



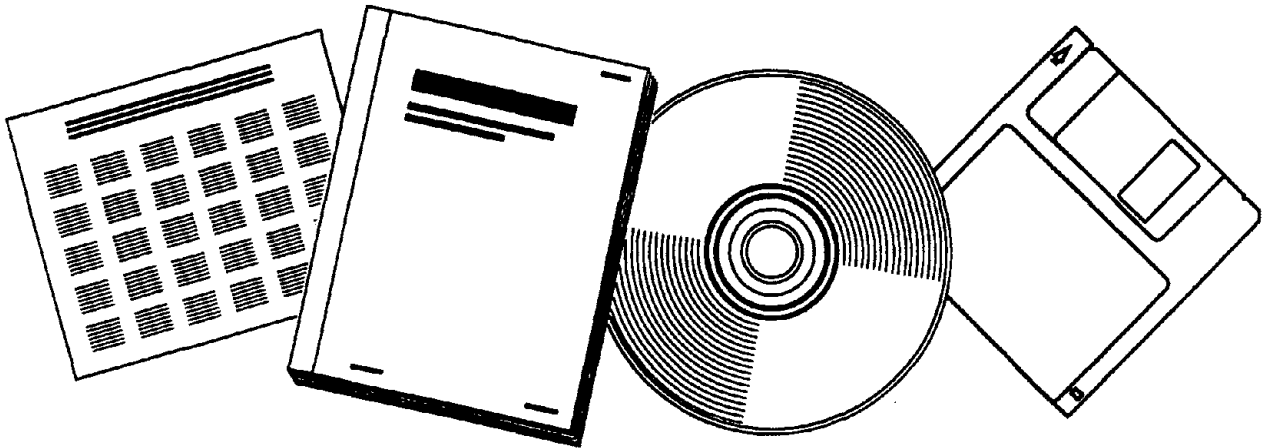
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TRANSIT SECURITY PROCEDURES GUIDE

KETRON DIVISION OF THE BIONETICS CORPORATION
MALVERN, PA

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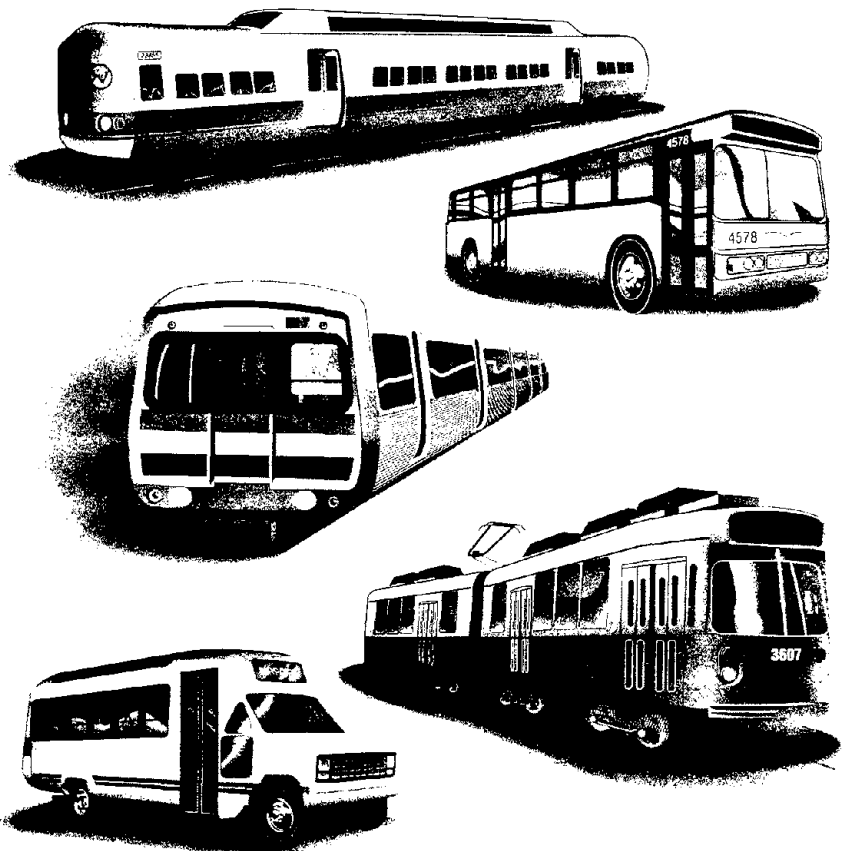


U. S. Department
of Transportation
**Federal Transit
Administration**

Transit Security Procedures Guide

U.S. Department of Transportation
Research and Special Programs Administration
John A. Volpe
National Transportation Systems Center
Cambridge MA 02142

December 1994
Final Report



FEDERAL TRANSIT ADMINISTRATION

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METRIC/ENGLISH CONVERSION FACTORS

ENGLISH TO METRIC

LENGTH (APPROXIMATE)

1 inch (in) = 2.5 centimeters (cm)
 1 foot (ft) = 30 centimeters (cm)
 1 yard (yd) = 0.9 meter (m)
 1 mile (mi) = 1.6 kilometers (km)

AREA (APPROXIMATE)

1 square inch (sq in, in²) = 6.5 square centimeters (cm²)
 1 square foot (sq ft, ft²) = 0.09 square meter (m²)
 1 square yard (sq yd, yd²) = 0.8 square meter (m²)
 1 square mile (sq mi, mi²) = 2.6 square kilometers (km²)
 1 acre = 0.4 hectares (he) = 4,000 square meters (m²)

MASS - WEIGHT (APPROXIMATE)

1 ounce (oz) = 28 grams (gr)
 1 pound (lb) = .45 kilogram (kg)
 1 short ton = 2,000 pounds (lb) = 0.9 tonne (t)

VOLUME (APPROXIMATE)

1 teaspoon (tsp) = 5 milliliters (ml)
 1 tablespoon (tbsp) = 15 milliliters (ml)
 1 fluid ounce (fl oz) = 30 milliliters (ml)
 1 cup (c) = 0.24 liter (l)
 1 pint (pt) = 0.47 liter (l)
 1 quart (qt) = 0.96 liter (l)
 1 gallon (gal) = 3.8 liters (l)
 1 cubic foot (cu ft, ft³) = 0.03 cubic meter (m³)
 1 cubic yard (cu yd, yd³) = 0.76 cubic meter (m³)

TEMPERATURE (EXACT)

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METRIC TO ENGLISH

LENGTH (APPROXIMATE)

1 millimeter (mm) = 0.04 inch (in)
 1 centimeter (cm) = 0.4 inch (in)
 1 meter (m) = 3.3 feet (ft)
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 1 kilometer (km) = 0.6 mile (mi)

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1 square centimeter (cm²) = 0.16 square inch (sq in, in²)
 1 square meter (m²) = 1.2 square yards (sq yd, yd²)
 1 square kilometer (km²) = 0.4 square mile (sq mi, mi²)
 1 hectare (he) = 10,000 square meters (m²) = 2.5 acres

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 1 tonne (t) = 1,000 kilograms (kg) = 1.1 short tons

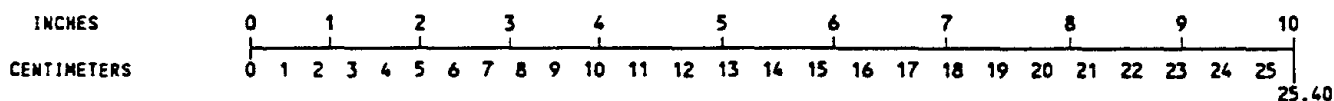
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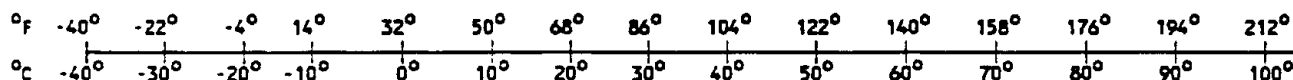
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For more exact and/or other conversion factors, see NBS Miscellaneous Publication 286, Units of Weights and Measures. Price \$2.50. SD Catalog No. C13 10286.

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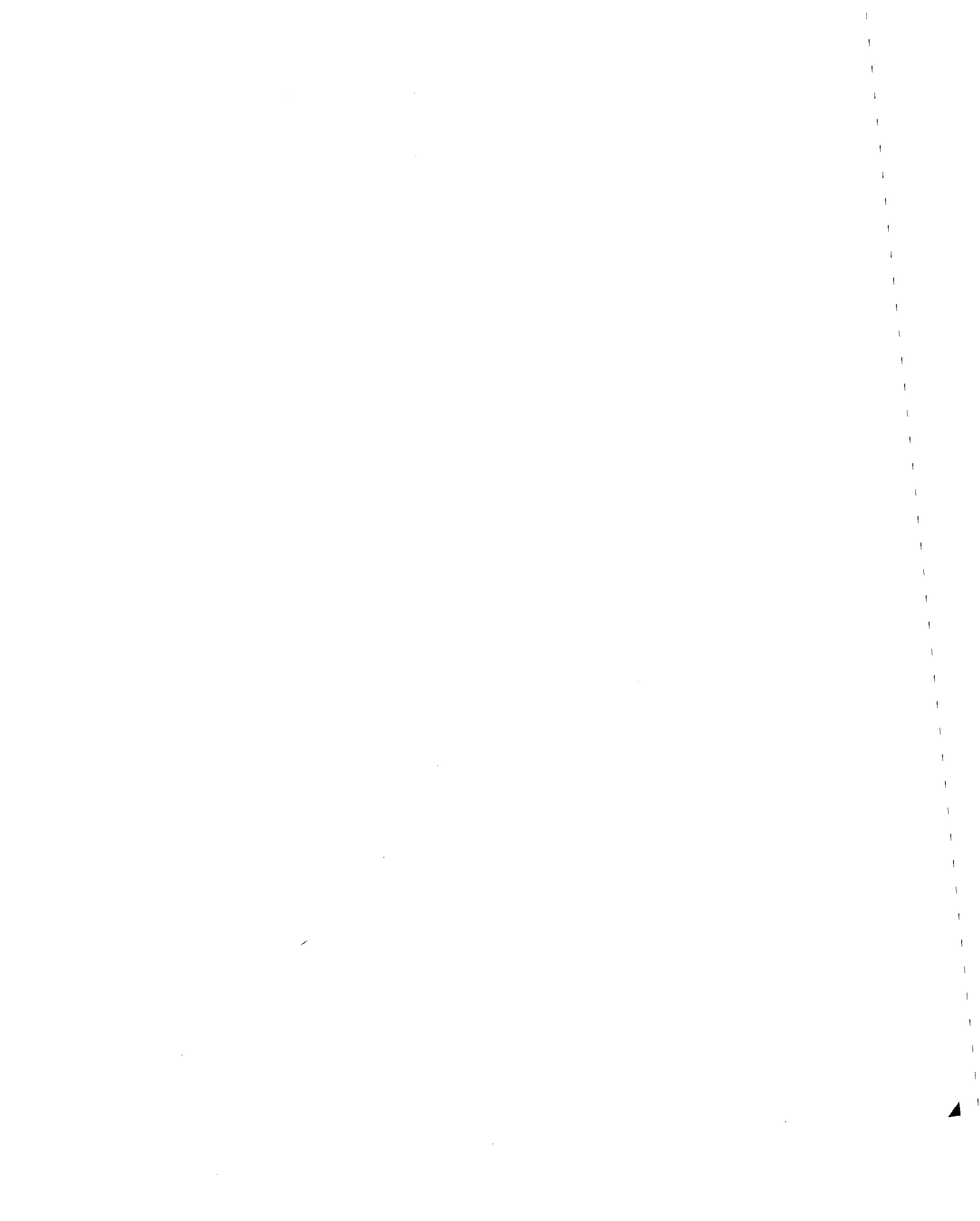




Table of Contents

Introduction..... 1

Section 1: Security Issues and Incidents

Chapter 1

Preventing Security Incidents 7

- Selecting an Approach to Policing Services..... 8
- Personnel..... 12
- Equipment..... 17
- Vehicles..... 19
- Qualifications and Training..... 21
- Deployment of Security Staff..... 23
- Coordination with Local Police Departments..... 26
- Perceived Security and Public Relations..... 29
- Ridership and Security..... 31
- Enhanced Perceived Security..... 33
- Visibility of Security Measures..... 35
- Community Relations..... 36
- Interior/Exterior Design, Architecture, and Hardware..... 39
- Planning for Physical Security..... 40
- Bus Stops..... 46
- Guideway/Track/Right-of-Way Design..... 47
- Stop and Station Location and Site Selection..... 48
- Exterior Design..... 49
- Features and Facilities..... 51
- On-Board Vehicle Security Equipment/Measures..... 55

Chapter 2

Security Issues..... 59

- Immediate Response..... 60
- Communication/Responsibilities..... 67
- Incident Follow-Up..... 71
- Reporting..... 75
- System Refinement..... 79

Table of Contents

(continued)

Section 2: Security Problems

Security Problems.....	83
Summary Tables.....	86

Chapter 3

General Security Issues 89

Drunkness.....	90
Disorderly Conduct.....	96
Crowd Control.....	99
Drug Law Violations.....	107
Minor Sex Offenses.....	113
Solicitation.....	117
Homelessness.....	120
Miscellaneous Misdemeanors/Nuisances.....	124

Chapter 4

Crimes Against Passengers..... 129

Theft.....	129
Physical Assault.....	132
Sexual Assault.....	135

Chapter 5

Crimes Against The Transit System 137

Fare Evasion and Fare Theft.....	138
Suicide Attempts.....	145
Vandalism.....	151
Trespassing and Physical Security Intrusions.....	158
Theft, Burglary, and Robbery.....	165
Attacks on Personnel.....	172

Chapter 6

Crimes Against The Public: Critical Incidents/Acts of Terrorism..... 179

Hostages.....	180
Hijacking.....	183
Bomb Threats.....	185

List of Figures

Figure

1	Seven Steps to Planning Security Procedures.....	40
2	Sample Incident Form.....	63
3	Sample Incident Information Form.....	67

List of Tables

Table

1	Selecting an Approach to Policing Service	8
2	Types of Alarms	54
3	Summary Table Format.....	86
4	Assessing the Affect of Drunkenness.....	95
5	Assessing the Affect of Disorderly Conduct	98
6	Assessing Crowd Control	105
7	Assessing Drug Law Violations	112
8	Assessing Sex Offenses.....	116
9	Assessing Solicitation	119
10	Assessing Homelessness	123
11	Assessing Misdemeanors, Nuisances, Local Ordinances, and Rule Violations.....	128
12	Assessing Theft.....	131
13	Assessing Physical Assault.....	134
14	Assessing Sexual Assault	136
15	Assessing Fare Evasion and Fare Theft	143
16	Assessing Suicide Attempts	150
17	Assessing Vandalism.....	157
18	Assessing Trespassing and Physical Security Intrusions.....	163
19	Assessing Theft, Burglary, and Robbery.....	171
20	Assessing Attacks on Personnel	177
21	Assessing Hostage Situations.....	182
22	Assessing Hijacking	184
23	Assessing Bomb Threats	188

Introduction

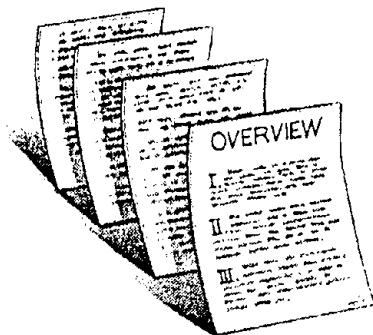


Introduction

Security — An Integral Part of the Transit System

Security is an integral part of the service provided by the transit system. This involves the security of passengers — which has an impact on the system's ridership and revenue — personnel, facilities, and equipment.

About This Guide



This Guide is a compilation of materials for planning and improving transit security. The formation can be used by transit system planners, security personnel, and managers in developing plans, procedures and capital programs. Transit systems are encouraged to take a proactive, prevention-oriented systems approach to transit security.

The concept of system security involves a planned, disciplined, systematically organized, before-the-fact process of identifying, assessing, and resolving/minimizing the potential security threats and areas of vulnerability with respect to a system's personnel, procedures, facility, and equipment. This is in contrast to the after-the-fact investigations of incidents or problems where possible system modifications to operations are implemented too late.

The Guide has been divided into the following sections and chapters:

Section I	Security Incidents and Issues
	Chapter 1 Preventing Security Incidents
	Chapter 2 Security Issues
Section II	Security Problems
	Chapter 3 General Security Issues
	Chapter 4 Crimes Against Passengers
	Chapter 5 Crimes Against the Transit System
	Chapter 6 Crimes Against the Public: Critical Incidents/Acts of Terrorism

Note: When referring to police entities, the terms *forces, authorities, and law enforcement agencies* are often used interchangeably throughout this Guide.

About the Systems Approach

The systems approach involves examining all aspects of the transit system and evaluating potential security risks. It involves planning for security in advance *of an incident*, rather than reacting *to an incident*. This approach has several advantages.

- It allows you to examine how all the aspects of the system interact to affect security, including personnel, procedures, equipment, communication, and passengers. No single area could be so well refined as to completely preclude a particular breach in security.
- Security risks and the measures needed to mitigate them can be identified before there is an actual security problem. Preventative measures can reduce dangers, problems, and resulting costs.
- Security measures can often be implemented in a more cost effective manner in the planning stages.

Planning and anticipating security risks can prevent a number of incidents and reduce the consequences of those that do occur. Reacting to a security breach is costly. For example, if fares are stolen, revenue is lost. Without observation cameras, alarms, and security procedures, there may not be a means for locating the perpetrator at all.

A breach in security can also have an affect on the morale of employees who will feel more at risk. In addition, there can be a negative affect on the perceptions of passengers who feel that they are not adequately protected. These negatives can be reduced if there are countermeasures already in place. They can include:

- observing incidents to aid in identifying the perpetrator
- raising an alarm for when the perpetrator leaves a vehicle or facility
- keeping some of the fares in inaccessible safes
- having procedures in place for apprehending an offender

Security Planning

Security planning involves

- identifying possible areas of security threats
- assessing the magnitude of the threats and the vulnerabilities of the system
- planning for the resolution of the threat

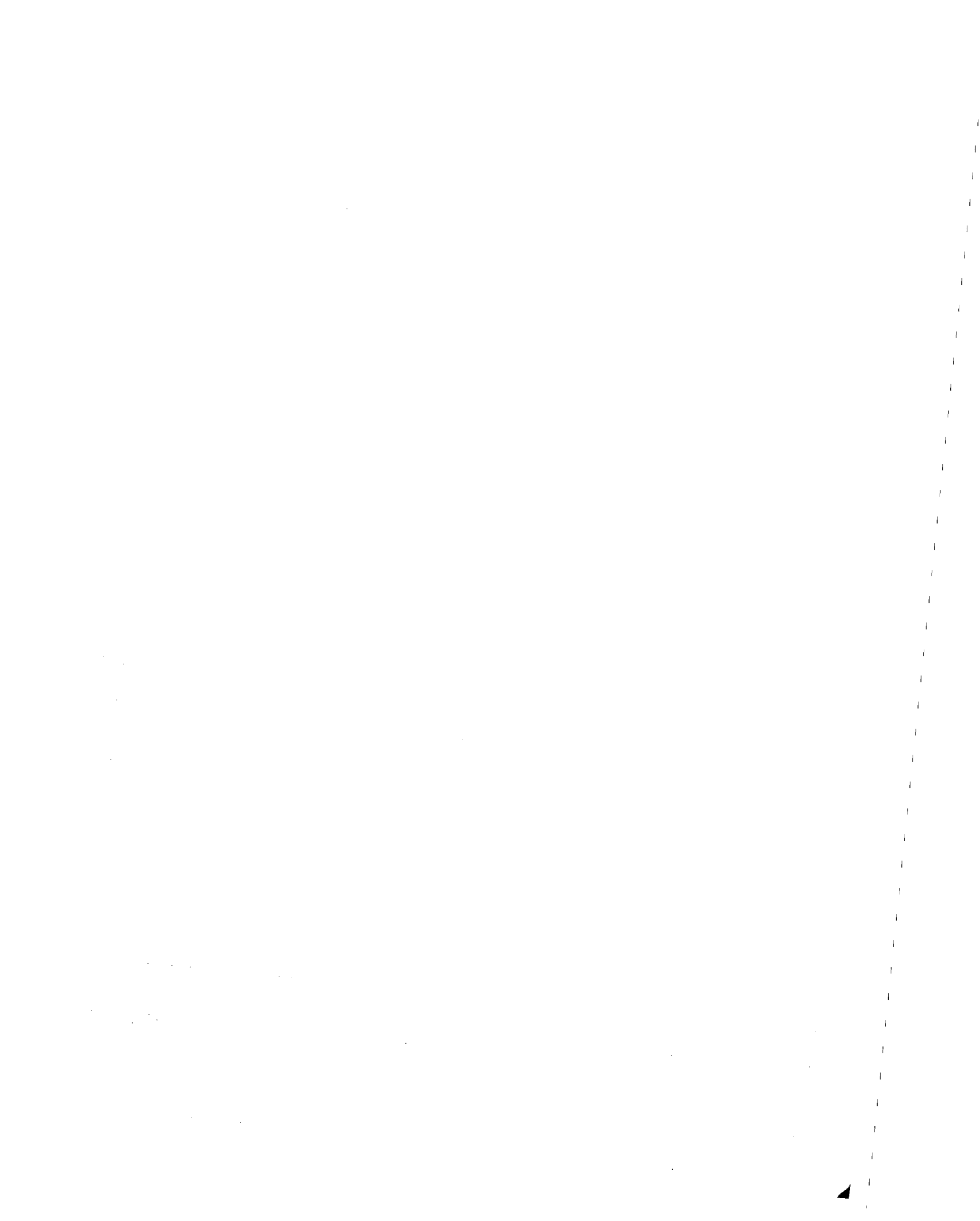
- following up with evaluation of procedures, plans and policies to address any errors and implement necessary changes

The entire process is described in a plan prepared by the transit system so that its employees and the community understand what security activities are being utilized. The development of the plan itself is described in detail in a companion publication entitled "Transit Security System Security Program Planning Guide." This Guide briefly summarizes the development, implementation, and maintenance of the Security Plan. A System Security Program Plan should

- be developed to create a detailed security program for the transit system
- state the objective of the security program and identify the key personnel who are responsible for achieving those objectives
- clearly outline and discuss the process the system has identified to implement security, the roles and responsibilities of the staff, and the specific procedures and policies for carrying out their security roles
- reflect the size and complexity of the system
- reflect the degree to which the security of the system is threatened by internal and external forces
- leave room for judgment on the part of the staff and provide guidance in addition to regulations where possible
- be kept simple enough to be understood and carried out by the staff
- be widely distributed and relevant sections read by all employees
- form the basis for security instruction for all new employees and for annual refresher training



Section 1 Security Issues and Incidents



Chapter 1 Preventing Security Incidents



Chapter 1

Preventing Security Incidents

About This Chapter

This chapter discusses the concerns of the transit system and alternatives in security with regard to staffing. Details on the considerations necessary for a complete staff of security officers are given, as well as a discussion of the roles of personnel whose primary function is other than security. This includes drivers, clerks, and other staff who play a vital role. This chapter concludes with a discussion of coordinating with local police departments. This is an extremely important element of all security programs, regardless of the size or makeup of the system.

This chapter does not attempt to determine what type or level of staffing is best for all transit systems; it merely outlines the alternatives. The "security department" referred to throughout may be a staff of several thousand transit police and support staff. Or it may be a single security, safety, and training "officer," depending upon the needs of the system.

Selecting an Approach to Policing Services

Selecting the appropriate approach is dependent on the size of the transit system, the number of political jurisdictions in the service area, and the need for the policing forces to have full police powers (such as making arrests, issuing citations) as shown in the table that follows.

Table 1. Selecting an Approach to Policing Service

Characteristics	Local Police	Local Police Transit Units	Contracted Police Services	Transit Police
Transit System Size	Small	Large	Large	Very Large
Jurisdictions	One	One	Multiple	Multiple
Full Police Powers Required	Yes	Yes	No	Yes

Many transit systems rely on a combination of these sources. A large multimodal system, for example, might patrol subways with transit police and rely on local police for responding to incidents on buses. Alternatively, they may use special transit units within local police departments to patrol buses as plain-clothes teams, and contract security service from a local security company for the patrol of maintenance and storage facilities. In contrast, smaller rural systems may have to rely entirely on the state police in a response only mode.

Local Police

All transit systems rely on local police departments to some extent. Smaller transit systems may rely exclusively on local forces. This arrangement is entirely appropriate if the security needs of the transit system are being met. Reliance on local police may be the best arrangement if the jurisdiction of the local law enforcement agency includes all or most of the transit service area. Communications can be organized to provide effective responses. Complete information from incident reports and transit crime statistics can also be provided to the system.

The system calls the police to respond to serious violations. Minor security incidents are handled by in-house security staff (or an operations supervisor), who can perform other operational functions such as assisting passengers. Formal arrangements with local law enforcement agencies are not always made by small transit systems.

If the system relies on the local police, its security department would be primarily administrative and operational. The system may employ staff to identify problem spots to keep the local authorities informed. While the system might employ additional patrol guards, the rest of the in-house security staff will commonly be supervisors, station attendants, and spotters to provide additional support. The tasks of in-house security staff might also include

- locking up
- inspecting facilities
- reporting incidents
- providing a human presence

Local police departments can provide an officer during fixed hours at specific problem sites. If the system operates in one police jurisdiction or more than one jurisdiction, arrangements must be made to establish a precise means to ensure police support and response as quickly as possible. Investigate the local standards regarding jurisdictions. Even systems operating in only a few jurisdictions may at some point discover the difficulties of determining in which jurisdiction an incident is occurring.

Some systems have attempted to enhance the perceived presence of uniformed officers by offering them free transit trips. It is intended that police officers will opt to ride transit vehicles whenever they are traveling in the city. Even off-duty officers can provide a deterrent by their mere presence.

Local Police Special Transit Units

Some systems rely on a special division of the local police department that is assigned to provide transit policing services. The system can work out arrangements with the local authorities for the qualifications that are required for the transit unit staff. Typically the special transit team is a respectable and elite assignment. The system may provide a great deal of orientation to these officers and even involve them in driver training to help them understand exactly what the vehicle operator experiences and how the logistics of transit operations are conducted.

Similar to reliance on local police, special transit units often do not provide services which satisfy all of the transit system's security needs. Other security staff may guard facilities at night, guard revenue transfers, and perform administrative functions.

This type of arrangement represents a compromise between a dedicated transit police force and complete reliance on a local police department that provides service to a large area. The special unit has complete familiarity with the transit system and on-going security problems but can draw on the same support resources as the local forces. The complications of transit security coordination with local forces are prevented because the officers are working through local authorities. Additional manpower can be brought in as needed, drawing from the rest of the local law enforcement agency.

Contracted Police Services

In order to establish a greater degree of control than is possible when relying on local services and to avoid the difficulties of administering a full staff, some systems contract for security services. By hiring the services of a set number of officers from a single firm or police force, the system can detail the exact requirements of the services. Staff can easily be transferred in and out of service to ensure a fully capable force. In some cases, the system and security company can jointly establish a pool of individuals from which to draw.

The security forces generally report to one person in the system, although it is possible to contract out for both the staff and management. An individual or office within the transit system, however, will have to monitor the performance of the contractor and provide guidance. Security officers contracted from private firms will not have full police powers. As security guards they may make citizen's arrests, detain individuals, and provide a uniformed presence and a rapid response. But they cannot make police arrests or issue citations.

If local police agree, it is possible to contract for service with the local police force. Some systems have found that this approach ensures a faster response than strictly relying on local services or contracting with a private security firm.

Off-duty officers can also supplement the transit system security force. Arrangements may be made with individual officers or through the local authorities. The system must recognize however, that rules limiting the number of hours worked per day or per week must be established to ensure an alert police staff. A system spanning many jurisdictions may be precluded from contracting with local police since the contract for services could be limited in application to the jurisdiction which employs the police officer.

Transit Police

Transit systems with dedicated transit police forces indicate that full police powers are necessary for the security staff to be effective. Although security guards can deter less serious crimes, police with full powers are often needed to deter and respond to more violent crimes. In communities where transit crime is often violent, police power can do much to enhance the effectiveness of the force.

An in-house force of transit police can allow the system to rely less heavily on local forces but cannot eliminate the need for cooperation. Reporting functions need to be shared, and local forces must provide backup for the transit police. Often the local forces are more widely distributed, and in some cases will be able to respond faster. Furthermore, local police facilities are generally relied upon for booking and holding functions.

Since it is always necessary to rely on and cooperate with the local police at some level, it is extremely important that the transit security staff command the respect of local authorities. In the case of a transit police force, it may even be required that the local force approve the transit police

force before full police powers can be granted on a permanent basis. This is commonly achieved by setting high training and employment standards. It is often convenient to use the standards employed by local police authorities, including the training sites and local academies. Respect for the experience and capabilities of the transit police is also greatly enhanced by drawing staff from the local force, especially to serve as top officials in the transit force. Salary rates are also often based on the rates paid to local officers.

A dedicated transit police force is appropriate when the transit system serves many jurisdictions. The complexity of coordinating services for each jurisdiction can be greatly reduced through a staff with full police powers that is responsible throughout the many locations the system serves.

Personnel

Sworn Police Officers

Sworn police officers have full police powers and have the authority to make arrests. They may include local police personnel, special transit units of local forces, or transit police that serve as patrol officers, detectives, undercover agents, or administrative officers. Sworn officers that have the most training and versatile powers are expensive and should be carefully deployed, but their utilization may be indispensable.

Security Officers

Security officers do not have full police powers and cannot make police arrests, but they can be armed. Security guards provide an armed, uniformed presence to deter crime. They can

- respond to all calls
- enforce most rules
- interrupt crimes in progress
- make citizen's arrests

Local police will have to be called for more serious incidents. In some systems, security guards are used to complement sworn officers to guard revenue and property. Security guards may be present at all revenue transfers and may patrol non-public areas and facilities.

Patrol Guards

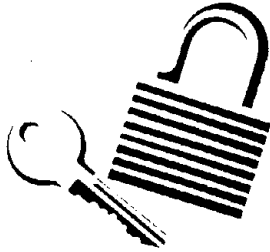
Patrol guards are not used to respond to incidents personally but to deter incidents and guard property and facilities. They are usually in uniform and provide a security presence, which can be a deterrent.

Administration/Management Staff

Administration/management staff can best assure an effective security program by formally providing its full commitment and support. It must also focus on obtaining adequate funding to support security efforts and establish initial communication with local police authorities. System management selects the leaders of the security program. The security program itself can be organized in a number of different ways, depending primarily on the size. There must be a single person clearly designated as the lead security officer, whether that be the Program Manager; Director of Safety, Security, and Training; Assistant Manager; or the Chief of Transit Police.

There is also some benefit to staffing the administration of a transit police department with civilians, thereby freeing officers for security operations.

Locksmiths



A locksmith may be employed full time at larger systems or may be selected to work on an on-going basis at smaller systems. Locksmiths will help repair damage caused by break-ins and can immediately replace locks if it is determined that a theft was committed by someone who had a key to a particular facility. The locksmith should work with security planning and facilities staff to arrange varied levels of access. It is often wise to change locks and redistribute keys if there have been significant turnovers in staff.

Inspectors

Inspectors may be employed full time or contracted from a security or consulting firm. The inspection function may be assigned to inspect facilities and vehicles for security effectiveness, signs of break-ins, damage to security equipment, functioning of security equipment, condition of locks, and other features essential to security. Inspectors may also determine that routinely required security procedures are being completed properly, that equipment is properly secured, and that staff understands and can execute other required security-related procedures. A part of this function may also include taking regular inventories of parts and other equipment.

Supervisors

Supervisors may perform the majority of security-related response activities. They may patrol terminals, ride buses, and even perform minor plain-clothed operations by riding with operators on problem runs. Like the dispatcher, the supervisor wields the authority to authorize the vehicle operator to interrupt operations in response to an incident.

Supervisors may typically settle arguments between operators and passengers, ask unruly passengers to leave the vehicle, or detain passengers until local police can respond. The involvement of supervisors in security response will be determined by the degree of violence experienced in the system's service area and the nature of the specific problem. In more serious matters, the supervisor may need to be present to gather facts, provide reassurance and direction to the vehicle operator, assist local officers as requested, and make decisions regarding the continuance of operations.

Citation Issuers

Although only sworn officers have full police powers, certain persons (security guards or other responsible staff) may be authorized to issue citations for fare evasion or transit-related local ordinance violations. Portable electronic devices are available to assist with this function. This function may be combined with other related assignments, depending on local regulations.

Spotters

Spotters are employed or contracted to observe the work of employees. They may ride a vehicle in plain clothes and observe the operator. Because the confidentiality of their identity is essential, spotters may be severely limited in effectiveness if they are permanent transit system employees.

Sales and Information Personnel

The primary security-related function of fare sales clerks is to account for all fares and revenues. This requires strict accounting of receipts against tickets and tokens by sales supervisors. Where token sales staff work in shifts, a method of the first clerk taking inventory of tokens and cash and both clerks signing off at shift change over can increase the accountability of each. It should also be a responsibility of all sales and information personnel to know how to respond if they observe a security-related incident or if a patron approaches them with a security problem.

Station/Terminal Attendants

Attendants at transit facilities have a variety of tasks that provide them with the opportunity to conduct security-related functions. In addition to any other operational functions, these can include

- observing closed circuit television (CCTV) monitors
- watching fare gates and turnstiles
- inspecting facilities for signs of security problems
- patrolling the facility
- making announcements regarding operations, safety, and transit rules
- opening and closing facilities
- completing reports on all security-related incidents
- recording check-ins by security and facility maintenance personnel
- requesting security assistance

Maintenance and Custodial Staff

Maintenance and custodial staff keep facilities and vehicles in good repair to provide a pleasant atmosphere. They may be expected to identify, report and correct all intentional damage, as well as report any observations regarding trends, potential for security breaches, and suggestions for improvements in security. The efficiency and safety of mobile staff can be increased through the use of radios and check-in procedures.

Vehicle Cleaners

Many transit systems have employees who are responsible for fueling and washing vehicles daily. This staff can significantly increase the system's security by inspecting each bus for signs of vandalism each day and reporting it to the security department. They may either remedy the problem immediately (by cleaning, for example) or report the damage to a vehicle supervisor who may assign maintenance staff to correct the damage, issue a repair order, and/or remove the vehicle from service.

Dispatchers

Dispatchers in transit systems are primarily responsible for communication. When a dispatcher receives a call regarding a security incident, whether it is witnessed, in-progress, discovered after the fact, or suspected, the dispatcher must know whom to contact. Eventually, the dispatcher may need to contact many different persons including: transit security, local police, fire and rescue, a supervisor, administration, maintenance and other departments, and other operations staff. Proper training and judgment regarding when, how, and whom to contact — and in what order — greatly enhances their effectiveness.

They may also need to communicate with other dispatchers. Transit systems often have specialized dispatchers separately handling paratransit operations, fixed-route operations, rail operations, transit police or security staff, power, and maintenance from the same central command facility. In a large transit system, a serious incident will rarely involve only one department.

Radio dispatchers must also be able to work with drivers to defuse a worsening security incident that is in progress. Reinforcing the transit rules over a radio or loudspeaker can often provide on-site staff with sufficient support to relieve a situation. The ability of the dispatcher to effectively make operations decisions is also necessary, whether it be to authorize the driver to stop the vehicle or to dispatch another vehicle to the scene to continue the route after a serious incident.

Vehicle Operators

Operators on the road are the first line of defense. It is up to them to

- enforce transit rules
- respond to complaints
- defuse arguments
- decide when to call for backup
- maintain control of the vehicle
- report all incidents

They must be familiar with how to handle the most common security situations. Furthermore, they must be given adequate support if they are to undertake the risk of policing the vehicle. It must be clear to them that the system will be ready to support their decisions and quickly respond if needed. Completing reports and other such responsibilities are more often undertaken voluntarily when operators are appropriately compensated for any additional time and provided with operational assistance as needed.

Equipment

Firearms

Most large transit systems with dedicated transit police issue handguns to officers. The decision depends upon the level of violent crime in the community and the powers afforded to the security staff. The training required should be significant. Transit systems that have experimented with concealed weapons attest to the value of clearly armed officers as a deterrent. The gauge and power of the firearms will depend upon the stopping power needed, funds, and local expectations. Shot guns are available to some transit police, but they are rarely issued or used.

Chemical Mace

Chemicals such as mace are commonly issued and may be appropriate for security staff without police powers. Mace has the ability to subdue assailants without causing permanent damage. A system may consider issuing mace to vehicle operators.

Handcuffs

Handcuffs are standard equipment for officers with police powers. They are used for detaining criminals and reducing risk during the transport of suspects.

Batons/Billy Clubs

Clubs are employed by officers for subduing violent assailants at close range and batons carry some value as a deterrent. The variety of uses for the baton are communicated to officers through special training.

Radios

The ability of an officer to communicate throughout the whole system provides some deterrence and increases the officer's morale and effectiveness. Radios provide communications capabilities for officers on patrol and are essential to effective response. The effectiveness of the radio, however, can be severely limited by "dead spots" in the coverage area. When underground or inside transit facilities, special measures are necessary to ensure full coverage. It is useful to provide security personnel with a separate channel from transit operations, especially if the security staff will conduct internal investigations. Officers rely on radios to summon backup, but the reception amplification must be controlled.

Infra-Red Goggles

Infra-red goggles can be purchased to enable officers to see in dimly lit or dark surroundings. Officers using these goggles in large rail systems report that their effectiveness is highly reassuring when entering darkened tunnels.

Bullet-Resistant Vests

The effectiveness of vests varies and significant differences among products do exist. Few transit systems issue vests as standard equipment but have them available as needed. The need for vests must also be based on the nature and frequency of violence.

Badges

Badges may be issued to all security staff, including security guards. The badge helps to identify staff and solicits cooperation. The pride associated with a badge maintains the morale and professionalism of the security staff.

Helmets

Helmets may be issued either for motorcycle or bicycle patrols or as disorder gear.

Keys

It is helpful to issue to transit police or security forces sets of master keys that allow them access to patrol the entire facilities for which they are responsible. This is especially helpful if they are expected to respond to alarms and calls for assistance from barricaded/locked areas. Security staff need not be provided keys to the entire system if their range is limited. It is helpful if similar lock cylinders are used to promote the use of master keys. Also, a large ring of keys is somewhat unwieldy and officers are already burdened by other equipment.

Disorder Gear

Riot outfits, including armor, shields, helmets, gas masks, and megaphones are not generally necessary for transit police, although select equipment may be helpful for non-riot purposes. Megaphones, portable barricades, and public address systems may be of some assistance in normal crowd control activities.

Vehicles

Patrol Cars

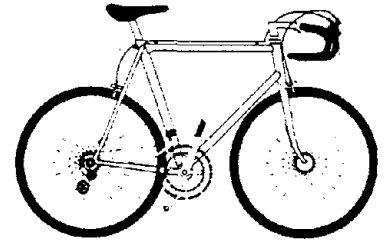
Patrol cars are often used to monitor surface operations, transport arrest persons, and deploy officers to remote areas. The cars are often unable to transport officers to the scene of a subway incident more quickly than the subway vehicles themselves, except when headways between trains are great or service has been suspended. Patrol cars allow officers to carry additional equipment and supplies and may provide more powerful radios than an individual could carry. Patrol cars may be marked or unmarked, although marked cars may be more useful for patrolling parking lots.

Motorcycles

Although motorcycles require a separate vehicle for each officer, they may transport officers to a site more rapidly than a patrol car. However, weather, shift lengths, and urban traffic may affect the officer's comfort and safety.

Bicycles

Bicycles allow interaction between officers and the public and allow officers attempting to reach a particular site greater access via shortcuts. Bicycles may also be transported on transit vehicles. Due to the limited speed and range of bikes, however, their effective use may be limited to large outdoor transit facilities or densely routed areas experiencing frequent security problems.



Transit Vehicles

Most officers patrolling rail systems will rely on transit vehicles for transport because it is useful to patrol the trains and the facilities at which they stop. By design, rail transport should be faster between points than any other mode. The ability of security staff to respond, however, depends on the headways of the system. Many systems expect that surface patrols or local police should also respond to rail incidents if they can reach the site faster. Decreased frequency of trips can require greater saturation by forces. Security staff ride buses also, but it should be recognized that the response ability of security staff on board buses is extremely limited.

Buses travel the public ways and are, therefore, exposed to the myriad of external forces more so than rail, which is a closed environment. Also, back-up officers must often travel on congested city streets in order to arrive on the scene with assistance.

Foot Patrols

Patrols are entirely appropriate for guards assigned to a single facility, particularly if the facility is large. Patrolling yards and offices and guarding revenue transfers requires only initial transport to the site, for which public transit is probably available.

Qualifications and Training

Whether transit security is contracted or consists of a dedicated transit police force, stringent qualifications to be an officer can ensure a highly capable force. If security manpower is contracted from another organization, that organization will likely have its own minimum qualifications. The system may, however, impose additional requirements for those to be used in transit security by specifying these requirements in the contract.

In-House Security Force

The qualification requirements of an in-house security force will depend on whether the staff consists of guards, security officers, or transit police. The most stringent requirements will apply to dedicated transit police. Since the largest pool of applicants is often the local law enforcement agencies, it is common to set minimum requirements at least equal to those of the largest local police forces. This ensures that the caliber of the new law enforcement personnel at least meets the standard of the existing operation and helps to establish the respect needed from local forces. It can be beneficial to set standards even higher than those of local forces. Indeed, transit security are often considered elite forces.

Qualifications

Basic qualifications may be established in any of the following areas:

- age preference minimum/maximum
- height and weight (proportional)
- interviews with security, personnel
- physical agility and dexterity
- physical fitness
- previous police/security experience of 1-5 years
- previous transit experience
- psychological character issues
- recommendations
- record and background checks
- general knowledge or aptitude

On-going Training

On-going training can increase the effectiveness of the security staff and provide an opportunity for the transit system to fine-tune the skills of the force to meet specific requirements. Such on-going training can include the following:

- operations
- special weapons
- new procedure orientation
- handling the homeless
- public relations and assistance
- sensitivity training for assisting victims
- inter-jurisdictional coordination

Security Training

Security training should not be limited to the specific security staff. All operations staff perform security-related functions and their effective response and daily security functions can be reinforced with refresher training and special courses. Other training can be aimed to protect transit personnel: for example, rape prevention training.

Deployment of Security Staff

Deployment of security staff can be divided into plain-clothed and uniformed, and the proportion of personnel assigned to these two very different approaches must be decided by senior management. Very often this determination is both strategic and political. Uniformed and plain-clothed officers represent two different approaches to enforcement and both have certain advantages. Some combination of these approaches is often most effective.

Uniformed Officers

Deterrence is one of the most positive values of a uniformed security force. As uniformed officers point out, crimes are not committed in front of them. This is one of the major arguments for and against a uniformed force. Uniformed officers may be favored because the presence of the security force is obvious to the riding public. While the presence of officers will prevent most transit crimes, a planned crime will simply take place when those uniformed officers are not present. The recognizability of uniformed officers provides higher deterrence, but sometimes provides reduced detection of crimes in progress.

Plain-Clothed Officers

Plain-clothed forces frequently have a reputation for generating higher arrest rates than their uniformed counterparts. They can be highly effective in responding to a specific and recurring problem at specific sites, especially if the problem is repeatedly caused by the same perpetrators. Stake-outs can allow decoy patrols to wait and observe a crime in progress in order to intervene and make arrests. After some arrests have been made, the general knowledge that plain-clothed officers are active (without the specific knowledge of who they are or when they are operating where) can be a deterrent to habitual transit criminals.

Assigning Officers

Staff may be assigned to random patrols, regular patrols, a fixed post or a riding post. They may cover a combination of buses, trains, stations, and transit facilities. Staff may be on foot patrol or be assigned to a vehicle. They may be deployed to cover a broad area, a specific and small area, or saturate an area. Their task may be general or specific to certain sites or problems. Regardless of the assignment, however, all officers should be available as needed. Coordination should be handled through a single dispatcher.

Security officers face the same dangers as the riding public and transit employees. Teams of two are common. Serious consideration should be given to assigning officers to single patrols. Systems using single-officer patrols often report low morale and limited effectiveness. It is

difficult to radio for assistance while pursuing or attempting to subdue a suspect. Single patrols may be considered for locales where the level of danger is determined to be very low. It is sometimes possible to increase coverage and decrease costs by pairing patrol officers with canine forces. Trained dogs have exhibited highly effective complimentary skills, and they are less costly than a second officer. Surface patrols, on the other hand, often require three or four officers to a team: two or three in plain-clothes riding on a bus, and one tailing in a patrol car.

Distinguishing Among Areas of Deployment

There are two distinct areas of deployment:

1. patrol of non-public transit facilities
2. patrol of public areas of transit facilities
 - . surface patrols
 - . underground patrols

Patrol of Non-Public Transit Facilities

This can include security guards posted at entrances to office facilities, guards that patrol yards at night, or surface officers assigned to patrol cars that check transit facilities regularly during a shift. Because these assignments tend to protect property more than persons and involve little public interaction, they are sometimes filled with contracted security guards that are less expensive than dedicated transit police.

Patrol of Public Areas of Transit Facilities

The range of a patrol assignment has to be carefully considered to cover all areas needing coverage. Each patrol unit should be able to reach any point within the assigned area in a reasonably short period of time. Underground patrols, for example, may include both trains and stations, but may be limited to perhaps only three stations. Even with this limited area, it can take an officer up to 15 minutes to reach an incident, depending on headways, so it is essential that surface patrols in cars also have the capability of responding.

Plain-clothed officers may be assigned to random patrols, but more often are assigned to a specific site to address a specific problem. They may work in teams from two to five officers or more. They may pose as vendors, passengers, or homeless persons awaiting an expected attack or watching an area of generally high crime. Plain-clothes officers don't always need an elaborate cover. Those assigned to a fare evasion sweep may simply wear any non-uniform clothes to arrest or cite an evader who passes the turnstile gates. Special response assignments can also involve uniformed officers if they are assigned to a post where they can observe from out of sight.

To respond to specific problem areas, security forces may conduct a "sweep" of an area, where the area is saturated with plain-clothed and uniformed officers and where many arrests and

citations are made for transit crime of all types and levels. The effect of these sweeps has been known to last many weeks.

Sudden surges in crime levels often require officers to work additional hours. Many systems find it useful to maintain agreements whereby additional officers may be temporarily drawn into transit service from a pool of other officers, whether from local police forces or a private security firm. Most officers are familiar with the frequent need for overtime service, but excessive overtime hampers performance and morale. Some systems find that assigning officers to four-days-on, three-days-off schedules help counter these effects.

By far, the most important element of deployment is the availability and use of accurate and up-to-date information on security incidents, which can often minimize the time and effort spent in trying to resolve incidents. Handling problems from a "lesson-learned" vantage is key to preventative/proactive policing. The deployment of officers must be extremely flexible so that staff may be deployed to wherever the most recent problems are occurring. After prevention, "nipping problems in the bud" is the most effective a security force can be.

Coordination with Local Police Departments

What the Coordination Includes

Coordination with local police departments includes

- sharing information
- agreeing on roles, responsibilities, and jurisdiction
- setting up communications
- cooperating during training exercises, and operations
- sharing security resources (equipment, vehicles, facilities, and computer information)

The coordination agreements established between the transit system and the local police department will depend on the level of responsibility for security that the transit system assumes for itself, its ability to exercise internal security, and the authority granted by the local jurisdiction. Each must examine its individual circumstances and then come to an agreement with the local police on a security cooperation policy.

Need for Coordinated Response

The local police force and the security department of the transit system must work as a team to prepare for and respond to security incidents. There are opportunities to cooperate in sharing information by setting up lines of communication, participating in joint training, and holding joint planning sessions. Despite sharing a common cause, they play different roles in the security process. These differences need to be understood and appreciated by both sides if they are to work together effectively.

Information Exchange

The most obvious information for the system to share with local police is incident reports. These will help the police keep track of the level of crime occurring throughout their jurisdiction. In general, local police will have more information on local crime that may impact the system than the system has collected itself. A process should be established for information to be shared routinely so it will be seen by the persons responsible for acting on it. Routine information can be handled on a periodic basis when trends are discussed and plans are made to correct vulnerabilities. However, direct access between the two forces for rapid communication of emergency information is necessary.

Communication

In addition to sharing what is intelligence information, there also needs to be direct communication to coordinate responses to security incidents. Additionally, a way for the

communications systems of the transit system and police department to interface should be in place. It may not require full compatibility, but there needs to be a method to patch the two systems together. Communication forms the basis for coordinating the response and is vital to success.



Training

Many opportunities exist for joint training exercises between the police and transit security forces. There is a need for the police to become familiar with the operations and facilities of the system in addition to any special hazards or operational restrictions. Activities such as working in tunnels, dealing with the third rail, and other unique aspects of operation should be familiar to police officers. Training of the transit system's security personnel should include a similar effort to learn about the operation of the local police department. It will be important for security personnel to know

- what to expect in the form of back-up during an incident
- how to hand off a suspect to police if they have left transit system jurisdiction
- common phrases used by the police for conveying information.

All of these activities will help both forces work together effectively by building mutual respect for each other's roles.

Shared Resources

On occasion, sharing resources between the police and the transit system makes sense. Opportunities for sharing can include vehicles, communications equipment, barriers, personnel protective gear and other items. These opportunities should be reviewed periodically to see if any new possibilities exist. There may be opportunities to use networked computers to share transit information about suspects and vehicles.

Long-Range Planning

Planning for inter-force cooperation is important to long-term efficiency. The police will have an interest in plans to expand transit service that in turn will require additional support to protect new assets and enlarged rights of way, and other aspects that impact police planning. Similarly, the system security department needs to know how the police plan to handle problems associated with drug dealing, prostitution, assaults, robberies and other types of crime that may occur on transit property. Of mutual interest will be staffing plans, training opportunities, plans to add additional security assets such as alarm and communication systems. Cooperation in long-range planning can set the stage for cooperation at all levels and set the example for the rank and file security personnel to follow.

Jurisdiction of Transit Security

Jurisdiction of the transit security department is strictly a local issue and will depend on the size and remoteness of the transit system's property. In most cases, the jurisdiction of the system's security personnel will be limited to the property controlled by the system and on assets such as buses and trains that are operated by the system. The local police department will also have jurisdiction in these areas and any questions concerning which jurisdiction is overriding should be resolved early and clearly explained to the members of both forces.

Authority of Transit Security

The authority of security personnel is also a local question. In most cases, security personnel must rely more on their ability to project authority rather than actually exercise it. The power to detain or arrest individuals suspected of committing a crime may be held only by local police. In large systems, security personnel may act as fully empowered police forces and have all the associated authority. The transit system, together with the community it serves, needs to decide what level of authority is required to maintain a safe and secure environment.

Developing Cooperative Security Agreements

A written agreement should be prepared that spells out the jurisdictions and the levels of authority. This agreement is a legal document and can come into play in cases if someone contests how an incident was handled. It can also affect the liability of the system for the actions of its security force. The agreement should be carefully prepared and reviewed by legal council before it is ratified by all parties and put into effect.

Perceived Security and Public Relations

Perceptions

Public perception of the security on the system can greatly effect ridership. Transit security is perceived to be lower during off-peak hours due to the smaller numbers of passengers present. The perception of minimum transit security can keep off-peak ridership low, especially during off-peak hours..

Passengers who have experienced a crime in the transit system, have witnessed a crime, or know someone who has been a victim of a crime, will have negative perceptions of transit security. Although, most perceptions are unrelated to actual crime statistic, passengers react negatively to trash-strewn stations, evidence of vandalism, physical deterioration, and graffiti.

Police Presence

In general, public perception of security depends on the visibility of efforts to protect the system and the passengers. Uniformed patrols are more effective in providing a perception of security than surveillance cameras. Surveillance cameras in plain view of passengers are more effective than hidden cameras. Surveillance cameras in conjunction with conspicuous booths where security personnel are watching the monitors are more effective than security cameras alone.

Studies show that individuals tend to rate some parts of the system safer than others. The following list is shown in descending order, starting with the safest.

- riding the bus
- waiting for the bus
- walking to the rapid transit station
- riding the train
- waiting at the station
- entering and exiting the station.¹

Media

People's perceptions of transit security are often conditioned by reports in the media. Media coverage tends to emphasize the crime, rather than how safe the system is and how most people actually ride in safety. Media reports of increased transit crime do not include information about increased ridership or overall levels of crime throughout the municipality. Media reports and sensationalism of particular crimes may contribute to an overall public perception of a lack of security on transit.²

Demographics

Women who are often at a physical disadvantage to their perpetrators, as well as the disabled and elderly, are likely to perceive a lack of security. Ethnic minorities are likely to fear racially motivated attacks. Most surveys indicate that the perception of the potential for crime is heightened during the hours after dark, across all demographic groups. Among those who do not use transit, there is a much higher number of people who perceive that the system is unsafe.³

Perceived Trouble Spots

Poorly lit areas and areas where people cannot be seen are perceived to be unsafe. These include

- entrances to stations that do not face the main street
- underground that includes blind corners
- stations that have very few riders during off-hours

Surrounding Neighborhood

The neighborhood around a station or bus stop will affect perceptions of security. Most people feel secure in their own neighborhoods but might not feel secure in another, nearby neighborhood. This is particularly true when each neighborhood has a predominant ethnic group.

Many people use the transit system because it is more convenient or more cost effective than other modes of transportation. These people will be even more inclined to use the system when security is not a concern. Studies have shown that the most important factor influencing the use of city transit is crime, even more so than fare levels or scheduling.⁴ It is clear that a system can improve its ridership and fare box revenue by improving security throughout the system as well as by concentrating on particular problem stations and areas.

Ridership and Security

A Reciprocal Relationship

Off-Peak Hours

For a station or bus stop to be used regularly during off-peak hours, there needs to be a critical mass of passengers at any given time. When there are few passengers at the station, passengers feel isolated and vulnerable. Measures such as rerouting buses to include a transfer point, building a park-and-ride lot, or implementing a feeder service to the station could increase ridership to the point of critical mass. That will, in turn, increase the perception of security so that others will feel comfortable using the station.⁵

Frequency and Timeliness of Service

Improvements in service frequency can have an impact on the perception of security by decreasing waiting time. Decreasing headways can reduce the time a person waits at a bus stop. When transportation runs on time, passengers can arrive close to the anticipated time of arrival, making them less vulnerable.

Familiarity With the System

An important aspect of a positive perception of transit security is familiarity with the system, the routes, the location of the stations and bus stops, and the vehicles. This enhances the feeling of security by showing passengers that the system cares enough to provide all the assistance that is needed. In attempting to attract new passengers, it is important that their first trips are smooth and non-threatening. Passengers feel more vulnerable when they are confused about the trip, are unaware of how the system and equipment operate, or are unsure of the location of stops.

- Standardized equipment at all stops, such as fare machines, turnstiles, doors, gates, escalators, and layouts can reduce the number of unknown elements.
- Provide easy to use and clear instructions on all equipment.
- Help passengers to go directly to their platform or stop and be certain that they are boarding the right vehicle by providing sufficient information, signs, directions, and schedules.

Aesthetics

Dirty stations, graffiti-marked walls and vehicles, trash, physical deterioration, and other unpleasant environmental attributes can detract from the perception of security. It is easy to consider the physical environment as a sign that the transit system is not capable of maintaining its facilities and may be lax in other areas. Passengers also tend to feel more secure in facilities that are aesthetically pleasing, with paint schemes, decorations, even art work, than in dingy, gray facilities, no matter how clean.

Enhanced Perceived Security

Insuring Visibility

Transit systems should survey all their facilities to make sure that each has as many design elements as possible to ensure that both the passengers and the transit personnel perceive that their surroundings are secure. For example:

- Passengers will not feel secure if they must enter a station from a deserted alley or if they must walk through a tunnel with turns around which someone could be hiding.
- A bridge over the tracks is more visible than an underground tunnel.
- Stairs can be left open rather than walled.
- Open fences improve visibility in comparison to walls.
- Corridors inside the facility need to have as few turns and barriers as possible.
- Mirrors are important security measures so people can see around corners.

Maintaining a Facility

Maintaining a facility is an important factor in increasing security. Aside from the importance of regular housekeeping (such as removing trash and keeping equipment in operation), it is important to remove quickly all evidence of vandalism or graffiti. This demonstrates the responsibility and responsiveness of the transit system. The presence of graffiti or other vandalism will suggest that the transit system is not concerned about the facility or about the passengers.

Eliminating Negative Factors

It is important to remove features that are annoyances or suggest a lack of security. The features of transit systems most associated with the likelihood of an unsafe environment are the lighting, the age of the facility, cleanliness, the evident level of maintenance, the amount of sensory aggravation, visibility, and the neighborhood.⁶ Although the neighborhood and the age of the facility cannot generally be changed, the other factors can be addressed by the system for each facility.

- Improved lighting can be installed and the facility can be kept clean.
- All equipment should be kept in working order.
- Broken fare machines, escalators, or other equipment can easily give the impression that the station is neglected and that passengers enter without protection from the transit authority.
- Keeping out non-paying loiterers, youth gangs, and derelicts can eliminate some of the noise, dirt, and maintenance problems.

Sensory Aggravation

Sensory aggravation includes anything that is annoying to the senses, increases tension, gives the impression of a system that does not care, and increases the perception that a facility or route has been neglected by the system.

- Odors give the impression of poor maintenance and cleaning.
- Noise due to poor acoustics, loud passengers, or radios can be irritating.
- Dirt is an irritating problem.
- Not being able to sit on the benches, lean against the walls, or hold the handrails all contribute to the passenger's discomfort and the feeling of vulnerability.

Enforcing Rules and Regulations

It is very important for rules and regulations to be enforced, but transit systems may wish to consider using methods that do not draw attention to a crime in progress. A number of police at the facility can be an obvious sign that crimes have occurred, which underlines the perception of a lack of security. In some systems, transit officers will not approach an offender on a bus but will follow the offender off the vehicle and then take whatever action is appropriate. It is especially important for security personnel and police to be aware of the danger to passengers when an offender has a weapon. It is often preferable to wait until there are few passengers present to confront an individual. While the presence of officers provides a sense of security, the presence of officers making an arrest can emphasize or remind people of a potential lack of security.

Visibility of Security Measures

Whether the measure is the increased presence of uniformed officers, surveillance equipment, or other features, it is important that potential offenders and employees are able to see them clearly, and know of their existence.

Visible Patrols

Most passengers prefer to *see* patrols. One study showed that more than half of those surveyed supported the increased use of the transit police as part of a crime prevention program. Bus passengers place more emphasis on transit police than those who do not ride the bus.⁷ Uniformed officers on the bus lend a visible presence that increases the perception of security. At the same time, the potential offender is aware of the immediate or general presence of transit police officers and may be deterred from committing crimes, at least while the officer is present.

Many systems use a focal point allowing the staff to be seen and for passengers to understand that they are being observed. The focal point can be a simple glass booth. At high crime stations, the focal point has been used to monitor the surveillance of areas of the station through CCTVs and to monitor the equipment associated with the alarm points in the station. The important point is that the staff member or members who are watching the monitors are highly visible to those in the station. Passengers and potential offenders know how close and how observant staff are.⁸

Cameras, monitors, photography equipment, sensor monitors, etc. need to be visible to both passengers and potential offenders. Offenders will have a tendency to avoid those who are being observed by the cameras. The cameras alone, however, are not as effective in fostering a perception of security as the combination of visible cameras and visible transit staff.

Passenger Reporting

Many systems experience success with passenger reporting programs. Such programs generally involve two major commitments from the system: (1) a comprehensive public relations campaign, and (2) a commitment to those reporting the incidents. It is also important for passengers to feel a low risk. Passengers must feel that they can be anonymous. Some systems have set up a process assigning reporting passengers a code number.

As success with the passenger reporting program increases, the public relations campaign can measure the number of arrests, prosecutions, convictions, or rewards that have resulted from passengers reporting observed security violations. The public relations campaign will be noted by potential criminals who will feel less confident undertaking criminal activities when there are people present. This makes each passenger a *de facto* security guard with a minimum risk.

Community Relations

It is a basic tenet of crime prevention that the participation of citizens is integral to success. In areas with tenant associations, neighborhood watch activities, and general citizen alertness to crimes, there is a tendency for criminals to be discouraged. Transit systems can tap into the resources in a community and extend them to include concern about the security of transit and an awareness of the community role in transit security.

Interacting With the Community

The goal of community involvement is to make the system and its facilities part of the community and part of the values that members of the community will attempt to protect. With this in mind, a concerted effort should be made to ensure that all members of the neighborhood, including gang members, are part of the passenger education process. Transit systems have formed relationships with neighborhood groups in order to address particular or on-going security problems. Transit employees have become active members of such groups and have been able to link transit facilities to the community.

Many systems actively seek audiences for talks about their system and develop other means of making contact with members of the community. Some systems' security personnel are investing their time with youths in the neighborhood. This gives the system a different face and prevents some hostility from developing among young people.

Many systems have found success with hiring unemployed youths on a part-time basis in the summer and training them in maintenance, computer skills, drafting, and dispatching. Communities are pleased that their young people are employed and those employed benefit from the learned skills and the income. Many community-based crime prevention efforts stress the importance of the members of the community feeling committed to the neighborhood.

Bike Patrols

Bike patrols can improve mobility, provide quick response to emergencies, and allow time to communicate with passengers.

School Programs

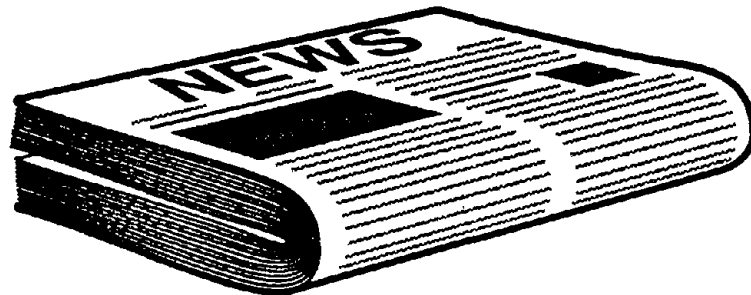
Many systems have specifically targeted efforts at young people in the community as a means of preventing crime. Systems should not think of youths as potential troublemakers. They should think of them as future riders, employees, and community leaders with a stake in the security and continuity of the system.

Many systems have slide shows, films, and presentations directed at various age groups which provide information to students about the system, its role in the community, and its value to them. Other activities can include

- giving tours of the transit system
- distributing coloring books with transit safety messages to younger children
- using local celebrities and athletes to promote good behavior on and off the system
- contacting student leaders for their support
- using retired vehicles as teaching locations

Media Relations

Public perception of security is influenced by newspapers, television and radio. The system should establish a strong relationship with the media to provide publicity for fare or policy changes, current information on delays or schedule changes, and other information that needs rapid, wide-spread dissemination. The system needs to be ready to release factual and forthright information when an event warrants it. It is important to have an individual who primarily talks with the press and who is in the chain of command for an emergency. Transit systems should have an interest in making sure that events receive non-sensationalized treatment.



Most systems need to have one person or office who works with the media so that all reports are reliable and accurate. Some systems establish regular contact with the media through scheduled luncheons, periodic news conferences, and other means of direct communication.

Passenger Relations Training

Operators and fare collectors are the front line. Their professionalism to help maintain a safe and secure environment, confidence, and helpfulness will contribute to a positive impression of the transit system. Training in passenger relations should include the following skills:

- maintaining professionalism through words, actions, and attitudes

- dealing with passengers in a polite and professional manner
- dealing with passengers who are making trouble
- confronting passengers from diverse backgrounds
- learning how to identify and cope with passengers who are intoxicated or under the influence of drugs
- estimating the potential for trouble and the best means to deal with it
- knowing when to handle something alone, when to call for help, and the best way to call for help

Guardian Angels

Guardian Angels operate in various cities around the country. They patrol streets, housing developments and transit systems. They appear to be successful at preventing crime, but the overtone of vigilantism is problematic in some communities. Transit systems do not enter into agreements with the Guardian Angels.

Interior/Exterior Design, Architecture, and Hardware

Design Features that Contribute to Crime

The following design features can contribute to crime:

- lack of adequate lighting
- barriers and corridors which prevent a clear line of vision
- areas where crowds become compressed
- areas where individuals become isolated
- unused or underused areas of a facility
- poorly marked areas and paths
- unattended entrances

Remedies

The following remedies to the design features identified above should be addressed:

- include design features that do not impede adequate surveillance of passenger areas, entrances, unattended areas, and operational areas
- accommodate the limitations of radio transmission and walkie-talkies which can experience interference and signal obstruction underground or around obstacles
- consider the inclusion of security devices such as alarms, emergency telephones, surveillance devices, or other equipment
- plan for the appropriate placement and the necessary number of such devices in the overall design of a facility
- include design elements as part of an overall crime countermeasure strategy

Planning for Physical Security

A Seven-Step Plan

Systems should adopt a proactive, prevention-oriented approach to security planning that will minimize threats and vulnerability should they occur. Systems need to examine their existing facilities as well as the designs for future facilities and assess what included features are conducive to crime. When those features have been identified and assessed, they need to be eliminated to whatever extent possible. At the same time, facilities need to be assessed regarding what positive countermeasures can be incorporated into the design.

The seven steps that can be applied to physical security planning are shown in Figure 1 and discussed in the paragraphs that follow.⁹

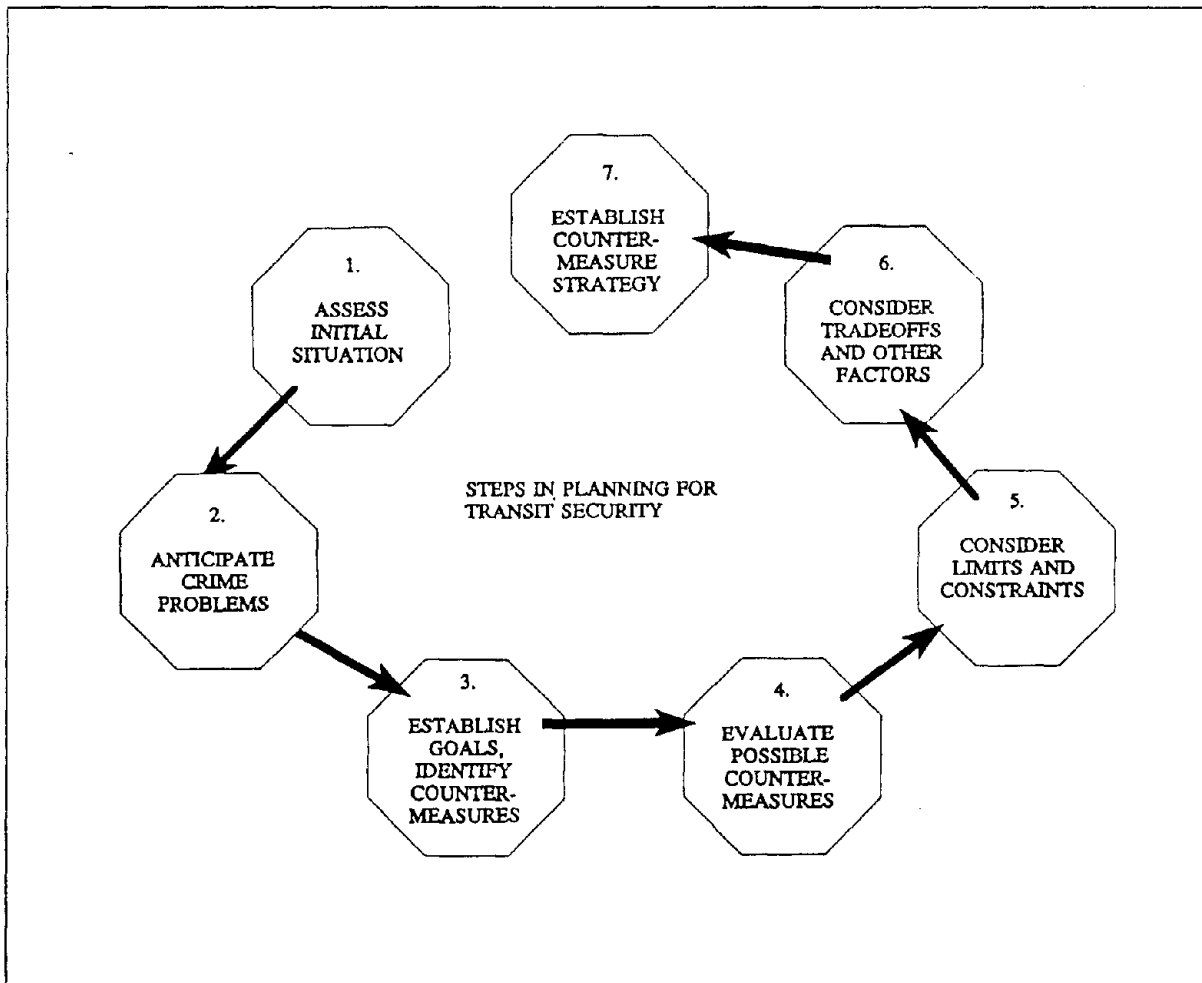


Figure 1. Seven Steps in Planning Security Procedures

Step 1: Assessing the Current Situation

A first step is to assess the current situation and ask the following questions:

How well is access limited to passenger areas in the facility?

It is important for the entrances to the facility to limit access to the criminal element. Limit access to the facility to paying passengers only. Have sufficient countermeasures to fare evaders, including sufficient barriers surrounding the facility. Limit the number of entrance and exit points to and from the paid fare areas.

How accessible are major security features of the facility?

Booths, emergency or courtesy phones, and other security items should be close to the major corridors and paths. Ideally, such features would be near all passenger paths in the facility and staff facilities would also be in clear view from most parts of the facility where passengers wait or congregate.

Are all areas visible from the fare booth or kiosk or through surveillance cameras?

Systems should attempt to ensure that all areas are visible either through surveillance equipment or by direct supervision by transit staff. All areas — including fare collection, passenger waiting areas, corridors, and platforms — should be visible for supervision by the transit staff. Survey the facilities for areas that are blocked from view by walls, obstructions, insufficient lighting, or other obstacles. Determine what areas need additional supervision of surveillance cameras because staff is not in a position to directly supervise them.

At bus stops and shelters, identify any areas that are blocked from the view of the bus operator when he/she is approaching the stop. Transparent materials for the shelter walls and gaps in other walls offers more visibility. Assess stops and shelters for the proximity of shrubbery and other features that are not necessarily the responsibility of the system.

Is lighting adequate in all areas?

Poor lighting offers protection for criminals to hide or engage in illegal activities, inhibits surveillance and the ability to discern legitimate from illegitimate activities, and makes it more difficult to apprehend offenders because witnesses will not be able to adequately identify them. Adequate lighting also includes lights in hard casings so they will not be easily broken or disabled. It is important to have some redundant lighting so that if one light is out, there are others to illuminate the area.

At bus stops and shelters, passengers waiting at an unlit stop or shelter are at particular risk from crime in the neighboring streets. When a bus stop is not adequately lit, those with other transportation options may select them. In this way, poor lighting could consistently discourage ridership and revenue.

Are there stations or routes with insufficient passenger volumes for security?

Since passengers tend to feel that a critical mass of passengers is necessary for a sense of security,

those stations with low ridership, particularly in the off-peak hours, would be perceived as not being secure.

What modes of transit are more secure than others?

In general, surface and elevated stations are often more secure than underground stations. Assess crime incidents to determine the least secure modes and concentrate on improving them.

What is the neighborhood in the vicinity of the facility?

Transit crime is often a reflection of crime in the community. Suburban stations tend to be more secure than urban stations. Stations in residential areas tend to be more secure than those in commercial areas. Stations in areas with lower land use density tend to be more secure than those with a higher land use density. Stations where there are no parking facilities may be more secure. These items cannot necessarily be altered, but the security differences need to be addressed. Systems need to concentrate on the facilities that do have or are more likely to have security problems due to the surrounding community.

Step 2: Anticipating Crime Problems

Anticipating crime means determining how much crime a facility is likely to experience and at which locations, in addition to what kinds of crimes are likely to occur. Try to anticipate when crimes are likely to occur and under what types of circumstances (night time, off-peak hours, or special conditions, such as when there are crowds from special events or during rush hour). Some indicators are:

- demographics of the area (e.g., densely populated areas sometimes beget greater incidents of crime)
- characteristics of the area (e.g., crime-ridden areas have an impact on transit service)
- unemployment rates and ages
- location of junior and senior high schools
- proximity to entertainment areas such as concert and sports arenas

Step 3: Establishing Goals and Identifying Countermeasures

Once facilities are assessed and expected types and levels of crime are identified, set security goals and identify potential countermeasures. Potential goals may include:

- ensuring adequate surveillance of key areas of the transit facilities
- controlling accesses and exits
- minimizing the exposure time of passengers to possible crimes
- ensuring adequate communication
- securing transit property
- ensuring the ease of use of the facilities
- enhancing perceived security¹⁰

Ensuring Adequate Surveillance of Key Areas of the Transit Facilities

Evaluate which areas of the facilities are inadequately supervised and what methods are most appropriate for increasing surveillance. CCTVs can be used to monitor areas where there are no patrols. Lighting can be improved where it is lacking. Increased patrols and police supervision can cover other areas. Eliminate obstructions to the line of sight.

Controlling Accesses and Exits

Many systems have found that controlling access to the station by moving fare collection close to the entrance can reduce some of the potential for crime. Although those entering the system to commit crimes will have a tendency to evade the fare, forcing them to do that before they have access to passengers enhances the risk of their getting caught before they have committed another or more serious crime. For maximum effectiveness, the fare collection areas need to be under close surveillance.

Multiple exits gives offenders more opportunities to evade capture, making the facility a more inviting area of operation for criminals. To fully control access and exit, consider the viability of plans to move the fare collection area and subsequent ramifications for other parts of the facility. It is possible to limit some entrance and exit points during certain times of the day. The following are a variety of ideas for limiting entrances and exits:

- When stations are not in full use, such as off-peak hours, certain exit and entrances can be closed.
- Exits and entrances can be closed permanently.
- Exits and entrances can be equipped with emergency alarms so that their use will set off an alarm.
- Exits and entrances that are not frequently used can be the subject of extra surveillance, either with cameras or through additional patrols in the vicinity.

Minimize Exposure Time of Passengers to Possible Crimes

Exposure time is the amount of time passengers are vulnerable to the possibility of crime while they are in the system. Crimes tend to happen while passengers are moving through facilities and waiting for vehicles. For the most part, exposure time can be minimized by reducing the distance between features of the system and reducing the amount of time passengers must remain at each major function area. Fare collection needs to be simple and machinery and equipment must operate at all times. Clear instructions will help passengers complete the process as quickly as possible. Increasing service frequency and running scheduled service on time can reduce exposure time.

Ensuring Adequate Communication in the Facilities and With Vehicles

Communication is necessary in facilities and vehicles. Radios, walkie-talkies, emergency phones, etc. must be easy to locate and use. Be sure instructions are visible.

Securing Transit Property

Trash receptacles, system maps, display racks, and other useful items are typically attached to the facility itself so they cannot be stolen or destroyed easily. The most vulnerable items, such as

surveillance cameras or monitors, need to be kept out of reach. Cameras can be put high on the ceiling or over tracks. Monitors can be kept in locked booths with safety glass and personnel supervision present.

Consider unbreakable window materials, special seat fabrics, seats without fabric, graffiti-resistant surface materials and coatings, and other design features. These materials will either prevent vandalism because they cannot be easily destroyed or make repair and cleaning easier because the surfaces resist the damage.

And consider physical construction designs that are easy to repair due to modular construction or other design features. For example, benches and seats in which one unit can be removed are preferable to those in which the construction is unified and damage can only be repaired by replacing the entire bench. Quick clean up and repair have already been demonstrated as effective in controlling vandalism.

Ensuring the Ease of Use of the Facilities

Passengers will become familiar with equipment at one location and will be confident with it when they use it at another location. Maps in stations should always be located in the same place relative to the station entrance, fare machines, or personnel booth. Escalators, elevators, stairs, and other necessities should be located in predictable locations throughout the system.

Systems should post adequate signs to provide instructions and directions. Directions to particular platforms, exits and other features need to be clear and be placed at all necessary locations. Passengers wandering into unsupervised areas of the facilities present a risk to themselves and a challenge to the transit system to protect them.

Enhancing Perceived Security

By incorporating positive security factors, systems can improve perceived security and increase ridership. The positive features added to the system can discourage offenses. Transit systems should consider *perceived security* as much as *real security* as a part of any planning procedures and security strategy. (See the earlier section on Perceived Security.)

Step 4: Evaluating Possible Countermeasures

Each potential countermeasure should be evaluated in terms of its

- effectiveness
- cost
- design implications
- feasibility and flexibility

The effectiveness of a countermeasure can be determined by considering the most likely types of crimes that may occur in a particular facility and the effect that the countermeasure will have. For example, crimes perpetrated by homeless persons may be deterred by a countermeasure that goes through great and expensive lengths to limit access to those who have paid a fare. However, if the

crimes are vandalism committed by school students who have transit passes, the countermeasure will not address the actual source of the crime.

Countermeasures embody the installation and operational costs, including the acceptance by the users or operators. Some countermeasures may not be feasible within the design of the facility without significant alterations. It might not be possible to remove all support columns that obstruct visibility. Some surveillance methods would require high ceilings and sufficient light and if not structurally viable, those methods would not be feasible.

Step 5: Considering Limits and Constraints

Financial and community concerns, employee and passenger considerations, and the on-going need to provide convenient service to all members of the community should be considered. Since crime may be higher in some neighborhoods than others, success in ensuring security will be limited by the area in which the facilities exist. Some existing facilities may include features that make it very difficult to ensure security. Larger facilities that serve more than one route or mode will have more spaces, corridors, and entrances and will have more impediments to implementing security measures. Such limits and constraints must be acknowledged when planning changes to a facility. When new facilities are designed, planners can seek means of including flexibility and reducing or eliminating potential barriers to personal security.

Step 6: Considering Tradeoffs and Other Factors

Systems must be concerned about safety, convenience, costs, comfort of passengers, and the needs of the community in general. It is necessary to consider the tradeoffs in safety that some security countermeasures may entail and to consider the comfort and convenience of passengers. The design of a facility may include fire walls and access areas for emergencies. Changing their design or function in the interest of security could result in increased risk. Transit security is one part of the overall transit system and each consideration must be weighed for its total value and effect before final decisions are made.

Step 7: Establishing Countermeasure Strategy

Once the possible crimes are identified, various countermeasures considered, and the constraints and tradeoffs calculated, most systems find that they need to implement at least minimum security measures, such as lighting and surveillance measures. Many systems choose to concentrate on particular facilities which experience high crime rates or on particular types of crimes that are either the most serious, or most frequent. Those measures that increase perceived security will usually increase actual security. When perceived security is improved, ridership and confidence in the system can increase, thereby adding to ridership and increasing the actual security that occurs from adequate numbers of people to deter certain crimes.

Bus Stops

Countermeasures That Can Deter Crime

Bus stops require countermeasures that can deter crime related to both the transit system and the street. Bus stops should be

- lit at night and properly placed for security considerations.
- located on busy streets and not off the main flow of traffic. Occasionally bus stops at interchange points are placed at different positions in order to maintain the traffic flow. The placement for traffic flow should not compromise security.
- positioned near the main sources of passenger traffic, whether a shopping center, office complex, or other source. The waiting passengers should be in full view of the busy areas.
- situated away from areas with a lot of liquor stores, flop houses, bars, strip joints or other similar businesses which attract "undesirable people" and activities such as drug deals, etc.
- some distance from shrubbery, walls, or other areas where people could be hiding. Some systems have found that bus stops located close to parks experiencing crime in the night hours are stops where there is a particularly high rate of crime. Offenders are able to wait in the darkness of the park until there is someone alone at the bus stop.
- designed so that the bus operator can see passengers waiting or anticipate potential danger.

Some transit systems have considered installing emergency phones or lights at bus shelters where there is a high crime rate. Shelters can be equipped with alarms that activate lights on the exterior to alert a passing police patrol. The main problem with such alarm systems is the potential for false alarms. Emergency phones are less prone to such occurrences if the personnel receiving the call can adequately screen it for false alarms. Another problem is that activating an alarm or calling for assistance has the potential to aggravate an assailant and further endanger the victim.

Guideway/Track/Right-of-Way Design

The tracks and guideways of transit systems must be protected against the encroachment of pedestrians and vehicles except at designated areas with appropriate safeguards. Access is necessary at stations and stops, but it should be regulated so that passengers approach at boarding areas only. Embankments, fences, guard rails and walls can be used to prevent access to other portions of the track.

All the tracks and guideways need to be grade separated to completely prevent access. Underground and elevated portions of the system alleviate most grade separation requirements, but all portions need to be at a different level than roads and pedestrian pathways. For the safety of passengers and for the security of the system, it is generally necessary to use overpasses or underpasses to allow pedestrians to cross the tracks. Walls, embankments and fences can prevent pedestrians from approaching the tracks from near the underpass or overpass.

At-grade/open cut trainways can be made more secure with fencing and access gates which can be opened by transit and/or law enforcement personnel. An adequate level of lighting along the surface portions of the trainway is also critical. Adjacent street lights may not exist or may provide insufficient illumination to maintain a secure environment.

Physical barriers placed along the right-of-way or some type of detection and alarm system should deter those attempting to tamper with the switches, drop items on the tracks, throw items at the vehicles, or hang dangerous objects in the vehicle's path. Overpasses should have sufficient high fences or walls with barbed wire at the top. In some areas fences can bend away from the tracks at the top to prevent individuals from scaling them or from being able to easily throw objects over them.

Stop and Station Location and Site Selection

Relationship of Neighborhoods and Sites

When a stop or station is placed in a high crime area, consider as a high priority the design of the station, the selection of the exact site, and the style of the stop or station. All the considerations regarding lighting, surveillance, and patrol should be included in the design and steps should be taken to plan for maximum security. For stations in relatively safe areas, security considerations must also be included, but the tradeoffs would be different. Transit stops or stations that are placed near activity areas generally experience good ridership levels, but the nature of ridership depends on the type of activity center.

- Business areas will have peak hours.
- Shopping areas will have a significant drop in ridership after the stores are closed.
- Entertainment centers (e.g., arenas and stadiums) will depend on the events that are held.

Selecting a New Site

When new sites are selected, consider the location of other stops, stations, or routes that are nearby. If a nearby stop or station serves the same pedestrian traffic, ridership will not grow to its full potential at the new facility and ridership may decline at the existing site. When ridership is not high enough, security can be diminished. A high priority is the security problems of a stop or station in an isolated area or an area that is isolated at certain times of the day. Bus stops near the edge of large parks or other uninhabited areas experience high crime rates because of the lack of supervision and the lack of passersby to observe or prevent an assault. Stops or stations in areas that are characterized by warehouses or shipping areas that close down at night offer the same security risks.

Transit planners might consider relocating stops or stations where efforts have proven to be unsuccessful in keeping the passengers and system secure. Consider the input from the public (passengers, residents in the community, police and commercial interests in the vicinity of facilities and proposed facilities). The following factors affecting security should be considered in selecting stop locations, many of which are also operational considerations:

- expected ridership and pedestrian traffic
- vehicle traffic
- headways
- access to utility lines
- landscape affects on visibility
- crime rates
- census demographics
- hours of ridership generators (businesses)

Exterior Design

Assessing the Neighborhood

Consider the neighborhood and community. The entrances should face main street and the main sources of passengers. Passengers perceive much more security in their own neighborhood than in another, even if the neighborhoods are adjacent. If there is a station located at the convergence of two distinct types of neighborhoods, perceived security could be increased if there were an entrance opening onto a street in each neighborhood. In this way, passengers would not have to leave the familiarity of their own neighborhood to use the facility.

Evaluating Approaches

Passengers approaching the station should see all that is ahead of them so that they can avoid any risks. That includes ill-lit tunnels, tunnels with blind turns, entrances in alleys, and walls and barriers that passengers must circumvent. Consider bridges over tracks rather than underpasses. Stairs may have fences rather than walls so that those on the stairs can be seen. Consider removing any unnecessary walls or other barriers. Fences can serve the same purpose. Entrances are best if they face the main street or the main activity center (shopping center, office building, etc.).

Eliminating Barriers

Barriers that prevent entry to parking lots or other areas can include gates that are opened when the fee is paid or other means of controlled access. Fences that protect the facility do not have to impede the access of passengers approaching through the main entrance, driveway, and parking areas. Areas used by passengers should be open and visible. For example, a fence around the perimeter of the facility would preclude entry from the rear or other unobserved locations, and all access would be from the opening in the front which is well-lit and unobstructed from view on all sides.

Considering Landscape

Landscape schemes must avoid any formations that provide suitable hiding places for offenders.

- Shrubbery should be kept low or small.
- Foliage should be placed away from paths that pedestrians take to and from waiting areas.
- Shrubbery and tree arrangements can be designed so that they do not obstruct views to and from the station.

- Maintain a clear area between the facility and the outer area for visibility. The landscaping design can also be arranged so that it does not obscure any lighting on the area.

Landscaping features can also be used to form natural fences around the facility. Close-growing shrubbery can be an effective and/or perceived barrier to an offender who is attempting to enter the vicinity or attempting to escape by deviating from normal pedestrian patterns.

Features and Facilities

Personnel Booths

Booths for transit personnel to sell or collect fares, information booths, or posts for station attendants or security guards are most effective if placed in a location that allows direct observation of as much of the facility as possible. Booths may house

- controls and monitors for alarms
- monitors for CCTVs
- microphones for public address announcements
- direct communication lines to emergency call boxes and operations headquarters
- logs for recording regular and unusual occurrences
- incident reports
- time-controlled safes
- silent alarm switches
- security procedures guides
- other security and operations supplies

Monitors for CCTVs should be placed within the booth in such a way that passengers can note their presence. Such booths require strong doors and locks, bulletproof glass, or other glazing with bank-teller-type service windows. If security is not a significant problem, staff may leave doors open to interact directly with passengers.

Entrances

Entrances are safe if they can be aligned with an area within the facility that experiences high traffic. Alternatively, the entrance may be very wide. The idea is to create a line of observation from outside the facility ⇒ through the entrance ⇒ into the public area of the facility. In some areas this may require clear doors and walls. Gates and solid doors can be used when the entrance is closed. One security countermeasure involves closing some entrances in evenings to limit the areas that must be supervised. In such cases, the entrance should be clearly indicated as closed at a point before approaching passengers are stopped at a locked door. Some systems use color-coded lights at all entrances to indicate their open/closed or exit/entrance status. Although expensive, it is also possible to construct entrances that can be opened and closed by remote control from a personnel booth or even central control.

Fare Boxes/Entrance Gates

To limit access to transit facilities to passengers only, fare collection gates should be located as close to the entrance as possible. Fare boxes are often subject to vandalism by those attempting to

steal fares. The theft of large volumes of fares can usually be deterred by investing in stronger vaults. Fare evasion can be reduced by making it more difficult to circumnavigate the collection point. Jumping over turnstiles can be reduced by using high-channel turnstiles and floor-to-ceiling type gates. Full-height revolving gates are particularly useful at points that are strictly exits; however, they may worry passengers because it is possible for passengers to trap themselves within the revolving gate. Direct observation of the fare collection point from personnel booths is a common practice.

Telephones



Telephones for the public serve as an amenity and security device. Passengers recognize the telephone as a potential means of calling for help. Even if someone is being assaulted and is unable to dial 911, the potential exists for someone else to call. Telephones also assure passengers that if they miss a transit vehicle or their ride, they have the opportunity to call for a taxi or another ride. Likewise, passengers arriving later than expected can call for a ride if they become worried about walking alone in the evening. Telephones are, however, subject to the same potential vandalism as other equipment and must be safeguarded and maintained.

Safe Waiting Areas

An area close to the entrance can be set aside as a safe waiting area. Such an area would be clearly marked for use during certain hours and should be supervised by transit personnel. The safe waiting area is shared by all passengers who would otherwise be waiting in separate locations. Such an arrangement must include a means of notifying passengers when their vehicle is approaching with sufficient warning to allow them to reach the boarding area before the transit vehicle moves on. As this requirement must be met for all passengers, including those who may be slow-moving due to age or disability, it is most helpful if the number of minutes before vehicle arrival can be communicated.

Emergency Call Boxes

Call boxes are a highly effective means of increasing security in isolated areas. These emergency communications devices are clearly marked, commonly with a blue light. They are equipped with a large button that activates a microphone and triggers an alarm at a remote location. The device should indicate the exact location from which the call is being placed. To maximize the effectiveness of response and reduce false alarms, call boxes should have two-way communications capability and a CCTV camera monitoring the area. The call box should not require the user to hold the button or prevent the responding personnel from listening and speaking at the same time.

Public Address Systems

Public address systems allow one-way communication between the system and the passengers. This communication can impart some perception of the presence of transit personnel. It is often unclear to passengers exactly where the staff making announcements is located and indicates the possibility of surveillance. This is especially true if announcements are specific to the particular facility or area of the facility or if CCTVs monitor the area. A high degree of security is achieved if transit staff can respond with announcements to situations. For example, if passengers congregate near the edge of the platform, a general announcement to please keep clear of the platform edge indicates that the facility is being monitored and patrons will usually respond appropriately.

Mirrors

Mirrors are successfully used in facilities with blind turns. They allow passengers to avoid potential assailants. Mirrors can be subject to vandalism, so polished stainless steel usually works best because it resists damage and can be cleaned easily.

Windows

Windows and glass walls can be highly useful in increasing security where some divider must exist. The greatest problem with windows and clear dividers is the potential for vandalism and illegal entry. Increased thicknesses, synthetic/plastic glazing, and wire reinforcement can increase the strength of the glazing, to the point that illegal entry is virtually precluded. Stronger glazings are, however, more expensive. The use of many small windows placed out of reach, or windows made of glass bricks might also reduce breakage and entry. Windows can be equipped with various alarms to minimize or prevent the effects of entry, but the alarms will not protect the window.

Doors and Locks

A wide variety of door and lock combinations are available. The exact door used at a location will depend on a number of factors, some of which are listed below:

- the direction of traffic
- which side is to be secured
- whether it is a fire door
- the volume of traffic
- the degree of protection to be given to the protected side
- the architecture of the adjoining rooms

Architects can help select the most appropriate types of doors for a specific site. A transit system must be able to change locks after significant turnover of personnel and must be able to designate various levels of access. Security forces should be able to move quickly through most doors in order to respond to alarms or pursue suspects. Various options other than metal keys are available to control access, including magnetic cards and remote release by a second party.

Barriers

Doors, walls, windows, fencing, barbed wire, sharp changes in elevation, gates, and portable barricades are all options for preventing or controlling access between areas. In many cases, the most obvious choice of these options will not provide the most security. For example, although opaque barriers (walls) are perceived to be the most secure in terms of privacy, there are cases where an unobstructed view may better increase security.

Alarms

Alarms can notify staff or emergency personnel of fires, unsafe conditions, unauthorized entry, and other conditions. Silent alarms are appropriate when a victim would be placed in even greater danger if the alarm were to be activated or the capture of a criminal is of greater importance than the protection of the person, area, or equipment guarded a rare situation. Alarms related to security and intrusion detection should normally notify anyone on site as well as remote staff when they are activated. A list of some of the different types and features of alarms, many of which can be combined, is shown in Table 2.

Table 2. Types of Alarms

◆ Bell	◆ Passive Infrared Detector
◆ Break-Wire Detector	◆ Perimeter Protection
◆ CCTV	◆ Proximity
◆ Computer Coordinated Systems	◆ Pull-Wire Detector
◆ Electrostatic Detector	◆ Ribbon Switches
◆ Fire Detectors	◆ Ribbon Switch Detector
◆ Flame Detectors	◆ Safety Detectors
◆ Heat Detectors	◆ Seismic Detector
◆ Hinge Switches	◆ Silent
◆ Horn	◆ Siren
◆ Intrusion Detectors	◆ Smoke Detectors
◆ Light	◆ Sonic Detectors
◆ Light Beams	◆ Sound Detector
◆ Light Beam Detector	◆ Telephone Dialers
◆ Magnetic Switches	◆ Televue Alert Systems
◆ Mechanical Switches	◆ Trip Cords
◆ Microwave Detector	◆ Two-way Communication
◆ Motion Detectors	◆ Ultrasonic/Microwave Detector
◆ Non-voice Communication	◆ Vertical Tilt Detector
◆ One-way Communication	◆ Vibration Detector

On-Board Vehicle Security Equipment/Measures

Despite all efforts to prevent security incidents, breaches will occur, but there are some measures that can be taken to minimize these breaches. All vehicles should be equipped with some security hardware and electronics. Locks and a starting sequence known only to the operator can prevent theft of transit vehicles.

Emergency Boxes

Trains should be equipped with emergency call boxes, central controls, or simple-to-operate intercoms to allow communication between all passengers and the operator. The location of the intercoms should be visible from any point in the car. Two-way capabilities allow transit staff to reassure passengers, request specific information, and provide instructions.

Advertising Placards

Advertising placards show concern for security. They also promote programs such as immediate cleanup and repair, passenger reporting programs, and community relations programs. This information can reduce travel anxiety and increase the speed with which passengers move through the system.

Mounted Cameras

Some systems have experienced success with mounting cameras within a vehicle to photograph a crime in progress. Although the primary value is to identify the criminal, the visibility of the camera can deter crime. The cameras themselves must be protected from vandalism.

Aerial Surveillance

Large, clear vehicle identification markings on the roof of the vehicle can aid in aerial surveillance in the event of a hijacking, hostage situation, theft, or in following a vehicle that is experiencing problems.

Two-Way Radios/Silent Alarms

The radio enables the operator to call for help or guidance and allows supervisory and security staff to communicate with the operator and problem passengers. The radio can be combined with a silent alarm which an operator can secretly trigger if there is danger. Silent alarms can also flash a distress light or message outside the vehicle.

Endnotes

1. R. Shellow, et al., "Improvement of Mass Transit Security in Chicago," Transportation Research Institute, Carnegie-Mellon University, Pittsburgh, PA, June 30, 1973.
2. U.S. Department of Transportation, Urban Mass Transportation Administration, Case Studies of Transit Security on Bus Systems, August 1983.
3. Lynch, G. and S. Atkins, "The Influence of Personal Security Fears on Women's Travel Patterns," Transportation, 15:257-277, 1988.
4. Austin, Thomas L. and Eve S. Buzawa, "Citizen Perceptions on Mass Transit Crime and Its Deterrence: A Case Study," Transportation Quarterly, Volume 38, Number 1, January, 1984.
5. Andrie, Stephen J., Barry Barker, Marvin Golenberg, "Security Considerations in the Design and Operation of Rapid Transit Stations," Rail Transit Planning and Rail Stations, Transportation Research Record, Number 760, Transportation Research Board, 1980.
6. Richards, Larry G. and Lester A. Hoel, "Planning Procedures for Transit Station Security," Traffic Quarterly, Vol. 34, Number 3, 1980.
7. Levine, N. and M. Wachs, Factors Affecting the Incidence of Bus Crime in Los Angeles, U.S. Department of Transportation, Chapter 6, "Perceptions of Bus Crime Prevention," January, 1985.
8. Swain, David, "A Study of Preventative Measures Applicable to Public Rail Transport," Proceedings of Seminar C, Transport and Planning 16th Summer Annual Meeting, September, 1988.
9. Richards, Larry G. and Lester A. Hoel, "Planning Procedures for Transit Station Security," Traffic Quarterly, Vol. 34, Number 3, 1980.
10. Ibid.



Chapter 2 Security Issues



Chapter 2

Security Issues

About This Chapter

This chapter discusses ways in which a system can respond to criminal activities. It includes:

- Security activities from the start of the incident to its closure ⇒ its review ⇒ follow-up ⇒ evaluation ⇒ reporting.
- Special considerations of communications, interaction with law enforcement agencies, record keeping and reporting, and on-going system refinement.
- A brief discussion of the role of procedures in a comprehensive Passenger, Vehicle, and Facility System Security Plan.

Also discussed are different types of crime and ways to assess the degree of danger inherent in the situation. A range of activities is listed that can be conducted in different sets of circumstances. This Guide does not dictate the response for any given system because each transit system will have its own policy concerning security responsibility and authority. However, it suggests ways to formulate the response policy and implement it through training. There is a short discussion of high technology equipment to help support the system staff in its response to crime.

Immediate Response

The Need for Immediate Response

Criminal activity poses a number of serious questions concerning how a transit system employee should react. An employee can be faced with such a broad array of possible crimes that no set of rules can accommodate all situations. The crimes security employees see can range from loitering, drinking or smoking, trespassing, assault, robbery, and sexual assault to murder. The response of each will vary. The objective of the initial response is to control the situation.

Each system needs to tailor its own approach to security response based on the size and authority of the organization, the community which it serves, and the degree of responsibility it accepts for its own security. Variables include

- existence of a transit security organization
- degree to which parts of the system are isolated from the community police force
- level of crime in the community and its level of violence
- level of crime currently occurring within the transit system

The average employee, as well as the security personnel, has specific responsibilities when observing criminal activity. Each of the following factors plays a role in how the transit employee is expected to respond when he/she observes criminal activity.

Observing a Crime

The first step in responding to a crime is observing it. The person to observe a crime first will often be a passenger or an employee. The actions of the initial observer can have a major impact on the outcome of the incident. There are three basic options to a person who observes a crime. He/she can

1. do nothing
2. go for help
3. try to intervene

The action taken should depend on how the observer is trained (e.g., motorman or security personnel) and what he/she observes. The objective is to stop the crime and prevent it from escalating.

Categories of Crime

The observer must base his/her reaction on the seriousness of the criminal activity taking place. The degree of criminal activity ranges from *low* (eating or smoking in an authorized area) to *high* (someone being robbed at gunpoint). A non-security employee may be able to intervene in the non-violent criminal activity and successfully stop it but would be ill advised to intervene in a violent crime. Crime can be divided into four categories:

Category	Crime	Description
1	non-violent, non-destructible violations (quality of life-infractions)	eating or smoking in authorized areas, loitering, etc.
2	non-violent, destructive behavior	fare avoidance, defacing system property, pickpockets
3	violent, theft-related	robbery with a weapon
4	violent, assault-related	assault, fights, murder

Assessing Risk

The decision to intervene comes down to judging the degree of risk. Staff members should take charge of a security breach which may mean coping with a dangerous situation.

Concern 1: Risk to Employees

Employees should take whatever action will delay or end the criminal behavior without putting themselves in danger. One option is to send for help after taking low-risk actions to interrupt the criminal activity.

Concern 2: Risk to Passengers

System employees must keep passengers safe from harm. That does not mean risking their own lives, but it suggests cautious actions that delay or reduce the seriousness of the security incident.

Concern 3: Degree of Danger

The amount of violence in the community will have a direct impact on the advisability of transit employees intervening in criminal incidents. It is important that the system and its employees recognize this and that employees are trained to take appropriate action to protect passengers, employees, and the system from criminal activity.

Concern 4: Risk to Equipment and Facilities

Transit system property is important to the proper operation of the system and should be protected from a wide variety of threats. The simple act of quickly removing trash, litter, damage, or graffiti will help to cover the incidence of this type of activity. However, property is of lower priority than other considerations when trying to decide how to respond.

Actions

Minor Violations

In the vast majority of cases, criminal activity will only involve some sort of minor violation that can be corrected with a simple comment or direction to the offender. However, these activities can cause problems if they are overlooked routinely or if there is an overreaction by security personnel. System employees should be trained to handle these situations routinely and consistently. Problems occur when the public perceives that someone is being singled out unfairly, that the reaction of the system is more heavy handed than the incident warrants, or if enforcement consists of empty threats.

More Than Violations

In cases where interrupting the activity may require more than a reminder, the judgment of the transit employee comes into play. It is not the responsibility of the employee to apprehend the criminal — it is only to stop the activity. Some actions are less risky than others. If the risk to the employee is high, there may be other indirect ways to intervene. In some transit systems, the security personnel are trained to handle more than minor violations.

Interrupting the Activity

The employee can call out from a safe distance or use a public address system to let the criminal know that the crime has been observed. Whatever approach is used, the point is to stop the activity as soon as possible and worry about catching the criminal later. The employee can say that

- security personnel have been summoned and are on their way
- the activity is being photographed or recorded
- he/she will sound an alarm

If the system employs security personnel, persons suspected of a crime can be detained by the security department. It is important that other employees do not merely observe a crime while waiting for the security or police to arrive and catch the offender.

Although it is not the role of the non-security transit personnel to become the enforcement authority in a confrontation situation, they should keep in mind that their first responsibility is to

think of ways to stop the crime, if possible, without endangering their lives or the lives of others. They should summon the appropriate personnel (e.g., police, transit police, security department, or other transit employees) that are trained and equipped to handle the situation. Employees should not assume the wrong role in a confrontation with an individual. An example of the wrong role is standing between the objective of the confronting individual.

Notifying Security Forces

Shortly after discovering the incident, the employee must make a decision when to alert the system that an incident is taking place. Several factors come into play in this decision:

- how easy it is to communicate with security
- how threatening the criminal incident is
- how much danger the employee or passenger is in
- whether the employee can resolve the incident without help

Notification can take place in the form of pressing an alarm button, calling on the phone or radio, or simply shouting for help if others are near. If the employee can bring the incident to a safe conclusion alone, it is still necessary to let someone else know that an incident has taken place as soon as possible. However, if there is a significant risk involved, initial notification should be made before any other actions are taken.

If there is a major incident where security personnel or the local police were involved, they will probably already have been notified and additional notification will be unnecessary. But even for routine security activity, there is still the need to keep the security department informed on the background level of small crimes and minor violations so they can be alerted to any change in the level or crime or of the need to address certain problems. Notification can be a simple phone call during which the security department collects the information they need or a very simple incident form that only includes the basic information concerning the incident. Any more than the basic information sheet will discourage employees from reporting incidents and may even reduce their initiatives to engage in security-type activities.

Figure 2 is an example of such a form.

SECURITY INCIDENT REPORT	
Date:	_____
Time:	_____
Location:	_____
Description of Incident:	_____ _____ _____
Passengers/Property Affected:	_____ _____ _____
Actions Taken by Transit Personnel:	_____
Submitted by:	_____
	Signature

Figure 2: Sample Incident Form

Helping Passengers

Once the activity has been interrupted and notification has taken place, the employee can focus attention on any passenger affected by the crime. The objective is to reduce the trauma of being a

victim and aid in the recovery. If an injury has occurred, whatever first aid employees are authorized to provide should be administered. The employee should then note the circumstances surrounding the incident. This can include

- the number of persons involved
- their physical description
- the location
- who or what was affected and to what degree they were impacted
- what was the time sequence of events
- what actions were taken by the transit system staff during the course of the incident

This information is important not only for future prosecution but for reviewing the way the transit system responds to criminal activity and improving its response to future events.

Preplanning and Training

The steps outlined are not intuitive. A system has to devote resources to train employees to handle security problems. It is necessary to map out how the employees should react to given types of incidents and then role play so that employee reactions are conditioned before the incident takes place. It is much easier to think clearly in a planning session than in the middle of a security incident. The practice will also help to iron out problems with the procedures developed.

Planning

Planning sessions should include a group representing management, security and non-security personnel, union representatives, and local police who meet to review the different types of crime and regulation violations that may affect the system. Their job is to categorize the different types of activities and to suggest strategies for the different categories of employees to use. Because you cannot train employees to handle every incident, generalize the planning to apply to a variety of circumstances and then train employees to recognize the different types of incidents so they can react accordingly. This input should be supplemented with discussions with other transit systems and reference to transit security literature.

Policies and Procedures

Each system should come up with a set of security policies that will depend on the

- size of the system
- modes of transportation
- type of facilities under their control
- size and amount of differentiation in the staff
- agreements that exist between the system and the local law enforcement agencies

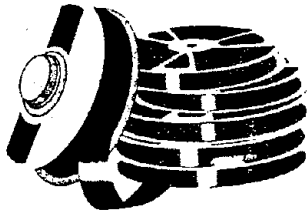
This system again needs to consider the community when prescribing security procedures. If graffiti is prevalent in the community and is an accepted form of urban art then, declaring it a crime on the system will require public education. If violence is prevalent in the community and weapons are frequently carried, then the amount and manner of intervention by security and non-security personnel should be carefully considered.

Training

Awareness Sessions

Awareness sessions should be conducted to inform employees of the actions to be taken in the event of a crime. They should define the types of criminal activities to be expected and the manner in which each type should be handled. Examples of actual incidents are very effective, especially ones that occurred in the local system. Better still are incidents related by the individuals involved.

Videotapes and Films



Videotapes and films can be used to effectively demonstrate policy and procedure information. Upon finishing the training, employees should have a clear understanding of what their responsibility is during a criminal act and what the system's expectations are of their actions.

Role Playing

Examples may be developed which will illustrate the approach to different types of incidents. They can illustrate the key stages of the event and possible problems that might be encountered. Employees should participate actively, guided by a script directing what they are supposed to do. This involves the staff and encourages them to think about their roles. Encourage questions during these sessions and provide reasoned answers. Avoid answers that say, "Because that is what it says in the policy."

Drills and Exercises

Training would move to the drills and exercises to where employees are periodically asked to practice what they know in realistic drills. These exercises may also be conducted at unannounced times to see how an individual will react in real-life situations. Results of these drills should also be fed back into the training session if the desired actions are not performed.

A note of caution . . . It is unwise to make the results of the training drills part of an employee's performance evaluation. The results should be viewed as reflecting the effectiveness of the training and not as a disciplinary tool for employee ratings.

Technology

When deployed properly, technology can be an effective force in trying to cope with security problems. However, no matter how useful the technology, the staff must be alert, motivated and trained to be effective. Technology is no substitute for motivated employees who take the security aspects of their jobs seriously and perform their duties professionally.

Technology that extends the reach of the security organization includes cameras, microphones, intrusion sensors and other equipment which allows remote areas to be monitored from a more central location. The primary advantage of using technology is that fewer individuals are needed to monitor the different locations in the system. The disadvantage is twofold.

1. No matter how dedicated the employee is, it is very difficult to focus for long periods of time on an event (e.g., a closed-circuit television monitor) in which there is no action. Boredom and/or inattentiveness often sets in, decreasing the effectiveness of the individual performing the job.
2. A sensor itself does not prevent a crime, but it might make it more difficult and force the criminal to take some precautions. Patrols by security personnel have added impact.

Technology can be effective and help a transit system cope with expanding responsibilities and smaller staff, but it cannot be relied on to the exclusion of the human element and still be expected to prevent crime. (For additional information see the later text on Hardware.)

Communication/Responsibilities

The Role of Communication

Communication serves as the backbone for response to a serious crime. It is the control link to coordinate the response while the crime is in progress. It can also help keep the situation from escalating, reduce public exposure to dangerous situations, and provide an accurate record of the activity surrounding the crime for later review and analysis. An effective communication system is vital to system security.

The Human Factor

A communication system is more than just phones, computers, wires, and alarms. To be effective, the people operating the system must be trained to react correctly under pressure. Their role is vital in coordinating security activities, disseminating information, routing requests and instructions, and prioritizing message traffic.

This section discusses the different aspects of the communication component as it impacts on crime. The system of communication is discussed in the following text in terms of information input, dissemination, sending instructions to the scene, maintaining the lines of communication, and dealing with the media. With each system, the communication process may be different, but this Guide is relevant because problems faced are similar.

Incident Information Input

NOTIFICATION INFORMATION	
Date:	___ / ___ / ___
Time:	___ : ___
Location:	_____
Type of Incident:	_____
Assistance Requested:	_____
Operator Initials:	_____

Figure 3. Sample Incident Information Form

The first notification that an incident is taking place may come in as an alarm, panic button annunciator, phone call, or radio transmission. It may come in while the incident is taking place. It is vital that the person on duty (operator) be familiar with how to record the information and know what to do with it.

Incoming information should provide the *location* and the *type of problem* involved. In the case of alarms or panic button calls, the operator will be told of the location automatically. For voice notifications, the operator needs a standard form or log to note specific information. Typical information to be collected at the initial reporting of the incident is shown in Figure 3.

More than the minimal information is not necessary immediately, and its collection can slow the response when speed is most needed. If follow-up will be needed, recording and automatic logging devices may be used to allow reconstruction of the incident. The person calling for help is not concerned with follow-up, and assistance should not be delayed to compose paperwork.

Disseminating Internal Information

Once the initial information is received, the operator or dispatcher will be responsible for putting the response system in motion. There will be a range of possible actions depending on the type, magnitude, and location of the incident. Actions include

- dispatching security personnel
- calling the police
- notifying supervisors and management
- notifying system dispatchers and route controllers
- establishing on-scene communication
- activating the public address system to relay messages
- calling for rescue or emergency support
- recalling off-duty personnel

The Operator As the Key Link

The contacts made by the operator will depend on the structure and policy of the system and the nature of the incident. The role of the operator is to collect and route the information accurately through the designated channels of the system. Those on the scene should handle the incident with the assurance that the rest of the system will support them. It is important that the information relayed by the operator is accurate, clear, concise, and complete. Each individual contacted should be told of the nature of the problem, the urgency required for response, and what actions the individual is expected to take. It is a good emergency operating procedure to *have the information repeated by the person receiving it to ensure that it is understood.*

The Role of Communications Personnel

The attitude, poise, and training of communications personnel are important to the success of emergency response. Communications staff must be able to collect information and relay it quickly, calmly, and accurately. Training and realistic drills are the most effective ways to prepare people for a security incident. Those who cannot function in a high-stress environment should not be assigned to a communications position.

On-Scene Instructions/Feedback

The communications system should provide for easy two-way communication between the site of possible security incidents and a central security coordination location. With compact portable radios, cellular telephones, and mobile tracking systems, most systems can equip their buses and vans with two-way communications. This will allow direct command and control of the security incident from a central location.

Autonomy

Each system will have to decide how much autonomy they are willing to give the on-scene personnel. There is a trade-off between relying on employees' training and expertise to handle incidents and centralized control that is dependent on communications systems dealing with limited information. The person on the scene needs to be given some leeway to handle non-routine situations that may not be apparent in central control. On the other hand, central control may be able to bring additional expertise or assets to the individual on-scene to help resolve an incident. For example, in extended incidents the people at central control may be able to provide background on the perpetrator and suggest ways of working with him/her that are not readily apparent on the scene. Conversely, the on-scene leader may see immediate opportunities to act.

Coordinating Communications

If multiple security/police departments are involved, it will be necessary to establish coordinated communications. Many areas already have protocols for coordinating the communication of multiple emergency response forces through which the transit system may be able to work. More remote sites may rely simply on telephone lines to connect the police and transit dispatcher.

Maintaining Lines of Communication

Once lines of communication have been established, they need to be maintained throughout the incident. The communication system operator must maintain communication with the scene, even at times when there is no traffic because the lines must be available as it is needed. Additional communication lines can be made available to the operator to handle calls to alert the other transit functions. This may also require back-up communication capabilities in case the original line to the scene is lost. This can be either a permanently installed system with redundant lines to all stations and facilities or a second means of communication on a temporary basis for the duration of the incident. Loss of communication with the scene will prevent the coordination of the response.

Media (Press) Information

It is unwise to call too much attention to security problems. However, the public rightfully expects that serious threats will not be withheld from them. The press should be given the facts surrounding the incident but not the methodology used or any particular grim aspects of the incident.



In any protracted incident, the media may insist on being kept abreast. The members of the media have certain deadlines they have to meet, and they should be treated with respect and fairness. The system should designate a single spokesperson to communicate. This spokesperson must be forthright in releasing information and should answer questions with only facts. Speculation should be kept to a minimum and no one should attempt to predict the outcome of an incident. The media often insists on their right to know and may claim certain privileges. The system should cooperate but should not feel pressure to respond to unreasonable or inappropriate demands for information. Information of a personal nature should not be released.

Incident Follow-Up

The Purpose of Follow-Up

The purpose of security incident follow-up is threefold:

1. To limit and repair any harm done to individuals and property. Follow-up response will initially focus on any people who were in the vicinity of the crime and to help in their recovery. It will the focus on limiting the danger to the transit system from any after-effects of the crime.
2. To collect information and evidence concerning the incident for possible legal action and to evaluate the effectiveness of the security system.
3. To return the system to normal operation. This will involve clean-up of the site, dispersing the crowd, reopening any areas that may have been closed, and handling the dissemination of information concerning the incident.

As with the initial response, the number of options and different sets of circumstances make it impossible to prescribe all of the activities to be conducted. The following guidelines will help ensure that all important aspects of the follow-up activity are considered. That includes

- short-term activities immediately after the incident has ended
- longer-term activities after the transit functions have been restored
- a policy review after all the evidence has been collected and studied to determine how the system might have responded differently

Short-Term Response

Short-term response begins after the security incident has been resolved and any persons directly affected are assisted. Its purpose is to limit and overcome the impact to the system, collect evidence while it is still available, and file the initial reports. This period is critical to ensure the incident is resolved with as little impact on the rest of the system as possible.

Limiting Impact

Limiting the impact can include evacuating people from the scene, arranging for alternative transportation, or arranging for support activities for traumatized passengers. Provide an effort to ensure that there are no residual problems that will impact other parts of the system. Routes may have to be alerted, stations closed, or additional buses activated to restore service. The system should continue to provide service to the community despite problems at one site. An effort needs to be made to keep the system operating during and after the incident.

In the case of minor incidents, such as graffiti or other vandalism, the goal should be to get the area cleaned and the damage repaired as soon as possible. In cases where the incident requires facilities to be closed or passengers re-routed, implementing temporary routes will require more planning and the commitment of additional operations resources. And in cases where the incident is not fully resolved (which could happen if a criminal escaped through a subway tunnel or a bomb threat lingers), the system may have to alter schedules and change routes for an extended period. The principal impact to avoid is personal injury. Additional assets will have to be committed as necessary to keep the system functioning.

Collecting Evidence

One of the challenges is to restore the operation of the system as quickly as possible. Evidence collection needs to be done quickly and correctly because any residual information will be destroyed as soon as the public is readmitted. There is little sympathy on the part of the public about being inconvenienced to investigate a crime.

Witnesses must be interviewed quickly and their names and addresses taken. If they can be convinced to provide information, they should be kept apart from other witnesses until they have had an opportunity to recount their experiences. If potential witnesses insist on leaving before a security person arrives, the system employee should try to get the witness's name and address so he/she can be contacted later. The statements should be taken by the security person in charge of the scene or a person they designate. If possible, a quiet area should be set aside to conduct interviews.

Completing Reports

Reports need to be completed quickly. Witnesses have a tendency to begin to *edit* what they report based on what they think other witnesses are saying or what they think other people want to hear. The more quickly the report is prepared, the more complete and accurate the information will be.

For the report to be effective, it should not limit the answers of the person filling it out. While a computer form makes data entry easy, the information collected may not represent what was actually witnessed. Give the witness as much latitude as possible. Questions should be open-ended, allowing the witness to fill in as much detail as he/she can remember. An open-ended report form will be more difficult to interpret, but it may include information that would have been missed in a more structured format.

It may be necessary for the system to provide assistance to individuals who have to fill out the forms. Persons with limited literacy or with language difficulties should be given assistance.

Long-Term Response

The long-term response involves conducting a review of the incident, determining any follow-up action to be taken immediately, or mitigating the impact of future incidents. Long-term response occurs after experts have had a chance to analyze the incident but before facts and details are forgotten.

Reviewing the Incident

The incident review is an examination of the circumstances surrounding an incident to determine whether any immediate actions are necessary. This review should include a representative from the security staff, the line management, and transit staff. The incident review should begin with a review of the reports. It should be followed by an examination of the actions taken by the perpetrator, the staff, and the public during the incident. It should consider the circumstances that led up to the incident, whether the perpetrator still represents a threat to the system, and if the actions of the staff and security personnel were effective in resolving the incident. If necessary, this review team should ask questions of the staff, review procedures and policies to assess what happened, and determine its effects of the passengers and the system. This review should be conducted quickly and recommendations reported directly to the person with the authority to implement them.

The specific individual selected to conduct the incident reviews may vary. It is important for the incidents to be reviewed in an open and unbiased manner. This will occur only if the participants approach the task in a fresh and serious manner.

Determining Additional Action Needed

The report of the review team will indicate whether any additional actions are necessary. The idea is to have a means to implement quick changes to the security practices to meet emerging problems. The actions could include

- distributing a description of the perpetrator throughout the system if he/she has not been apprehended
- recommending that additional security staff be assigned to patrol high risk areas
- providing staff with portable radios to help resolve the situation

Following Up As Needed

Periodic follow-up of the recommendations is important. If the security danger still exists, the follow-up will encourage the staff to remain alert. Once the situation has been resolved, it may be appropriate to relax the increased state of alert.

Reviewing Policies

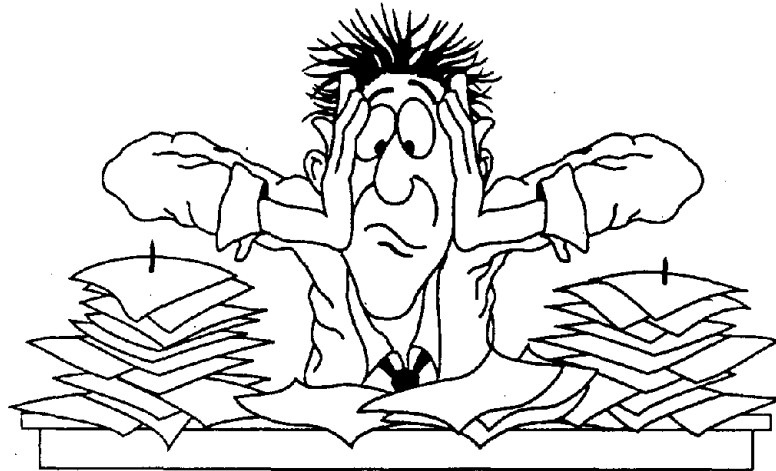
In conjunction with the recommendations of the incident review team, system management should examine its policies to see if changes are necessary. This policy review will affect the performance of security on a more basic level than the recommendations of the incident review team. The policy review may indicate that insufficient attention was paid to someone loitering around a bus stop for several days before an incident took place . . . that the operators should be trained to be more alert to occurrences of this kind . . . that panic buttons should be installed on buses so operators can indicate trouble without alerting the person threatening them. The results of the policy review can be documented and included for refinement as part of the system security program plan.

Reporting

Why All The Paperwork?

"Security would be so simple if it weren't for all the paperwork" is an attitude shared by many professionals. It is not surprising for people to question the benefit of filling out long, complicated forms. The reporting part of the security process must demonstrate its value.

Information collection begins with considering the reasons security information is collected and some of the uses of that information. It is important to know what data is available, but more important, which of it is useful to collect for data analyses. Once the information requirements are established, the means of collection, storage, and analysis are discussed. In what manner and in what form reports are prepared are also reviewed.



Information Requirements

Performance Requirements

Performance requirements involve measures of system effectiveness including the number of incidents, response time, outcome of incidents, and comparisons with other like-events. The information would deal with how secure the system is and what role the security department has in keeping the system secure. In particular, any information that would assist in determining where to deploy staff or allocate resources is especially important. There is obviously a lot of room to decide how much information to require within these categories. The temptation is to collect everything available just in case it is needed. A concerted effort is required to reduce the information requirements to just what is needed.

Legal Requirements

Depending on the authority and jurisdiction of the system's security, there may be a requirement to keep legal records. Transit police should maintain records of arrests, criminal investigations, interviewing witnesses, etc. Records have to be kept on suspects, arresting officers, detention, and custody. This information is especially important for identification purposes in criminal trials.

Administrative Requirements

Administrative requirements include organization, payroll, and security expense information. This information is collected as a matter of course to issue payroll, pay vendors, and other routine matters. However, this information is useful in security when used with performance data to determine adequacy of resources.

Collecting Information

Performance information can be collected from many sources. A large security organization may keep tapes of the conversations between the on-scene command and the operator and the rest of the security coordination team. Reports will be prepared from the different phases of the security activity. In addition to security incident reports already mentioned, two useful sources of summary information include *incident review reports*, which are created by a small group reviewing the incident, and *periodic procedure and police review reports*, which are completed at the end of a formal security system review. These reports and logs can be a primary source for performance information.

Legal Information

Legal information will be contained in records of incident investigations, arrest records, and custody records. The extent of this information and its use will depend on the scope of the system's jurisdiction. In all but the largest systems, this information will be handled by the local police department and not the system's security department. It is, however, useful to familiarize key security personnel with legal document requirements even if the system is not responsible for the records.

Quantitative Information

Quantitative information (or numerical information, which are cost and time) can be used in calculations to draw statistical conclusions. This type of information is very useful for conducting trends analyses and solving budget allocation problems.

Qualitative Information

Qualitative information is narrative and requires the user to interpret and draw conclusions. It has the disadvantage of frequently being anecdotal. This information is helpful if it is analyzed as a whole and used in conjunction with the quantitative information to find trends and identify problems.

Statistical Information

Statistical information can be manipulated for almost any purpose. Many times a conclusion is reached and then the information is sought to support that conclusion. This approach frequently precludes obtaining good information from the data collected.

Methods of Storage

Using the computer to store the information related to security always requires careful planning to determine what will be stored and how it will be stored. The report formats are generally simple enough to be put into a database for incident reporting. A limited number of categories can be established to cross reference the incident so it can be compared with similar incidents. Categories can include type of incident, incidents involving property damage, time of day the incident occurred, etc. Databases will allow storage of information about the specific categories and also the text information in either large fields or in memos. If the database is properly designed, it will permit both the storage and retrieval of security information.

A number of safety reporting software programs and databases are available. Among these are two which have been developed and refined by the Federal Transit Administration. They are Automated Emergency Response System (AERS) and Section 15 Safety Management Information Statistics (SAMIS).

Report Preparation

Report preparation is based on the same information requirements discussed earlier. This leads to the selection of the data to be collected and dictates the standard reports that are generated by the database system. Minimum requirements could be a monthly listing of incidents by type, and another could be a listing of events by location.

Statistical reports are often used to track the rise and fall of key numbers as one measure of the effectiveness of the security system. Including text information in the database allows for more than just numerical indications of effectiveness. It will allow a story to support or qualify the numerical values.

The system should also be able to provide supplemental and special request reports as needed. Someone familiar with the database can extract the information in a variety of ways and format the report to suit the request.

Report Dissemination

Careful planning is needed to decide how to distribute security reports. Reports may deal with very sensitive information that should not be widely available. To be useful to the security department as a whole and to assure the suppliers of the information that is being used, it is important that at least portions of the data see wide distribution. Specific, detailed reports should have some restrictions put on their availability since they will contain sensitive and personal information. Statistical reports showing incident rates and possibly limited descriptions of the incidents can be distributed more widely. The key factor in distribution, however, is what information can be used by what staff to enhance security further.

System Refinement

Keeping Up With The Times

The effectiveness of any security system depends on its internal structure and on the environment in which it functions. This means that as the environment changes, the system has to change.

There is another aspect to making changes in a security system. One of the biggest problems with security is that since it might be fully exercised infrequently, it can gradually become ineffective because it is heavily dependent on the alertness of employees. Making changes to the system will require security and other staff members to think about what they are doing and how they are doing it. Change can improve the overall effectiveness of the security system without causing substantive differences in the way security is implemented.

Policy/Procedure Review

Policy review should involve the people who are responsible for carrying out the security program. It must depend on their experiences and their knowledge of security requirements to direct improvements to the system. The role of management is to guide the review to ensure that all aspects of security are considered.

Sources for Procedure Development

Similar Transit Systems

Sources for the development of new procedures can be adopted from similar transit systems. Their System Security Program Plan will provide an outline for framing procedures and suggest ways to handle common problems. They may even shed some light on security issues often overlooked. Other sources for ideas are the incident review team's recommendations and the policy review recommendations made during incident follow-up. These sources will help to tailor the way security is implemented to the specific needs of the system.

Consultants

Consultants can provide helpful information on how other systems approach particular security problems. They can also point out areas that may have been overlooked in the development of earlier security procedures. However, the suggestions of consultants have to be considered in the context of the transportation system itself. No consultant can know all the unique security challenges faced by individual systems, and they cannot be aware of how the community will react to certain security procedures.

Review Committee

The system's management should be flexible enough to handle a number of committee formats. One way to review the effectiveness of procedures could be incorporated into the training program where members of the staff devise ways to thwart the security system. This forces the security staff to develop better ways to detect and react to security problems. Then the roles can be reversed and the security personnel could create ways to defeat their own procedures. Not only does the staff have to learn the procedure being examined (effectiveness training), they also may find a means to improve the way it is employed (better procedures). The group then evaluates the process for consistency, efficiency, and check particular procedures against the reports of security incidents.

Recommendations

Whatever method is used, the results should be recorded and presented for approval. The recommendations would include a statement discussing the problems and should be corrected to reflect how new procedures will satisfy that requirement. They should be complete and include any special circumstances for their implementation. The individual responsible for implementing the recommendation must be comfortable that consideration was given to all important aspects of the new procedure and that no adverse effects are likely.

Approving and Implementing Policies

Those who have worked to recommend the changes ought to see that their work was important enough to be reviewed quickly. New policies should be fully implemented as soon as they are approved. This generally requires wide distribution of the new policy together with instructions on how it is to be implemented. Hardware procurement or special classes may be necessary. In some cases, procedures may be implemented on a small scale to see whether they will solve the particular security problem. This implementation has to be monitored for a time to see if it is worthwhile.

Systems need to be careful that these evaluations are not influenced by non-relevant factors. It is not uncommon for people to go out of their way to make a procedure successful that may not be effective in general use. A successful new procedure should be incorporated into the System Security Program Plan.

Section 2
Security Problems

Security Problems

About this Section

This section has been designed as a reference and planning tool for solving security problems. It does not need to be read in sequence and some redundancy exists to make it easy to use. Each subsection discusses a unique security problem and its potential solutions. Subjects that are inherently related have been identified, and cross references have been provided to indicate sections that discuss common issues in further detail.

This section focuses on the causes, prevention, and handling of specific security-related incidents. Solutions beyond the more general proactive measures discussed in the previous section are provided. A discussion regarding each unique security problem includes:

- common scenarios and factors contributing to the occurrence
- typical victims
- common modus operandi of the perpetrators
- the affects of the setting, timing, and physical environs of the situation

Prevention methods are reviewed with discussions of:

- the fiscal requirements, where applicable
- effectiveness
- frequency/duration of application
- various approaches and recommendations.

Careful planning and consideration should precede the implementation of any of these approaches to increasing the security of your passengers, vehicles, facilities, staff, and overall system. Also, decision-makers must realize that new technologies are being made available every day. Additional research may be necessary before implementing particular procedures to ensure all options have been considered.

Special Security Problems

The security problems have been organized as follows:

- Chapter 3: General Security Issues
- Chapter 4: Crimes Against Passengers
- Chapter 5: Crimes Against the Transit System
- Chapter 6: Crimes Against the Public: Critical Incidents

Security Problems

(continued)

Chapter 3: General Security Issues

This includes minor issues that must be handled on a daily basis by front-line transit personnel. These issues seldom require the intervention of police and are rarely reported. They also include security-related issues that may not result in harm to people or property during a single incident but have been ignored for some time. Such issues common to all transit systems include:

- Drunkenness
- Disorderly Conduct
- Crowd Control
- Drug Law Violations
- Minor Sex Offenses
- Solicitation
- Homelessness
- Miscellaneous Misdemeanors/Nuisances (such as transit rule violations or local ordinance violations)

Chapter 4: Crimes Against Passengers

These are serious but infrequent. Variations in the nature of these crimes and approaches are discussed to address the problems of:

- Theft
- Physical Assault
- Sexual Assault

Chapter 5: Crimes Against the Transit System

These are particularly common. They include employees, equipment, revenues, and system facilities. In particular, such as:

- Fare Evasion and Fare Theft
- Suicide Attempts
- Vandalism
- Trespassing and Physical Security Intrusions
- Theft, Burglary, and Robbery
- Attacks on Personnel

Security Problems

(continued)

Chapter 6: Crimes Against the Public: Critical Incidents/Acts of Terrorism

These are system crimes that are *not* limited to either the security of the passengers or the transit system; they are extremely critical incidents. Discussion and procedures are provided for handling the following:

- Hostages
- Hijacking
- Bomb Threats

Summary Tables

About Summary Tables

Summary Tables are provided for each security problem. The basic format is shown as Table 3. Each table shows summarized information regarding:

- the usual scenario
- the degree of the problem
- the effects of the problem
- profiles of various solutions and approaches

Table 3. Summary Table Format

SECURITY PROBLEM		Severity:	Frequency:	
Type:	Areas of Affect:			When:
Locations:				
Contributing Factors:				
Solution areas:				
SOLUTIONS/ APPROACHES:	Cost		Effectiveness	Duration
	Personnel	Facility/Equipment		

Summary Tables

(continued)

What Each Entry Refers To

Security Problem	name of the security problem or issue.
Severity	Low, Moderate or High depending on how much damage, how great an injury, and how much loss may occur based on a single incident.
Frequency	the relative likelihood of the incident occurring or how often the crime may occur relative to other problems.
Type	whether the issue is considered a General Security Issue, a Crime Against Passengers, a Crime Against the System, or a Crime Against the Public.
Areas of Affect	what parts of the system may be impacted most directly by the incident including: passengers, vehicles, equipment, facilities, staff, or all of these.
When	describes the time of the day or part of the passenger's trip the incident can occur. This descriptor varies significantly depending on the problem, and might include whether the incident is likely to occur while patrons are: waiting, boarding, on board, exiting the system; during peak hour, off peak, business hours, rush hours, early AM/evening, late night; while closed; at some special time; or at any time.
Locations	describes where the problem occurs the most, whether on the bus, on rail, on board any vehicle, in parking lots, at stops or shelters, in the adjacent community, at facility approaches and exits, in the vehicle front or rear, at entrance/exit areas, at fare collection areas, on the platform, in corridors, in offices and garages, in any location, or various other sites.
Contributing Factors	those general conditions that cause a problem or make a security breach more likely. Examples include: lighting, community, staff, the presence of others, the approach of the vehicle, observation, time of day, equipment strength, police presence, secrecy, response capabilities, history of an issue, human factors, equipment power, or various other factors.

Summary Tables

(continued)

Solutions	summarizes the <i>types</i> of approaches and areas affected by solutions. These areas vary but may include: Training, Equipment, Facilities Design, Response, Public Relations, Community Relations, Communications, Observation, Fares, Advertising, Coordination, Cooperation, Enforcement, Special Materials, and Contingency Planning, among others.
Solutions/ Approaches	provides brief descriptions of possible solutions or approaches to handling the problems. Approaches are discussed in further detail within the text, but in this table information regarding the costs, effectiveness, and frequency/duration of application are summarized for comparison. All of the costs, effectiveness, and frequency/duration are variable, but the relative merits and drawbacks are presented for quick consideration.
Cost-Personnel	describes the relative expense in staff time and salaries generally required to effectively implement and maintain security. These costs are presented as either low, moderate, or high.
Cost-Facility/ Equipment	describes the relative costs of obtaining and/or maintaining new equipment devices, or facility improvements. They vary, depending on how elaborate the specific materials are. In general costs may be described as low, moderate, or high.
Effectiveness	notes how effective this solution or approach should be, how effective other systems have found this to be, and how likely the approach is to work. The real effectiveness of a program will be determined by how well it is implemented and the specific problem it is designed to address. However, the relative effectiveness of the approach compared to other approaches is described as slight, low, moderate, high or very effective, or Variable, if there is an unusually high number of other factors which dictate the success of an approach.
Frequency/Duration	describes how often or how long the solution approach will have to be applied. Equipment based solutions need to be installed only once, for example, but training approaches are required periodically. Efforts may be required once, for each case, periodically, or on an on-going basis.

Chapter 3 General Security Issues



Chapter 3

General Security Issues

What Are General Security Issues

The general security issues described in this section are not necessarily those that result in the most risk for passengers or most damage to the facility. These issues are often handled by operations staff on a daily basis and security personnel may not be required. However, these problems easily create an environment that passengers perceive as not secure or safe enough for their transportation needs. If passengers feel that the transit system is unsafe, they will choose other transportation options. Therefore, even a small or infrequent security disturbance is enough to discourage some riders.

Dealing With General Security Issues

Dealing with general security issues requires the transit system to

- promote security
- demonstrate the transit system's concern with security
- minimize security problems in the system

Drunkennness

Problems Caused by Drunkennness

Intoxicated passengers very easily become a nuisance. In some circumstances they can become a real hazard to transit personnel and to other passengers. Drunk passengers generally exhibit the following behaviors:

- talking to a bus driver while he/she is trying to operate the vehicle
- annoying other passengers
- sleeping at the end of the line or preventing seat access

In more serious instances they could present severe problems such as:

- menacing or threatening the driver or passengers
- instigating arguments or fights among passengers
- relieving themselves or vomiting in buses, on rail vehicles, or in stations and bus shelters
- becoming violent and attacking the driver or other passengers

Occurrence of Drunkennness



Problems with drunk passengers generally occur late at night and on the weekends. Bus routes that travel through areas with many bars and night spots are more likely to pick up intoxicated passengers.

Often, the very presence of other passengers on the vehicle or at waiting locations contributes to the problem. A drunk passenger may respond with hostility to another passenger's attempt to avoid him/her. A driver's attempts to interfere with an intoxicated passenger's activities can also contribute to an incident that threatens the security of the passengers and the driver.

Addressing Problems Caused by Drunkennness

There are a number of methods which transit systems may use to combat the problems caused by drunkenness, including:

- training transit personnel
- establishing procedures for communicating with dispatch
- implementing procedures for dealing with intoxicated passengers

- monitoring intoxicated passengers
- enforcing transit system policies
- preventing intoxicated passengers from boarding vehicles

Training of Transit Personnel

One solution to the drunkenness problem is to conduct training for effectively identifying and dealing with drunk passengers. This training should be given to drivers, operators, conductors, facility personnel, and others. The training should foster appropriate communication techniques and should be conducted for all new hires and provided as a refresher course for experienced personnel. Training areas should include observation and evaluation, professional attitudes, persuasion techniques, communication, and assistance.

Observations

Drivers need to observe intoxicated passengers for signs that they may become sick, may want to relieve themselves, or may become a menace to other passengers. Timely and accurate observation is essential because it is usually easier to defuse a situation in its earlier phases.

Dealing With Verbal Abuse

Another important part of training is to teach drivers how to deal with verbal abuse from a drunk passenger and still maintain a professional attitude. A driver cannot allow him/herself to be dragged into a fight with a passenger who is drunk and hostile.

Training for Persuasion Techniques

Training should also include effective persuasion techniques which allow the driver to stop a passenger's unwanted behavior or to remove the passenger from the vehicle. This training is important to maintain the safety of the driver and other passengers by not provoking a passenger who may be volatile.

Training in communication and assistance techniques is another important area of instruction used to address problems with intoxicated passengers. Techniques for receiving assistance from and communicating with the dispatch office, transit or municipal police, and other drivers and personnel are important for dealing with drunk passengers.

Training in appropriate techniques for dealing with intoxicated passengers involves the initial moderate cost of adding the instruction module to other training taking place. There will be a low facility and equipment costs, except for the training facilities themselves.

Training to adequately handle problem passengers is a very effective solution for addressing the difficulties caused by drunk passengers. It has the added benefit of protecting drivers and other

personnel from the hazards of potentially dangerous individuals. The effectiveness is long term in that personnel will be able to apply what they learn whenever necessary.

Communicating with Dispatch

Communicating with dispatch is a very effective means of dealing with drunk passengers on a bus. The voice on the other end of the radio can have a dramatic affect on an unruly passenger and may induce behavior that the driver alone is not able to impose.

When the driver is coping with a difficult passenger, the threat of calling dispatch may be enough to persuade the passenger to cooperate. If dispatch is called, the dispatcher has a variety of options to communicate to the passenger and the driver. The dispatcher has the authority to stop the operation of the vehicle altogether, which the dispatcher should communicate to the passenger. The passenger knows that the driver's function is to maintain the bus schedule, but the dispatcher can authorize the driver to take extraordinary actions in individual circumstances. The dispatcher also has the resources to call the police and have the passenger incarcerated. This is a valid threat and one the dispatcher may be called on to use.

Actions of the Dispatcher

The dispatcher can also take other actions, such as calling for the police or a street supervisor to board the vehicle and assist the driver, requesting the name and address of the passenger, or requesting that the passenger alight at the next stop. The transit system can also develop other options, policies, or techniques that the dispatcher can communicate to the passenger.

This procedure has low personnel and equipment costs, assuming that vehicles are equipped with radios and dispatchers are on duty during service hours. This procedure is effective in a relatively short time without undue delay of the vehicle. Using the dispatch system to deal with unruly passengers also demonstrates to other passengers that there is an authority beyond the driver on which they can rely for their security, particularly when the driver seems to be having difficulty dealing with the situation.

Implementing Procedures for Dealing with Intoxicated Passengers

Even if assistance is available through dispatch or police communication, there may be a time delay and the situation often must be addressed immediately. Therefore, effective techniques must be developed for transit personnel to help individual drivers cope by themselves whenever necessary.

The techniques must be implemented in conjunction with training. Without it, procedures cannot be as effective unless the operators know how to identify and address problems as they arise and make the correct judgment regarding the need for assistance. A variety of procedures may be developed for dealing with the different circumstances that a drunk passenger presents, such as:

- a quiet passenger slumped in a seat
- a passenger threatening another passenger (with or without a weapon)
- a passenger who cannot be roused at the end of the line
- a passenger verbally abusing a driver or passenger

Effective procedures need to become an integral part of personnel training, and they should be consistently applied to reassure other passengers who are present that their security will be protected if it becomes necessary.

Steps in Dealing With an Intoxicated Passenger

A passenger causing a mild nuisance may be given a warning from the driver. If the behavior continues, the driver may:

1. ask the person to move to another seat
2. ask the passenger to alight at the next stop
3. stop the vehicle until the passenger alights
4. call dispatch. (The dispatcher should have escalating options with the last resort being a call for police assistance.)

Other effective procedures must be in place so that when a driver needs assistance it arrives quickly. Dispatchers must have the authority to call the police in different precincts or jurisdictions. Phone numbers and names of key contact individuals must be readily available. The police or transit police must be involved in setting up procedures so that they can quickly get the information they need to enact a response. This information includes: the number of people involved, whether there is a weapon, the location of the vehicle, the next stop, if there are injured parties, and other crucial information.

When a Driver Should Call for Assistance

Although it is vital that the driver be able to call for police assistance when an intoxicated passenger becomes violent and menacing, the driver should avoid calling for assistance when the situation is not dangerous. Doing so could unnecessarily delay other passengers, create a scene the other passengers may find frustrating or intimidating, or offend a passenger who may not be as inebriated as was presumed.

Enforcing Transit System Policies

All transit policies that may have some affect on coping with intoxicated passengers must be consistently enforced. For example, many systems have policies banning food and drink on vehicles or in stations. Enforcing this policy will prevent passengers from becoming increasingly intoxicated while riding. It may also prevent intoxicated passengers from boarding if they refuse to leave their drinks. On the other hand, the policy will create problems if it is not consistently enforced. If a person who is prevented from bringing a bottle of alcohol on board observes

another passenger drinking a soda, the entire policy is undermined. If the driver is unable to enforce policies for the protection of passengers, security staff or police should be called in.

Consistent application of policies will have moderate personnel costs because they must include training. There will also be a low equipment and facility cost for both the development and implementation of policies.

Observing Intoxicated Passengers

Drivers need to observe passengers as they board and identify those who may be intoxicated. When such individuals are identified, the driver must watch the passenger during the length of his/her trip in order prevent problems. If problems do occur, techniques for curtailing the unwanted activities include the following:

- stopping the vehicle and letting the passenger off if the passenger is going to vomit or urinate
- keeping a trash bag on board in case a passenger becomes ill

Drivers should also observe the reactions of other passengers. If other passengers are expressing disgust, shock, or anger, the driver may need to take action regarding the problem passenger. Observation alone will not address all the problems that intoxicated passengers create, but it will be effective in preventing some in the early stages of development.

Prevention of Intoxicated Passengers from Boarding Vehicles

A more controversial procedure is implementing a policy of preventing obviously intoxicated individuals from boarding the vehicle. This could have a moderately high cost in terms of personnel because of the additional training that will be required for drivers to accurately identify those who are intoxicated.

Costs for Preventing Intoxicated Passengers From Boarding

There may be a moderate cost for equipment if needed. The procedure may be only slightly effective because of the negative effect on passengers who may be wrongfully accused of being intoxicated, the negative effect on passengers who feel that keeping individuals off the bus is unfair or discriminatory, and the reluctance of transit personnel to use their own judgment to implement it.

Table 4. Assessing the Affect of Drunkenness

DRUNKENNESS		Severity: MODERATE	Frequency: MODERATE	
Type: GENERAL	Areas of Affect: PASSENGERS, STAFF, FACILITIES		When: WAITING, ON BOARD, LATE NIGHT	
Locations: Bus, Rail, On Board, Stop/shelter				
Contributing Factors: Presence of others, Community (boarding location), Time of day				
Solution Areas: Training, Response, Communications, Enforcement, Observations, Contingency Planning				
Solutions/ Approaches	Cost		Effectiveness	Application
	Personnel	Facility/Equipment		
Training of operators to defuse situations	MODERATE	LOW	VERY	ONGOING
Planning of responses for speed and consistency	MODERATE	LOW	MODERATE	ONGOING
Communications - radio to dispatch	LOW	LOW	VERY	EACH CASE
Communications - with police, transit police, dispatch	MODERATE	LOW	VERY	ONGOING
Call a patrolman - transit or municipal	MODERATE	LOW	VERY	EACH CASE
Enforcement of transit policies	LOW	LOW	MODERATE	ONGOING
Observation to prevent a problem	LOW	LOW	MODERATE	EACH CASE
Prevent people from boarding if intoxicated	MODERATE	LOW	SLIGHT	EACH CASE

Disorderly Conduct

What Is Disorderly Conduct

Disorderly conduct is not a criminal offense. It relates to the loud, rude, or abusive behavior by individuals or groups of passengers. The problem is relatively minor in comparison to others, but it is usually threatening to other passengers. The perception that no one is in control and there might be danger can be sufficient to discourage passengers from using the transit system.

Who Causes Disorderly Conduct

Disorderly passengers are often gangs or other groups of young people. The same passengers may also engage in other more serious and costly crimes. It is important to eliminate disorderly conduct before it leads to a more serious problem. The very presence of other passengers can be a contributing factor to disorderly conduct. Often, the undesirable behavior is targeted on other passengers who may be uneasy or frightened. In addition, disorderly conduct shows contempt for rules and regulations, and doing so in front of the authorities provides an additional incentive for the behavior.

Locations of Disorderly Conduct

Disorderly conduct occurs most frequently on specific systems or routes. Gangs or groups of youths who engage in disorderly conduct often come from particular neighborhoods, so facilities in those areas may have higher incidents. Sporting events, concerts, and similar events involving large crowds can also lead to disorderly conduct. Facilities and routes near such areas may experience more disorderly conduct than others and will experience more at the times of special events.

Disorderly conduct occurs in a number of locations including buses, trains, bus stops and shelters, train platforms, fare collection areas, and the corridors or stairs of a facility. Passengers are generally the most affected by disorderly conduct, but vehicles and facilities also exhibit effects such as strewn trash. Disorderly conduct can happen at any time. It is not strictly related to late hours because such behavior is usually displayed in the presence of a large number of people.

Addressing Disorderly Conduct Problems

There are a number of methods for addressing disorderly conduct problems, such as:

- the presence of security personnel and other transit system employees
- public address systems and CCTV halting services
- removal of disruptive passengers

Presence of Security Personnel

Although the presence of others can contribute to disorderly conduct, security personnel or police are a deterrent. It is important for more than one officer to be present to have a sufficient affect. Armed and uniformed officers tend to discourage disorderly conduct.

Mobilizing Transit Personnel

Transit personnel should move onto the platform or other areas where disorderly conduct is occurring. In some cases, as in large crowds, the effect might be to control the crowd, reassure individuals, or achieve a level of organization. Often, if the disorderly individuals are a small part of the crowd, they will be inclined to move to another part of the facility or out of it altogether. (See the discussion on Crowd Control for more information on dealing with crowds.)

Mobilizing transit personnel will have a moderate personnel cost, depending on the number of individuals required to respond. When a number of transit personnel are involved in dealing with an incident, they will not be available to address other problems which may occur in the facility. This procedure will be moderately effective depending on the type of individuals involved in the disorderly conduct.

Observing Disorderly Conduct

Observing those involved may prevent a dangerous incident or criminal activity (such as fare evasion or vandalism). When disorderly conduct is observed through surveillance equipment, transit personnel must carefully evaluate the potential threat to passengers, staff, and the facility. The cost of observation is moderate, but there is a good return on the effort.

Transit systems may use the public address system to discourage disorderly conduct. If people are observed through a closed-circuit television system, the public address system can be used to warn them to stop what they are doing. This procedure will be particularly effective if the public address system is directed to specific areas of the facility. Even if the announcement does not stop disruptive behavior, the group will know it is being watched and will be less likely to engage in behavior that will lead to arrest. Procedures must be in place if the group does become engaged in illegal or destructive activities.

Stopping the Transit Vehicle

The operator has the option to stop the vehicle and handle the problem directly. This compromises the operator's schedule and invites the anger of other passengers. Stopping the vehicle has moderate effectiveness. It has a high personnel cost in that the driver is confronting unruly passengers who may be a threat. In situations like this, the operator must radio the dispatcher.

Removing Disruptive Passengers

Another procedure for dealing with disruptive behavior is to remove the individual(s) from the vehicle. The operator could radio for a municipal or transit police officer to remove the offending individual(s). The source of the trouble will be eliminated as soon as the vehicle is boarded by the security personnel or police. This will be an appropriate procedure for cases when offenders are extremely abusive and threatening to other passengers, or when operation of the vehicle is endangered.

Table 5. Assessing the Affect of Disorderly Conduct

DISORDERLY CONDUCT		Severity: MID	Frequency: MODERATE	
Type: GENERAL	Areas of Affect: PASSENGERS, VEHICLES, FACILITIES		When: ANY	
Locations: Bus, Rail, On board, Stop/shelter, Vehicle rear, Fare collection area, Platform				
Contributing Factors: Presence of others, Observation, Police presence, Community				
Solution areas: Response, Communications, Enforcement, Observation				
SOLUTIONS/ APPROACHES:	Cost		Effectiveness	Application
	Personnel	Facility/Equipment		
Stop the vehicle	MODERATE	LOW	MODERATE	EACH CASE
Security/staff presence	MODERATE	LOW	MODERATE	EACH CASE
Remove from vehicle	MODERATE	LOW	SLIGHT	EACH CASE
Public relations — other passengers	MODERATE	MODERATE	MODERATE	ONGOING
Observation	MODERATE	MODERATE	MODERATE	ONGOING
Public address system	MODERATE	LOW	MODERATE	EACH CASE

Crowd Control

Events That Might Require Crowd Control

The need for crowd control is generally caused by single events such as a

- festival
- major athletic event
- concert
- major employment center
- heavy traffic routes
- weather problem

A single event with an unusually large crowd can pose *safety and security* problems because passengers will wait at the edge of the curb or all the way along the platform in a transit station.

Problems Caused by Large Crowds

Crowd control is necessary to address a number of problems, including surging, debris, and vehicle overloading. The transit system's main concern is the large number of patrons trying to board vehicles at the same time. This leads to huge volumes of people who are confined to a space too small for the size of the crowd.

Surging

Volumes of people pushing into each other to reach a similar destination is known as surging. Surging always causes the danger of crushing passengers, especially to frail individuals or children. Additional medical problems include potential heat exhaustion, lack of oxygen, and claustrophobia.

Surging is the most serious problem related to crowd control. The crowd is generally anxious when surging towards the point where pedestrians meet the vehicle. Should those passengers move just beyond that point, serious dangers occur. More specifically, should the crowds surge into the vehicle path, the probability and severity of danger is high. If a crowd pushes passengers into the right of way, people can be injured or killed.

Debris

Crowds are also a maintenance issue. Anticipate a great deal of debris after crowds pass through a single center. Security and crowd control should be aimed to prevent maintenance issues related to breakage.

Vehicle Overloading

The transit system should be concerned with preventing vehicle overloading. The following factors make overloading dangerous or illegal: seating capacity, gross vehicle weight rating (GVWR), health concerns, driver and vehicle limitations, and tempers.

Other Problems

With huge volumes of people, there is a high probability of fights breaking out, pickpocketing, vandalism, fare evasion, or trespassing into non-public areas.

Goals of Transit System Crowd Control

The comparative need for crowd control is best measured in the number of passengers per minute who move into the transit waiting area. The goals of the system should be to:

- provide sufficient service to meet that high number of passengers per minute service demand
- reduce the number of persons per square foot in the waiting area to a manageable and safe size
- maintain the safety of the transit vehicles, facilities, staff, and passengers

Methods for Crowd Control

Methods to control crowds include planning, establishing committees, coordinating with traffic generators and local police, communicating with key staff, utilizing proper equipment, increasing transit operations, using a consistent approach, reducing the size of the crowd, keeping transit areas clear, marketing transit services, and establishing a communications center.

Planning

The most important method for effective crowd control in a transit system is planning, which should begin when major traffic generators or transit facilities are being built. Urban planning generally requires the involvement of the transit system in the design of major traffic generators such as stadiums, concert hall, employment centers, etc.

Systems can help themselves by insisting on large pedestrian areas surrounding the traffic generators and transit stops or stations. If the transit system needs to limit access to the transit stop, there needs to be an area for crowds to disperse outside that stop. Transit systems can ease the problem of crowd control by providing large waiting areas. It is common practice to allow for a slightly higher pedestrian volume than anticipated by providing a larger waiting area.

Establishing Crowd Control Committees

In some areas, crowd control committees have proven to be very effective. The committee may involve a police force, ushering services, emergency medical services, communications office, managing representative, ticket offices, custodial staff, and a member of the transit team.

If the system establishes a committee, it should include primarily operations and security staff, including a vehicle operator, station attendant, supervisor, security officer and manager, representative from local police and emergency forces (including medical services), and a *floating* member who should represent the traffic generator for which crowd control is being planned. The committee should meet prior to each major event at which crowd control is anticipated. For larger urban centers where there are numerous needs for crowd control, subcommittees should be established. A single committee can meet regularly to plan for anticipated events over the following weeks, month, or months.

Coordinating with Traffic Generators

The transit system can learn a great deal from traffic generators that is very useful in planning for crowd control. This information can include the following:

- anticipated start and end times of the event generating traffic
- anticipated volume of passengers
- type of crowd anticipated
- extent to which start and end times are fixed

A basketball game or a concert with an encore may have a very specific release time during which all patrons leave. A conference, however, may have a staggered release time, with persons arriving and leaving over several hours. In the latter case, the need for crowd control will be somewhat reduced.

Coordinating with Local Police

Local police are generally involved in events sponsoring large crowds. Therefore, it should not be necessary for a transit system to start from scratch with regard to security planning for crowd control. Work with other involved security and police teams in planning for the event. Coordinate with local police forces to ease the burden of crowd control and to build a strong relationship with other security forces.

Communicating with Key Staff

In anticipation of the need for crowd control, a number of things should be established:

- the anticipated paths of pedestrian movement
- patron travel demands

- the number of local police that will be involved
- the various means of communication to be used

Communication paths must be established among local police and the traffic generator staff at entrances to the transit waiting area, staff at the transit waiting area, and transit security personnel (whether in-house or hired). Effective communication between vehicles, the dispatcher, and the waiting area must also be established.

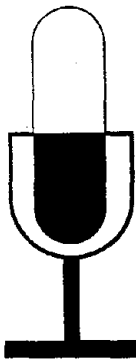
Utilizing the Proper Equipment

Utilizing proper equipment will significantly support crowd control efforts. This equipment can be borrowed from local police or the traffic generator and stored at the transit facility. Storing the crowd control equipment at the transit facility is most appropriate in the case of frequent events demanding regular crowd control. Crowd control equipment includes radios, megaphones and/or public address system, portable metal fencing, sawhorse-type barricades, proper signage, trash barrels, and custodial equipment.

Sawhorses and Barricades

When controlling crowds boarding buses, an effective safety measure is to use metal or sawhorse barricades along the curb to prevent crowds from walking onto the street except at designated boarding locations. The vehicle operator can easily place the boarding doors appropriately between barricades to enable passengers to board.

Megaphones or Public Address Systems



Megaphones or public address systems may be used to inform the crowd when the next vehicle will be arriving to request crowd movement (such as to move the crowd away from the edge of the platform or out of the street) or to impart information to ease the crowd's anxiety. A permanent public address system, however, tends to be more acceptable to patrons. The public address system is an unknown authority (rather than a single security person) which calmly imparts information in a normal speaking voice. The volume of megaphones too near to patrons imparts a feeling of herding, and may cause excitement rather than alleviate it.

Increasing Transit Operations

An operational approach to crowd control can perhaps be the most significant factor in easing the problem. Prior to the event, the transit system should assign additional vehicles, drivers, and supervisors to the area which will decrease headways. This will reduce the frustration and anxiety of the transit crowd and reduce the period of time during which crowd control is required. The faster passengers are moved from the waiting areas toward final destinations, the more effective the crowd control and transit service will be.

Using a Consistent Approach to Crowd Control

Crowds are easiest to deal with when they are self-policed. A crowd that is informed and not anxious will cause few problems. This is achieved by using a consistent approach to crowd control for every event.

Additional signage indicates that access to the waiting area is being controlled, that vehicles are coming at "X" headway, and all passengers will be afforded the earliest possible boarding opportunity. This reduces the anxiety of the crowd. Excitement and surging can be reduced through consistent methods and signage for crowd control.

Reducing Crowd Size

Smaller numbers of people are easier to control. In the case of a crowd, smaller sections of the crowd are desirable units to control. Allowing smaller groups of people to enter the waiting area is easier than allowing crowds to enter en masse. Barriers or barricades should be placed to narrow a large crowd so that by the time patrons are entering the transit facility waiting area they are in single- or double-file lines.

Maintaining Clear Areas in the Transit Center

Certain areas around the transit center should be kept clear. If the entrance is also the only exit from the waiting area, the area should be kept relatively clear. This may be accomplished by allowing patrons to enter in small groups, cross the entrance area, and stop in the waiting area. Patrons are generally accepting of the explanation that fire departments require certain areas to be kept clear and can understand that a waiting area can only hold a certain number of people.

Marketing Campaigns for Transit Services

The problems of crowd control will also be reduced by informing the public prior to the event through a marketing campaign. Signage should be posted on the way to the event to inform passengers of what transit services and options will be available. Planning to arrive early, leave early, or leave late from the event may also be emphasized to reduce the number of passengers per minute traveling at peak times.

Establishing a Communications Center

Establishing a communications center has proved extremely effective in relieving some cases of crowd control. This communication center should have access to all communication channels including local and state police, local emergency services, the traffic coordinator's own security and ushering services, the transit security staff, and transit supervisory staff.

If these organizations are not on the same channel, the communications center must take responsibility for relaying information between such staff members. For example, should a medical emergency occur, the supervisory staff patrolling the waiting area should immediately notify the

communication center and have nearby emergency medical forces deployed to the specific location of the disabled patron.

Roles of Transit and Security Staff

The roles of transit staff and security staff in crowd control will be many. Some staff members will be assigned to control access to the waiting area. In the case of a transit station, the staff should be assigned to the top of stairs or escalators and at the doors used for entering the facility. Additional staff will assist them by roaming the surrounding area to anticipate the volume of crowd attempting to access the waiting area. The staff controlling access to the waiting area will be extremely dependent on staff in the waiting area. By radio, the staff in the waiting area will let other staff know when additional room in the waiting area is available. The dispatcher or transit operator should assist by informing on-site staff of the vehicle's approach to the transit center so that additional passengers can be let into the waiting area as soon as the vehicle arrives.

Staff at the boarding area should also be available to assist vehicle operators in preventing the overbearing of the vehicle. Responsibility for enforcement of bus capacity restrictions is ultimately the operator's, but the burden of enforcement will have to be shared. Transit or security staff in the waiting area should also be responsible for the following:

- keeping the boarding point clear until the vehicle arrives
- watching for the safety of patrons
- being alert to arguments or pushing
- watching access points to non-public areas
- watching for transit equipment vulnerable to attack, such as change machines, telephones, fare boxes, and turnstiles

Personnel should be on the alert for any malfunctioning equipment. Problems with crowd control are exacerbated by malfunctioning equipment. On-site or stand-by maintenance personnel should quickly return equipment to working order, such as turnstiles, climate control systems, public address systems, and token sales machines. If any of this equipment is broken, the frustration of the crowd is likely to increase.

Naturally, the safety of passengers and the restoration of normalcy is paramount to the transit system. Custodial staff should be available to clean up any spillage, eliminate slick areas, remove overflowing trash cans, and dispose of broken glass. They should also be employed immediately after the crowd is dissolved to clean up and return a clean, well-maintained, and controlled appearance to the transit site. *Overall, the key to the safety and security of the crowd is limiting masses of people to manageable groups and maximizing communication through planning and adequate staffing.*

Table 6. Assessing Crowd Control

CROWD CONTROL		Severity: HIGH	Frequency: MODERATE	
Type: ALL	Areas of Affect: ALL		When: BOARDING	
Locations: Surrounding area, Entrance, Waiting Areas, Platform, Vehicle path				
Contributing Factors: Number of people, Facility sizes, Headways				
Solution Areas: Planning, Staffing, Communication, Barriers				
SOLUTIONS/ APPROACHES:	Cost		Effectiveness	Application
	Personnel	Facility/Equipment		
Establish crowd control committee	LOW	LOW	VARIABLE	ONCE
Work with area traffic generators to determine crowd control needs	LOW	LOW	HIGH	PERIODIC
Coordinate with local police that will be involved	MOD	MOD	HIGH	PERIODIC, EACH CASE
Establish communication between boarding area and entrance	MOD	MOD	HIGH	EACH CASE
Establish communication between vehicle, dispatch, security staff	LOW	MOD	MOD	EACH CASE
Limit access to boarding area	MOD	LOW-MOD	HIGH	EACH CASE
Use barriers to form crowds into lines	MOD	MOD	MOD	EACH CASE
Train crowds with consistent approaches	LOW	LOW	MOD	ONGOING
Market special schedules, services before event	LOW	MOD	MOD	ONGOING, EACH CASE
Set out extra trash cans	LOW	LOW	LOW-MOD	EACH CASE
Dedicate extra operations, supervisory, security, maintenance, and custodial staff	HIGH	LOW	HIGH	EACH CASE
Temporarily increase frequency (or decrease headway) for event	MOD	MOD	HIGH	EACH CASE

Install public address system to keep crowd informed and request needed cooperation	LOW	MOD	HIGH	ONCE
Design for large waiting areas and surrounding areas	MOD	HIGH	HIGH	ONCE
Climate control	MOD	HIGH	MOD	ONGOING

Drug Law Violations

Effects of Drug Law Violations

Drug violations are not only problems of the transit system, they breach local, state, and federal law. The effects of drug law violations can cause serious problems for the transit system because of the dangers inherent in handling drug-influenced individuals and drug-related debris.

Some of the effects are that passengers and staff will have to cope with passengers under the influence of drugs, operators and other transit personnel will have the responsibility of ensuring the safety of themselves and their passengers, and the debris from drug use will affect the transit facility itself as well as transit personnel charged with maintaining the facility.

Affects on Passengers

Drug transactions can be dangerous, and any interference by transit personnel can pose risks to personnel and to bystanders. Debris and the disruptive behavior of the individuals create problems for the system. Preventing drug use on the premises does not necessarily eliminate the possibility of having to cope with drug-influenced passengers, but the presence of drug dealing and drug abuse in the system causes many passengers to feel uncomfortable and unsafe in the transit facility.

Drug use and its effects are not isolated issues. For example, drug use and abuse are components of the homeless phenomenon, and syringes and other debris are often left in areas where homeless people congregate. Drug use breeds criminal activities which directly affect passengers. This can result in muggings, purse snatching, assaults, panhandling, aggressive solicitation, or prostitution.

Safety of Personnel

Drug dealing is dangerous. Drug dealers are often armed and conflicts frequently end in violence. Transit systems need to keep drug dealing activities outside their facilities to minimize this risk to their personnel and passengers.

Debris

The debris from drug use (hypodermic syringes, crack pipes, vials) affects both the transit facility and the personnel charged with its maintenance. There is a serious danger in removing the trash that intravenous drug users leave, largely due to the potential for contracting the HIV virus and AIDS. Thus, serious health and morale issues will emerge for maintenance and janitorial personnel who must clean up areas where drug users have littered.

Where Drug Law Violations Occur

Drug law violations are typically completed in secrecy and away from the observation of law enforcement or other personnel. Drug users and dealers conduct their activities in many locations in and near transit facilities, such as in the rear of rail cars and buses, in ill-lit or little-used areas of transit facilities, in dark bus shelters used infrequently at certain times of the day, in adjacent parking lots, near entrances and exits to the transit facility, and in immediate areas of the adjacent community (which may lead to the spread of drug-related activities to nearby facilities).

There is more likelihood of drug use and dealing when there is a low level of activity such as late at night, early in the morning, and during times of infrequent service. Drug paraphernalia may be left anywhere, causing danger to both passengers and transit personnel.

Addressing Drug Law Violation Problems

To prevent the problems caused by drug law violations, transit systems will want to create an environment in which it is clear to users and dealers that observed violations will be reported and acted upon in every instance. Passengers must feel that reporting their observations will result in actions. Drug users will find it difficult to locate a hidden area where they can remain for a period of time where a transit personnel will be aware of all that is going on.

Systems should concentrate their efforts in specific problem locations throughout the city. A number of methods should be employed, including

- designing drug-free facilities
- starting public education campaigns
- enforcing laws and transit system policies
- coordinating with local law enforcement personnel
- coordinating with local social service agencies
- maintaining surveillance of all facility activities
- providing outreach to drug abusers

Designing Drug-Free Facilities

Facilities need to be designed to discourage illegal activities of all types. All areas need to be well-lit. Bright lights in transit stations, bus shelters, platforms, and the interiors of vehicles will contribute to minimizing drug activity. The presence of passengers, transit personnel, law enforcement personnel, or others is an inhibiting factor. While the presence of other passengers alone will not necessarily eliminate drug use or transactions, users and dealers will be more inclined to find less busy areas.

Systems should close off portions of the facility or corridors that are not being used at certain times of the day. Closing all but one entrance to facilities during night operation is a common practice.

Security-conscious facility designs can be expensive. Personnel costs will be low since the intent of the design is to reduce those needed to monitor and patrol facilities. Design changes will be implemented once and will have on-going effectiveness, making it easier to observe activities and to enforce policies and procedures.

Starting Public Education Campaigns

Public education campaigns have been used successfully in many systems to alter such undesirable behaviors as vandalism, fraudulent injury claims, fare evasion, and other transit problems. Similar campaigns should be waged for eliminating drug law violations. Public education campaigns should encourage passengers to be aware of drug use and to report problems when they occur. The transit system should develop public awareness materials which include pamphlets, posters, flyers, interior bus advertisements, station flyers, radio, and local television spots.

Materials encouraging passengers to report drug use violations will discourage drug users who may otherwise feel free to do as they wish. The materials must include information regarding the hazards of drug use and the importance that passengers can play. These materials must also include instructions for the passenger on how to report a drug-use violation. Warnings should be included that alert the passenger to report the violation to the nearest appropriate individual, not to interfere in the drug transaction.

Passengers will be more likely to participate in reporting drug law violations if they are convinced their input is welcome and action will be taken and that reports will be competently and expediently investigated. The system also needs to develop materials specifically for transit personnel which must include procedures for effectively responding to reports from passengers regarding drug law violations.

The cost of a public education campaign is moderate in terms of personnel and facilities. Personnel need to be involved in its design and management. They also need to be trained in the purpose of the campaign and their public relations role. Facilities and equipment costs will depend on the quantity of the materials produced, the distribution efforts, and the type and extent to which different media will be involved in advertising the campaign.

Enforcing Laws and Transit System Policies

Because of the danger inherent in drug transactions, many systems have been reluctant to aggressively address activities. Law and policy enforcement is an important tool in preventing hazardous activities. The system needs to develop and implement clear procedures for arranging for the arrest of drug dealers or the incarcerating of drug users. Enforcing these anti-drug policies will have immediate as well as long-term effectiveness. Those arrested may not return to the same location. At the same time, a reputation for enforcing the law will discourage activities in the future.

Response by transit or municipal police to reports of drug transactions from transit personnel or passengers will also inhibit drug activities. A consistent practice of thorough and on-going implementation of integrated policies and overall prevention of all unwanted activities will serve as a deterrent to drug law violations over time. Enforcement procedures will have a moderate personnel cost because the policies will require the transit personnel to contact the police and be able to effectively communicate with them.

Coordinating with Local Law Enforcement Personnel

Close coordination with local law enforcement personnel is essential, and systems should aggressively build these relationships. After identifying a local law enforcement contact person, the system should keep them informed of

- pamphlets that are developed and distributed
- potential crime sites in the system
- transit system policies and procedures for enforcing drug law violations

Establishing an on-going working relationship with the local police force will facilitate the enforcement of drug law violation policies and procedures. The working relationship needs to

- simplify the procedures for responding to information when there are drug-related activities taking place
- address community-wide problems that impact the transit system, such as neighborhoods adjacent to transit facilities and stops where there is heavy drug trafficking
- assist in the routine observation of bus stops and shelters, parking lots, bus lots, or other areas that police include in their patrols.

Personnel costs involved in coordinating with the police in enforcing laws and arresting violators include establishing a working relationship with the police and maintaining the working relationship through regular contact. The facility and equipment costs should be low. The only exceptions are costs associated with establishing any type of permanent live communications such as shared radio channels and direct telephone lines.

Coordinating with Local Social Service Agencies

The system needs to coordinate with local social services or rehabilitation services. These agencies can provide information, training, techniques for referring individuals to drug treatment centers, advice to users seeking help, assistance for users in a crisis, and other tools for coping with the problems.

Early coordination with the agencies in the community will facilitate their availability. Establish a strong working relationship with a contact person for each appropriate local agency. Those working in the social services will have insights and information that will greatly assist the transit system. Coordination with social services will be most effective on an on-going basis and when

accompanying other policies and procedures that create an atmosphere where drug use is deterred and enforcement expected. This will have a moderate personnel cost. There will be a low facilities or equipment cost. Coordination will have moderate effectiveness, depending on the level of organization and the extent of outreach efforts.

Maintaining Surveillance of Transit Facility Activities

Thorough surveillance of system facilities is an effective deterrent. Systems should assist police operations in the surveillance and arrest of drug dealers who habitually use facilities or nearby areas to conduct business. Effective surveillance can be accomplished by:

- installing cameras and monitors for attendants to monitor facility activities
- installing large mirrors to see around corners
- removing unnecessary obstructions, such as doors in corridors or oversized display areas to increase observation
- using police or transit system personnel patrols to monitor facility activities
- concentrating facility activities to limited areas

Increased surveillance is moderately effective because it alone does not prevent or stop unwanted activities. Observation needs to be supported with quick-reaction procedures. When depending on the type of equipment that is installed or alterations made, there will be a moderate to high cost for increasing the surveillance of illegal activities. The costs of increased observation capabilities can include the cost of personnel to be available to observe drug law violation and the cost for any devices that increase the capabilities of individuals to watch for activities. It should be noted that better quality observation devices will reduce the relative cost of surveillance.

Providing Outreach to Drug Abusers

Outreach and assistance projects should be used to address drug use violation problems. This should be accomplished by the distribution of pamphlets and materials describing the locations of local soup kitchens, social service agencies, hospitals, drug abuse centers, etc. that are available in the area; the availability of social service and/or other emergency phone numbers; and easy access to medical information on vehicles and in facilities.

Distributing literature and other information regarding social services will be useful in directing those seeking help. The outreach policies may only be effective with a small portion of those violating drug laws in the system, but the cost is low for both personnel and facility resources. One significant drawback is that the pamphlets are often discarded right after they are received, thereby contributing to a litter problem.

Table 7. Assessing Drug Law Violations

Locations: On board, Parking lot, Stop/shelter, Adjacent Community, Entrance/exit, corridors				
Contributing Factors: Lighting, Presence of others, Police presence, Community, Secrecy, Human				
Solution Areas: Response, Advertising, Enforcement, Observation, Coordination, Facilities design, Community relations				
Solutions/ Approaches	Cost		Effectiveness	Application
	Personnel	Facility/Equipment		
Creating an environment that inhibits drug law violations	HIGH	HIGH	VERY	ONGOING
Facility design	LOW	HIGH	MODERATE	ONCE
Public education campaigns	MID	MID	MODERATE	ONGOING
Enforcement of drug laws	MID	LOW	VERY	EACH CASE
Observation of users or dealers	LOW	MID	MODERATE	ONGOING
Coordination with local law enforcement	MID	LOW	VERY	ONGOING
Outreach to drug users, homeless and others	MID	LOW	SLIGHT	ONGOING
Coordination with local social service or rehabilitation agencies	MID	LOW	MODERATE	ONGOING

Minor Sex Offenses

What Constitutes a Minor Sex Offense

Sex offenses include exhibitionism, solicitation, or prostitution. They are not necessarily assaults and may not be severe, but they are annoyances. (See the section Crimes Against Passengers concerned with Sexual Assault for a discussion of severe crimes.)

For crimes such as prostitution there may be no real victim, but the transit system will receive complaints and the situation must be addressed quickly. Crimes such as exhibitionism must be responded to rapidly. They may involve a perpetrator with a mental disability who must be handled sensitively, perhaps with the involvement of social service agencies.

Occurrence of Sex Offenses

Sex offenses can occur at any time of day, but there is more activity during the evening hours when ridership is very low. These crimes effect passengers primarily, but the staff can also be victimized. Exhibitionism may take place in or on vehicles, bus stops, shelters, platforms, and corridors. Prostitution and solicitation occur less frequently but also take place in parking lots and at bus stops. Dark areas in a facility or at a bus stop can also contribute to sex offenses. Shelters where activities can take place in secret will attract sex offenders, particularly when there is a constant traffic.

Addressing Sex Offense Problems in the System

It is very important for transit systems to take rapid action. While many activities can threaten the feeling of security that passengers have when they use the system, sex offenses can be particularly frightening. The following are some methods that may be employed to reduce or eliminate sex offenses:

- improving facility design
- training transit and security personnel
- enforcing laws and policies
- observing activities within the system
- coordinating with social service agencies

Improving Facility Design

Eliminate dark and secret areas. Close off portions of the facility that are not in use and implement observation procedures in areas that are not heavily traveled. Maintain adequate lighting and

remove any barriers to observation. All public areas must be made highly visible so that exhibitionists are discouraged and prostitutes cannot solicit without being seen.

Exhibitionism can take place very rapidly and requires only a small area for the offender to hide. Transit personnel must tour the facility to identify areas that are unobserved, get information from police and security patrols regarding where sex offenses have occurred, and attempt to remove the enabling features. Facility design changes to combat sex offenses include

- installing cameras
- instituting additional patrols
- removing architectural features such as decorative columns or unnecessary walls
- installing features such as locks, doors, and barriers

Changes in facility design have a low personnel cost but can have a moderate to high facility cost depending on the type of design changes that will be made. Removing poor facility design features will have a moderate effect in eliminating sex offenses.

Training Transit and Security Personnel

Transit and security personnel must be trained to identify potential sex offenders. For example, not all prostitutes are obvious, and a person dressed questionably has the right to be in the transit facility and on vehicles as long as there is no active solicitation. It is more likely that a solicitor will be active during nighttime hours than during the morning hours. The surrounding community can contribute to the training because prostitutes often work in specific parts of a city and sex offenders can be identified by the police or other groups.

Other training should involve procedures for dealing with sex offenders. Relocating prostitutes to another area is a relatively simple task, but dealing with an exhibitionist can be more complex. Some sex offenders may be suffering from a mental impairment and may not respond predictably. Others, such as the homeless who gather at transit facilities, may require a social service agency.

Training must include the sensitive handling of complaints and reports of offenses. Although these offenses are not assaults, the victims are often affected. Personnel must also respond in a manner that leads the victims to believe that a similar incident will not happen again. This includes

- taking immediate action to apprehend the offender
- taking information for a later arrest and prosecution
- notifying the police

These responses will promote the perception that the transit system is in control and will not allow its passengers to be victimized. Training has a moderately high personnel cost but a low equipment cost. Training occurs once for each person, but has on-going effectiveness.

Enforcing Laws and Policies

Policies against loitering can eliminate the opportunity for sex offenders to frequent the system. However, the policies must be enforced and loiterers must be asked to move. Policies that prohibit solicitation inside and outside the facility are important to establish and enforce. All sex offenders must be removed before anyone is victimized. It is important to make sure that

- offenders are arrested
- prosecution takes place within the law
- repeat offenders are quickly identified and removed from the system

All these enforcement policies demonstrate to the public that the transit system is committed to their safety. The enforcement policies also demonstrate to offenders that they will be prosecuted if they undertake these activities. Policy enforcement can have a moderate personnel cost but a low equipment cost.

Observing Activities Within the System

An important tool for the observation of sex offenders is to recognize and identify them when they are in the facility. Having images taken through facility cameras will enable transit and security personnel to identify individuals to observe when they enter the facility. When offenders are recognized, foot patrols or surveillance equipment can be used to monitor their activities. The most important purpose of the observation is to prevent the offender from committing a crime, not to harass the individuals or remove them from the system when they have not committed an offense.

Observing the facility in general is important for preventing sex offenses. When individuals move behind barriers or into isolated areas, system personnel must be able to observe them and prevent unwanted activities. An obvious presence — such as a foot patrol — is an effective means of observing activities. (See the section concerning Crimes Against the Transit System which includes additional information on Trespassing and Physical Security Countermeasures and information on surveillance equipment.)

Observation must be an on-going system procedure and can have a moderate personnel cost and moderate to high equipment costs, depending on the type of equipment involved. Observation can be very effective in preventing sex offenses, particularly when it is obvious that the potential offender is being observed or will be observed when the offense takes place.

Coordinating with Social Service Agencies

Some sex offenders are mentally impaired and are not able to respond to enforcement, observation, or other procedures as predicted. Coordination with social service agencies will provide the system with valuable aid in dealing with sex offenders. Social service agencies provide a good source of information, such as educational materials and information on the different needs and responses of sex offenders. The agencies may also intervene if the sex offender needs

assistance. Coordination with social service agencies has a low personnel and facility cost and can be moderately effective if the offender requires the assistance. Social service agency coordination needs to be maintained on an on-going basis.

Table 8. Assessing Sex Offenses

SEX OFFENSES		Severity: MID		Frequency of Occurrence: INFREQUENT	
Type: GENERAL	Areas of Affect: PASSENGERS, STAFF			When: ANY	
Locations: Bus, Rail, Parking lot; Stop/shelter, Platform, Corridors					
Contributing Factors: Lighting, Presence of others, Police presence, Secrecy, Human					
Solution Areas: Training, Response, Enforcement, Observation, Facility design, Community relations					
Solutions/ Approaches	Cost		Effectiveness	Application	
	Personnel	Facility/Equipment			
Facility design - lighting, observation	LOW	MID	MODERATE	ONCE	
Training - observa- tion, sensitivity	MID	LOW	MODERATE	ONGOING	
Enforcement	MID	LOW	VERY	EACH CASE	
Observation	MID	MID	VERY	ONGOING	
Social services coordination	LOW	LOW	MODERATE	ONGOING	

Solicitation

What Is Solicitation

Solicitation involves begging and panhandling, distributing products and literature, and unlicensed merchants. It does not constitute a threat to people who use transit service. But for many of them it is an issue that contributes to their impression of the transit system. Solicitation may make passengers feel uncomfortable and give them a reason to avoid using public transit. It may also give passengers an impression that the system cannot control lesser nuisances.

Legal Issues Concerning Solicitation

Since 1989, a series of court rulings has tried to define what rights individuals have and the authority of a government to restrict or prevent certain activities. The basic question centers on whether begging is a form of free speech that cannot be prohibited in public areas. One court (1990, in New York) ruled that begging was a protected form of speech. That decision was appealed to the U.S. Court of Appeals, which ruled that begging is *conduct* rather than speech. As a result, the government was given the authority to ban begging. Other parties are challenging this ruling and are seeking a more specific interpretation, such as a precise definition of "begging" and its distinction from other types of solicitation that is permitted (e.g., Salvation Army).

Passing Local Ordinances

A transit system may try to work with the local government to pass an ordinance that is precise in wording and has the support of the community. The ordinance may not prohibit solicitation by itself but may be enforced in connection with similar illegal activities, such as harassment. In effect, it should discourage solicitors from frequenting system facilities.

Addressing the Solicitation Issue

The following are some ways a transit system can address solicitation in its facilities:

- passing a local ordinance
- emphasizing the presence of security personnel
- designing solicitation-free facilities
- relocating fare collection
- cooperating with the solicitors
- cooperating with the surrounding communities

Presence of Security Personnel

Security personnel at stations and platforms will discourage begging and other types of solicitation. It will reduce the presence of unlicensed merchants who are indisputably violating the law. Unfortunately, these merchants are often acceptable to passengers (and in some cases desirable) because of the goods they have to offer and because their presence may deter other criminal activities.

Designing Solicitation-Free Facilities

A transit system can design its facilities in such a way that it discourages solicitation. It should make its facilities and vehicles less desirable by making it more difficult for beggars or merchants to reach passengers. One design technique that has been employed in large stations is to create restricted waiting areas. These locations usually have security personnel and limited access in which only individuals that have tickets are allowed. These waiting areas are often separate rooms close to the boarding area. However, a transit system can create such an area by placing seating within a cordoned area. Presumably beggars or merchants will not buy a ticket to gain entrance to the restricted waiting area.

Relocating Fare Collection

Another way to eliminate solicitation is to place the fare collection area as close to the station entrances as possible. This limits the area to which a non-farepayer has access. This may be difficult to carry out because of the limitations that it imposes. Larger stations often have other public uses (e.g., stores, banks, restaurants). Also, a station often has several entrances, so fare collection will have to take place at each entrance rather than a central location.

Cooperating with the Solicitors

A transit system may feel that it cannot eliminate solicitation at its facilities and in its vehicles, but it can displace it or locate it at more acceptable areas. Management may cooperate with the solicitors by offering an area within a station that they can conduct their activities without being disturbed by security staff. Of course, any illegal activities will continue to be prohibited. This approach will allow the system to have greater control over solicitation and devote its security resources to other problems. On the other hand, the passengers may not see this as an acceptable solution since they may still encounter the solicitors in the facility.

Cooperating with the Community

This problem extends beyond the confines of a transit system. A broader approach to take is to work with the surrounding community. A transit facility is often the focus of solicitation because

the facility is a gathering place for the general public. But the transit system can only eliminate the problem with a cooperative effort with the various groups in the community that it serves.

Table 9. Assessing Solicitation

SOLICITATION		Severity: LOW	Frequency of Occurrence: MODERATE	
Type: GENERAL	Areas of Affect: PASSENGERS		When: WAITING, ON BOARD, EXITING AND ENTERING SYSTEM	
Locations: Rail, Parking lot, Entrance/exit, Waiting area, Platform				
Contributing Factors: Surrounding community, Lack of security presence, Concentration of passengers				
Solution Areas: Enforcement, Laws, Cooperation with solicitors, Facility design				
SOLUTIONS/ APPROACHES	COST		EFFECTIVENESS	APPLICATION
	PERSONNEL	FACILITY/EQUIPMENT		
Presence or security personnel	MEDIUM	LOW	MEDIUM	ONGOING
Local ordinances	LOW	LOW	MEDIUM	ONCE
Cooperation with community	LOW	LOW	VARIABLE	ONGOING
Cooperation with solicitors	LOW	LOW	VARIABLE	ONGOING
Restricted waiting areas	LOW	MEDIUM	MEDIUM	ONGOING
Fare collection at entrance	LOW	MEDIUM	MEDIUM	ONCE

Homelessness

How This Affects Transit Facilities

The homeless population in transit facilities has become a growing problem in terms of the security of passengers and employees, as well as in the cost of maintaining facilities where homeless people gather. The transportation industry has typically been left out of decisions on issues that impact the homeless. Shelter programs, rehabilitation efforts, employment programs, and other efforts to help the homeless fall outside transit interests.

Why Homeless Individuals are Attracted to Transit Systems

The largest factor is the amount of amenities provided by the system for its passengers, such as coming in out of the cold, sleeping, searching for food. In addition, transit facilities are public places that anyone may enter. Transit facilities offer homeless people the opportunity to be among other homeless as well as many people who may contribute money and food.

Effects of Homelessness

Effects on Passengers

Passengers often feel threatened and intimidated by a large number of homeless people and can cause them to use other modes of transportation.

Effects on Facilities

Transit facilities show the effects of homeless in the quantities of debris and rubbish that are left, the official or unofficial closure of parts of facilities, and the increased maintenance problems. Homeless people who take up residence in a transit facility leave the remains of meals and drinks which attract vermin and cause a health risks. Human waste also accumulates.

Some systems prevent access to facilities when they shut down at night. Even without formal restrictions, corridor access to passengers is limited due to the presence of homeless people sleeping on benches or rest room floors, bathing in public sinks, and setting up sleeping areas in entrances and corridors.

Effects on Staff

Transit staff feels the effects of the presence of homeless people the most. These effects result in health risks, demoralization, and high turnover rates. Constant attention on the part of transit and

janitorial staff is required to maintain sanitary conditions. They must cope with the added cleaning and the danger of such health-threatening debris, such as used hypodermic syringes. Transit police have the additional responsibility of moving the homeless — a job which lowers morale among those on the shift.

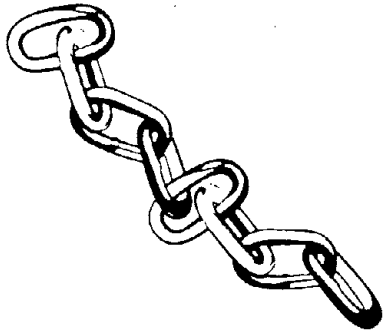
BART, in San Francisco, Working on a Solution

Bay Area Rapid Transit (BART), in San Francisco, has a special wake-up shift that rouses sleeping homeless people and moves them in the morning. Police on the shift must wear plastic gloves for protection. Token agents are afraid to leave their booths at night because of the homeless sleeping around them. Maintenance crews have additional work in trying to repair equipment which has been contaminated when used as bathroom and bedroom facilities by homeless people.

Addressing the Homeless Problem

A variety of methods for addressing the homeless problem have been attempted across the country including increased policing, closing facilities, and limiting non-passenger access. Addressing the needs of the homeless and moving them to appropriate programs include community outreach in the form of travelers' aid, coordination with social services, and coordination with the local community.

Closing and Locking Facilities



Some systems, such as those in Washington, DC and New York City, lock or gate off all extra entrances and exits in the evenings. This should minimally inconvenience passengers. In some facilities, stairways or corridors that are more frequently used by the homeless have been closed. Locking facilities and areas of facilities does prevent people from residing in these areas, but it may encourage them to move to busier areas of the facilities, causing congestion. On the other hand, preventing people from gathering and staying in remote areas of the facility makes them more controllable through supervision. This increases the safety of homeless people and passengers.

Gates and locks can be a significant investment, depending on the type of equipment. But after installing new barriers, there is little subsequent cost for implementing procedures for closing facilities at appropriate times. In addition, closing facilities and areas of facilities may reduce the number of personnel and time required to patrol and observe the security of the facility.

Limiting Non-Passenger Access to Facilities

Many systems have instituted procedures whereby only passengers with tickets are permitted in areas of the facility. Relocating fare collection devices close to transit stop entrances can prevent the entry of individuals who will not be traveling on the system. In larger transportation facilities, designating waiting areas for ticketed passengers will eliminate the occupation of those areas by people not using the system.

Increasing Facility Patrols

Increased patrols can be effective in preventing the congregation of homeless people. If the homeless are continually asked to move, they will be more reluctant to choose a transit site. This can be effective in the long run, but at a high cost. Moving homeless people on a constant basis is a large task and may require much additional personnel. This is a significant risk to transit or other personnel because some homeless people may be dangerous due to poor mental health, drug use, or the AIDS virus. Poor morale and high turnover are common problems among those who deal with the homeless, particularly in enforcement activities.

Coordinating With Social Service Providers

Transit systems are not social service providers, but they often feel the burden of the homeless problem. Transit systems must establish effective programs, policies, and procedures to coordinate with local social services to address the issues of the homeless. In many communities, close work between transit systems and social services has resulted in innovative solutions to the homeless problem. The following methods require coordination and cooperation with local social service agencies and the surrounding community:

- establishing shuttle services to shelter programs
- donating surplus vehicles to serve as shelters for homeless people
- arranging for the occupation of unused properties by the homeless

Instituting Travelers' Aid Programs

Often a person arrives in a city or town without resources and is unable to find assistance. By helping people find appropriate resources, the system can prevent the people from becoming residents in system facilities. Many systems have found that distributing brochures and other literature about specialized programs to homeless individuals in system facilities is helpful.

Coordinating with the Local Community

It is important for transit systems to coordinate their activities with other community services. In many cases, transit authorities are not involved in community decisions regarding the homeless or other issues. However, without proper coordination and communication, policies designed to help will have a negative affect on the system.

Table 10. Assessing Homelessness

HOMELESSNESS (LOITERING)		Severity: MODERATE	Frequency: FREQUENT	
Type: GENERAL	Areas of Affect: PASSENGERS, EQUIPMENT, FACILITIES, STAFF		When: WAITING, PEAK, OFF-PEAK, CLOSED, LATE NIGHT	
Locations: Bus, Rail, Approach, Entrance, Exit, Fare collection, Corridors				
Contributing Factors: Presence of others, Accommodations, Community, Time of day, Human				
Solution Areas: Training, Response, Enforcement, Equipment, Coordination, Maintenance, Community relations				
Solutions/ Approaches	Cost		Effectiveness	Application
	Personnel	Facility/Equipment		
Increased patrol	HIGH	MODERATE	MODERATE	ONGOING
Closing facilities	MODERATE	HIGH	MODERATE	DAILY
Limiting non-passenger access	HIGH	MODERATE	VERY	ONGOING
Travelers' aid	HIGH	LOW	MODERATE	ONGOING
Coordination with social services	MODERATE	LOW	MODERATE	ONGOING
Community relations	MODERATE	LOW	MODERATE	ONGOING

Miscellaneous Misdemeanors/Nuisances

Simple Violations

The most common security problems that all systems are forced to handle are violations. Up to several times an hour, each first-line operation employee (bus drivers and station attendants) will have to enforce the transit system rules. Depending on the specific violation and the validating source of the rule, these incidents may be minor rule violations, misdemeanors, nuisances, or local ordinance violations, such as:

- littering
- spitting
- smoking in unauthorized areas
- eating or drinking on vehicles
- loud radios
- loud behavior

Effects of Minor Rule Violations

Minor rule violations have the greatest impact on vehicle operators and station personnel because they must prevent violations numerous times a day. Violations also effect the passengers. Many of the rules and regulations were created to keep a clean and welcoming environment for passengers. The facility is affected when passengers leave trash, smoke, spit, or create excessive amounts of noise.

Locating Minor Rule Violations

Rule violations can occur in all locations within the system and at all times during the day. Locations include vehicles, station platforms, and places where special rules apply such as non-smoking areas. The degree to which the policies are enforced will contribute to how often they are violated. If enforcement is lax, violations can be more frequent. In some communities, a degree of misbehavior is tolerated and that tolerance will spread to the transit system as well. In such neighborhoods, transit systems will need to be especially diligent to ensure the quality of the atmosphere in the vehicles and facilities.

Addressing Minor Rule Violations

Transit systems can employ the following methods for addressing minor rule violations:

- consistently enforcing rules and regulations
- advertising and public relations
- involving the dispatcher
- empowering the staff
- relaxing standards
- using back-up methods

Consistently Enforcing Rules and Regulations

When passengers observe that a station is free of rubbish, they are less likely to drop theirs. If one passenger is playing a radio too loud and the operator asks that passenger to turn it off, it is not appropriate for the driver to allow another passenger to play a loud radio because he/she likes the music better. The consistent enforcement of rules has a low cost in personnel and equipment. In fact, it can decrease the amount of resources necessary to enforce the rules because operators will not have to explain and justify every incident.

Advertising and Public Relations

Advertising

Advertising has a strong affect on miscellaneous misdemeanors. An essential part of advertising is the posting of rules at many locations throughout the system, including inside all vehicles, at entrances to facilities, on station platforms, and in bus shelters. Passengers often violate rules because they are unaware of them.

Post the rules in clear language in an easy-to-read location. When passengers are moving through the facility they do not have the time or inclination to read a lengthy list and description. On station platforms, the rules can be somewhat more detailed because there is time to read them while waiting. Eventually everyone who uses the system regularly will have had time to read the rules. Other places to publish rules include brochures, schedules, and information pamphlets that are distributed throughout the system.

Posting the rules has a low personnel cost and can actually decrease the cost of enforcement. There is a moderate equipment and facilities cost, depending on the size of the system and the number of vehicles and facilities on which to post the rules. A good advertising policy can be moderately effective and the cost is periodic, depending on how often rules change or literature is published.

Public (or Passenger) Relations

Operators must be thoroughly trained in public relations so that they can deal with rule violations. These skills can prevent a relatively minor incident from becoming a major argument which would cause a delay on the system. All public relations skills training involves treating every passenger

politely and professionally. Being polite to passengers includes not intimidating or belittling them because they are violating the rules, not threatening or menacing them, and not getting into arguments or confrontations with those who are violating the rules. Passenger relations training must include

- communication skills
- appropriate policies and procedures
- appropriate means of coping with problem passengers

Public relations training can have a moderate personnel cost because it can be a part of general operator training. The cost for equipment is low. The effectiveness of driver training in public relations is very high. The training occurs once, but the skills can be applied on an on-going basis.

Involving the Dispatcher

Many systems have found that when the operator is coping with a particularly disruptive passenger, it is useful to contact dispatch to inform them of the problem and seek a solution. The dispatcher has a variety of options which include

- asking the passenger to cease the rule violation
- asking the passenger to leave the vehicle
- mentioning that police or security personnel will be contacted

In general, the voice over the radio takes on a level of authority that can have a dramatic effect on the passenger. The passenger is often not aware of the level of authority of the person on the radio and will often respond to the dispatcher in circumstances in which the driver was ineffective.

This method has a low to moderate cost in personnel and equipment, depending on whether the system has radio equipment and dispatch capacity. The method can have a moderate effect on the prevention of the rule violations and is dependent on the type of violation, the type of passenger, and the type of options available to the dispatcher.

Empowering the Staff

In some cases, the dispatcher needs to be empowered to authorize activities outside the standard operating procedures. For example, a violator may take advantage of the fact that the operator needs to stay on schedule. The dispatcher may then need to authorize the driver to stop the vehicle until the disruptive passenger agrees to leave, even though this is contrary to standard procedures. Once the vehicle is authorized to stop, the passenger will lose his/her advantage.

Because these types of violations occur frequently, dispatchers must be trained in

- responding to particular security violations with the appropriate manner
- understanding what procedures are appropriate, under which circumstances, and when they should be applied
- describing situations accurately and knowing what responses are appropriate

There can be a moderate personnel cost in authorizing the selected use of extraordinary procedures. The cost is low for facilities and equipment. The method will have moderate effectiveness, particularly when used in combination with other policies. Effectiveness will be on-going and should increase over time as the experience of the operators and dispatchers increases.

Relaxing Standards

Another procedure that some systems have considered is the relaxation of certain standards to more effectively enforce others. For example, local law might prohibit cursing in public, but transit personnel may decide against enforcing it unless it becomes too loud or is an obvious disturbance. This allows operators and attendants to concentrate on more important violations and on operations in general. This method has a low personnel cost and low effectiveness. The policy may be applied in each case or on an on-going basis.

Using Back-up Methods

Transit systems need to have a number of back-up procedures to address rule violations. For example, informing some people that they cannot bring food on the vehicle will be enough for them to discard it. But for less cooperative people, the operator will need additional procedures to enforce the rule such as refusing entry to the vehicle, calling dispatch, or whatever appropriate procedures a transit system designs.

Table 11. Assessing Misdemeanors, Nuisances, Local Ordinances, and Rule Violations

MISCELLANEOUS MISDEMEANORS, NUISANCES, LOCAL ORDINANCE AND RULE VIOLATIONS		Severity: LOW	Frequency: FREQUENT	
Type: GENERAL	Areas of Affect: PASSENGERS, FACILITIES, STAFF		When: ON BOARD	
Locations: On board, Platforms				
Contributing Factors: Enforcement, Community, Backup				
Solution areas: Advertising, Enforcement, Passenger relations				
SOLUTIONS/ APPROACHES:	Cost		Effectiveness	Application
	Personnel	Facility/Equipment		
Train drivers in passenger relations skills	MODERATE	LOW	HIGH	ONGOING
Consistent enforcement of transit rules	LOW	LOW	HIGH	ONGOING
Involve dispatcher over speaker	LOW-MODERATE	LOW-MODERATE	MODERATE	ONGOING, PERIODIC
Empower staff to deviate from standard operating procedures	MODERATE	LOW	MODERATE	ONGOING
Backup enforcement with security, police, or supervisor	HIGH	LOW-MODERATE	MODERATE	PERIODIC
Rules posted on vehicles	LOW	MODERATE	LOW-MODERATE	ONCE/PERIODIC
Rules posted entering system	LOW	MODERATE	LOW-MODERATE	ONCE
Rules posted on information literature	LOW	LOW-MODERATE	MODERATE	PERIODIC

Chapter 4 Crimes Against Passengers



Chapter 4

Crimes Against Passengers

Categories of Crimes Against Passengers

There are three broad categories of crimes against passengers. They include *theft* (pickpockets, purse snatching, robbery), *physical assaults*, and *sexual assaults*. This chapter will describe the most widely used measures for preventing and responding to these crimes, including costs and effectiveness. The approaches span the following:

- coordination with local security forces
- facility design elements
- surveillance
- on-site presence of transit system personnel

Theft

Theft is an issue of both actual security and perceived security. Theft occurs in transit systems of all sizes and settings. In some large urban systems, reported losses by passengers is in the hundreds of thousands of dollars each year. However, transit security staff believe that this figure greatly underestimates the magnitude of the problem because many thefts go unreported. Single incidents total a significant security issue on their own.

Pickpocketing (Dips)

Pickpocketing differs in certain aspects from other types of thefts from passengers. *Dips* (as these thieves are known in their field) rely on diversions and confusion to help them carry out the crime. Dips often work in teams of two or three. They prefer to operate in crowded situations, such as a train platform, bus stop, or near parked vehicles. One member of the pickpocket team may ask the mark for help (perhaps to pick up something from the floor) or intentionally bump into the mark to create the distraction. One of the team members will continue the distraction — another will lift a wallet from the mark's pocket or quickly pull a wallet from the mark's purse.

Locations of Theft

Theft of personal property can take place in any portion of a transit system, including a bus stop, platform, station, parking lot, or vehicle. In general, theft is most common where surveillance is low, escape is easy, and response time is long. The crime can take place at any point during a passenger's journey through the system, including times when the passenger is

- waiting for a bus or train
- boarding a vehicle
- riding a vehicle
- entering or leaving a station

Preventing Theft in the Transit System

The best deterrent is to create an environment that makes potential thieves or pickpockets aware of surveillance. Thieves want to escape undetected and will try to avoid situations where they will be detected.

Presence of Transit Personnel

The presence of transit personnel is key. Uniformed security personnel provide the greatest deterrent to thieves and give passengers a heightened sense of safety. Other transit personnel who serve as deterrents are maintenance staff, vehicle starters, ticket collectors, and token clerks. They do not create the same perception of security to passengers; however, they provide a similar visible deterrent. Pickpocketing, like other types of theft, is deterred by the presence of transit personnel. Plain-clothes security personnel can also be a deterrent.

Improving Facility Design

Station design and specific hardware can contribute to a more secure environment for passengers. Good lighting deters thieves and creates a more hospitable setting for passengers. This applies to all high theft risk sites. The designation of off-hours waiting areas has proven to be a very simple and effective way to keep passengers together and in view of transit personnel during evening hours. Passengers will feel more comfortable if there are obvious response mechanisms when a crime takes place, such as rider-operated alarms and intercoms that are conspicuously placed and easily accessible.

A number of systems have invested in closed circuit television (CCTV) technology to enable the monitoring of many different sites from a central location. While not as effective as having personnel on site, CCTV serves as a deterrent by its explicitness as a surveillance tool.

Other Methods for Preventing Theft

Heightening the public's awareness of theft is important to reducing crime. Training transit personnel need to be alert to theft attempts. Similarly, creating the proper lines of communication between non-security and security personnel will increase the likelihood of stopping a theft or capturing the perpetrator.

Costs for Preventing Theft

The techniques discussed here average low cost in initial investment and moderate cost in continual use. Surveillance cameras will have a slightly higher initial capital cost than security personnel, but operating costs will be moderate. Both security staff and CCTV surveillance have high acceptance levels to both passengers and transit management. Overall, the methods of reducing theft are fairly low cost, but they must be employed continually in order to be effective.

Table 12. Assessing Theft

THEFT (includes pickpocketing)		Severity: MEDIUM	Frequency: FREQUENT	
Type: AGAINST PASSENGERS	Areas of Affect: PASSENGERS		When: ANYTIME	
Locations: On board, Platform, Stop				
Contributing Factors: Lighting, Crowds, Police presence				
Solution areas: Training, Communications, Enforcement, Observation, Facilities design, Public awareness				
SOLUTIONS/ APPROACHES:	Cost		Effectiveness	Application
	Personnel	Facility/Equipment		
Visible transit security personnel	HIGH	LOW	HIGH	ONGOING
Presence of other transit personnel	LOW	LOW	MEDIUM	ONGOING
Good lighting	LOW	MEDIUM	MEDIUM	ONGOING
Off hours waiting areas	LOW	LOW	HIGH	ONGOING
Close circuit television	MEDIUM	HIGH	HIGH	ONGOING
Plain clothes security	MEDIUM	LOW	MEDIUM	PERIODIC

Physical Assault

Threat of Physical Assault

While assaults in transit are often comparable to or less than those in the surrounding community, many people have the perception that they are less secure while waiting for or riding on a public transit vehicle. Transit security personnel must create a secure environment and educate the public regarding positive steps to take to increase their security.

Types of Assaults

Assaults in transit systems fall into one of two categories.

First: There are altercations that involve a single assailant and a single victim who may or may not know each other. This type of assault is usually not planned in advance and does not involve a weapon. It can occur anywhere in a transit system.

Second: There are general types which involve one or two victims confronted by a group of assailants. This type of assault usually is planned. It may not be designed for the actual victim but is planned with the intent of assaulting anyone in the transit system. Often the motive is robbery, but there are other common motives such as hate crimes, or violence against certain ethnic, religious, or racial groups; crimes targeted at homeless individuals; and gang assaults of a random nature.

Frequency of Physical Assaults

Assaults do not occur as frequently as other less serious transit crimes. The surrounding service area of the system usually determines the frequency of assaults which occur more often in high crime urban areas, and rarely in small towns and rural areas. Assault victims are likely to report the incident to authorities, so the reported number of assaults in transit systems closely reflects the actual incidence of assaults.

Preventing Physical Assaults

The actions of the transit system should be very visible to both the potential criminal and the passengers. These actions include

- creating an environment which discourages assaults
- employing visible transit security personnel

- designing facilities to discourage assaults
- installing CCTV
- installing alarms and call boxes

Creating an Environment Which Discourages Assaults

Preplanned assaults will more likely take place at times and locations where the criminals believe their attack will go undetected and where escape is easy. Therefore, effective measures should involve

- designing and maintaining the facility (stop or station)
- training the operators and other personnel in the field
- specifying security personnel and procedures

Employing Visible Transit Security Personnel

Visible, uniformed security personnel are very effective in preventing assaults. Transit personnel, while less effective, may be more practical and require fewer additional expenditures. The fact that an assault will be immediately detected is the greatest deterrent. Smaller transit systems and systems that only operate buses may not have their own security personnel to patrol the bus routes and stops. Instead they rely on local police. In such cases, the lead transit security officer should focus his/her efforts on coordinating the system's resources and information with the local police department.

Designing Facilities to Discourage Assaults

Good lighting increases the likelihood that a passenger can see a potential assailant. Passengers will feel more comfortable in a well-lit area such as station platforms, bus stops, and bus shelters. Many rail systems have designated "off-hours waiting areas." These are clearly marked portions of the station that are within sight of token booth clerks or other transit personnel. They are also part of the train platform or are close enough to the platform for easy access to arriving trains. Passengers are not required to wait at these off-hours areas. They tend to do so, however, especially when encouraged through transit system promotions.

Installing CCTV

An effective but higher-cost measure is a CCTV. The presence of cameras at stations and platforms gives an impression to passengers and potential assailants that criminal activity will be detected. CCTV's enable the security staff to observe activities at a wide variety of locations and alert security personnel to report to a specific location when necessary.

Installing Alarms and Call Boxes

Alarms and call boxes provide a means for passengers and transit personnel to call for assistance in the event of assault, threat, or other emergency. Their locations must be planned for the convenience of users. A transit system must also develop procedures for responding to the alarms or messages, including the inevitable "false" alarms. The effectiveness of alarms, call boxes, and CCTV is enhanced when used together.

Table 13. Assessing Physical Assault

PHYSICAL ASSAULT		Severity: HIGH	Frequency: INFREQUENT	
Type: AGAINST PASSENGERS	Areas of Affect: PASSENGERS		When: ANYTIME	
Locations: Bus, Rail, Parking lot, Stop/shelter, Adjacent community, Platform, Corridors				
Contributing Factors: Poor lighting, No police presence, No other staff presence, Awkward facility design				
Solution areas: Enforcement, Equipment, Facilities design, Cooperation, Observation, Training				
SOLUTIONS/ APPROACHES:	Cost		Effectiveness	Application
	Personnel	Facility/Equipment		
Coordination with local police force	LOW	LOW	VARIABLE	ONGOING
Visible transit security personnel	HIGH	LOW	HIGH	ONGOING
Presence of other transit personnel	LOW	LOW	MEDIUM	ONGOING
Good Lighting	LOW	MEDIUM	MEDIUM	ONGOING
Off hours waiting areas	LOW	LOW	HIGH	ONGOING
Closed circuit television	MEDIUM	HIGH	HIGH	ONGOING
Alarms/call boxes	MEDIUM	MEDIUM	MEDIUM	ONGOING

Sexual Assault

Occurrences of Sexual Assaults

Sexual assault — rape or molestation — is an act of violence. A transit system's preparation and response to sexual assaults should be linked to its preparation and response to other physical assaults. However, response to sexual assaults requires particular attention to sensitivity toward the victim and issues of privacy. Although sexual assaults are more frequent in larger systems, they still comprise a small proportion of all assaults. Society's attitude towards these acts makes many victims reluctant to report these incidents.

Sexual assaults are more likely to occur in settings where the assailant believes that the assault will go undetected and he/she will be able to escape from the scene without being identified. A single assailant or a gang will try to isolate a potential target at a time and location where there will be no witnesses and no chance for the target to call for help.

Preventing Sexual Assaults

The best strategy for reducing sexual assaults is to create an environment that discourages these assaults. The requirements for creating this environment involve:

- designing and maintaining the facility (stop or station)
- training operators and other personnel in the field
- deploying specific security personnel
- developing emergency operating procedures
- maintaining specialized support for the victim after the assault

The measures discussed in this Guide on Physical Assault address these requirements and are appropriate measures for a transit system to take in trying to reduce the number of sexual assaults. They include

- creating a visible transit security presence
- promoting the presence of other transit personnel
- installing good lighting at stations, platforms, and stops
- creating off-hours waiting areas
- using a closed circuit television system
- maintaining emergency alarms/call boxes
- coordinating with local police and special sensitivity training

Coordinating with Local Police

Many transit systems depend on the local police department to provide security along bus routes and at bus stops. The local police are frequently responsible for responding to assaults and providing immediate medical attention to victims. A key responsibility of the lead transit security officer is to coordinate the transit system's resources with the local police. This applies to any criminal activity within the transit system but especially to those incidents that require expertise that the transit system's own security personnel may not have.

Special Sensitivity Training

Victims of sexual assault will need special attention that transit personnel should be prepared to provide. The victim will need immediate medical attention. The system should also have women on its staff to comfort female victims and provide support during any questioning. All staff involved in the response to sexual assaults should receive sensitivity training on the preferred ways to take care of victims after the assault. Transit staff should also be sensitized to the privacy issues involved. Information concerning the assault should be handled by the head security officer. The system should respect the privacy of the victim who does not want to be identified to the public. Transit personnel should follow whatever policies the system has established regarding the control of information to the media relating to security incidents.

Table 14. Assessing Sexual Assault

SEXUAL ASSAULT		Severity: MID-HIGH	Frequency: INFREQUENT	
Type: AGAINST PASSENGERS	Areas of Affect: PASSENGERS		When: WAITING, ON BOARD, OFF PEAK, EARLY AM/EVENING, LATE NIGHT	
Locations: Parking Lot, Stop/Shelter, Adjacent Community, Platform, Corridors				
Contributing Factors: Poor Lighting, No Police Presence, No Other Staff Presence, Awkward Facility Design				
Solution Areas: Enforcement, Equipment, Observation, Facilities Design, Cooperation, Training				
SOLUTIONS/ APPROACHES:	Cost		Effectiveness	Application
	Personnel	Facility/Equipment		
Coordination with local police force	LOW	LOW	VARIABLE	ONGOING
Visible transit security personnel	HIGH	LOW	HIGH	ONGOING
Presence of other transit personnel	LOW	LOW	MEDIUM	ONGOING
Good lighting	LOW	MEDIUM	MEDIUM	ONGOING
Off hours waiting areas	LOW	LOW	HIGH	ONGOING
Closed circuit television	MEDIUM	HIGH	HIGH	ONGOING
Alarms/call boxes	MEDIUM	MEDIUM	MEDIUM	ONGOING
Medical attention	MEDIUM	MEDIUM	HIGH	CASE BY CASE
Staff sensitivity	MEDIUM	LOW	HIGH	CASE BY CASE

Chapter 5 Crimes Against The Transit System



Chapter 5

Crimes Against the Transit System

Types of Crimes

Crimes against the transit system occur frequently, and they often cause injuries or death to transit passengers and employees. They involve the destruction of transit property that can be very costly to repair or replace.

Fare Evasion and Fare Theft

Fare evasion is not a serious crime in terms of injury or destruction, but it has the potential to cost the transit system a significant amount of money over time. Fare evaders who are not caught can encourage more of the same activity by other passengers.

Suicide Attempts

Suicide attempts can be destructive, disruptive, and take a high morale toll. Further disruption can result when the publicity encourages others to attempt suicide.

Vandalism, Trespassing, and Theft

These crimes frequently cause large losses. They also create an overall perception of insecurity on the part of passengers. The prevention of trespassing can thwart a variety of other crimes and disturbances. The security of passengers and personnel must be of primary importance. Transit personnel must be relied on for their commitment and dedication, and they must feel safe or their effectiveness will be impaired.

Fare Evasion and Fare Theft

How Serious Is This Problem?

Fare evasion and fare theft are serious problems. They appear to be low-cost and low-damage crimes, but they have multiple impacts upon security. Enforcement can communicate to all passengers that the transit system is watching.

Reducing Fare Evasion

Serious crimes are likely to be accompanied by less serious crimes. For example, graffiti artists and muggers rarely pay to enter the system. Police crackdowns on fare evasion have been known to reduce other crimes in the system. That can bring about the arrests of offenders wanted for previous crimes and stop more serious criminal activities.

Transit criminals are not unlike criminals on the street. A breach in security is rarely an isolated incident or a unique experience for the perpetrator. It is a pattern of behavior. Of course, not all who evade fares are dangerous transit criminals. However, in efforts to reduce serious crime, transit police forces often start with stopping criminals as they enter the system.

Loss of revenue always hampers the ability of a transit system to provide needed service, especially in terms of combating security problems. Furthermore, the maintenance costs often associated with fare theft are high.

Fare Evasion Techniques

The transit crimes of fare evasion and fare theft include the following:

- short-changing fares
- boarding through the rear door of the bus
- misusing transfers
- turnstile violations

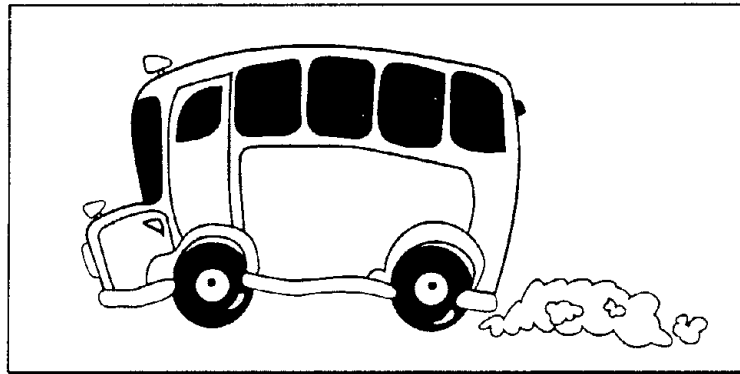
Robbery of token clerks, break-ins, and theft of revenues from within the system are discussed separately. (See companion materials on Theft, Burglary, and Robbery.)

Short-Changing Fares

One common fare evasion strategy is short-changing fares by depositing only a portion of the fare. Another technique is to use a dollar bill that has been torn in half, folded, and deposited to appear as a whole dollar.

Boarding Through The Rear Door of the Bus

Fare evasion often occurs in the rear of the vehicle. Instead of slipping past the farebox, the fare evader enters through the rear door. Even if the doors only open from the inside, or if the rear doors are locked by the operator as the last passengers exit, fare evaders may grab the rear doors as others exit, prevent the doors from closing, and enter after the others have exited. Exiting passengers may even hold rear doors for boarding passengers. Although it may be difficult for the driver to see, this type of fare evasion is particularly obvious to passengers.



Misusing Transfers

Some systems experience the problem of passengers requesting a transfer, sitting toward the rear of the bus and handing it out the window to a person who can then board at the transfer rate. This can also cause a significant loss of revenue.

Violating Turnstiles

Thousands of passengers in major systems evade fares at turnstiles by jumping over them, crawling underneath them, or squeezing through the gap. Fare evaders also dart through fare gates or enter through exit doors held open by existing passengers. Similarly, an imbalance or lack of entrance and exit gates can cause bottlenecks in pedestrian flow which contributes to fare evasion.

In sweeps where plain-clothes officers have arrested fare dodgers, a true cross-section of transit riders have been caught. They often have excuses about long lines and broken turnstiles. The number of these atypical criminals increases with the number of disabled turnstiles. In fact, major transit systems have found frequent occurrences of dozens of passengers jumping turnstiles as the train arrives because they were frustrated by long lines behind out of order turnstiles.

Jammed and broken turnstiles are frequently caused by fare thieves known as *trolls* and *token suckers*. They pry open the turnstile and steal the entire bag or box of tokens. Another approach is to steal tokens. Token suckers will jam the turnstile with paper or metal. Then, once the paying rider gets around the turnstile or goes to complain, they will suck tokens out with their mouths. Trolls may employ token catchers, which are thin pieces of metal cut into the shape of a comb and inserted into the coin slot, which can collect several tokens before being removed. A metal sleeve inserted in the coin slot can also collect several tokens. Trolls also steal temporary fare boxes that may be set out by transit staff when turnstiles are jammed.

Addressing the Problem of Fare Evasion

On the bus, the first line of defense is the operator. As with other transit rules, the operator's enforcement will set the expectations of the passengers. The driver must flag fare evaders yet remain calm and polite. The fare evader will typically deny the charge, stating that the fare was paid. Because the moment of the evasion has generally passed, the truth may not be obvious. The operator can be assisted by the system's equipment and operating procedures.

Improving Fareboxes

Secure Farebox with Flip Plate

The transit vehicle should have a secure farebox with a flip plate and window. The box will allow the operator to count each fare without touching it and drop the fare after each passenger boards. This permits the operator to be certain of the amount each passenger has paid. If the fare is incomplete, the operator must not drop the partial fare, which is now proof, until the issue is resolved.

Electronic Fare Boxes

Electronic fare boxes can count money and produce a beeping sound whenever the correct fare is deposited. This can help reduce disputes between drivers and passengers regarding the amount deposited. Also, a routine beep when the fare is deposited can make it clear to others that the fare was fully paid. An electronic display can show the exact amount that was deposited. These boxes are also able to collect dollars and display the entire bill in a window for the driver to examine before depositing into the fare box vault.

Farebox Hardening

Farebox hardening means installing stronger locks and small vaults to collect fares. This is extremely effective in combating fare evasion.

Implementing Fare Enforcement Procedures

Procedures should address all types of fare evasion techniques. For example, the misuse of transfers can be curbed by stamping the route on transfer slips and disallowing same route transfers. Also, short-changing drivers by using a half of a bill can easily be prevented by asking that all passengers unfold their dollar before depositing. The following are sample operating procedures for bus operators to reduce fare evasion.

SAMPLE PROCEDURES FOR VEHICLE OPERATORS

- Be sure farebox, mirrors, and transfers are in working order.
- Watch all passengers exit before allowing passengers to board.
- Lock the rear doors and require that all passengers enter through the front door. Watch the rear doors as they close.
- Use interior and exterior mirrors to watch for passengers attempting to board through rear doors or windows, or for passengers inside handing out a transfer.
- If a passenger enters through the rear, ask him/her to come forward and pay the fare. Remind the passenger to enter through the front door.
- Remember and use all passenger relations skills. Be polite and calm. State company policy clearly and avoid arguing.
- At problem stops, have all passengers exit via front doors only. Do not open the rear doors.
- Watch passengers board.
- Know and enforce all fare rates. Explain them as necessary.
- Check the required identification for reduced fares.
- Check all transfers to be sure they are valid.
- Count each fare and flip the farebox lever after each deposit.
- Allow passengers to make change for those who do not have the exact fare.
- Give the passenger the benefit of the doubt in a questionable situation. It may be helpful to ask such passengers to make sure you see them pay the full fare.
- If you are certain the appropriate fare was not paid, request politely that the fare be paid. Explain, if necessary, that you will not move the vehicle until the fare is paid.
- If necessary, radio the dispatcher and explain briefly.
- If possible, allow the non-paying passenger to hear the dispatcher's instructions, which could be to remain parked or continue the route to where the bus will be met by a security officer.
- Report any trends in fare evasion to your supervisor.

Increasing Driver Visibility

Illegal rear boarding problems and illegal distribution of transfers can be monitored by increasing driver visibility. High-mounted left and right view mirrors will allow the operator to see the full length of the outsides of the coach will help monitor the activities of boarding passengers. Interior mirrors can help the operator to see the activities of all passengers. Interior mirrors aimed at the

rear door or rear stepwell will allow them to be monitored. Additional mirrors are usually worth their cost because they are valuable safety features.

Exact Change

Making it easy to obtain exact fares will help limit fare evasion. This can be accomplished by providing change machines or ticket/token sales machines that give change, and by having nearby retail businesses make it easy to obtain correct fare. However, high maintenance costs and delays at the farebox should be expected.

Advanced Sales and Convenience of Payment

Advance sales can reduce fare evasion. This includes monthly, weekly, or weekend passes with a limited number of rides. Advance sales does lead to a common form of white-collar fare evasion, whereby passengers loan their passes to others.

Advance sales and convenience of payment approaches have the benefits of increased ridership and reduced cash handling. However, they require the costs of marketing and additional sales locations. They also may be subject to counterfeiting problems. The more difficult a pass is to produce, the harder it will be to counterfeit.

Sweeps by Plain-clothes Police

In crack-downs of this type, fare evaders can be booked at the time of the violation. Sentences can include fines, community service, and transit system maintenance such as cleaning and painting. Police sweeps can be a very effective short-term solution, but they are generally limited to those who use the particular station. Cooperation from local police forces and courts are necessary.

Maintaining Turnstiles

Well-maintained turnstiles are important. Unfortunately, it is far easier to jam turnstiles than to have them repaired, although repairs usually take only 20 minutes once maintenance staff arrive. Transit systems have found it useful to

- add higher railings, making them harder to jump over
- add better lighting, making fare theft more obvious
- install customized devices in turnstiles, making it harder to remove tokens

Using Coded Fare Cards

One expensive, long-term approach to reducing fare evasion is coded fare cards or coded fare tickets. These cards have fare information recorded on the magnetic strip. The cards have a number of advantages. They are

- extremely difficult to imitate
- easy for the rider to handle
- operational and have marketing advantages
- commonly used to both enter and exit the system, which requires fare dodgers to successfully evade turnstiles twice per trip
- able to be recoded to be reused. Unlike tokens, used fare cards that remain in the electronic turnstiles or fareboxes are without value.

Well-Trained Station Attendants

A well-trained and properly equipped station attendant (station manager or token booth clerk) may be the most effective way to reduce fare evasion in transit facilities. Direct observation of the fare collection area tends to reduce fare evasion and cut back on fare theft. However, this effect will be limited without active enforcement from the station attendant. Depending on the situation, the attendant can

- confront the fare evader
- indicate by speaker that fare evasion was observed
- notify security staff to meet the person who evaded the fare

In the case of fare theft and turnstile vandalism, the attendant can summon police or security staff. It would be useful if attendants are trained in minimum turnstile maintenance so they can unjam the coin slot area and keep the fare collection system operational.

Station attendants are most effective if they are relieved of the routine duty of token sales so they can then devote their full attention to observation. In addition, without tokens, tickets, or cash the attendant is less subject to attack.

Table 15. Assessing Fare Evasion and Fare Theft

FARE EVASION / FARE THEFT		Severity: LOW	Frequency: FREQUENT	
Type: SYSTEM	Areas of Affect: REVENUES, PASSENGERS, EQUIPMENT, STAFF		When: BOARDING	
Locations: Rear doors, Turnstiles, Exits, Fare collection area				
Contributing Factors: Fare, Poor observation, Poor response, Long lines, Disabled/malfunctioning turnstiles, Poor enforcement				
Solution areas: Enforcement, Maintenance, Equipment				
SOLUTIONS/ APPROACHES:	Cost		Effectiveness	Application
	Personnel	Facility/Equipment		
Require enforcement by drivers	LOW	LOW	MODERATE	ONGOING
Train drivers in passenger relations	MODERATE	LOW	MODERATE	PERIODIC
Install single fare count fareboxes on buses	LOW	MODERATE	MODERATE	ONCE

Install mirrors for observation of rear door and sides of coach	LOW	MODERATE	MODERATE	ONCE
Increase advance/non-cash sales	MODERATE	MODERATE	MODERATE	PERIODIC
Install station attendant booth/with attendant	MODERATE	MODERATE	MODERATE	ONCE/ONGOING
Install CCTV	LOW	HIGH	LOW	ONCE
Continuously monitor CCTV	MODERATE	MODERATE	HIGH	ONGOING
With public address system	LOW	MODERATE	MODERATE	ONCE
Install single event cameras	LOW	MODERATE	LOW	PERIODIC
Plainclothes/decoy officers	HIGH	LOW	HIGH	PERIODIC
Uniformed police presence	HIGH	MODERATE	HIGH	PERIODIC
Farebeating sweep	HIGH	LOW	HIGH	PERIODIC
Higher railings	LOW	MODERATE	MODERATE	ONCE
Electronically controlled fare gates	MODERATE	HIGH	HIGH	ONCE
Post security guards, station manager/ attendant, police	HIGH	MODERATE	HIGH	ONGOING
Farebox hardening	LOW	MODERATE	HIGH	ONCE
Custom farebox devices	MODERATE	LOW	MODERATE	PERIODIC
Improved lighting	LOW	MODERATE	LOW	ONCE

Suicide Attempts

Suicide Statistics

Approximately 25,000 people commit suicide each year in the United States. All ages and sexes may attempt suicide on or around a transit system, and a majority of suicides are attempted by those under 40. Some systems report much higher suicide attempt rates among women; however, the rate of success is greater among men. In addition to loss of life or serious injury, the staff and passengers are subject to trauma.

Suicide Attempts As They Relate To Transit Issues

Suicide attempts are a greater problem among those systems with rail operations. Although the velocity of a bus can kill a person, the chances of success are not too great. Most suicide attempts on transit systems occur as trains enter a station. At this particular point, the transit vehicle is both accessible to the suicidal individual and traveling with sufficient speed to guarantee the person's death. The jumper — by leaping from the platform into the path of the train — is subject to a substantially high suicide success rate given the velocity of the train, the accessibility of the undercarriage, the power of the "third rail," and the semi-enclosed space of the track bed. Should the passenger be flung forward by the vehicle, he/she will probably be struck a second time as the train proceeds forward.

Preventing Suicides on Transit Systems

Preventing all suicides is nearly impossible. In most cases, a depressed person will not respond to attempts to save his/her life. Nevertheless, a system must take all precautions to prevent suicide attempts in their facilities including observing passengers, communicating with passengers, training transit personnel, etc.

Observing Passengers

A passenger contemplating suicide may build up the courage to jump by allowing several trains to pass before the attempt is made. For this reason, the transit system has some opportunity to prevent suicides. Through patrols or CCTVs, transit staff should observe patrons exhibiting nervous behavior at the end of the platform where the train enters the station. Staff may also witness a passenger waiting while several trains go by. One cannot be certain that passengers loitering are contemplating suicide; however, observation does afford the transit staff an opportunity to be aware of a potential situation. Observation can be aided by the use of CCTVs and improved lighting, especially at platform ends.

Communicating with Passengers

If a potential suicidal individual is observed, transit police should approach and confront the individual, calling on special background training. Although it is not recommended that token clerks or station attendants leave their observation area, they may communicate with passenger through a public address system. Personnel may simply say: *"Will all passengers waiting for a train please move away from the edge of the platform."* It is highly recommended that station attendants have some means of notifying the train operator to approach the station with caution, whatever the reason.

Training Transit Personnel

Transit security personnel approaching a suspected suicidal individual should be adequately trained to defuse the situation. Officers should receive sufficient training to identify and properly refer those individuals that may need help. If the person states that he/she were planning suicide, staff can direct them to suicide prevention hotlines. Security staff have the opportunity to defuse a potentially dangerous situation before it escalates by:

- approaching individuals in a friendly and helpful manner
- assessing individuals
- calming excited patrons
- providing necessary information to police or security

Not all passengers approached by security personnel are dangerous, a problem, or attempting any feat requiring security. However, all loitering passengers that represent a possible threat to themselves or others should be escorted from the station.

Other Measures

Other methods include

- offering discounts to public service advertisers such as those with toll-free hotlines, particularly if the transit agency has an interested suicide prevention advertiser
- eliminating public access to track bed areas
- reducing train speeds into platform areas

Responding to a Suicide Attempt

Should a suicide occur on the system, all transit personnel should understand exactly where to report this type of emergency. It may be helpful to establish a direct link to central control by means of a passenger-activated emergency alarm that automatically identifies the location from which it was activated. Such alarms may have communications capabilities for soliciting additional detail from the passenger.

Immediate Response Time

Once a suicide is discovered, a transit employee should immediately follow regular emergency reporting procedures by notifying the central control. In the case where a vehicle operator or transit staff witnesses a suicide attempt, he/she should

- report the attempt
- specify the location
- provide a description of the situation

Any sections of track involved should be powered down immediately. Local police should then be notified to conduct an investigation. The body should not be removed by transit staff. Central control should

- immediately notify police and paramedics
- initiate delay-in-service procedures
- initiate other standard emergency operating procedures

There should be a contingency plan for suicide attempts which contains emergency operating procedures detailing the responsibilities of specific individuals. Following a suicide attempt, passengers should be immediately cleared away from the area. Witnesses should be kept together so that police can take statements.



Attempts That Might Not Be Obvious

Should the suicide attempt occur on a bus with paraphernalia the passenger carried aboard, the attempt and cause of injury may not be obvious. If a passenger collapses from a chemical/drug overdose, it is likely that the suicide attempt will be handled as a medical emergency. The driver must safely stop the vehicle and radio dispatch as soon as possible. The report should detail the location of the incident, a brief description of the problem, and the type of emergency forces needed. Also, statements from nearby passengers should be collected.

A violent suicide attempt on the transit vehicle is handled differently. Immediate reporting is still required. However, it becomes more important to move the passengers away from the fallen victim as soon as possible. Statements from witnesses will be necessary. Passengers should not be dismissed; they should be kept away from the incident until police arrive. This will serve to aid in the investigation, aid the efforts of paramedics, and reduce trauma among passengers. On the operations front, another bus and another operator should be dispatched as soon as possible. The incident may otherwise be handled similarly to other accidents and emergency situations.

Informing the Public of a Suicide — *Don't*

The transit system should announce that an unavoidable delay in service has occurred, not that a suicide attempt or injury has taken place. The system should also estimate the number of minutes before service will be resumed and announce it. Transit staff should be available to suggest alternative routes, particularly if the station will be closed for more than a half hour.

Public relations staff or the transit manager responsible for handling the press should be updated as soon as possible in order to prepare any press statements necessary. Systems will generally receive more favorable coverage when cooperating with the press, so it is not advisable that real incidents be denied. It is essential, however, that staff have accurate information and appear to be well informed of the situation.

Resuming Operations

Before resuming operations

- check and clear the right-of-way of any unseen debris
- repair any damage to the track or vehicle
- examine the wheels and undercarriage of the vehicle involved

If operations cannot be resumed due to damage, alternative means of transportation must be established immediately. Collect witness information before the witnesses board another vehicle. In addition, determine the best means of reestablishing the normal schedule by considering vehicles and headways.

Witnessing a suicide attempt may or may not cause trauma to an operator, but it can be distracting. The operator should be relieved from duty for the rest of the day with pay. Additional days may also be taken through a liberal leave policy if the employee feels any uncertainty about returning to work too soon. Employee assistance programs should be used to counsel an employee if it is necessary.

Minimizing System Liability in Suicide Situations

There are a number of approaches a transit system can take to minimize its liability in the event of an attempted suicide.

Using Proper Signage

Warn passengers to stay away from the edge of the platform as the train approaches by using printed handouts and conspicuously located signage. Post high-voltage signs and warnings in the track bed. This will help establish a case for the system that passengers in the track bed were well aware of the dangers and were purposely attempting to injure themselves. Hence a death or injury could not have been the fault of the system.

Eliminating Public Access to the Track Bed

The system should minimize or eliminate public access to the track bed by establishing

- barriers at the end of platforms
- barriers that prevent access to steps leading to service areas and tracks
- fencing along all sections of the right of way

Employing Effective Medical Response Systems

Employ a rapid and effective response system for deploying paramedics to the scene of a suicide attempt. Slow response times are not acceptable in an emergency situation where lives are at stake.

Reducing Train Speed

In larger systems, it is not uncommon to experience 50 suicide attempts annually. If a system is having an on-going problem with suicide attempts at particular stations, an appropriate response is to reduce the train speed into the stations.

Collecting Witness Information

Transit systems can also help minimize liability by collecting witness information. If this has already been done by the police, copies of the information should be obtained through cooperation with the local police agency. The system should have statements from those present at a suicide attempt, especially if they support the system's case that a passenger's entrance into the track bed area was deliberate. Without witness information, it may be difficult to establish with certainty that the victim jumped.



Maintaining Accurate Records

Records should be collected and maintained on all suicides. Because the measures to prevent suicide attempts are different from those to prevent other types of security problems, statistics on suicide attempts should be kept separately. Information generally recorded includes:

- demographic information on the victim
- station location
- method of attempt
- time and date
- responding staff
- responding agencies

Table 16. Assessing Suicide Attempts

SUICIDE ATTEMPTS		Severity: HIGH	Frequency: OCCASIONAL	
Type: SYSTEM	Areas of Affect: PASSENGERS, VEHICLES, STAFF, OPERATIONS		When: WAITING	
Locations: Waiting areas, Platform, Right-of-way				
Contributing Factors: Access, Vehicle speed, Observation, Staff				
Solution Areas: Training, Response, Observation, Public relations, Contingency planning				
SOLUTIONS/ APPROACHES:	Cost		Effectiveness	Application
	Personnel	Facility/Equipment		
Identify problems sites	LOW	LOW	MODERATE	PERIODIC
Train staff to intercept possible suicides	MODERATE	LOW	MODERATE	PERIODIC
Emergency response contingency plan	MODERATE	LOW	MODERATE	ONCE
Good media relations	MODERATE	LOW	MODERATE	ONGOING
Observe platform with CCTV	HIGH//HIGH	LOW//HIGH	LOW*	ONGOING
Reduce vehicle approach speed	LOW	MODERATE	MODERATE	ONGOING
Improved lighting at ends of platform	LOW	MODERATE	LOW*	ONCE

* Effectiveness is greater when combined with other approaches.

Vandalism

What is Vandalism?

Vandalism is the willful and malicious destruction of property. For small transit systems, vandalism is not too common. For large systems, it is quite common, and the costs can run in the millions of dollars. The crime is generally nonviolent and is aimed at the destruction or abuse of transit property. Like many types of transit crime, vandalism makes transit less pleasant for patrons by increasing anxiety and fear.

Types of Vandalism

Missilings

What is Missiling?

Missiling includes rock or brick throwing, shooting BB guns or sling shots, and firing guns at transit property. The windows of transit facilities, especially those in transit vehicles, are a tempting target for vandals. Also, the fact that transit vehicles are moving makes them a more tempting target.

Risks

The high risks to passenger and personnel safety will cause the system to categorize certain missilings as assaults. Rocks, bricks, bullets and BBs all have the potential of not only shattering the glass or plastic, but causing the shards to fly onto passengers. The likelihood of shards entering a passenger's face or eye is high because windows are generally set at levels that enhance visibility. In addition, there is the danger of the missile itself entering the cabin and striking the passengers, especially if the missile is a bullet. Missilings, particularly those hurled with significant force or from powerful weapons should always be pursued as a form of assault as well as vandalism.

Inherent Costs

Replacing glass or plastic is the highest expense associated with vandalism.

Combating Missilings

A deterrent is to use vandal resistant glazing, including specially treated glass or plastics. Glass may be strengthened by adding additional layers of thickness. To increase the safety associated with broken glass, windows may be

- backed with lamination
- tempered causing the glass to fragment into small less sharp pieces
- laced with reinforcing wire

Using plastic in place of glass has been known to have drawbacks associated with clear visibility. Plastic has invited a different sort of vandalism associated with scratching initials or random markings in the glazed panes. In addition, "so-called" bullet-proof glass, or lexan-type materials, are very expensive.

Window vendors have begun to offer a wide variety of options in improved safety and vandal resistance in glazing. For example, there is shatter-proof translucent fiberglass reinforced plastic for bus shelters. Costs are generally related to the effectiveness of the glazing. It should be noted, however, that many options in glazing have trade-offs. Assess the costs of window replacement for the past year and compare them to the costs of replacing glass with vandal-proof glass over the next year. Then weigh that against the cost of not having to replace the glass in upcoming years.

Destroying Seats or Other Equipment

Inside the transit vehicle, particularly in buses, one of the most common forms of vandalism is the abuse of seats. That includes seats that are slashed with knives, written on with pens or markers, or set on fire. Fortunately, the increased dissemination of information and the adoption of fire-resistant materials has made the likelihood of fire slightly less severe. However, the problem has not been completely eliminated.

Vandals committing a crime of this nature normally leave a bag smoldering in the back of the bus or purposely light one of the seats on fire. Setting seats on fire is especially dangerous because of the toxic fumes and excessive smoke conditions. Systems should also be concerned about the speed with which an entire vehicle can be consumed in flames. In many cases, vandals may be unaware of the likelihood that their seat fire may result in the consumption of the entire transit vehicle.

The vandalism of turnstiles, vending machines, and other equipment has day-to-day operational impacts. This type of vandalism may be motivated by frustration, the thrill of destruction, or attempts at theft. Combating the destruction of seats and other system equipment may be accomplished by the following methods:

Hardening Equipment

If destruction of equipment is a problem, only the hardening of that equipment to prevent the likelihood of theft or ease of breakage is a specific approach. Otherwise, more general techniques aimed at observing and enforcing to reduce transit crime will be very effective.

Using Detection Systems

Seat fires can be discovered with early detection devices. Unfortunately, those used most successfully have been employed inside the engine compartment where automatic fire suppression systems can be activated. Automatic fire suppression systems inside the transit vehicle is not practical because of the presence of passengers. Suppression systems may even hinder patrons attempting to evacuate a vehicle that is on fire. Smoke alarms in a vehicle may provide a form of early detection. This has a combined safety and security benefit. Whether a fire is started from

arson or malfunctions in the engine compartment, a smoke detector in the back of the bus can save lives and limit the destruction to vehicles.

Flame-Resistant Seat Materials

Non-toxic, flame-resistant seat materials should be required. Special seat covers can also be ordered to combat the problem of seat slashing. While hard, unpadded transit seats reduce problems associated with knives and sharp objects, they are not generally favored by passengers. Seat vendors have been sensitive to the need for cut-resistant and flame-resistant seating for a number of years and offer such coverings at a moderate but increased cost. Also, some methods exist to repair torn or slashed vinyl seating, though these may vary in effectiveness. The latest developments in vandal-resistant materials are generally advertised in the transit trade magazines. Vendors should be contacted for the most recent developments in vandal-proof materials.

Graffiti

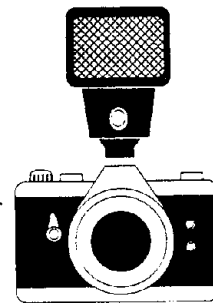
Graffiti is one of the most obvious forms of vandalism. It is "placed" to be seen. Graffiti is committed on a whim; as a test; for fun; or just to spread a name, a mark, or a signature. Graffiti is less random a crime than we often think. Graffiti artists — as they consider themselves — need to acquire paints, select a site and a time, and plan the design of more elaborate pieces. Occasionally graffiti is as simple as writing on transit vehicle seats, seat belts, walls, or ceilings with magic marker. This "common graffiti" may not have been planned by the rider before boarding the vehicle or entering the system.

Graffiti can result in signs being stolen, dented, or defaced. This is particularly frustrating for passengers, since it not only presents an eyesore, but it removes necessary information.

Graffiti artists commonly work in groups, bonded primarily by entertainment. Those with similar status within a group of graffiti artists may dress similarly. Graffiti vandals generally range from ages 13 to 20, but occasionally include those as young as eight. Graffiti artists who have not yet made names for themselves, or are younger and less experienced members of the group, are sometimes known as *toys*. Toys will assist with the artwork. After age 19 or 20, a graffiti artist will usually give up this pursuit and take up more lucrative crime.

Large pieces of graffiti are seldom done by a single artist. One member of the group may be responsible for bringing the basic design, and toys may be responsible for the paint cans. Another artist may do the outline while several still others fill in various colors.

Frequently, a member of the group will bring a camera to take pictures of the artists at work. The unexposed film in confiscated cameras and developed photographs in the possession of suspected graffiti artists has helped establish the proof necessary for convictions. Graffiti artists will develop their own mark or symbol to be associated with their pieces, which, if properly recognized and interpreted, can also be used as evidence for convictions.



Combating Graffiti in the Transit System

Many methods may be used, each with varying effectiveness and cost. These include

- using special "Graffiti Teams"
- using "Anti-Graffiti" surfaces
- routinely removing graffiti
- instituting an Adopt-A-Shelter Program.

Using Special "Graffiti Teams": Because graffiti artists have a culture of their own, one of the most effective approaches has been the use of non-uniformed officers. These officers can

- develop an understanding of graffiti culture
- learn to recognize works by the same graffiti artist
- know the proper evidence to look for
- communicate with graffiti artists using their own language terms to obtain knowledge of other artists and plans
- learn to identify those locations within the system that are most vulnerable to a graffiti bombing.

These special teams can be trained to look for other clues that may lead to identification and conviction of suspected graffiti artists, such as paint found on the fingertips or under the fingernails, attachments for spray paint cans, photographs of completed pieces with the artists, and sketches of pieces to be accomplished.

The personnel costs associated with special teams are high but the material costs are relatively low since the team does not rely on any specialized equipment. Special teams can also work with local police since vandals will not necessarily limit graffiti to the transit system.

Using "Anti-Graffiti" Surfaces: Textured surfaces and materials deter some handwritten graffiti, since graffiti with pencils, pens, or magic marker is generally opportunistic and casual. Surfaces with irregular colors or designs including other art are less attractive to vandals because graffiti will not show up as well. Many approaches to controlling the surface available to graffiti art involve using

- surfaces that make it easier to clean, such as stainless steel
- tiles which are resistant to solvents
- anti-graffiti paint systems that make it easier to wash off graffiti

Routinely Removing Graffiti: Graffiti begets graffiti. Therefore, the routine removal of graffiti is one of the most effective means of combating it. This is expensive but has been proven to be very effective. It requires that transit systems be alert and report all incidents diligently. Less obvious graffiti needs to be spotted by drivers and fuelers at the end of each shift.

Graffiti artists want a piece to last. The most successful advertising and marketing campaigns to combat graffiti have been those that indicated that no matter how much work was spent on

graffiti, it will be washed off the very next day. Various types of cleaning agents and solvents make magic marker clean-up relatively simple. Anti-graffiti coatings, paint systems, surfaces, and solvents are extremely helpful in daily graffiti removal, which generally require steam cleanings. Lastly, every effort should be made to replace vandalized signs as soon as possible.

Instituting an Adopt-A-Shelter Program: In this successful program, a company or group takes responsibility for cleaning a shelter in exchange for posted recognition. The company should clean once a week for a period of up to a year. This is a fairly low-cost approach with some moderate costs related to posting the notice of who has adopted the shelter.

General Methods for Combating Vandalism

Additional methods to combat vandalism can include

- instituting witness reward programs
- preventing access to non-public areas
- involving the local community

Instituting Witness Reward Programs

In these programs, several hundred dollars may be offered to anyone providing information leading to the conviction of a transit vandal. The system can make such tips anonymous if that is preferred. One of the advantages is that passengers assist in identifying vandalism close to the time that it happened, making it easier to remove or repair.

Preventing Access to Non-Public Areas

Areas of the system not normally available to the public should be hardened against access by vandals and other criminals. Center platforms and other means which remove the walls from reach of people are effective ways to reduce vandalism. This may include

- installing additional fencing
- installing locks
- providing surveillance and alarm systems
- instituting other approaches generally used to prevent trespassing

(See the portions on Trespassing and Physical Security Countermeasures for additional information.)

Involving the Local Community

Some systems have successfully employed a community involvement and public relations approach to combating vandalism. Transit professionals may visit schools to distribute transit information and discuss with students the high cost and unfairness associated with transit crime.

In some cases, special teams of transit security personnel have been authorized to invest time with youths in the community sharing information and respect. Also, bike patrols enable officers to interact more easily with persons in the surrounding community and in the transit system.

Educational packages in schools can include:

- multi-media marketing approaches
- lectures
- field trip
- discussions

Sample Vandalism Countermeasures Objectives

- Establish special anti-vandalism security team.
- Report and remove all graffiti as soon as possible.
- Catalog graffiti with photographs, dates and locations. Remove graffiti immediately.
- Identify the specific locations and types of locations most often vandalized.
- Deploy special teams to highly vandalized areas.
- Employ public education campaigns at schools in highly vandalized areas.
- Investigate the costs associated with anti-graffiti coverings. Apply or replace with new materials where they are needed.
- Learn to recognize the marks and signatures of vandals.
- Familiarize special teams with vandal culture. Encourage interaction to gain knowledge that can be used in the prevention of future vandalism and the apprehension of vandals.
- Establish special coordination with community police units.
- Make every effort to apprehend and arrest graffiti artists.
- Work to obtain commitment of courts to mandatory sentencing for transit crime.

Table 17. Assessing Vandalism

VANDALISM		Severity: MODERATE	Frequency: FREQUENT	
Type: SYSTEM	Areas of Affect: VEHICLES, EQUIPMENT, FACILITIES		When: ANY TIME	
Locations: Onboard, Vehicle exterior, Corridors, Yards and lots, Walls, Areas with equipment				
Contributing Factors: Observation, Surfaces, Equipment strength				
Solution Areas: Design, Special materials, Response, Marketing, Enforcement, Community relations				
SOLUTIONS/ APPROACHES:	Cost		Effectiveness	Application
	Personnel	Facility/Equipment		
Vandal-proof seat coverings	LOW	MODERATE	MODERATE	ONCE
Automatic or remote controlled 35mm camera	LOW	MODERATE	MODERATE	PERIODIC
Prevention of trespassing	LOW	HIGH	HIGH	ONCE
Visible, uniformed security force patrols	HIGH	MODERATE	HIGH	ONGOING
Open facility design for high observation	LOW	MODERATE	MODERATE	ONCE
Knowledgeable special teams approach to enforcement	HIGH	LOW	HIGH	ONGOING
Instant graffiti removal policy	HIGH	MODERATE	MODERATE	ONGOING
Cleanable, graffiti-proof surfaces	LOW	MODERATE	MODERATE	PERIODIC
School/community programs	MODERATE	LOW	LOW	PERIODIC
Witness reward program	LOW	MODERATE	MODERATE	ONGOING
Anti-vandalism marketing	LOW	MODERATE	LOW-MODERATE	PERIODIC
Mandatory sentencing	MODERATE	LOW	MODERATE	ONGOING
Vandal resistant glazing	LOW	HIGH	MODERATE	ONCE
Inaccessible walls	LOW	MODERATE-HIGH	HIGH	ONCE

Trespassing and Physical Security Intrusions

About Trespassing

Trespassing is a frequent security problem that involves theft, vandalism, or taking up residence. Trespassers enter into stations or vehicles in parking lots that are not in use; unauthorized areas of transit facilities, such as maintenance areas, train tunnels, administrative offices, fare collection booths; or other locations. (See the discussion on Homelessness for additional information regarding trespassers who are using transit system property as living space.)

When Does Trespassing Occur?

Trespassing typically occurs

- when facilities are closed or during low periods of use
- wherever entry can be concealed due to poor lighting conditions, inadequate patrol of facilities, or facility design that prevents observation
- when there are few people around
- at transit facilities in neighborhoods where there is an overall high crime rate

Methods for Addressing Trespassing

A quick response is very effective in reducing future incidents as well as in preventing crimes. There are a variety of means of improving the likelihood of observing a trespass and improving the quickness of the response. These include

- installing closed circuit television systems and/or photo cameras
- patrolling transit facilities
- implementing aerial surveillance (helicopter patrols)
- utilizing two-way radio communications
- building in sensors, alarms and detectors
- using emergency phone systems and public address systems
- installing physical barriers
- designing facilities for observation and response

Installing Closed Circuit Television Systems (CCTV)

Many transit systems have installed CCTVs to combat trespassing. The systems are connected with monitors near the cameras or in other locations where transit personnel can observe them. In order to observe access to unauthorized areas, the cameras should be directed toward fare collection areas and entrances; platforms to prevent trespassers on the tracks; or in the train tunnels, corridors, or other areas.

There can be a very high cost for the installation of CCTVs, depending on the type. CCTVs are sometimes difficult to maintain because the vibrations in train stations can harm the components. However, a low maintenance cost is typical.

The effectiveness of the CCTV depends on the type of system that is installed and how well it is operated. The transit system must have the necessary technical capabilities for the type of observation being undertaken. The placement of the cameras is also important. For example, if the cameras are going to be used for observing parking lots, there will also be a need for

- capabilities for low-light operation
- zooming in on a trespasser's face or vehicle license plate
- observing large areas through sequential images, panning, or multiple camera placements

The effectiveness of CCTVs is dependent on how well transit personnel view the monitors; they must be watched at all times. Cameras that pan or monitors that display sequential images will show areas only briefly, so it is important for personnel to quickly perceive something out of the ordinary. It may be necessary for personnel to work in teams and watch the CCTV screens in intervals to prevent boredom and fatigue. Procedures must be established whereby personnel can respond to a trespassing incident.

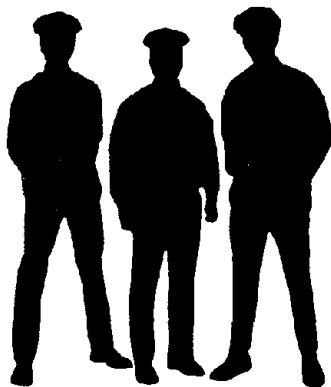
Installing Photo Cameras

Photo cameras can be installed in areas where CCTVs are not appropriate, such as infrequently used areas. The cameras are generally hidden, so they are more effective in high crime facilities where the vandalism of CCTV cameras is a problem. (See the text on Vandalism for more information on preventing vandalism of transit equipment.) The cameras can be manually activated or triggered by a sensor. The sensor can also activate an alarm in the station. When activated, the camera can take photographs of the trespassers.

Photo cameras are less costly than CCTVs. However, the overall cost depends on the number and type of cameras placed, the sensors, alarms, or other items involved. If the cameras are manually activated, there will be a personnel cost for staff to trigger the camera in response to an alarm or other notification of a trespasser.

Cameras are very effective in addressing a trespassing problem, particularly if the response is quick and effective. The photographs are a response as well as an observation technique and can be effective evidence if the trespasser is arrested. Once the cameras are installed and activated, they should require little maintenance.

Patrolling Transit Facilities



Facilities can be patrolled by transit police, other transit employees, or municipal police. The presence of police and transit personnel are a deterrent, and additional patrols can respond immediately when a trespasser is observed.

Many systems find the personnel costs too high except in facilities that have particular problems with trespassing or other crimes. Patrols can be very effective, but they need to be maintained on an on-going basis. There is a moderate equipment cost because patrol personnel need two-way communication devices to improve effectiveness and for their own safety.

Implementing Aerial Surveillance (Helicopter Patrols)

Helicopter patrols are effective for the aerial surveillance of vehicle parking lots, rail yards, or passenger parking lots. They can easily spot trespassers or observe criminal activity and communicate with police or transit personnel. These patrols will have a high cost for equipment and service. Their effectiveness depends on the number of hours the helicopter is in the air, how many facilities it will include in the patrol, and how often and at what height it will pass over each facility.

Utilizing Two-Way Radio Communication

Two-way radio communication will assist those on patrol in coordinating their efforts to cover an entire property thoroughly, requesting assistance if the trespassing instance becomes hazardous, and notifying dispatch headquarters and other personnel when something unusual is observed. Each member of a unit should carry a portable radio unit with a dedicated frequency for use only by the security patrols. Large systems may use multiple channels so that there is sufficient access in an emergency. The units could also have capabilities for direct access to local police departments and with other departments of the transit system.

The capability to communicate throughout the system can minimize personnel needs. For example, being able to communicate with the patrol at the scene of the incident prevents the need to have supervisory personnel sent to each incident. In addition, fewer patrols may be needed if a

dispatch can efficiently direct them to alerts from sensors, alarms, video surveillance, or other devices. The cost of two-way communications units is moderate and depends on the number of units and the level of sophistication required. All units should be equipped with

- multiple channel capabilities
- capabilities for direct communication with police departments
- an emergency signal button which signals that an officer is in trouble

Two-way communications systems can be very effective in aiding the response personnel with instructions from the system and in preventing intruders from committing further crimes once they have trespassed. It speeds the response and is an effective force multiplier. The purchase of the units with or without central control equipment requires a one-time installation, although units will need to be replaced over time. This is an on-going procedure that must also be backed up with procedures for response when an incident is detected.

Utilizing Sensors, Alarms, and Detectors

There is a wide variety of sensors on the market that include

- photoelectric beams
- radar
- pressure sensing alarms
- electromechanical switches
- vibration detectors
- metal foil

Transit systems use many types of alarms. *Silent alarms* alert the police of an intrusion. They may be triggered by sensors or manually by a foot patrol or passenger. *Hidden alarms* ring in the vicinity of the intruder or in a remote monitoring system. *Remote alarms* provide some advantage because the intruder will not

- be aware that it has been triggered
- immediately flee to evade capture
- attempt to dismantle the system

However, without video or other means of monitoring, there is an increased likelihood of false alarms. Also, in the case of manual activation, it is not usually possible to determine what is taking place, causing difficulty in staging an appropriate response. Furthermore, an alarm triggered manually may agitate the trespasser who is there for criminal purposes. This may endanger the person sounding the alarm.

Sensors and alarms are moderately expensive to install and incur a moderate personnel cost. Personnel still need to monitor and respond to alarms, but the sensors provide additional monitoring capabilities because personnel cannot be everywhere at once. Sensors and alarms can

be very effective when the appropriate equipment is used. Once the installation is complete, the on-going cost is low.

Using Public Address Systems

Public address systems can alert security or other personnel of a disturbance. To be most effective, the public address system needs to be part of an overall system of communication and response. The cost for using the system should be low to moderate, depending on whether it is already in place.

Using Emergency Phone Systems

Phone systems are generally installed for passengers to use in an emergency. However, they can be used by staff members when an emergency occurs with a vehicle. Emergency phones are also available for transit personnel to alert police or security staff of an intrusion. The main disadvantage of an emergency phone system is users may endanger themselves if they are seen by the intruder.

The overall effectiveness of an emergency phone system depends on how it is set up and what response it can trigger. Emergency phone systems are designed for passenger emergency use. They are moderately effective as alert systems for violations. On the negative side, emergency phones that link directly with the local police or with an alarm system can cause a number of false alarms.

If the phone system requires significant screening by transit personnel, response time can be delayed. The emergency phone system could be linked to other security equipment. The phones are relatively expensive to install, but the personnel costs are generally low.

Installing Physical Barriers (Door Locks, Gates, and Fences)

Many systems have installed padlocks, chains, gates, or other locking equipment to block some or all entrances and exits when the facility is not in operation. This is often directed at addressing problems caused by the homeless who are taking up residence in a transit facility.

Many entrance configurations do not easily lend themselves to barriers and locks. Some access points may require sophisticated locks or locks that are very difficult to destroy. In high-crime areas there needs to be durable barriers. Even the most durable apparatus can be compromised over time if the attacks are persistent. Door locks and gate mechanisms should be connected to sensors and alarm systems so that an alarm will be activated when the locks are breached. Locked doors must be accompanied by adequate patrols, reporting, and response policies. Once a door

has been breached, transit personnel should be made aware of it through sensors, other devices, or direct observation during a patrol.

Fences (barbed wire, razor wire, electrified, etc.) around transit facilities and vehicle lots must be appropriate to the type of protection they need to provide. Some of these barriers, however, can prevent emergency access or exit in the case of a fire or other hazard.

Locks, gates, and fences will have a moderate to high cost of installation, depending on the type of system installed. The equipment itself is moderately expensive and will present a formidable barrier to trespassers.

Designing Facilities for Observation and Response

Facility design can provide additional security by improving the capability to patrol and observe activities where trespassers may enter. Two-way radio communication can be difficult in facilities that present barriers to the airwaves such as tunnels or dense wall structures. Removing barriers that may make it difficult to observe activities at access points can be important for improving security capabilities as well as ensuring the safety of patrols.

This will have a moderate cost and will be moderately effective because the effectiveness of other observation and response procedures are improved.

Table 18. Assessing Trespassing and Physical Security Intrusions

TRESPASSING & PHYSICAL SECURITY INTRUSIONS		Severity: MID	Frequency of Occurrence: Frequent	
Type: SYSTEM	Areas of Affect: VEHICLES, FACILITIES		When: CLOSED, LATE NIGHT	
Locations: Parking lot, Stations, Platforms, Offices				
Contributing Factors: Lighting, Presence of others, Observation, Police presence, Community, Time of day, Response				
Solution Areas: Response, Communications, Enforcement, Equipment, Observation, Facilities design				
Solutions/ Approaches	Cost		Effectiveness	Application
	Personnel	Facility/Equipment		
Closed circuit television	MID	HIGH	MODERATE	ONCE
Radio communications equipment	MID	MID	VERY	ONCE

Emergency phones	LOW	HIGH	MODERATE	ONCE
Public address system	MID	MID	MODERATE	ONCE
Alarms and sensors	MID	MID	VERY	ONCE
Photo cameras	MID	HIGH	MODERATE	ONCE
Altering system operations	MID	HIGH	MODERATE	EACH CASE
Vehicle locating systems	MID	HIGH	SLIGHT	ONGOING
Police patrols	HIGH	MID	VERY	ONGOING
Gates, locks, fences	LOW	HIGH	MODERATE	ONCE
Aerial surveillance	HIGH	HIGH	VERY	ONGOING
Facility design	LOW	MID	MODERATE	ONCE

Theft, Burglary, and Robbery

Locations for Theft, Burglary, and Robbery

Facilities in high crime areas typically experience high levels of crime. Theft and robbery can occur in the fare collection area by robbing the attendant, or removing fares from turnstiles or fare machines. (See the text on Fare Evasion for information on fare evasion practices and prevention procedures and the text on Hijacking for additional information regarding theft of a vehicle with passengers on board.) Theft, robbery, and burglary can occur in any of the following areas:

- administrative offices of the transit system
- fare room during counting
- maintenance areas when equipment is taken by employees when it is not authorized or expensive parts, tools, and machines are stolen
- vehicle lots or stopped buses when the driver leaves without implementing sufficient security procedures

Frequency of Theft, Burglary, and Robbery

Burglary is more likely to occur at night or when the system is closed and there are fewer people present. Theft of fare revenue and robbery are more likely toward the end of the service day after fares have been collected but before the money is secured or deposited at the bank. Robbery is more likely during off-peak and slow hours.

Preventing Theft By Employees

Employees who have access to fares might be tempted to find ways to steal them. Fare theft may take place on the vehicle, before the fare is placed in the fare box, or before the fares are removed from the vehicle. The operator may be tempted to steal cash if the operating procedures require that he/she handle the cash, such as making change. Many systems have procedures in which the driver must handle the cash because the farebox does not record the deposit of paper money. These procedures might tempt the driver to take some of the revenue that passes through his/her hands.

Training Employees

One solution is to train all personnel in the proper procedures for maintaining security. Training might include

- locking vehicles
- securing fare revenues
- keeping an equipment inventory

Employees must also learn what happens to those who are caught. It has been shown that employee theft is more easily deterred in systems where employees who steal are prosecuted rather than just discharged.

Observing Employees

Surveillance Equipment

Surveillance systems can include CCTV systems and photo cameras in facilities and vehicles. Cameras take a series of photographs that will document any fare theft by personnel and ensure that proper fare collection procedures are being followed. The photo cameras will be more useful than television cameras in vehicles because they can survive the vibrations of the vehicle better and will last longer with less need for repairs or replacement. Some systems have found success with the placement of dummy cameras that are less expensive and do not operate. A deterrent is created when employees do not know which cameras are operating.

Uniformed Patrols

Uniformed patrols are obvious to the employee. Personnel know when they are being watched and will act accordingly. Patrols should be completed by security personnel or supervisors. This can prevent theft if observation is used continuously. (See the text on Trespassing and Physical Security Intrusions for more information on observation techniques.)

Undercover Patrols

Undercover (anonymous) patrols are used by many systems to monitor activities on buses and rail vehicles. Members of the patrol who are unknown to transit employees travel on the system to observe whether procedures are being followed and whether there is a potential for theft or other crimes. Observation procedures are relatively inexpensive and have some effectiveness in situations when personnel must handle cash. Most systems have instituted policies that prevent drivers from handling fares, such as exact fare policies.

Implementing Secure Fare Counting and Depositing Procedures

Fares are removed from vehicles through different procedures ranging from manual removal by the operator to sophisticated methods using machines which attach to the underside of the farebox through the vehicle floor and move the cash directly to the fare room. One security procedure is to count the money several ways to increase the likelihood of one miscount being detected and

rectified. Some systems have the money counted at the facility and weighed at the bank. Others have multiple employees count and recount the cash.

Fareboxes

Fareboxes can record the theoretical amount of money being deposited, but many cannot effectively record paper money. In fare situations, procedures for comparing the recorded fare to the actual cash must be available. Some systems will not allow paper money to be used and all fares must be in change. This addresses the problem of theft when the money is being counted and the potential for theft when the driver handles cash.

Ridership Estimates

Many systems generate ridership estimates and compare them with farebox revenue in order to detect discrepancies. Ridership estimates can be made through sample counts on particular routes at various times of day and days of the week. When there is a great discrepancy between the estimated revenue and the actual amount, there might have been some theft on the vehicle or in the fare room. Ridership estimates are also valuable for making operational decisions regarding route changes and vehicle purchases.

Fare Counting and Depositing Procedures

Fare counting and depositing procedures are moderate in cost in terms of personnel, particularly if multiple fare counting is part of the procedures. The cost is also moderate in terms of facilities and equipment. Some of the more sophisticated equipment is expensive, but the return on investment will be very good if fare theft is a major problem in the system. Any type of procedures must be implemented on an on-going and consistent basis.

Implementing Inventory Control Procedures

Another location for employee theft is in the maintenance facilities. Many systems have found their inventories of parts and tools shrinking. Strict inventory control procedures must be implemented in the maintenance facility in order to control the theft of costly parts and tools. Procedures in which a tight inventory is kept can help a system detect theft. The fact that a tight inventory is kept and that discrepancies may be quickly detected will also deter potential thieves.

Signing Out Tools

One inventory control procedure is a system of signing tools out through a maintenance clerk. Maintenance employees should be required to initial a form showing that they have the tool and must return it when they are finished. The employee is then responsible for that piece of equipment. These types of procedures will have a moderate personnel cost, but a low facilities cost. They can very effectively address the problem of employee theft from maintenance facilities.

Preventing Theft by Non-Employees

Non-transit employee theft is far more common than employee theft. Outsiders may steal fares from fare machines, fareboxes, turnstiles, or other access gates.

Securing All Loose Objects

The most obvious deterrent is a policy of securing all objects directly to the walls and floors of the facility. Trash cans, display racks, maps, and other items should be securely bolted to the facility itself.

Observing Equipment and Facilities

Equipment that takes and holds fares must be kept under observation through a CCTV system or direct observation. This can have a high personnel cost and a moderate facility cost. Observation can be very effective if it is combined with a rapid response, such as photographing the perpetrator at the time of the theft or as he/she moves out of or through the facility following the theft.

Vehicle lots must be kept secure with fences and surveillance equipment. Many systems have found that camera surveillance is not sufficient for vehicle lots; therefore, security patrols must also be implemented. Observing vehicle lots can have a moderate personnel cost and a moderate to high cost in facilities and equipment. These procedures can have be very effective.

Outsider theft also occurs in the maintenance areas. Parts, tools, and items as large as bus engines have been stolen when maintenance areas are breached. Areas must be protected through careful observation and surveillance procedures in combination with alarms and other devices. Such procedures can have a low personnel cost and a moderate equipment cost.

Using a Vault for Keeping Fares

The equipment that holds the fares must include a strong and impermeable vault for keeping the cash safe. While no particular device is completely resistant to break-ins, any equipment that makes it extremely difficult will be a deterrent. A thief will not have sufficient time to open a resistant vault unobserved. In addition, any excessive time that is spent working on a vault will be a further opportunity for the police or transit security to apprehend the thief. Secure vaults will be very effective, particularly if the equipment is under observation. Strong, secure equipment can have a moderate equipment cost, but there will be a low personnel cost.

Implementing Vehicle Security Procedures

Outsider theft also frequently occurs in vehicles when they are not in use. Vehicles can be stolen, but the theft of equipment on board the vehicles is much more common. The most popular target is the radio, but items such as the fire extinguisher and first aid kit are also popular. Operators must always follow locking procedures whenever they leave the vehicle. Other vehicle security procedures should be implemented that require the driver to observe the vehicle at all times. These procedures have a low cost in terms of personnel and facilities and can be very effective in the short term.

Securing Administrative Offices

Many transit systems have experienced non-employee theft from the administrative offices. Unauthorized access can lead to the theft of expensive office equipment. In addition, records or data on computers can be taken or destroyed by an intruder.

It is important to implement consistent procedures for locking the offices no matter how many people are there. Many systems use access cards, keys and codes to limit access into the office area. This is particularly important because access to offices in some systems can be obtained from public corridors. Doors should not be marked in too obvious a manner. Alarms and/or observation of the entrances to the administrative offices will alert police or transit security personnel that there has been unauthorized entry to the offices. There must be procedures for responding to an incident of theft in administrative offices. (See the text on Trespassing and Physical Security Intrusions for more information on these procedures.)

Procedures for locking and limiting access to the administrative offices have a low cost for personnel and can have a moderate cost in terms of equipment. When used in combination with other policies, locking procedures can be very effective.

Preventing Burglary in the Transit System

Keeping Transit Facilities Occupied

Never allow all or any part of the facility to be unoccupied or unattended. On-site personnel or the presence of television cameras can prevent burglary.

Constant personnel at the facility can have a high cost. Depending on the size of the facility, it may be necessary to have many individuals. There is also a moderate to high cost for equipment, which can reduce the need for personnel if implemented properly. Personnel observing CCTVs can observe more than they can on patrol. However, it does not demonstrate a physical presence.

The needs of the system must be balanced with the cost and return on investment. In high-crime areas or in facilities where there has been a high degree of burglary, it is useful to increase physical patrols. In quieter areas and in facilities where there is little burglary activity, video surveillance may be sufficient. (See the text on Trespassing and Physical Security Intrusions for further discussion of means of preventing entry.)

Preventing Entry to Transit System Facilities

Burglars will have a difficult time entering the building if alarms, sensors, locks, doors, and gates are installed and properly implemented.

Preventing Robbery in the Transit System

Robbery is the act of threatening or harming an individual in order to steal what they have. For the transit system, this often translates to the robbery of fare collection personnel and operators. (See the robbery of passengers, which is discussed in more detail in the section on Crimes Against Passengers.)

Effective Observation Techniques

Observing fare collection booths, ticket counters and other areas through CCTVs provide protection to employees. The placement of obvious cameras can provide a deterrent and additional protection. Vehicle operators must also be protected through observation via cameras in the vehicles or by physical patrols. If the purpose is to prevent robbery, the cameras and the patrols will be most useful if they are visible. Uniformed patrols are very effective, but they cannot be on all vehicles at all times. Some transit systems allow municipal police in uniform to ride on the vehicles at no charge because the officer is such an effective deterrent to all types of crimes.

Implementing Cash Protection Procedures

Procedures that limit employees' access to cash will deter potential robbers. If, for example, all cash is removed from the ticket booths at frequent intervals, there may never be enough on hand to tempt a robber. When these procedures are observed or described on signs, it is clear to a potential robber that there is not enough to steal. If a robbery does occur, the system will only lose a small amount.

Well-Publicized Undercover Police Patrols

When the transit system widely publicizes the fact that there are many undercover patrols on the system at all times, potential robbers will never know when an armed patrol is on any given vehicle. Well-publicized, successful arrests can contribute to the effectiveness of the patrols. The identities of the patrols can be protected if the actual individuals who make up the patrols never make the arrests, but merely report activities.

Using Safety Materials

Safety glass or other heavier materials in ticket booths will protect employees from threatened injury. Secure locks and locking procedures on all work areas will also protect employees from robbery.

Installing Silent Alarms

The silent alarm must be placed so that the employee can trigger it without the robber being able to observe it. The alarm can be placed on the floor or under a desk.

Table 19. Assessing Theft, Burglary, and Robbery

THEFT, BURGLARY, AND ROBBERY		Severity: HIGH	Frequency of Occurrence: FREQUENT	
Type: SYSTEM	Areas of Affect: SYSTEM		When: ANY	
Locations: Bus, Rail, On board, Fare collection area, Offices, Garage, Parking lot				
Contributing Factors: Observation, Police presence, Community, Fare, Time of day, Equipment strength				
Solution Areas: Training, Response, Enforcement, Equipment, Observation, Facilities design, Fare collection				
Solutions/ Approaches	Cost		Effectiveness	Application
	Personnel	Facility/Equipment		
Observation of employees	HIGH	MID	VERY	ONGOING
Money room procedures	MID	MID	VERY	ONGOING
Observation of turnstiles, fare machines	MID	HIGH	VERY	ONGOING
Observation of operators	MID	HIGH	VERY	ONGOING
Secure fareboxes, turnstiles, fare machines	LOW	MODERATE	MODERATE	ONCE
Lock buses when not in use	LOW	LOW	HIGH	ONGOING
Protect vehicle lots	MID	HIGH	VERY	ONGOING
Protection of maintenance areas	LOW	HIGH	VERY	ONGOING
Maintenance procedures	MODERATE	LOW	MODERATE	ONGOING
Inventory	HIGH	MID	MODERATE	ONGOING
Secure all materials to facility	LOW	MID	VERY	ONCE
Protect operators, fare attendants	MID	MID	MODERATE	ONGOING
Prevent entry	HIGH	HIGH	VERY	ONGOING
Secure administrative offices	MID	HIGH	MODERATE	ONGOING

Attacks on Personnel

Responsibility of the Transit System

A transit system has the responsibility to protect its administrative, maintenance, operations, and security personnel from the time they report for duty until the time they are safely on their way home.

Occurrence of Dangerous Incidents

At any time during their work day transit employees may be subject to harm, especially those who work late into the evening and early in the morning. Although the potential severity of an assault on transit system personnel is high, it is fortunately not frequent. However, assault rates can become alarmingly high in some communities.

Transit system employees are charged with certain responsibilities and usually project an image of authority. More often than not, the employees provide order and enforcement which sometimes puts them at risk. For example, personnel may be assaulted on board a vehicle when trying to calm a drunken passenger. It is generally conceded that most assaults on staff arise out of an enforcement conflict.

Factors Contributing to Security Compromises

Employees are at risk anywhere on transit system property or grounds. They may be assaulted in a parking lot while conducting pre-trip inspections or walking to their cars late at night. Generally, employees will be at greatest risk when they are isolated, especially when they are moving between points in the system without communication capabilities. The presence of others, cash handling procedures, confrontations with passengers, and the design of vehicles and facilities are a number of factors compromise the security of personnel. Poor lighting allows criminals to take an employee by surprise. If yards are not well lit, an assailant may hide behind any vehicle. If a station attendant moves into a dimly lit section of a facility during a routine operation and cannot see into the shadows, he/she is unable to take actions to assure his own security.

Reasons Transit Employees are Subject to Attack

Those lashing out with random violence may see the employee as an authority figure appropriate for their anger. An employee may be attacked for having previously carried out a work-related function, such as disallowing a passenger from boarding the bus for not having the appropriate

fare or removing a drunk passenger who was disruptive. Transit system employees may also be attacked only because they are

- alone
- among the few people out and available in the middle of the night
- believed to be carrying cash and other revenues

Establishing a "Buddy System"

The most effective means of security is to establish a program whereby the members of the system provide security for each other. In large systems, mobile facility maintenance personnel and other mobile support staff are at very high risk because they must move about alone. Radio contact makes their functions more effective and enhances their security by keeping them in contact with a central dispatcher. Arrangements should be made for such mobile maintenance personnel to check in with operators, station attendants, and other security personnel in the area in which they are working so that other personnel are able to watch for them. In the case of train systems, station attendants should pay particularly close attention to monitors showing maintenance work areas. Assistance from others is particularly helpful when a maintenance individual is working on equipment that collects fares for cash. The Buddy System

- ensures that all employees can maintain verbal contact at all times
- identifies the whereabouts of all employees at all times
- has remote employees check in before and after leaving their assignment location
- encourages employees check in at regular intervals
- welcomes employees who monitor the safety of other employees

Verbal Contact with Employees

Verbal contact is generally the lifeline of all transit staff. This contact provides employees the ability to request assistance when needed and to check on the condition of other staff. This contact is automatic for office workers where they are in verbal contact with all those in the same or adjacent rooms. They are also in telephone contact with the rest of the building and the outside world. Verbal contact must usually be kept by radio for operators, mobile maintenance personnel, supervisory personnel, and security personnel.

The transit system must identify any dead spots in radio coverage area and have the signal strengthened at those locations. Radios require a dispatcher to control communications and guarantee that at least one staff member is available to provide response as needed.

Knowing the Location of All Employees

Procedures must be in place to ensure that the location of all staff are known in order to discover and assist an employee in danger. This also provides the operational benefits of increased information for central control.

Have Employees Check In Before and After Leaving Their Posts

If an operator needs to leave the vehicle to investigate a mechanical problem in an unsafe location, he/she should call in the problem and the intent to investigate prior to leaving the vehicle. Station attendants and token clerks should take similar precautions when taking rest breaks or leaving the security of their booth to perform regular station functions. Should something happen in either case, the dispatcher should:

- send out a supervisor
- ask a passing vehicle to report in
- dispatch additional vehicles
- notify the police
- take any other appropriate action

Have Employees Check In at Regular Intervals

Mobile transit staff that cannot be provided the convenience and security of portable radios due to practical or budgetary constraints can be afforded protection by checking in regularly. Facility maintenance staff should check in at each location which houses a stationed transit employee. They may check in with the employee on duty or may use communications at that site to contact central control.

Have Employees Monitor the Safety of Other Employees

This increases morale and is especially effective when involving security staff. Security guards or transit police checking in on clerks and drivers makes their security function and protection explicit rather than implied. It also reinforces to patrons that transit employees are given formal protection.

Contingency Plans

The transit system should develop specific procedures to be employed by staff as they carry out their regular duties. In some cases, cooperation with the assailant will be the only effective response. The prevention and elimination of attacks, however, should be the primary concern.

Increase Lighting

Most transit system operations must typically begin and end in the early hours of the morning and late at night. Staff are vulnerable from the instant they arrive at the site of transit offices. Employees will usually have to walk along a street or across a parking lot. Until they reach the transit offices, they may be at some risk.

Lighting a parking lot is very effective in creating a greater sense of security. The lighting should cover the area that employees have to cross to reach the transit offices as well as a perimeter area to allow individuals to see their entire surroundings clearly.

The installation of additional lighting is somewhat expensive, but the cost of providing electricity can be reduced by setting lights on a timer that comes on up to 30 minutes before work shifts begin and up to 30 minutes after shifts end. For those employees leaving the building slightly later than expected, a switch that temporarily turns outside flood lights or parking lot lights on can be included. The cost of lighting can also be reduced by mounting spot lights, flood lights, or parking lot type lights on the building itself rather than on poles throughout the lot. This may not be possible if the employee lot is particularly large.

Adjust Shift Times

Staggered shift times can provide a steady stream of people entering and exiting the transit facility. In this case, individuals who are planning assaults will be uncertain when the next individual might happen by. Also, all passing employees have the potential of interrupting or observing a crime in progress. For the protection of transit personnel whose shift changes are in remote locations, it is beneficial to schedule the beginning of the following shift at least five or ten minutes before the preceding shift ends.

If the relieving employee fails to arrive for a shift or is absent from his/her post, it should be reported and investigated. In many cases, this will lead to the disciplining of an offending employee. However, it is helpful from a security standpoint to be able to note the approximate time and immediately send for help if a serious incident occurs. One employee should stay in radio or verbal contact and should be able to observe the approach and/or departure of the other.

Eliminating Unauthorized Access to Transit Facilities

Entrances to the facility from public areas should generally be locked. The locks should be sufficient to keep out any unauthorized persons without causing staff undue trouble entering. Due to the possibility of an attacker entering the building with a transit employee who has appropriate access, the area immediately inside the main entrance to the transit facility should be continually monitored by a receptionist, office windows that overlook the entrance way, or a CCTV camera and an alarm.

If none of these observation techniques are available in the entrance area, an alarm should be installed that enables transit employees to alert other staff in the building that assistance is needed. Similarly, the transit office building should have windows that overlook the employee parking area, increasing the amount of observation.

Many of these measures seem extreme or complicated for only entering the building, but it is the early morning hours when transit systems generally begin and end operations that cause particular danger to individuals. The community in which a facility is located also determines the need and extent of such protection.

Preventing Robbery in the System

Provide Passenger Relations Training for Drivers

Passenger relations training generally includes how to assess the seriousness of an encounter and addresses the appropriate time to call central offices. It should also include the appropriate use of any on-board alarms. The more trained a vehicle operator is at handling a frustrated patron, the more conflicts may be avoided. Good passenger relations training includes specific training for those encounters most likely to occur in daily operations.

Equip Transit Vehicles With Radios

The radio enables operators to check in regularly and to notify the dispatcher when they will be away from their vehicles and when they will return. It also enables dispatchers to contact operators when there is a problem. In-vehicle radios allow operators to communicate specific information to a responsible party in the transit system in the event of an emergency.

Equip Transit Vehicles With Alarms

Alarms involve a secret button on the floor, a concealed button underneath the dash or on the driver's left side control panel, or an easily reached switch. These alarms are intended to activate a request for assistance without notifying the perpetrator.

In some cases a destination sign is instantly set to read *Help, Emergency, Emergency, Call Police* or some other variation to notify passersby or any passing police. Some systems have found that interior destination signs reflected off the windshield can make the request for help known to the assailant inside the vehicle. To counter this, some vehicles have lights placed on the roof of the bus which flash to indicate the need for assistance. This type of alarm requires that area police be able to recognize the flashing light and interpret it correctly. However, these too can reflect in nearby windows if not shielded to flash only in particular directions, thus notifying assailants that an alarm has been triggered.

Other silent alarms built into the vehicle transmit a pre-coded message to dispatch via radio signal that can include the bus number and the need for assistance. This type of silent alarm is especially effective if it is tied to automatic vehicle locator systems (AVLs) which can pinpoint the exact location of the driver in trouble.

Use Special Materials to Resist Assault

Materials which increase the security of station attendants include

- bullet-proof or bullet-resistant glass
- stronger locks
- silent alarms
- attached rest room facilities

- radio contact capabilities
- telephone or other hardwired lines

Table 20. Assessing Attacks on Personnel

ATTACKS ON PERSONNEL		Severity: HIGH	Frequency: MODERATE	
Type: SYSTEM	Areas of Affect: STAFF		When: SHIFT CHANGE, LATE NIGHT, ANY	
Locations: Onboard, Parking lot, Entrance/exit, Garage/yards, Other				
Contributing Factors: Lighting, Presence of others, Confrontations, Equipment, Cash handling				
Solution areas: Contingency planning, Procedures, Cooperation, Facilities design, Special materials, Access				
SOLUTIONS/ APPROACHES:	Cost		Effectiveness	Application
	Personnel	Facility/Equipment		
Overlapping shift change procedures that protect staff	MODERATE	LOW	MODERATE	ONGOING
Special materials that resist assault	LOW	HIGH	MODERATE	ONCE
Increased capability of remote operations	LOW	MODERATE-HIGH	MODERATE	ONCE
Silent alarms	LOW	MODERATE	MODERATE	ONCE
Automatic vehicle locator systems	LOW-MODERATE	HIGH	MODERATE	ONCE
Patrolling security staff with check-ins	HIGH	MODERATE	MODERATE-HIGH	ONGOING
Required check-in procedures	LOW	LOW	LOW-MODERATE	ONGOING
Employees in contact at all times	MODERATE	MODERATE	HIGH	ONGOING
Lighting	LOW	MODERATE	MODERATE	ONCE
Closed circuit television monitoring	MODERATE	HIGH	MODERATE	ONCE/ONGOING

Chapter 6
Crimes Against The Public: Critical
Incidents/ Acts of Terrorism

Chapter 6

Crimes Against the Public: Critical Incidents/ Acts of Terrorism

About This Chapter

This chapter addresses three serious crimes that threaten multiple passengers, transit staff, and the general public.

- hostage situations
- hijackings
- bomb threats

All three of these incidents are rare occurrences in transit in this country. When they do occur, however, they can be part of a terrorist situation, in which case there should be procedures in place that allow the transit agency to request assistance from the Federal government.

There are many systems that have had the good fortune of never having been involved in a hostage situation, vehicle hijacking, or bomb threat. Nevertheless, the lead security officer at a system should be aware of the measures that the system and the local police department should take to deter and/or respond to these situations. Every incident will have a unique set of circumstances and demands. The over-riding priority of a system in all such incidents should be to minimize injuries and avoid deaths.

Hostages

Training Transit Personnel

Vehicle operators should receive training on the specific procedures to be followed in the event of a potential or actual danger. These may include:

- alerting the dispatcher, either directly or through "ten" codes. The operator should give the location of the vehicle and the nature of the danger.
- turning on the silent alarm (if available).

Dispatchers and other office staff must be trained to take appropriate steps as soon as they learn of a hostage situation.

Coordinating With Local Police Forces

Unless the system has its own specially trained personnel to deal with hostage situations, it should allow the local (or state) police to respond to the hostage situation. This does not necessarily mean that the system should relinquish all control. Whatever the arrangement between transit and police, there must be a clear understanding of each organization's responsibilities and jurisdiction. In hostage situations where lives are at stake, coordination is crucial.

Gaining Release of Hostages

There are four steps in gaining release of passengers and vehicle operators:

1. Isolate the Vehicle

The area surrounding the hostage vehicle should be cleared as quickly as possible. In the case of a train, the car with the hostages should be detached from the cars ahead of and behind it. The vehicle should also be blocked off as much as possible from other public areas to reduce the possibility of other people getting involved. In addition, this limits the movement of the hostage takers.

2. Collect Information on the Situation

Staff should immediately collect all relevant information including:

- location of the vehicle
- type of vehicle
- operator identity

- number of passengers
- number and description of perpetrators
- the demands for releasing the hostages

A spokesperson should cooperate with the media to avoid unfounded exaggeration of the actual events. At the same time, the spokesperson must stress the sensitivity of the problem and reveal only information that does not put the hostages in greater danger.

3. Negotiate with the Perpetrators

An experienced and skilled negotiator should act on behalf of the transit system and police. The ultimate decision maker — transit director, police chief, mayor — should use the negotiator as the intermediary in discussions with the hostage takers. Ideally, the negotiator will end the crisis simply by the powers of persuasion. A negotiator should reassure the hostage takers, allowing them to speak their minds and perhaps soften their stance. Negotiations should be lengthened to place pressure on the hostage takers to back down and to provide more time for the security forces to collect additional information that may help in the case of a forceful reclaiming of the hostages.

A good way to lengthen discussions with the hostage takers is for the negotiator to have to defer all decisions to another authority. This also directs the blame away from the negotiator when talks are delayed or demands are turned down.

While negotiations are taking place, other security staff should be preparing for the release of the hostages and capture of the perpetrators. The exact procedures to be followed and the assignment of authority should be arranged jointly by the transit authority and the local police. (See Staff and Immediate Response for further discussion on suggested responsibilities and activities for transit staff and outside police.)

4. Forcibly Reclaim Hostages

The system and local police must be prepared to reclaim the hostages through forceful means if negotiations appear to be failing. This is a decision that only the highest administrators can make based on recommendations from lead security staff. Force is likely to lead to injuries; therefore, it is a last resort.

Table 21. Assessing Hostage Situations

HOSTAGES		Severity: VERY HIGH		Frequency: RARE	
Type: AGAINST THE PUBLIC	Areas of Affect: PASSENGERS, VEHICLES, STAFF			When: ANYTIME	
Locations: On board any vehicle					
Contributing Factors: Passengers, Other criminal acts					
Solution Areas: Coordination and cooperation with local police, Training, Special planning, Forceful hostage reclaiming, Negotiation, Information gathering					
Solutions/ Approaches	Cost		Effectiveness	Duration	
	Personnel	Facility/Equipment			
Operator and dispatcher training	LOW	LOW	MEDIUM	ONGOING	
Coordination with local police force	LOW	LOW	VARIABLE	CASE BY CASE	
Isolate vehicle	MEDIUM	LOW	MEDIUM	CASE BY CASE	
Collect information during incident	MEDIUM	LOW	MEDIUM	CASE BY CASE	
Negotiation with hostage takers	LOW	LOW	VARIABLE	CASE BY CASE	
Forceful reclaiming of hostages	HIGH	MEDIUM	VARIABLE	CASE BY CASE	

Hijacking

Motives for Hijacking

Hijackers may already possess what they want — the vehicle — and may be using the passengers as a negotiating chip to gain safe passage or meet some other demand. Because motives are usually different in hostage takings and hijackings, transit and police officials may learn about the incidents at different stages of its development. For example, hostage takers will reveal that they have hostages as soon as they are ready to make demands. In contrast, hijackers' objectives may be to use the vehicle to travel somewhere. In that case, it is to their benefit to remain undiscovered for as long as possible.

Dealing with Hijackings

Hijackings are very rare. Many transit systems have never had to face a hijacking. Yet, because of the severe consequences of such an incident, systems should be prepared to handle a hijacking in cooperation with the local police.

Identifying and Locating the Vehicle

Since the hijackers and hostages will be on a moving vehicle, identifying and locating the vehicle becomes an important issue. A number of systems use AVL equipment that allows a dispatcher to know the location of any vehicle in operation at any time. Each bus transmits a signal that provides its geographic coordinates to a computer system at the dispatch center. A dispatcher can identify individual buses on a map display and if a bus strays from its scheduled route, it can be noted right away. Another technique used to track the location of buses is to paint vehicle identification numbers in large numerals on top of the buses so the numbers can be seen from a plane, helicopter, or surveillance tower.

Coordinating with Police Forces

Hijackings may involve multiple jurisdictions as the hijacked vehicle travels beyond the area covered by the local police. In general, highways are patrolled by state police. Each system should coordinate with the state police for dealing with potential hijackings. The system should also develop and maintain relationships among police departments of neighboring communities so that they will be ready to effectively act together when a hijacked bus enters an adjoining jurisdiction.

Other Measures

Other measures include

- trying to stop and isolate the hijacked vehicle
- collecting all potentially useful information on the hijackers and the hostages
- negotiating with the hijackers
- reclaiming the hostages — forcefully only if no other options remain.

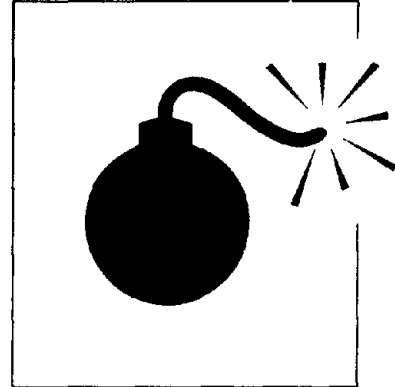
Table 22. Assessing Hijacking

HIJACKING		Severity: VERY HIGH	Frequency: RARE	
Type: AGAINST THE PUBLIC	Areas of Affect: PASSENGERS, VEHICLES, STAFF		When: ANYTIME	
Locations: On board any vehicle				
Contributing Factors: Passengers, Other criminal acts				
Solution areas: Coordination and cooperation with local police, Training, Vehicle locating, Special planning, Negotiation, Information gathering, Forceful security personnel actions				
SOLUTIONS/ APPROACHES:	Cost		Effectiveness	Application
	Personnel	Facility/Equipment		
Operator and dispatcher training	LOW	LOW	MEDIUM	ONGOING
Coordination with local police force	LOW	LOW	VARIABLE	CASE BY CASE
Coordination with state and other jurisdictions	LOW	LOW	VARIABLE	CASE BY CASE
Automatic vehicle locators	LOW	HIGH	HIGH	CASE BY CASE
Rooftop IDs	LOW	LOW	MEDIUM	ONCE
Negotiate with hijackers	LOW	LOW	VARIABLE	CASE BY CASE
Forceful reclaiming of hostages	HIGH	MEDIUM	VARIABLE	CASE BY CASE

Bomb Threats

Purpose of Bomb Threats

A bomb threat is to disrupt the system, not to cause physical harm. If harm were intended, a perpetrator would not give advanced warning. Bomb threats elicit many reactions from transit personnel and passengers. There is a sense of relief when the threat turns out to be a false alarm and the potential disaster was avoided.



Yet this sentiment soon turns to frustration, distress, and anger as the people affected realize the waste of time and resources they were subjected to and the danger to which they had been unnecessarily exposed.

The Incidence of Bomb Threats

The incidence of bombs going off, or even discovered, in transit vehicles or facilities in this country, is extremely low. However, bomb threats have to be considered and seriously evaluated, since the materials and know-how to create bombs is within reach of many individuals. Responsible transit systems cannot ignore bomb threats. Transit systems can hope (and are usually right) that bomb threats are nothing more than threats. But a system must establish procedures in anticipation that one time the danger will be genuine.

Pre-Trip Vehicle Inspections

If an unfamiliar or suspicious package is detected near, inside, or attached to a vehicle, the operator should notify his/her supervisor immediately. This may stop an incident before it ever starts.

Elicit Important Information From the Caller

Develop a standard set of questions for determining the authenticity of the threat. The following set of questions tries to elicit important information from the caller, including whether the bomb threat is real.

When is the bomb going to explode?

This question is crucial in deciding how to proceed. For example, if the answer is "five minutes," the transit system should evacuate all vehicles and facilities immediately. If the answer is "later today," the person taking the call should try to get a more precise answer before continuing with the other questions.

Where is the bomb?

This question will help to narrow down its evacuation and/or search activities. The dispatcher should follow up with questions that try to pin down the precise location, e.g., not just which station but which platform, parking lot, or rest room facility. The dispatcher may also try to deceive the caller to find out if the threat is a hoax. For example, he/she can ask "Is the bomb at the garage on Main Street?" knowing there is no garage on Main Street.

What does the bomb look like? What will make the bomb go off?

Try to gain more technical information about the bomb. The responses will help the transit security staff to:

- determine the credibility of the threat
- search for the bomb
- deactivate the bomb (if genuine).

Why did you plant the bomb? Who are you? From where are you calling?

These questions allow the caller to state any demands related to the bomb threat. From these responses, the transit system should:

- evaluate the authenticity of the bomb threat
- learn the motives for the threat
- provide the local police with information to identify and capture the caller

Instituting Emergency Bomb Threat Procedures

While the dispatcher attempts to receive important information from the threatener, the chief security officer and/or a top manager of the transit system should prepare to institute emergency procedures for bomb threats.

Evacuating Vehicles

If vehicles are to be evacuated, the dispatcher should inform all operators of the emergency. *Bus operators* should pull their vehicle to the side of the road and tell their passengers to get out. To avoid panic, they can say that this is a request of the police and should not mention the bomb threat. *Train operators* should follow their emergency evacuation procedures or the instructions of the dispatcher on where to stop. *Vehicle operators* should wait for further instructions from the dispatcher and not allow the passengers to reboard until given specific instructions that it is safe.

Evacuating Facilities

Depending on the information gathered on the nature of the bomb, local police may order a greater evacuation from transit facilities and areas adjacent to the transit facilities.

Planning For Potential Fire and Damage

The transit system should coordinate planning with the police and other emergency forces (fire department, medical) on how to control and handle potential fires and damage. In the case of an actual explosion, early planning will greatly reduce the possibility of fire spreading to other areas.

Low-Key Reaction to Bomb Threats

If the bomb threat is determined to be false or inauthentic, a transit system may record, but not take large scale action on the threat. It should, however, conduct a low-key search that does not disturb service to the passengers.

Table 23. Assessing Bomb Threats

BOMB THREATS		Severity: MEDIUM TO HIGH	Frequency: LOW	
Type: AGAINST THE PUBLIC	Areas of Affect: PASSENGERS, VEHICLES, STAFF, FACILITIES		When: ANYTIME	
Locations: On board any vehicle, Parking lot, Platform, Offices/garage				
Contributing Factors: Discontented passengers/staff, Secrecy				
Solution Areas: Coordination and cooperation with local police, Training, Special planning, Communications among staff, Information gathering, Evacuation, Vehicle/facility search				
Solutions/ Approaches	Cost		Effectiveness	Duration
	Personnel	Facility/Equipment		
Operator and dispatcher training	LOW	LOW	MEDIUM	ONGOING
Inspection of vehicles and facilities	LOW	LOW	HIGH	ONGOING
Coordinate with local police force	LOW	LOW	VARIABLE	CASE BY CASE
Evacuate vehicles/facility	MEDIUM	LOW	HIGH	CASE BY CASE
Get information from threatener	LOW	LOW	MEDIUM	CASE BY CASE
Search for bomb	MEDIUM	LOW	VARIABLE	CASE BY CASE
Control potential damage	HIGH	VARIABLE	VARIABLE	CASE BY CASE

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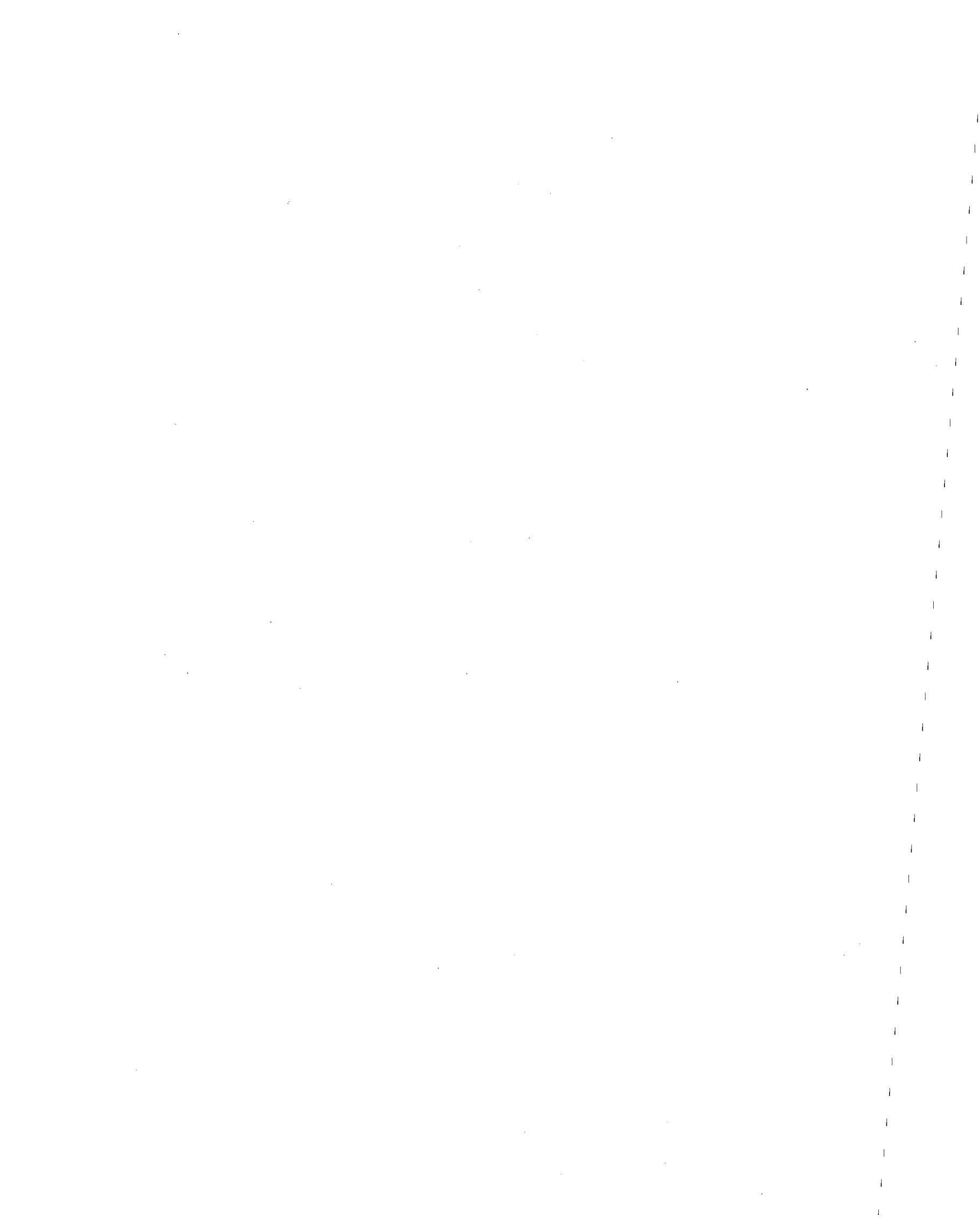
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