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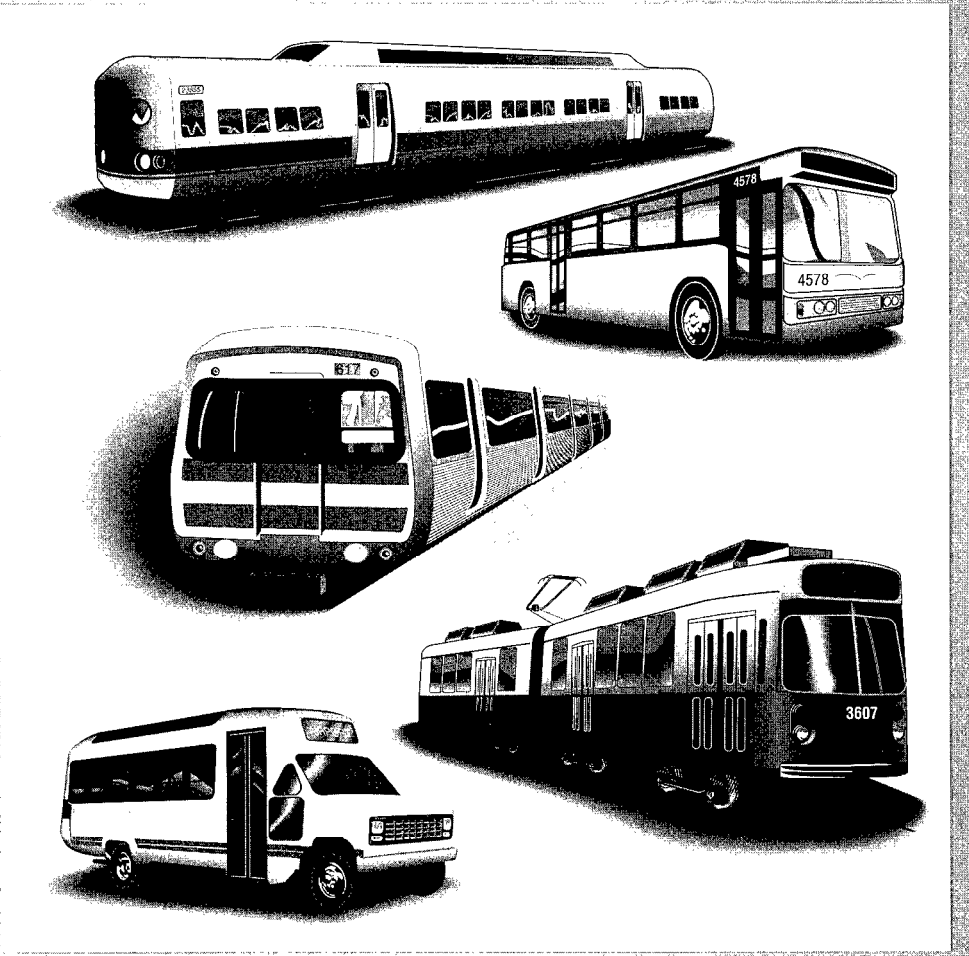
U. S. Department
of Transportation

**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

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, in^2 = 6.5 square centimeters (cm^2)
1 square foot (sq ft, ft^2 = 0.09 square meter (m^2)
I square yard (sq yd, yd^2) = 0.8 square meter (m^2)
I square mile (sq mi, mi^2) = 2.6 square kilometers (km^2)
I acre = 0.4 hectares (he) = 4,000 square meters (m^2)

MASS - WEIGHT (APPROXIMATE)

1 ounce (oz) = 28 grams (gr)
1 pound (lb) = .45 kilogram (kg)
1 short ton = 2,000 pounds (lb) = 0.9 tome (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 (1)
1 pint (pt) = 0.47 liter (1)
1 quart (qt) = 0.96 liter (1)
1 gallon (gal) = 3.8 liters (1)
1 cubic foot (cu ft, ft^3) = 0.03 cubic meter (m^3)
cubic yard (cu yd, yd^3) = 0.76 cubic meter (m^3)

TEMPERATURE (EXACT)

$[(x-32)(5/9)]\ ^oF = y\ ^oC$

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)
1 meter (m) = 1.1 yards (yd)
1 kilometer (km) = 0.6 mile (mi)

AREA (APPROXIMATE)

1 square centimeter (cm^2) = 0.16 square inch (sq in, in^2)
1 square meter (m^2) = 1.2 square yeards (sq yd, yd^2
1 square kilometer (km^2) = 0.4 square mile (sq mi, mi^2)
1 hectare (he) = 10,000 square meters (m^2) = 2.5 acres

MASS - WEIGHT (APPROXIMATE)

1 gram (gr) = 0.036 ounce (oz)
1 kilogram (kg) = 2.2 pounds (lb)
1 tonne (t) = 1,000 kilograms (kg) = 1.1 short tons

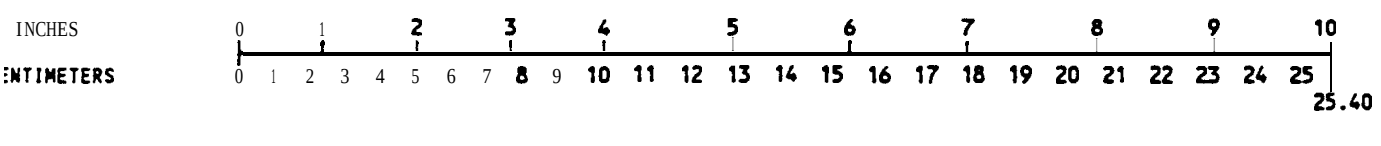
VOLUME (APPROXIMATE)

1 milliliters (ml) = 0.03 fluid ounce (fl oz)
1 liter (1) = 2.1 pints (pt)
1 liter (1) = 1.06 quarts (qt)
1 liter (1) = 0.26 gallon (gal)
1 cubic meter (m^3) = 36 cubic feet (cu ft, ft^3)
1 cubic meter (m^3) = 1.3 cubic yards (cu yd, yd^3)

TEMPERATURE (EXACT)

$[(9/5)\ y + 32]\ ^oC = x\ ^oF$

WICK INCH-CENTIMETER LENGTH CONVERSION



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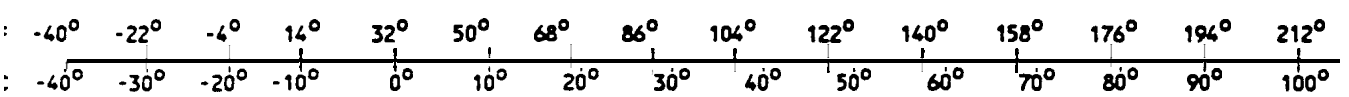

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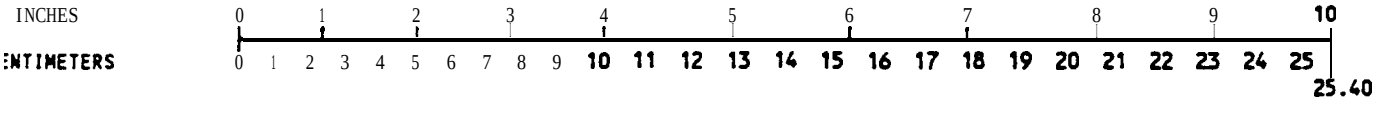

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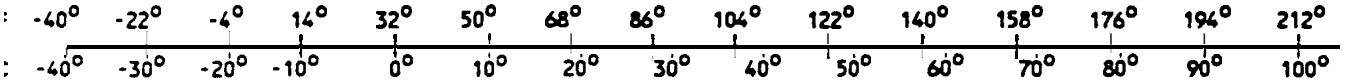

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Section 2: Security Problems

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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

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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.

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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 employes 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.

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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.

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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.

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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.

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- 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.

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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.

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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.

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.

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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]

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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 securityso 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.

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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 comers.

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 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.

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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 that 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.

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- 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 mimimize 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]

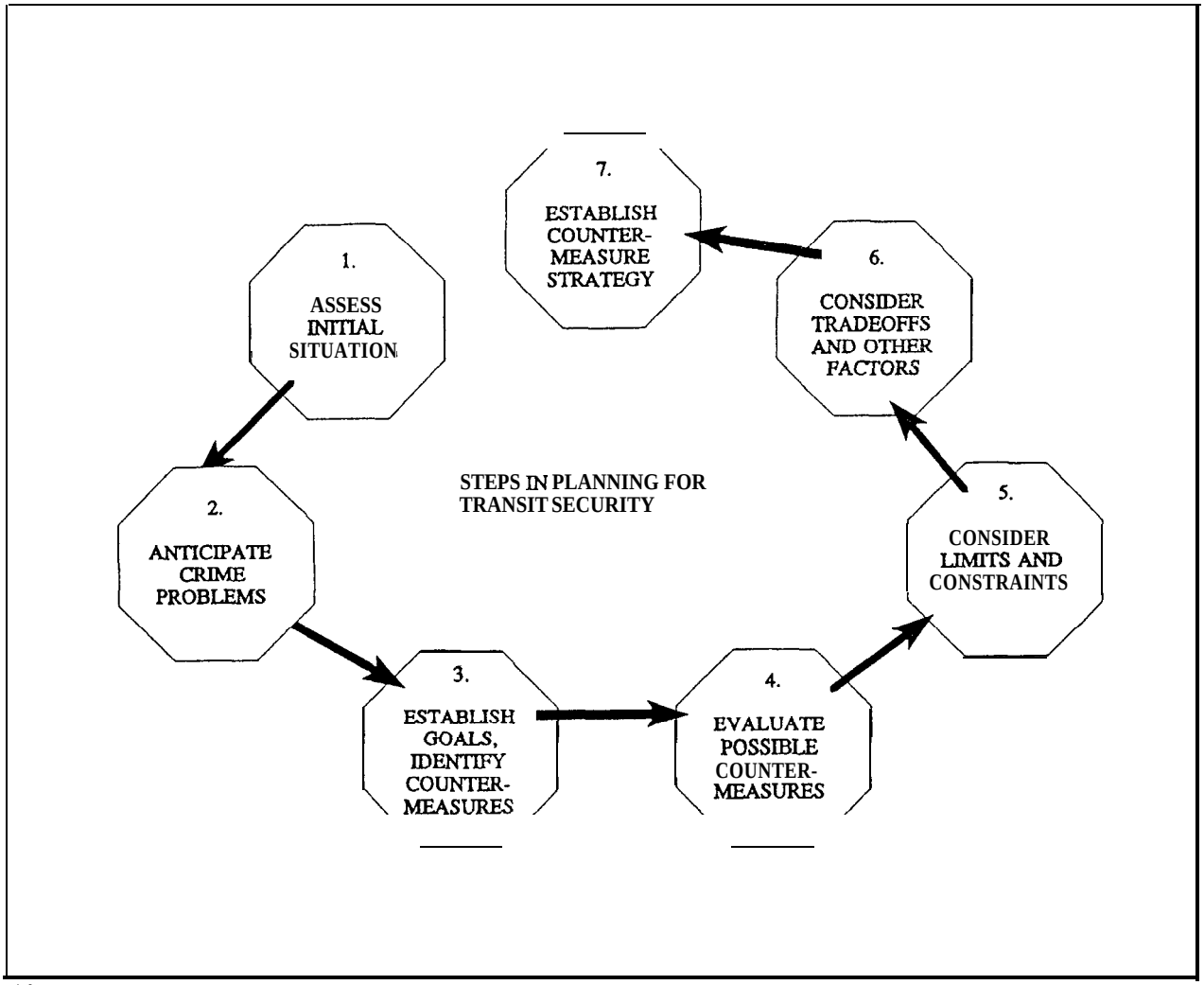

Figure 1. Seven Steps in Planning Security Procedures

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 front 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 rider-ship, 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 security [10]

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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

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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.

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- 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.

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)

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9 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.

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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 turnstyles 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.

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

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Two-Way Radios/Silent &arms

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.

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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.

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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

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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
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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.

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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.

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

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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 b 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.

Witnessed 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.

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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.

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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.

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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.

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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.

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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 influences 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.

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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
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- 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
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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
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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:			
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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.

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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

Drunkenness

Problems Caused by Drunkenness

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 Drunkenness

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 Drunkenness

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
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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:

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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.

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.

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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.

$&cations 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.

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.

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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.

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

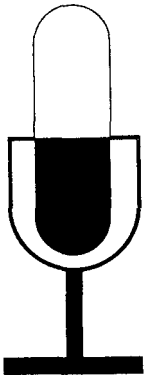
Communication paths must be established among local police and the traffic generator staff at entrances to the transit waiting area, staff at the transit waiting area, and transit security personnel (whether in-house or hired). Effective communication between vehicles, the dispatcher, and the waiting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

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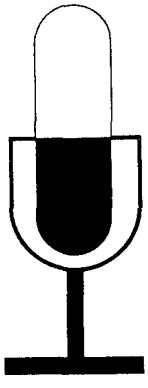

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Roles of Transit and Security Staff

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.*

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Install public address system to keep crowd informed and request needed cooperation	LOW	MOO	HIGH	ONCE
Design for large waiting areas and surrounding areas	MOD	HIGH	H I G H	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.

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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

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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,

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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 - observation, sensitivity	MID	LOW	MODERATE	ONGOING
Enforcement	MID	LOW	VERY	EACH CASE
Observation	MID	MID	VERY	ONGOING
Social services coordination	LOW	LOW	MODERATE	ONGOING

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Enforcement	MID	LOW	VERY	EACH CASE
Observation	MID	MID	VERY	ONGOING
Social services coordination	LOW	LOW	MODERATE	ONGOING

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

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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.

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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.

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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.

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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

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- 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.

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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

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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

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

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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

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

Coordinating with Local Police

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SOLUTIONS/ APPROACHES:	cost		Effectiveness	Application
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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

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.)

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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 o 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 Fly 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.

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

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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

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Install mirrors for observation of rear door end 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

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Custom farebox devices	MODERATE	LOW	MODERATE	PERIODIC
Improved lighting	LOW	MODERATE	LOW	ONCE

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.

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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 council 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.

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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

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mproved lighting at ends of platform	LOW	MODERATE	LOW'	ONCE

- Effectiveness is greater when combined with other approaches

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 System
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

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.

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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

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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.

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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

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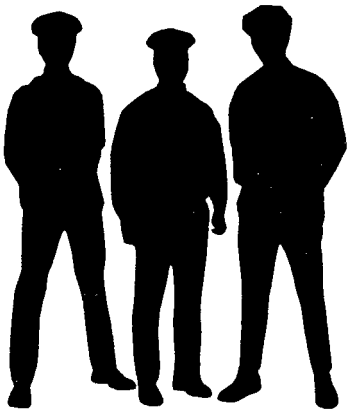
Cameras are very effective in addressing a trespassing problem, particularly if the response is quick and effective. The photographs are a response as well as an observation technique and can be effective evidence if the trespasser is arrested. Once the cameras are installed and activated, they should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

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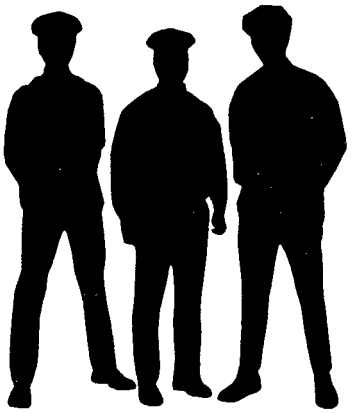

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Using Public &dress Systems

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

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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
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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.

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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.

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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 &tack

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

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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.

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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

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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

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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

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

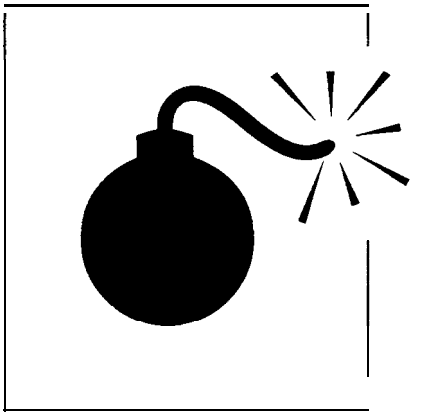
HIJACKING	Severity: VERY HIGH	Frequency: RARE	
Type: AGAINST THE PUBLIC	Areas of Affect: PASSENGERS, VEHICLES, STAFF		When: ANYTIME
Locations: On board any vehicle Contributing Factors: Passengers, Other criminal acts Solution areas: Coordination and cooperation with local police, Training, Vehicle locating, 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.

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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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