON _____ TIME _____

LOCATION OFF _____ TIME _____

SATISFACTORY SERVICE _____ RULE VIO. CODE NO. _____ DATE REPORT RETURNED ____/____/____

OTHER REMARKS _____

OPS-GEN-30 LOS ANGELES COUNTY METROPOLITAN TRANSPORTATION AUTHORITY
 REV. 8-93 **SERVICE INSPECTOR INITIAL REPORT**

No. _____

Inspector No. _____ Date _____, 19____

Line _____ Bus _____ BR _____ Badge No. _____ M/F

Location On: _____ Time On: _____ AM/PM

Location Off: _____ Time Off: _____ AM/PM

Violation Code No.: _____

Location: _____ Time: _____

Description: _____

Narrative to Follow: Yes No Satisfactory Service: Yes No
 White: Manager Canary: Operator Pink: Service Inspector

APPENDIX E (Continued)

QUALITY ASSURANCE REPORT

QA91
Rev: 8/17/93

REQUESTED RIDE YES ___ NO ___ WITH REG RIDE CHECK YES ___ NO ___
 EVALUATOR _____ DATE _____ LINE ___ BUS NO ___ BUS RUN NO. ___ BADGE NO. _____
 LOCATION ON _____ TIME _____ AM PM
 LOCATION OFF _____ TIME _____ AM PM
 BUS WAS: ON TIME ___ EARLY ___ LATE ___ UNKNOWN ___ IF EARLY OR LATE, HOW MANY MINUTES? ___
 EST. MAX. NUMBER OF SEATED PASSENGERS _____ EST. NUMBER OF STANDEES ___ LOCATION _____
 DIRECTION AT BOARDING LOCATION: N S E W

PLEASE ANSWER YES OR NO (OR N/A IF YOU DIDN'T OBSERVE)

BUS OPERATOR ITEMS	YES ___ NO ___ N/A ___	BUS CONDITION WAS SATISFACTORY FOR:	YES ___ NO ___ N/A ___
1 BADGE NO. WAS LEGIBLE	YES ___ NO ___ N/A ___	15 EXTERIOR CLEANLINESS	YES ___ NO ___ N/A ___
2 BADGE NO. WAS EMBROIDERED	YES ___ NO ___ N/A ___	16 GRAFFITI FREE EXTERIOR	YES ___ NO ___ N/A ___
3 WORE REGULATION UNIFORM	YES ___ NO ___ N/A ___	17 GRAFFITI FREE INTERIOR	YES ___ NO ___ N/A ___
4 DISPLAYED CORRECT TIMETABLES	YES ___ NO ___ N/A ___	18 MOPPED FLOORS	YES ___ NO ___ N/A ___
5 CALLED OUT MOST STOPS	YES ___ NO ___ N/A ___	19 CLEAN SEATS	YES ___ NO ___ N/A ___
6 CALLED OUT MOST CONNECTING LINES	YES ___ NO ___ N/A ___	20 UNMARRED SEATS	YES ___ NO ___ N/A ___
7 WAS COURTEOUS/HELPFUL	YES ___ NO ___ N/A ___	21 CLEAN WINDOWS	YES ___ NO ___ N/A ___
8 DROVE SAFELY	YES ___ NO ___ N/A ___	22 UNETCHED WINDOWS	YES ___ NO ___ N/A ___
9 DROVE SMOOTHLY	YES ___ NO ___ N/A ___	23 UNOPAQUE WINDOWS	YES ___ NO ___ N/A ___
10 DEMONSTRATED SKILL IN USE OF ACCESSIBLE LIFT EQUIPMENT	YES ___ NO ___ N/A ___	24 UNETCHED PANELS/DOORS	YES ___ NO ___ N/A ___
11 DISPLAYED DEFECT CARDS	YES ___ NO ___ N/A ___	25 CLEAN CEILING	YES ___ NO ___ N/A ___
12 TRASH BAGS AVAILABLE & OPEN	YES ___ NO ___ N/A ___	26 CLIMATE CONTROL	YES ___ NO ___ N/A ___
13 ENFORCED ON BOARD RULES	YES ___ NO ___ N/A ___	27 FUNCTIONING LIFT EQUIP	YES ___ NO ___ N/A ___
14 CURBED BUS PROPERLY	YES ___ NO ___ N/A ___	28 CLEAN ACCELERATION (NO SMOKE)	YES ___ NO ___ N/A ___
		29 INTERIOR PANELS SECURE	YES ___ NO ___ N/A ___
		30 EXTERIOR PANELS SECURE	YES ___ NO ___ N/A ___
		31 WINDOWS SECURE	YES ___ NO ___ N/A ___
		32 STEPWELLS CLEAN	YES ___ NO ___ N/A ___
		33 DIV NO. CURBSIDE WINDSHLD	YES ___ NO ___ N/A ___
		34 HEADSIGN/SIDESIGN CLEAN, EASY TO READ	YES ___ NO ___ N/A ___
		35 OVERALL MECHANICAL	YES ___ NO ___ N/A ___

THE TRANSPORTATION RESEARCH BOARD is a unit of the National Research Council, which serves the National Academy of Sciences and the National Academy of Engineering. It evolved in 1974 from the Highway Research Board, which was established in 1920. The TRB incorporates all former HRB activities and also performs additional functions under a broader scope involving all modes of transportation and the interactions of transportation with society. The Board's purpose is to stimulate research concerning the nature and performance of transportation systems, to disseminate information that the research produces, and to encourage the application of appropriate research findings. The Board's program is carried out by more than 270 committees, task forces, and panels composed of more than 3,300 administrators, engineers, social scientists, attorneys, educators, and others concerned with transportation; they serve without compensation. The program is supported by state transportation and highway departments, the modal administrations of the U.S. Department of Transportation, the Association of American Railroads, the National Highway Traffic Safety Administration, and other organizations and individuals interested in the development of transportation.

The National Academy of Sciences is a private, nonprofit, self-perpetuating society of distinguished scholars engaged in scientific and engineering research, dedicated to the furtherance of science and technology and to their use for the general welfare. Upon the authority of the charter granted to it by the Congress in 1863, the Academy has a mandate that requires it to advise the federal government on scientific and technical matters. Dr. Bruce Alberts is president of the National Academy of Sciences.

The National Academy of Engineering was established in 1964, under the charter of the National Academy of Sciences, as a parallel organization of outstanding engineers. It is autonomous in its administration and in the selection of its members, sharing with the National Academy of Sciences the responsibility for advising the federal government. The National Academy of Engineering also sponsors engineering programs aimed at meeting national needs, encourages education and research, and recognizes the superior achievements of engineers. Dr. Robert M. White is president of the National Academy of Engineering.

The Institute of Medicine was established in 1970 by the National Academy of Sciences to secure the services of eminent members of appropriate professions in the examination of policy matters pertaining to the health of the public. The Institute acts under the responsibility given to the National Academy of Sciences by its congressional charter to be an adviser to the federal government and, upon its own initiative, to identify issues of medical care, research, and education. Dr. Kenneth I. Shine is president of the Institute of Medicine.

The National Research Council was organized by the National Academy of Sciences in 1916 to associate the broad community of science and technology with the Academy's purposes of furthering knowledge and advising the federal government. Functioning in accordance with general policies determined by the Academy, the Council has become the principal operating agency of both the National Academy of Sciences and the National Academy of Engineering in providing services to the government, the public, and the scientific and engineering communities. The Council is administered jointly by both Academies and the Institute of Medicine. Dr. Bruce Alberts and Dr. Robert M. White are chairman and vice chairman, respectively, of the National Research Council.