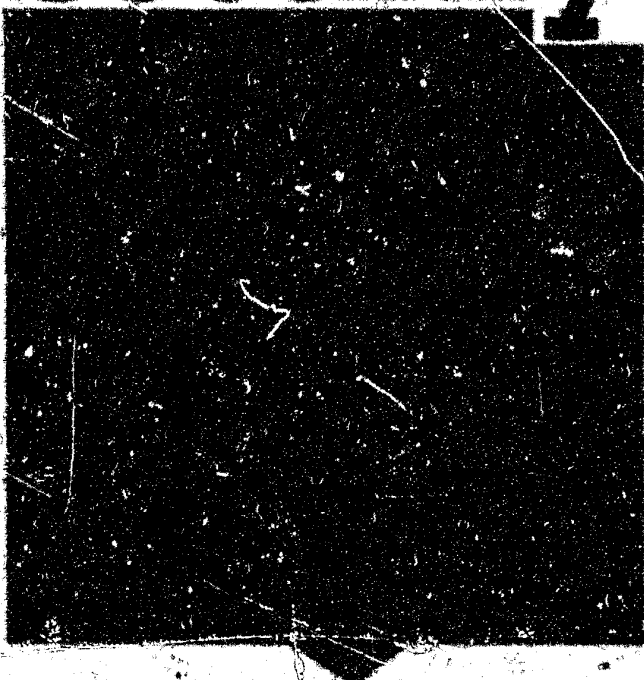


# Security



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## and the Small Business Retailer

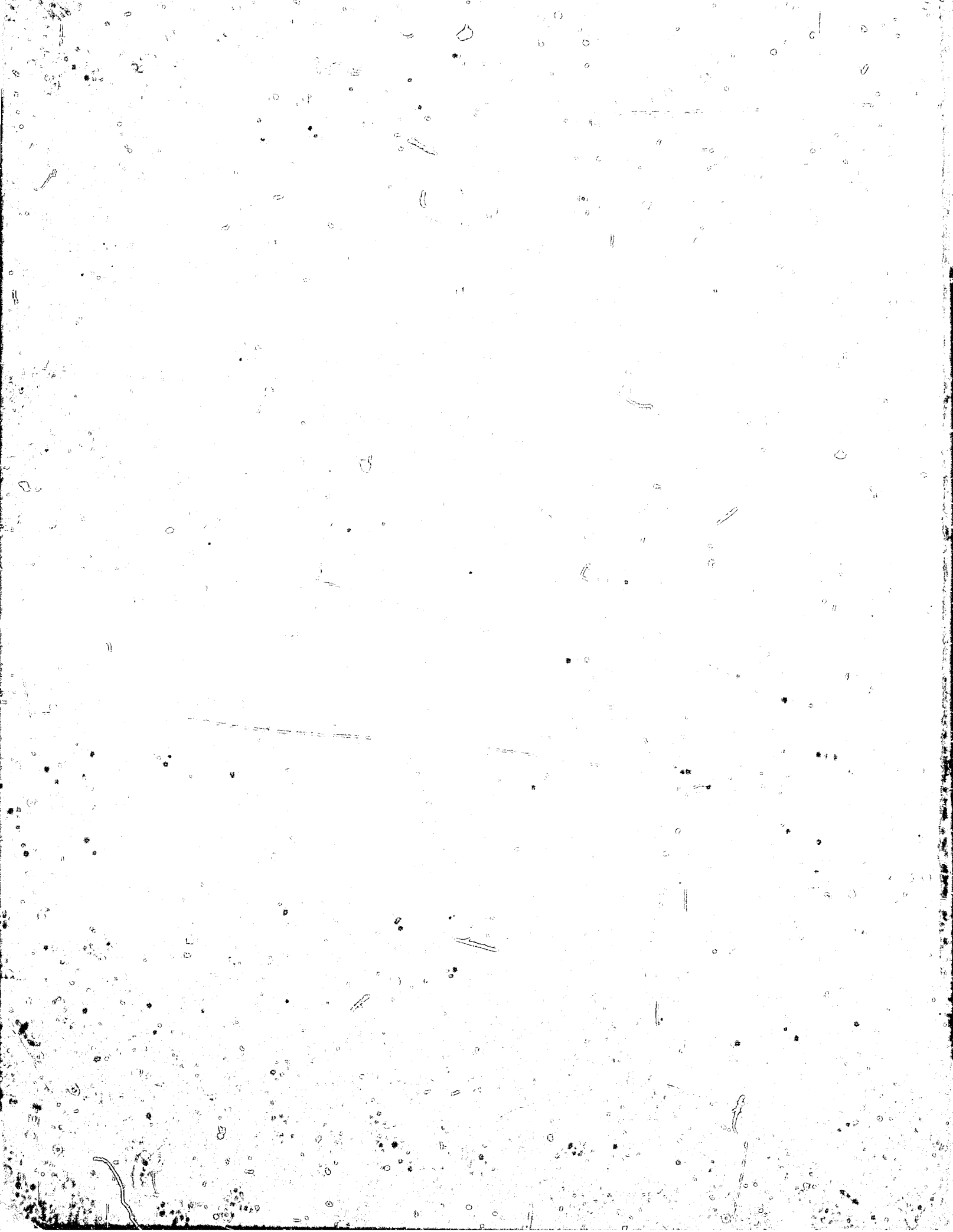
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Office of Development, Testing and Dissemination  
Federal Bureau of Investigation and Criminal Justice  
Law Enforcement Assistance Administration  
U.S. Department of Justice

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# PROGRAM MODELS



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**SECURITY  
AND THE  
SMALL BUSINESS RETAILER**

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**February 1979**

**Research on this project was completed in June 1978**

**National Institute of Law Enforcement and Criminal Justice  
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### **ABSTRACT**

**Security and the Small Business Retailer is a handbook which has been developed to provide business proprietors with a straightforward, nontechnical guide to practical, economical, and reliable countermeasures to the crimes of robbery, burglary, shoplifting, and internal theft. Chapter II first examines the four crime types in terms of the business setting, and then addresses the central issues involved in making security accessible to small business proprietors by proposing a simple process model of retail operations and illustrating how security considerations enter into day-to-day management decisions. Chapter III offers a catalog of available low-cost security techniques from which the business proprietor may select those measures most appropriate to his own security needs. Finally, the Appendices provide supplemental material taken from a variety of sources that have been included to aid the small business retailer with his security decisions.**

## ACKNOWLEDGEMENT

Many people provided us with assistance in our research effort for this project, contributing not only important information but also their valuable time during interviews with us and in reviewing this document.

We are indebted to the members of our Advisory Board for guidance in their areas of expertise. Mr. Harry Haacke (Vice President, Marsh & McLennon, Inc.), Dr. Richard S. Post (President, Security Management Services), and Dr. George Saunders (Chief, Engineering Department, Underwriters Laboratories) gave us helpful counsel on the selection of security techniques appropriate for small business owners. Representatives of Federal and other agencies involved in the regulation and protection of businesses shared with us their thoughts and informed observations about special small business considerations: Mr. William B. Cherkasky (Executive Director, Senate Select Committee on Small Business), Ms. Alice Cullen (Office of Planning, Research, and Data Management, U.S. Small Business Administration), Mr. Wayne Hopkins (U.S. Chamber of Commerce), and Mr. James M. Rose, Jr., (Assistant Administrator, Federal Crime Insurance Administration, Housing and Urban Development). We are grateful to Mr. Frank Chasin (Proprietor, Frank's Clothiers) and to Mr. Joseph Rose (Proprietor, Rose-Mar Liquors), advisors who provided us with invaluable perspectives from within the small business

community. Lt. James Rand (Sunnyvale Police Department, Sunnyvale, California) directed us to persons and to sources of information, and shared with us his knowledge acquired through years of experience in the area of security.

Our extensive interviews with members of crime prevention units across the country made our research experience not only critically informed but both professionally rewarding and personally enjoyable as well. We were especially helped by Mr. Robert Anderson (Director, Office of Crime Prevention, St. Petersburg, Florida), Sgt. Richard Dengler (Miami Florida Police Department), Gregory Desadler (Department of Human Services, Chicago, Illinois), Lt. F. Lewis Etzler (Hialeah Florida Police Department), Lt. Gil Frazier (Hollywood Florida Police Department), Officer Dave Lundy (Vancouver Washington Police Department), Mrs. Vicki Patterson (Director, Idaho Retailers Association, Boise, Idaho), Cpl. John Touchton and Officer Michael V. Melhern (Largo Florida Police Department), Det. Sgt. Don Vert and Officer Gerry Germeau (Seattle Washington Police Department), and Officer Tom Walsh (Chicago Illinois Police Department).

Finally, we would like to acknowledge the extraordinary effort and contribution of Mrs. Shirley Melnicoe of the LEAA who provided us with a great deal of assistance and encouragement throughout the life of this project.

<b>CHAPTER I:</b>	<b>INTRODUCTION</b>	
<b>Section 1:</b>	<b>WHAT THIS HANDBOOK IS (AND IS NOT)</b> .....	<b>1</b>
	<b>Businesses That Can Profit</b>	
	<b>From This Handbook</b> .....	<b>1</b>
	<b>An Aim Of The Handbook</b> .....	<b>1</b>
	<b>What The Handbook Covers</b>	
	<b>(And Does Not Cover)</b> .....	<b>1</b>
	<b>How This Handbook Was Prepared</b> .....	<b>2</b>
<b>Section 2:</b>	<b>HOW TO USE THIS HANDBOOK</b> .....	<b>5</b>
<b>CHAPTER II:</b>	<b>SECURITY AND THE SMALL BUSINESS PROPRIETOR</b> .....	<b>5</b>
<b>Section 1:</b>	<b>SMALL BUSINESS AND THE THREAT OF CRIME</b> .....	<b>5</b>
	<b>Background</b> .....	<b>5</b>
	<b>Crime And Small Business</b> .....	<b>5</b>
	<b>Crime Trends And Clearance Rates</b> .....	<b>6</b>
	<b>Retail Operations: The Handbook Focus</b> .....	<b>6</b>
<b>Section 2:</b>	<b>HOW CRIMINALS VICTIMIZE SMALL BUSINESS</b> .....	<b>7</b>
	<b>The Four Crimes In Perspective</b> .....	<b>7</b>
	<b>The Crime Of Robbery</b> .....	<b>7</b>
	• <b>Robbery Victims</b> .....	<b>7</b>
	• <b>How Robbers Operate</b> .....	<b>7</b>
	• <b>Potential Control Points</b> .....	<b>8</b>
	• <b>Robbers</b> .....	<b>8</b>
	• <b>What To Do If You Are Robbed</b> .....	<b>8</b>
	<b>The Crime Of Burglary</b> .....	<b>9</b>
	• <b>Burglary Victims</b> .....	<b>9</b>
	• <b>How Burglars Operate</b> .....	<b>9</b>
	• <b>Potential Control Points</b> .....	<b>10</b>
	• <b>Burglars</b> .....	<b>11</b>
	• <b>What To Do If Your Store Has Been Burglarized</b> .....	<b>11</b>
	<b>The Crime Of Shoplifting</b> .....	<b>11</b>
	• <b>Shoplifting Victims</b> .....	<b>11</b>
	• <b>How Shoplifters Operate</b> .....	<b>11</b>
	• <b>Special Problems With Shoplifting</b> .....	<b>12</b>
	• <b>Outcome Of The Crime: Fences And Their Role</b> .....	<b>13</b>
	• <b>Potential Control Points</b> .....	<b>13</b>
	• <b>Shoplifters</b> .....	<b>14</b>
	• <b>What To Do If Merchandise Is Shoplifted</b> .....	<b>14</b>
	<b>Internal Theft</b> .....	<b>14</b>
	• <b>Kinds Of Internal Theft</b> .....	<b>15</b>
	• <b>Cash Losses</b> .....	<b>15</b>

- Loss Of Store Property ..... 15
- Special Problems ..... 15
- Outcome Of The Crime ..... 15
- Controlling The Crime ..... 15
- The Internal Thief ..... 16
- What To Do If You Encounter Internal Theft ..... 17

**Section 3:**

**HOW TO CASE YOUR OWN BUSINESS FOR VULNERABILITIES ..... 18**  
**Typical Opportunities For Criminality In A Retail Business ..... 18**

- Business Operations: Five Stages To Profit (Or Loss) ..... 18
- Receiving: Where Merchandise Comes Under The Proprietor's Custody... 18
- Inventory/Storage: Where Merchandise Is Held Before Being Displayed... 19
- Display: Where Merchandise Is Accessible To The Public ..... 20
- Sales: Where Goods Are Paid For ..... 20
- Cash Transfer: Where Money Is Moved From The Store To A Bank ..... 21

**Fitting Your Business To The Pattern ..... 22**

Finding The Special Weaknesses Of Your Business To Robbery, Burglary, Shoplifting, And Internal Theft ..... 22

- Robbery ..... 24
- Burglary ..... 27
- Shoplifting ..... 29
- Internal Theft ..... 31

**Section 4:**

**HOW TO INTERPRET YOUR FINDINGS AND CHOOSE APPROPRIATE SECURITY TECHNIQUES ..... 34**

Interpreting Your Findings ..... 34  
 Security Problems And Potential Solutions ..... 34

**Section 5:**

**HOW TO DESIGN AND SET UP A SECURITY PROGRAM FOR YOUR BUSINESS ..... 35**  
**Good Management: Good Security ..... 35**  
**How Much Should Good Security Cost ..... 35**  
**Components Of Good Security ..... 35**  
**What To Consider In Choosing Techniques And Equipment For Security .... 37**  
**Federal Crime Insurance ..... 37**  
**Employee Relations ..... 38**  
**Community Involvement And Legal Questions ..... 38**  
**Statutory Obligations ..... 38**  
**The Buying Public ..... 38**  
**The Applicability And Appropriateness Of Security Techniques ..... 38**  
**Consulting With Security Professionals And Architects ..... 38**

**REFERENCES ..... 38**



<b>CHAPTER III:</b>	<b>CATALOG OF SECURITY TECHNIQUES.....</b>	<b>41</b>
<b>Section 1:</b>	<b>PROPERTY LINE PROTECTION.....</b>	<b>43</b>
	Fencing, Walls And Hedges.....	44
	Watchdogs.....	47
	Guards.....	49
	Lighting (Exterior).....	50
<b>Section 2:</b>	<b>ENTRY PROTECTION.....</b>	<b>52</b>
	Door Protection.....	53
	Window Protection.....	57
	Miscellaneous Entry Protection.....	61
<b>Section 3:</b>	<b>SPACE PROTECTION.....</b>	<b>62</b>
	Lighting (Interior).....	63
	Key Control.....	64
	Visibility Enhancement.....	65
	Cameras.....	66
	Movement Controls.....	68
	Shopping Services.....	69
	Employee Motivation.....	70
	Employee Screening.....	71
	Prosecution Policy.....	73
<b>Section 4:</b>	<b>POINT PROTECTION.....</b>	<b>75</b>
	Inventory Control.....	76
	Article Surveillance And Merchandise Anchors.....	77
	Display Cases.....	78
	Cashier Enclosures.....	79
	Safes.....	80
	Money Handling Routines.....	82
<b>Section 5:</b>	<b>ALARMS.....</b>	<b>84</b>
<b>APPENDIX A</b>	<b>SHOPLIFTING POLICY GUIDE FOR RETAILERS.....</b>	<b>89</b>
<b>APPENDIX B</b>	<b>OAKLAND CALIFORNIA SECURITY ORDINANCES.....</b>	<b>97</b>
<b>APPENDIX C</b>	<b>SECURITY CONSULTANTS.....</b>	<b>105</b>
<b>APPENDIX D</b>	<b>DICTIONARY OF ANTI-INTRUSION DEVICES FOR ARCHITECTS AND BUILDERS.....</b>	<b>109</b>
<b>APPENDIX E</b>	<b>FEDERAL CRIME INSURANCE APPLICATION FORMS.....</b>	<b>117,119</b>



## Section 1: WHAT THIS HANDBOOK IS (And Is Not)

**Security and the Small Business Retailer** is a handbook which is intended to make available to small business retailers throughout the nation the best information currently available on ways of dealing with four serious types of crime—robbery, burglary, shoplifting, and employee theft.

### Businesses That Can Profit From This Handbook

This handbook is designed for you, the retailer, who either has a small business already operating, who is starting a business, or who is planning extensive modifications to a store and wants to ensure that security is built into the changes. By "small business" we mean retail and service stores that are physically small with cash registers in a central location and with a small number of employees: maybe up to eight or ten on busy days. The underlying philosophy of this handbook is that you, the operator of such a small business, are faced with serious problems from crime and need some assistance in selecting ways of reducing your losses.

### An Aim Of The Handbook

This handbook should serve as a guide to economical and reliable equipment, and to techniques that business operators can use to reduce loss through crime. In most cases, these items of equipment and types of techniques are ones that the average store operator can handle without professional assistance. And they are techniques that can also help you run your business more efficiently. For those techniques and equipment that do require help from professional security people, the handbook provides guidelines for realistically defining serious problems and assessing the various proposals by professional security consultants to solve them (see Section 3).

### What The Handbook Covers (And Does Not Cover)

This handbook deals with four crimes:

- Robbery
- Burglary
- Shoplifting
- Internal (or Employee) Theft.

It addresses these four because they represent the greatest sources of loss for small businesses and because the measures needed to prevent or counter most of them are interrelated. The handbook does not deal with bad checks, arson and vandalism, and the many types of fraud that can occur. Techniques for dealing with

these types of crime are significantly different from those required for robbery, burglary, shoplifting, and internal theft; consequently, they lie outside the scope of this manual.

The handbook also limits itself to problems associated with the small businesses described above. Large stores with multiple entrances, big shipping and receiving areas, separated warehouses, and employees numbering in the dozens and even hundreds will find this handbook less useful.

Throughout the development of this handbook, the focus has been on proven, simple techniques and equipment. In our judgment, good security can be achieved using common sense and reliable measures for prevention and control without relying on exotic or prohibitively expensive devices. There is special reason to be cautious about elaborate electronic devices, for example. Current advances in technology are so rapid that many complicated items of security equipment now on the market are obsolete or will soon be. Further, it is a basic premise of this handbook that the same kind of



attention to detail that leads to profitable operations also leads to improved security. In this sense, good management equals good security.



The major source of expert opinion for the handbook was an Advisory Board whose members possess extensive experience in business operations, insurance, security, law enforcement, and the needs of small business proprietors. (The names and titles of Advisory Board members can be found in the Acknowledgement, page iv.)

A second source of useful opinion was found in the experience of a number of small business proprietors who reviewed the handbook.

### How This Handbook Was Prepared

The basic purpose of the handbook is to help small business proprietors address their crime problems by digesting the results of 8 years of Federal research into anticrime strategies and by adding the expertise of security and law enforcement professionals with experience in dealing with the four crimes. The sources that were used ranged from specialized technical reports dealing with specifications for doorframe assemblies, to books written by convicted criminals about how they committed their crimes.

Throughout the process, the aim was to ensure that the material would be reliable. Where possible, the handbook depends on scientifically proven research findings. Unfortunately, much research still needs to be done, especially regarding the effectiveness of some of the countermeasures. For that reason, expert opinion remains the best guide available for many of the techniques and equipment described in Chapter III.

## Section 2: HOW TO USE THIS HANDBOOK

The choice of what to read always rests with you, the reader. However, some pointers here on how to use this handbook may be useful to small business proprietors who are its main audience.

Chapters II and III contain the main substance of the handbook. Chapter II is divided into five sections. It begins by considering the level of loss which small businesses presently suffer because of crime. This first section is meant to be used as a quick overview of the crime problem that plagues small businesses. The other four sections detail the crimes and their possible solutions:

- **Section 2: HOW CRIMINALS VICTIMIZE SMALL BUSINESS.** This provides you with a detailed picture of the nature of the four crimes and the operating methods of four types of criminals.
- **Section 3: HOW TO CASE YOUR OWN BUSINESS FOR VULNERABILITY.** This permits you to survey your business through the eyes of a criminal and to spot weaknesses in your installation and procedures.
- **Section 4: HOW TO INTERPRET YOUR FINDINGS AND CHOOSE AMONG SECURITY TECHNIQUES.** This section focuses on problems and solutions and shows the range of security techniques that could strengthen your business.
- **Section 5: HOW TO DESIGN AND SET UP A SECURITY PROGRAM FOR YOUR BUSINESS.** This helps you choose the techniques that are right for your business.

Each of these sections has a bearing on your final decisions about the security program you will want to implement. Perhaps the most important thing you can do, however, is thoroughly survey your business, with reference to guidelines in the section on casing the vulnerability of your operations to crime (Section 3). Then you should examine the various techniques recommended in Chapter III. The guidelines in the section on designing and setting up a security program for your business

(Chapter II, Section 5) lead to the final step: they permit you to sort out the variety of techniques and equipment in terms of the specific needs of your own business operation.

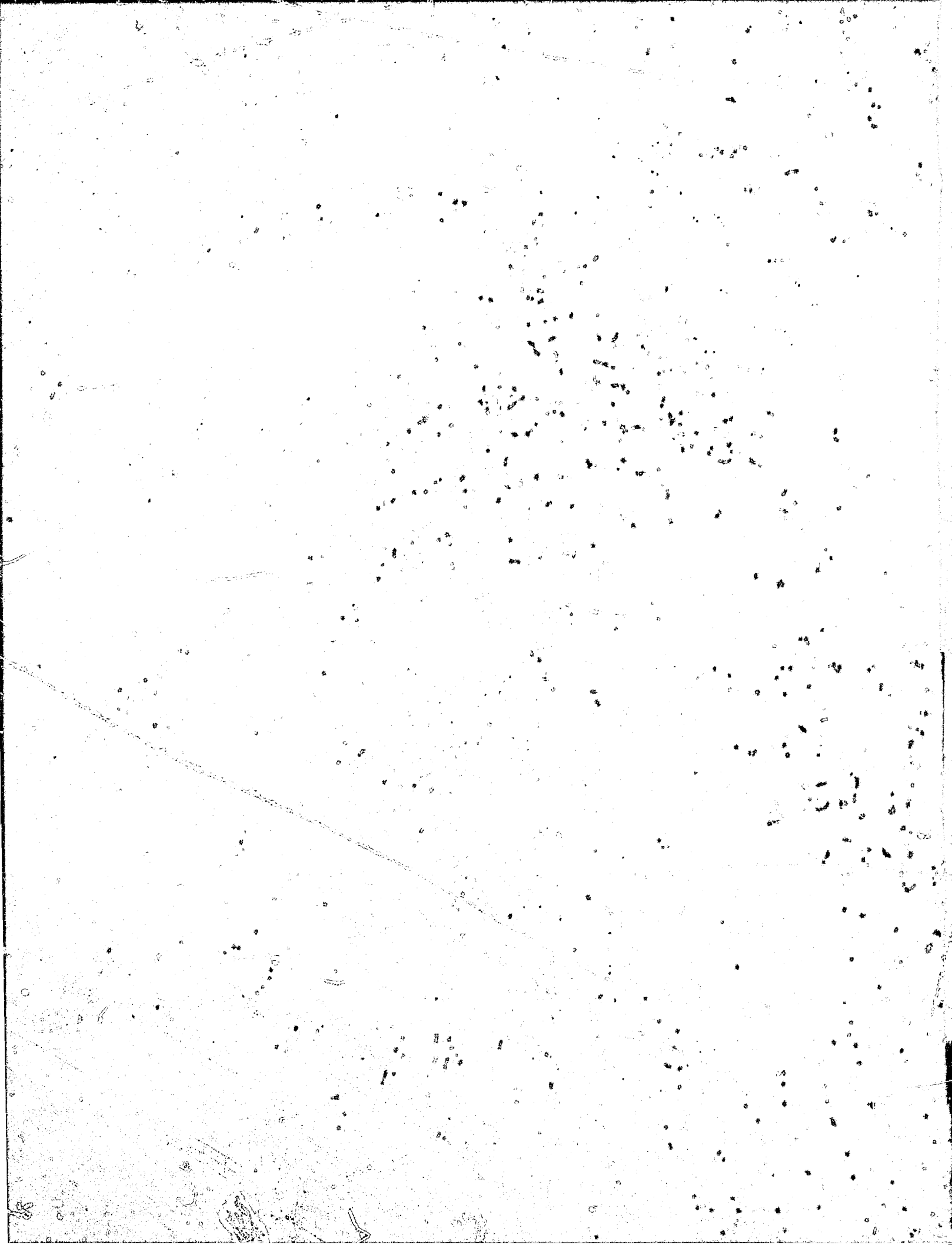
Perhaps a good sequence of steps to follow in using the handbook then, might be:

1. **Locate your business type** in terms of the four crime types discussed (Chapter II, Section 2, "How Criminals Victimize Small Business"). This allows you to develop a yardstick for assessing your crime problems.
2. **Conduct a survey** to identify problem areas (see Chapter II, Section 3, "How to Case Your Own Business For Vulnerability") using the checklists provided.
3. **Determine your crime risk** based on the crime history of your business and on the risks and problem areas perceived in your daily operations.
4. **Review the Problems and Solutions** section (Chapter II, Section 4, "How to Interpret Findings and Choose Techniques") to establish the range of measures appropriate to your business.
5. **Examine pros and cons** of the applicable techniques in the Catalog section (Chapter III "Catalog of Security Techniques").
6. **Consider the issues** discussed in Section 5 on designing and installing a security program. And then...
7. **Return to the Catalog** for details regarding the techniques selected.
8. **Finally, if you are starting a business from scratch...**

or are making extensive modifications to an existing facility to start a business ...

or are modifying an existing facility in an already operating business. ....

review the Appendix, Dictionary of Anti-Intrusion Devices for Architects and Builders



## CHAPTER II: SECURITY AND THE SMALL BUSINESS PROPRIETOR

### Section 1: SMALL BUSINESS AND THE THREAT OF CRIME

#### Background

There are approximately 10 million businesses in the United States.<sup>1</sup> Of these about one in every four is a retail merchandise operation; one in three provides some service to the public; and 1 in 17 is categorized as "wholesale trade."

The vast majority of all businesses are small: The Small Business Administration has estimated that almost six out of seven (or 85 percent) had annual receipts of less than \$100,000. Only 1 in 300 grossed more than \$5 million.



The impact of crime on business in general is staggering. Current rough estimates indicate the total loss may be \$30 billion per year, with

almost a third of that amount lost by the retail sector. Inventory shortages alone may total as much as 3 percent of sales nationwide.

Small business operators bear a much heavier proportion of the loss to crime than other businesses: the fraction of business receipts lost to crime by the 85 percent of small businesses is 24 times what is lost to crime by businesses grossing over \$5 million.

Given the importance of the small business sector to the nation's economy (small business contributes about 48 percent to the business portion of the total Gross National Product, and 55 percent of workers in the private sector are employed in small business operations),<sup>2</sup> it is evident that rising crime in this area—multiplying costs and eroding profits—can have a major, damaging effect on the economy as a whole. But that is not all. As the late Senator Hubert Humphrey wrote:

Small business is fundamental to our competitive enterprise system and the bedrock of the thousands of small towns that tie the nation together . . . . A decline in the economic power of small business also has profound social implications for the vast majority of our society including impacts on the individual, the family and the community.<sup>3</sup>

#### Crime And Small Business

The effect of crime on small business can be crippling, and yet we can only hint at its magnitude. One reason for this is the tendency to mask the problem with such terms as inventory shrinkage, shortage, or profit loss, as if crime is to be taken in stride as a normal consequence of being in business. The consequences can be severe. Insurance companies estimate that 30 percent of all business failures are directly attributable to internal theft.

### DID YOU KNOW?

- Ordinary crimes cost business more than \$20 billion in 1974, up 31 percent over 1971.
- Retail establishments are hardest hit by crime.
- The incidence of crimes against business continues to rise.
- Crime affects firms in all parts of the country.
- Small businesses suffer from crime more than larger firms.
- Crime losses by retailers reached \$5.8 billion for 1974, up 21 percent from 1971.
- Losses by wholesalers in 1974 totaled \$2.1 billion, up 50 percent from 1971.
- Losses by manufacturers are very difficult to estimate because of the scarcity of data; however, it is estimated that manufacturers lost \$2.8 billion in 1974, up 60 percent from 1971.
- Service Industries lost an estimated \$3.5 billion to criminals in 1974, an increase of about 30 percent over 1971.
- Between 31 percent and 61 percent of the commercial establishments in the largest American cities suffered burglary attempts in 1972.
- In Detroit, 72 percent of the retail stores were burglarized in 1972.
- Businessmen spent \$3.5 billion in crime prevention programs in 1974.

The magnitude and increasing cost of crimes against business are clearly evident, with such cost being passed on to the customer in the form of higher prices.

#### Crime Trends And Clearance Rates

An additional aspect of crime against retail businesses is that the majority of criminals are not arrested and prosecuted, very little merchandise or cash is ever recovered, and most

crimes remain unsolved (or are not cleared, in the language of law enforcement). Law enforcement agencies clear a crime when they have identified the offender, have sufficient evidence to charge him, and actually take him into custody.

While the situation does appear to be worsening every year, it is far from hopeless, given the energy and determination of America's small business proprietors. As stated by a spokesman for the Department of Commerce, "... reducing crime losses should receive the same type of constant aggressive action you devote to cutting labor costs, material costs, and other costs that sap profits." If crime can be likened to a disease, then there is sufficient strong medicine available to considerably reduce the ills suffered by business operators. That is what this handbook is designed to do: to make information available to store operators to assist them in lowering the impact of crime and its costs.

#### Retail Operations: The Handbook Focus

Small retail businesses were selected as the focus for this handbook because of the magnitude of losses they suffer from criminal activity. Furthermore, the fact that retail businesses open their doors to the general public and depend on the public for their continued existence also makes retailers vulnerable to attack from criminals in all walks of life: the same public that shops is also the source of the shoplifters who drain profits.

This handbook is intended to make information available about both the crimes and the security techniques needed for retail operators to improve their defenses against crime. The sections which follow describe the crimes and the criminals, what to do in the event you are the victim of crime, how to take advantage of what you know about each type of crime to spot weaknesses in your defense, and how to strengthen your defense. Essentially, this means letting you take a look at your business through the eyes of a criminal in order to show where you can be victimized and where you can install safeguards to protect yourself.



## Section 2: HOW CRIMINALS VICTIMIZE SMALL BUSINESS

### The Four Crimes In Perspective

This handbook deals with four crimes. Robbery is the most brutal of the four, and the most dangerous in terms of risk to human life, but it is likely to cost you less than the other three, simply because the number of crimes multiplied by the average loss adds up to the least amount lost to crime. Burglary can be more damaging because both your building and your merchandise can suffer loss. Shoplifting generally involves small losses, but the number of shoplifters in your store during a month can represent a serious threat to your profits. Finally, internal (or employee) theft, which is the most invisible of the four crimes, probably costs you more than the other three combined. The pages following describe each crime in detail.



#### The Crime Of Robbery

Of the four crimes covered by this handbook, robbery is the most violent and frightening

because it usually involves a confrontation between the victim and the criminal. Most law enforcement definitions follow the language of the FBI:

Stealing or taking anything of value from the care, custody, or control of a person by force or violence or by putting in fear, such as strong-arm robbery, armed robbery, assaults to rob, and attempts to rob.

The reason for using this distinction throughout this handbook is to ensure that specific security techniques against robbery are identified with robbery. Although some security techniques (e.g., a single alarm system with a day/night operation switch) are common to both robbery and burglary, protective measures against burglary and other kinds of theft are generally different from those used against robbery.

#### Robbery Victims

Across the nation there are more than 100,000 commercial robberies every year; one every 4 1/2 minutes. Nationwide statistics are not available regarding the number of small business robberies, but a Small Business Administration study<sup>2</sup> estimated that more than two-thirds of all money lost to robbers by businesses was lost by small business proprietors. In particular, small retail business in inner-city areas experience a robbery rate of almost one out of five. Nationwide, only one robbery in four is ever cleared.

Losses to robbery are difficult to estimate for the entire small business community. Estimates of average dollar loss range from \$100 to \$300; however, for the individual business operator, any loss is serious. Repeated losses from robberies have put some proprietors out of business.

#### How Robbers Operate

Most experts say that robbers plan their crimes carefully. They begin, of course, with the disposition to commit the crime. They generally want easy money quickly and they look for targets that appear to offer little resistance and enough money to make the risk worthwhile. In selecting a store to rob, a criminal looks for places that are isolated from their neighbors,

that are easy to enter and leave, and that permit him to overcome the resistance of cashiers with the least effort. These factors add up to an ideal robbery target: a lone convenience store, a gas station, drive-thru, or liquor store located on or near a major thoroughfare, staffed by a single clerk, and operating late at night (e.g., 8:00 p.m. to midnight) with the day's receipts still on the premises.

Robbers who find vulnerable targets almost always case the store to ensure they can be successful. Frequently they will check out the interior of the store from outside, often from a phone booth. Other times, they enter the store, survey the interior, leave, and then return to rob.

When they return, they typically begin by threatening the cashier—usually with a handgun—and announce the purpose: to hold up the store. The object is to get money and leave quickly. Often they scoop bills from the cash register and run out the same door they entered. Other times they may look for cash in a strongbox or safe outside the selling area of the store. Whether they attempt to prevent cashiers from calling for help immediately depends on the individual robber. When they're through, they leave the scene quickly, escaping by car or on foot. The whole sequence usually takes less than 1 minute, sometimes as little as 20 seconds.

Apart from the loss of money, business operators' lives are at stake in robbery. The statistics are not precise, but as many as one out of five commercial robbery victims may suffer injury or death at the hands of robbers. More often than not, the people injured during robberies are those who offered some resistance to the criminals.

An additional difficulty with robbery is that the time taken to commit the crime is so short that victims cannot alert police quickly enough to give chase or make arrests. Even when suspects are arrested, the problem of evidence remains; unless money from the crime is found in the possession of suspects and can be traced (by serial number, for example), the testimony of witnesses may be the only evidence.

#### **Potential Control Points**

Robberies can be prevented. The elements of the crime indicate that there are several points leading up to the actual execution that offer some chance of avoiding robbery. During target selection, the robber looks for easy entry and exit. During the casing phase, he looks for easy control opportunities inside the store. When he

approaches the cashier, he is interested in surprising the victim. Therefore, it seems that focusing on the period before the crime to discourage a potential robber from going further (because the business is not as vulnerable as it appeared from a distance) would have the best chances of countering the crime.

#### **Robbers**

Throughout this section on robbery we have used "he" and "him" to identify robbers. The fact is that most robbers are males in their late teens and early twenties.

However, the person who robs your business may fit none of these categories. Consequently, you will need to look for certain traits that will help you identify the potential robber, particularly in those individuals not usually seen in your neighborhood. Most crime prevention units say "robbers watch people." If, then, a person enters your store and, while appearing to browse, is really focusing on your customers, he may very well be a robber. While casing your store, the robber may make a small purchase. This is usually an item available at the counter for which there was no need to browse.

Finally, be a keen observer of what goes on outside your store. If your view is unobstructed and you notice a car driving slowly past your business two or more times and it suddenly pulls up near your door and one person exits from the passenger side while the motor is left running and the driver remains behind the wheel, you may very well be about to become a robbery victim. Never attempt to telephone the police with a suspected robber in the store; however, very often, a potential robber will first case the store and then step outside to confer with a partner or to make a final check of the street for police cars. You may have an opportunity at this time to alert the police of suspicious persons on your premises.

Increasingly, robbers are operating in groups of two and three and carry handguns. Some researchers report that robbers consider themselves the elite of the criminal world because they confront their victims and display courage not found in other kinds of crime. The odds are that robbery victims do not know, or have never seen, the people who rob them; that is, robbers are most likely to be strangers to their victims.

#### **What To Do If You Are Robbed**

The best rule of thumb if and when you're being robbed is to do whatever it takes to stay alive.

You're in a very dangerous situation and you might be killed or crippled for life: don't take any risks, don't resist the robber, and—above all—don't fight back. Entirely too many people are dead because they thought they could overcome an armed robber. When you're being robbed, it is too late to undertake preventive measures. It is best to concentrate on what the robber wants and what you're going to tell the police.



Discreetly observe the robber closely. The police will want to know about the suspect and how he operated: height, weight, clothing, race, age, weapons, what he said, how he escaped, what way he went, how much he took. Look for identifying characteristics: scars, tatoos, different speech patterns. Why not install a height chart on the frame of your front door and keep a pad near your counter where you can jot down descriptive items while they are fresh in your mind? And, if you can do so safely, get a look at the getaway car. Write the license number down. If you can't, then at least try to determine the make, year, and color of the vehicle. Also, a very valuable piece of information for the police is the direction of travel of a suspect whether on foot or in a vehicle. The object of both knowing and doing all these things

is to broadcast a description to patrol officers in the hope of spotting the suspect, and to support a search through robbery squad files to assist detectives who may be looking for clues to other robberies by the same suspect.

By the way, if you observe the robber touching anything, isolate both the area and the object after he is gone. The police may be able to make an identification from a clear set of fingerprints.

When the robber has left, call the police immediately and report the crime. The odds that a suspect will be apprehended if the police are alerted rapidly are many times greater than if there are delays. Yet recent research has shown that victims often wait a good deal of time before phoning the authorities. (They may make other calls first.) Since your testimony may be the only evidence available in your robbery case, it is all the more urgent to call the police without waiting.

### The Crime Of Burglary

Burglary is one of the most prevalent crimes in the country. In 1975 alone, the FBI indicates that more than 3.2 million burglaries were reported—one every 10 seconds.

The law enforcement definition of burglary is: "The unlawful entry of a structure to commit a felony or theft." Entry need not involve force (although insurance policy and jurisdiction definitions of the crime vary on this point), and attempted entry is considered to be burglary as well.

### Burglary Victims

More than one-third of all burglaries are categorized as "nonresidential." (That is, these are burglaries of stores, manufacturing plants, business offices, schools, etc.) The total cost for nonresidential burglaries in 1975 was \$460 million. Average loss per burglary nationwide was \$422. As is true for crime as a whole, the highest rates for burglary were observed in the large metropolitan areas. Nationwide, only one burglary in six is cleared.

### How Burglars Operate

As with robbery, the impulse to burglarize obviously begins with a need for money. But burglars are not necessarily needy in the usual sense of the word. They frequently are drug addicts with expensive habits to support (and burglary offers a relatively easy way to supplement income). Juvenile burglars may crave the excitement associated with committing the crime, either alone or in groups. In all cases,

however, it is the opportunity for gain, accompanied by low risk (of detection during the crime, or witnesses to testify) which makes burglary attractive.

Choosing a target to burglarize involves finding locations that contain something worth stealing and identifying those that appear easy to break into. In particular, burglars look for locations that are unoccupied: residences in the daytime, for example, and businesses (or other nonresidential targets) at night. Moreover, their judgments appear to be strongly influenced by the look and feel of the business they are planning to burglarize. Consequently, if the exterior of your business reflects attention to security (i.e., if the risk of getting caught seems high), most burglars will very likely look for an easier target.

After identifying targets that show absence of activity inside, the burglar looks for freedom from observation from outside: buildings with entry points that are not readily observed by neighbors. Finally, he looks for entry points that are easy to pass through: open doors, unlocked doors and windows, unlatched skylights. Failing that, he chooses entry points that offer the least resistance to entry. Depending on the burglar's level of sophistication, forcing an entry point may involve the refinements of lock-picking or other manipulation. Otherwise, entry techniques involve some measure of physical force: breaking doorframes and hinges, smashing doors, crowbarring windows, locks, etc. Some burglars have resorted to entering businesses by breaking through building walls with hammer and chisel, pneumatic drills, or explosives. In all cases, except for lock-picking, breaking into a business involves damage that can eat into profits—even before merchandise or cash is taken, and even when the burglar does not successfully enter the business premises.

Executing a burglary involves locating and collecting items of value: jewelry, home entertainment equipment, and cash, primarily. Older burglars (those in their mid-twenties) tend to remain on the target premises longer than younger criminals and they tend also to make larger hauls. Time on the premises ranges from a low of 2 to 3 minutes to more than an hour, depending on the nature of the location and the confidence of the burglar.

Successful burglars do not enter a building unless they have a way of getting out—quickly. For this reason, the first consideration for a

burglar, after easy entry, is a good exit, frequently the same avenue as the entry (although a more desirable exit for a thief who enters through an alley window might be the shipping/receiving entrance).

In most cases, burglars leave the scene rapidly, and property disposal usually occurs within an hour of the crime.

The risk to the personal safety of burglary victims is slight, except where burglars unexpectedly discover people occupying a building. Even then, most burglars attempt to leave rather than confront and subdue occupants.

Problems for the police in clearing burglaries arise from the fact that the crime usually isn't detected until occupants return to discover the evidence of breaking and entering and the absence of valuables. A further problem lies in determining the nature and value of what has been taken. For businesses, frequently, a detailed inventory is needed to establish the amount of the shortage.

Except where cash is stolen, burglars need reliable fences. Virtually always, two sets of criminals are involved in a burglary: the burglars themselves and fences, that is, those to whom they bring items for disposal or sale. Unfortunately, a substantial number of fences are members of the same business community that is victimized by burglars. When a burglar leaves a business with any amount of loot, his next stop is the fence. Often the goods he has stolen are passed over to fences and redistributed for sale within 1 hour of the crime: in other words, merchandise may be converted into cash and put on the market before its absence is even detected!

#### Potential Control Points

Controlling burglary for an individual business or in a community is a complex problem. For most business operators, the overall strategy is to discourage the attempt by limiting the opportunity for a burglar to execute the crime successfully. In general, this means ensuring that likely entry points in secluded areas are safeguarded and that entry will be noticeably difficult. The two points in executing a burglary that are most susceptible to preventive measures are: (1) the target selection, when a burglar can be discouraged from making an attempt, and, thereafter, (2) during casing when specific burglary prevention measures (e.g. visible deterrents) undertaken make it clear that the target is not worth the effort required to overcome obstacles.

A third control point for the crime exists while the burglar is inside the business premises, when a silent alarm, activated by the intrusion, signals to some outside respondent that a break-in has occurred. Then, depending on the quickness with which the response occurs and on the confidence level and skill of the burglar, police may be able to arrive at the scene in time to make an arrest.

A final control point exists at the stage where burglars dispose of stolen merchandise. Business operators should refuse to trade in merchandise of dubious origin. A related countermeasure exists in making stolen goods harder to dispose of easily by marking them in ways that permit them to be traced to their origins (e.g., sales tags, recording serial numbers, trademark emblems).

### **Burglars**

Ninety-nine percent of all reported burglaries are performed by males; however, it is the area where your business is located and your area's native population that will usually determine who will burglarize you. Burglars generally fall into three categories: the rank amateur, the semi-professional, and the professional. The rank amateur is the sloppiest and the biggest opportunist, looking for the most poorly defended targets. Comprising 70 percent of all known burglars, he is also the easiest to defeat. The semi-professional burglar comprises more than 28 percent of the known population of burglars and poses the greatest immediate threat to your business, because he possesses the means to dispose of large quantities of goods quickly and makes his own opportunities. However, the professional poses the greatest long-range threat to your business because he can target vulnerable and lucrative locations more precisely and knows how to by-pass alarm systems, open safes, and pick locks. It is not likely, though, that you will be burglarized by a professional, since they make up less than 2 percent of the known population of burglars.

An additional refinement often available to the professional is contact with an insider in a business who knows the vulnerabilities of the location and, more important, can pinpoint what and where the valuables are.

### **What To Do If Your Store Has Been Burglarized**

Don't open for business. Your problem now is to give police the best possible opportunity to collect evidence in the hope that the burglar has left behind some identifying clues. (Even the marks left by tools used by burglars can be

traced back to individual hammers, chisels, and crowbars.) If it's possible, keep people away from the entry point used by the burglar and from where he operated inside the store. You'll have to determine the extent of your loss—what was taken and what it was worth—along with the cost of repairing whatever damage the burglar did in forcing entry.

### **The Crime Of Shoplifting**

Shoplifting may be the most frustrating crime covered by this manual. The very reason for the existence of a business is to bring the public together with merchandise offered for sale. But the same process is central to the work of shoplifters: they enter the store as do regular customers, visit the same merchandise displays, and handle merchandise in much the same fashion as ordinary buyers. Up to the point where they conceal merchandise and leave without paying, shoplifters have responded in precisely the same manner as normal shoppers.

Strictly speaking, there are six elements involved in the crime that are ordinarily listed: shoplifting is "taking and (1) carrying away; (2) personal property; (3) of another person (a corporation is a person); (4) with intent to permanently deprive the owner of his property; (5) that has some value; and (6) that makes the crime a petty theft (value need only be minimal) or grand theft (a felony)."<sup>10</sup>

### **Shoplifting Victims**

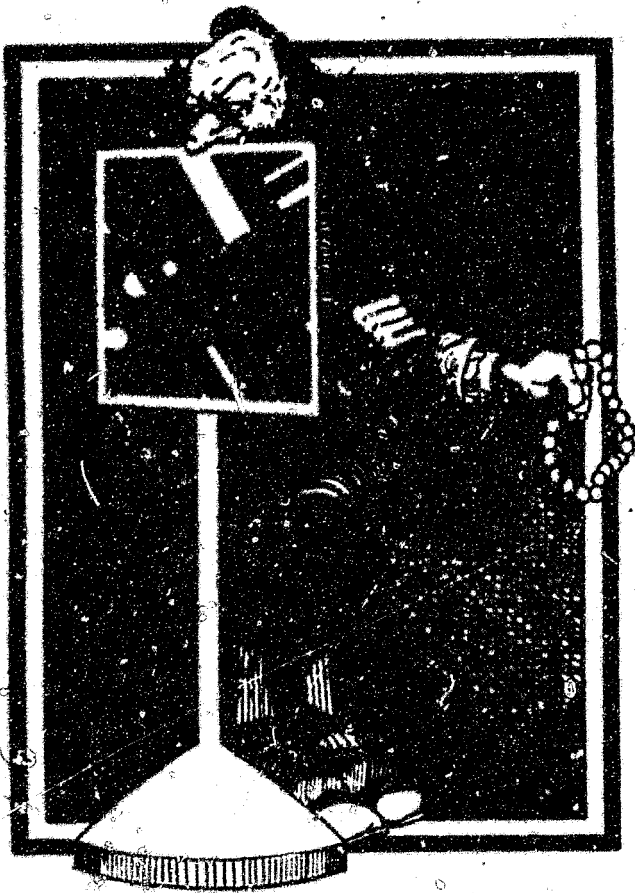
While no type of business is entirely immune from shoplifting, the stores most frequently affected by shoplifting are those selling small and concealable items. In this category are hardware stores, clothing dealers, drug stores, grocery and food stores, and department and variety stores.

It is not clear whether there are regional trends in shoplifting, since so much of it goes undetected or is confused with other causes of inventory shortage, such as internal theft. It is known that stores in small towns and suburban shopping centers are more likely to be victimized by professionals known as rounders, who operate in pairs.

The average take for shoplifters appears to be small: on the order of \$4 to \$5 for each instance. In 1975, an estimated 140 million shoplifter incidents resulted in a loss of \$1.9 billion for the nation's retailers.

### **How Shoplifters Operate**

In contrast to burglary, shoplifting occurs as a part of ordinary customer behavior, up to the point where the shoplifter hides merchandise



(or alters its price tag). Thus, there is neither a definable approach to the target nor a visibly different selection of merchandise from that which characterizes ordinary customers. Many shoplifters operate alone and are likely to steal at any time of day, any day of the week, although studies have shown that most shoplifting coincides with time when stores are most crowded: mid- to late afternoon and Wednesdays through Saturdays.

The behavior of shoplifters begins to differ from that of ordinary customers, however, after merchandise has been removed from displays. First, shoplifters tend to concentrate in areas of the store where they cannot readily be observed from the cashier's station or by sales clerks on the floor. Notably, they look for anything that obstructs vision or reduces visibility: high sales counters, tall displays, free-standing signs, and poorly lighted areas.

Shoplifters are legendary for their ingenuity in hiding items. While most use purses, pockets, or underclothing, some develop elaborate special-purpose equipment to increase their payloads. This equipment ranges from coats with extra pockets sewn into the linings to

devices such as hooker belts that permit an array of merchandise to be hung around the shoplifter's waist under a bulky coat. Some even equip themselves with slings that permit them to carry comparatively large items such as radios or turkeys between their legs.

Some shoplifters operate in groups, with some diverting the attention of the clerks while others pocket merchandise. (This technique is especially true of shoplifting couples called rounders, who tend to victimize small shops in suburban shopping malls and in rural areas.) Group shoplifters also often pass merchandise from one to another to reduce the likelihood that observation by store employees will lead to their being detained with the goods on their persons.

Categories of merchandise stolen, of course, depend on the type of store victimized. For some professional shoplifters, the size of the merchandise does not appear to be a problem. There are instances of shoplifters successfully walking out of stores with television sets, small furniture, or appliances in full view.

#### Special Problems With Shoplifting

The two most serious problems associated with shoplifting are detecting the crime in the first place and then dealing with the shoplifter.

For the business proprietor, knowing that there is a problem with shoplifting means identifying the causes of inventory shrinkage with some precision: determining whether shortages are due to error, internal theft, fraud, or shoplifting. Generally, this means conducting careful and frequent stock inventories and comparing findings with known sales. The other method, of course, is to observe shoplifters in the act; and that means constant vigilance, watching customers, and being available among them for service.

Dealing with shoplifters is an especially sensitive matter: what begins as a criminal apprehension of a suspect thief can be converted into grounds for a civil suit against the business operator unless things are done very carefully. In particular, detaining someone, even momentarily, without hard evidence of theft can lead to serious loss for a business owner. Because of the potential for false arrest suits, some stores make it a policy not to attempt an arrest unless the suspect has been kept in sight continuously from the moment merchandise is hidden until he or she has left the store, on the assumption that shoplifters working in groups can transfer merchandise during the time they are not observed.



**Outcome Of The Crime: Fences And Their Role**  
As with the other two types of property crimes, burglary and internal theft, the crime may continue after the perpetrator has left the store and involve a third party, someone who receives the stolen goods and pays for them. As is mentioned in other sections of this handbook, all too often the recipient is another member of the local business community who doesn't ask questions about the origins of odd lots of merchandise or about the below-market prices which entice him to handle them.

#### **Potential Control Points**

Three critical steps in carrying out shoplifting appear to offer some control: (1) when perpetrators enter a store, (2) when they pick up merchandise, (3) and when they leave. At entry, whatever steps a business operator can take to intimidate shoplifters (e.g., signs warning of prosecution) or to reduce their capability to conceal merchandise (e.g., a system requiring customers to leave parcels with the cashier until they leave) can be helpful. Thereafter, when shoplifters are in the vicinity of their target merchandise, the courteous intervention of store employees offering assistance can put shoplifters on notice that they are being watched. (Ordinary customers, of course, will appreciate the extra service.) Finally, when shoplifters have concealed merchandise and are

preparing to leave, whatever mechanism that can either detect the presence of hidden goods (e.g., electronic sales tag sensors) or prompt the shoplifter to decide to pay rather than risk discovery and apprehension will be effective. (One technique used by some retailers is to subtly inform a customer who is observed concealing an item that the deed has been witnessed—generally by making pointed references to the merchandise remaining on the shelf from which the item was taken.)

There are some things you can do to make shoplifting of your merchandise more difficult:

- Don't leave a section of your store unattended during business hours. If for any reason a salesperson needs to be away, have an arrangement whereby another employee is able to take over that station temporarily. Most shoplifting occurs when store areas are left unmonitored, and it is never enough protection for a salesperson to say to another, "Watch my counter for me, I'll be right back." Chances are, even the best intentioned employee will be distracted by a customer, the telephone, etc.
- Make certain all valuable merchandise is locked in a secured display area. If your merchandise is only accessible to the public via a clerk who has the key to your display case, you eliminate virtually all opportunity for shoplifting. Incidentally, instruct your clerk to show no more than one piece of merchandise displayed this way at a time. It's much easier to keep track of one item than a half dozen or more.
- Advertise that all bags must be checked at the counter upon entering your store. Give all customers receipts for all purchases made and then seal the bags with the receipt attached so that it will be clearly visible. Ideally, you would want to check every receipt at the exit points from your store. Since this is usually not feasible, perform your spot checks on a random basis.
- Occasionally employees must make or receive telephone calls. Make certain telephones are placed so that employees may still observe sales areas while using the phone.
- Develop a code or warning system so that, the moment a suspicious person enters the store, all employees can be alerted as to the presence of the potential shoplifter.

### Shoplifters

There is little to say that applies exclusively or typically to shoplifters. They are part of the general population. Perhaps a third are between 12 and 17 years old. Nearly one in six who is arrested is under 12. As many as a quarter are between 17 and 19 years old. The fact that arrests of people over 20 does not correspond with their ratio of the overall population may only indicate that they steal, but are experienced enough not to be observed.

There are two kinds of shoplifters: the amateur and the professional. The amateur is the person who steals on impulse. From 85 to 95 percent of all persons apprehended for shoplifting fall into this category. So, your major effort where shoplifting is concerned will focus on the prevention, control, and apprehension of the amateur. And, there are at least three important things we know about the amateur shoplifter. First, most amateur shoplifters are juveniles. Although your loss per incident involving juveniles will be approximately half that in an adult shoplifting incident, juveniles comprise as much as three-fourths of all recorded apprehensions. Second, most amateur shoplifters are females: 85 percent of all persons arrested for shoplifting are females, and girls outnumber boys as much as 20 to 1. This does not mean, however, that males never shoplift. They do, and when they do, statistics indicate they steal far more valuable items than their female counterparts. Finally, most amateur shoplifters have no prior arrest records and may be found in any segment of our society.

But what about the professional shoplifter? Obviously, the professional accounts for a significantly smaller portion of shoplifting incidents but, nevertheless, causes a huge drain on a store's profits, because stealing is his livelihood. He is extremely well-trained, often works as part of a team, and steals items that can be easily fenced or resold.

Now that you know something about the two types of shoplifters, what are the kinds of behavior you should watch for to identify the shoplifter? First, watch the way the person you suspect is dressed: is he or she wearing baggy clothing, an overcoat out of season, carrying a large handbag or any other item that could readily offer concealment for stolen goods? Second, watch the person's eyes and demeanor. They are often eloquent. The amateur shoplifter, in particular, tends to be extremely nervous, glancing up frequently from the merchandise. Third, watch the aimless walker who obviously has no clear-cut purpose in mind as he wanders about your store. And finally, watch

the person who is focusing his or her attention on your customers. He may well be surveying them to make certain he is not being observed.

### What To Do if Merchandise Is Shoplifted

This subject is so sensitive and so important to the individual store proprietor that we have reprinted a detailed list of suggestions in Appendix A (see the "Shoplifting Policy Guide for Retailers"). In general, the advice given by experts is: be sure of your facts. Whoever sees a shoplifter take property and conceal it should be responsible for detaining the suspect after he or she leaves the store. You should take at least one other employee with you in making the arrest, and you should identify yourself as the operator or an employee of the store. You should also state the reason for detaining the suspect and attempt to recover at least one item before re-entering the store. (The reason for much of this is that you must be able to testify in court regarding the crime and the criminal, identifying your property and describing the circumstances under which it was taken.) Then call the police. Don't be surprised if the suspect attempts to create a major disturbance, accusing you of infringing on his or her rights; it's part of the shoplifter's bag of tricks and frequently is very effective.

### Internal Theft

Despite the dangers of robbery, the prevalence of burglary, and the exasperating character of shoplifting, the most serious threat to small business from crime is found in internal (or employee) theft. Annually, as much as \$16 billion is lost to employees who steal from their employers. No type of business is immune from the threat and no type of merchandise or operating equipment (or cash) is untouched.

There is no standard definition of internal theft; it is really a type of larceny which the FBI defines as:

The unlawful taking, carrying, leading, or riding away of property from the possession of another.<sup>11</sup>

Internal theft can masquerade as another type of crime, especially when store operators cannot determine whether inventory shortages are due to shoplifting or to stealing from within. Some employee theft of cash is explained away as robbery. In other situations, an inventory taken after a burglary may find substantially more missing than was taken by the burglar.

The number of instances of internal theft is impossible to calculate. The crime takes place during the ordinary course of business operations and can occur at any time of day and in





virtually any part of the store. It is a crime that takes its toll in installments: a package of meat, a pair of pliers, a ream of paper, a box of gloves, a single piece of jewelry, perhaps no more frequently than once a month. But across the span of a year and the size of the business staff, the total can well exceed the profits.

Internal theft is different from the other three types of crime in this handbook because there is no common pattern or profile for the crime. Internal theft does not feature a target selection phase or a deliberate period of casing or criminal entry or even flight from the scene. The only identifiable characteristic of internal theft is that employees hold back some part of what they're handling and divert it for their own use by taking it from the store.

#### Kinds Of Internal Theft

You suffer merchandise losses from internal theft in two ways: when employees steal without paying and when they pay a fraction of the appropriate price. In the first case, employees can remove merchandise before it is ever entered into inventory by unloading it directly into their

own cars. Or, they can use their access to the storage area to remove whole case lots of goods through back and side doors. Or they can take individual items from the sales floor and leave with them during or at the end of the workday.

Underpaying involves some form of collusion with a cashier or a customer. Simply put, it means that either a reduced amount is rung up on the cash register or that money is not paid for a correct ring up.

#### Cash Losses

The ways to beat a cash register are legion. Fundamentally, however, they all involve bypassing the recording function of the register, which is designed to make an accurate record of every sale, refund, or other adjustment. Failure to ring up sales and pocketing the cash is a typical method. Adding the subtotal from a previous small sale to a larger subsequent sale and pocketing the surplus is another (although in this instance the second customer is the victim). Fraudulent payouts for refunds to friends or other employees is a third method.

#### Loss Of Store Property

Methods for stealing tools and store operating equipment are much the same as for merchandise theft. Employees simply divert what they are using to operate the store for their own use.

#### Special Problems

The most serious problem with internal theft is detecting it in the first place and distinguishing it from other causes of inventory loss, such as shoplifting and clerical error. A second problem is identifying the criminals, especially when employees have been working in the store for years. A final problem is resolving the situation when suspects have been identified.

#### Outcome Of The Crime

Relatively few employees who steal from within a business are detected and very few are punished. Many business operators prefer to fire an employee rather than prosecute when suspects are identified. The recovery rate for lost inventory and cash is low.

When internal theft is conducted systematically, the likelihood is that a fence is waiting to receive the stolen goods. Much of the heavily discounted merchandise of uncertain origin that becomes available to merchants was stolen from other merchants by their own employees.

#### Controlling The Crime

Since internal theft is so pervasive, few discernible control points are evident. The only practical countermeasures appear to be (1) those that strengthen the awareness a business proprietor has concerning the amounts and

movements of goods, cash, and property on hand; (2) those that control the access employees have to stealable items; and (3) those that make it difficult for employees to leave with stolen items concealed in their clothing. In one sense, controlling internal theft consists of doing what is required for efficient operation of the business, but doing it much more intensively (periodic audits and checks of cash register totals, for example.)

### The Internal Thief

Although there is little evidence available to distinguish employees who steal from those who don't, research indicates that anywhere from 5 percent to 75 percent of employees steal. Moreover, statistics show that employee theft may be repetitive in nature with certain individuals demonstrating a tendency toward behaving dishonestly. Further, a number of professional agencies in the security field now estimate that between 10 percent and 30 percent of all employees consistently engage in employee theft, and that anywhere from 25 percent to 80 percent of the employees of a particular business will become involved in employee theft when no active preventive security measures are employed.

The facts cited above serve to document the pervasive nature of employee theft. But what kinds of behavior help you identify the employee who may be guilty of pilferage? Crime prevention professionals interviewed as part of the research for this handbook have come up with the following categories which may prove useful to you.

- **The Conspicuous Consumer** — This is the employee who is observed to be living well above his means. His or her habits are noticeably extravagant (e.g., drives a flashy car, wears clothing that is excessively expensive). This employee's lifestyle cannot be supported by his salary alone. Statistics indicate he is perhaps the most obvious and easiest risk to identify.
- **The Financially Irresponsible Employee** — This individual proves incapable of handling his own affairs properly. He or she is unable to come to grips with economic realities and is in constant difficulty in his or her private life. This is the employee whose creditors are most likely to plague you. Watch him! He represents a real risk to you and your business.
- **The Alcohol Abuser** — This employee may steal to support his chronic abuse of

alcohol; however, he bears watching for other reasons as well, because his behavior can reduce profits from your business. His or her productivity is almost never what it should be and he is far more likely to make costly money errors or damage your property than the employee who does not have a drinking problem.

- **The Drug Addict** — The employee who uses hard drugs can almost never earn enough money through honest means to support his costly drug habit. One recent study indicated that more than 70 percent of all employable men and women between the ages of 18 and 30 have used marijuana or other illegal drugs. While the vast majority of these persons are not drug addicted, this alarming statistic does indicate how widespread drug usage is among the single largest segment of our work force. If you suspect an employee of heavy drug use and urine surveillance is lawful in the state where you reside, you can request that he undergo urinalysis as a condition of continued employment. In fact, drug usage has been shown to have such a high correlation with employee pilferage that some firms are requiring urinalysis of all prospective employees.
- **The Moonlighting Employee** — This individual can present serious problems for both business efficiency and security. From the loss prevention or security standpoint, he may very often help himself to merchandise, supplies, tools, or other equipment belonging to you, his primary employer. As a business owner/manager, you must maintain close adherence to internal controls in order to maintain good accountability of your inventory. This strategy, perhaps coupled with strict policies governing moonlighting, will go a long way toward discouraging pilferage which may result from multi-jobholding.

In addition to the five general categories discussed above, there are other kinds of behavior and/or activities to which you should be alerted:

- Compulsive gambling
- Persistent borrowing
- Bad-check writing
- Consistently requesting advances.

Finally, a word of caution. Please remember that the behaviors we have just discussed are to

be viewed as symptoms of potential problems, and you should not conclude that an employee who exhibits one or more of these traits is positively guilty of employee pilferage. Unfortunately, there is no fail-safe technique for positively identifying the dishonest employee. Nevertheless, these general behavioral characteristics ought to provide some warning for the alert owner/manager.

**What To Do If You Encounter Internal Theft**  
As is the case with shoplifting, you must be sure of your facts: that a given employee stole something which is identifiably yours. You must be able to show that the loss was demonstrably a theft and not due to error. It is best to have more than one witness.

In general, when you have identified a suspect, the best strategy is to build a case, unless you wish to resolve the matter by firing the individual and recovering whatever else you've lost. Building a case involves observing the thief in the act and determining the value of the item or cash taken and the manner in which it was stolen. One useful device is to use a shopping service which will, for a fee, observe your employees in the operation of the business and report to you what they learn.

After you have the evidence, if you wish to prosecute, you should contact the police.

This section is in two parts. It looks first at typical opportunities for criminality offered by retail business operations and then seeks to help you identify the specific weaknesses of your own business in terms of the four crimes which are the focus of this handbook.

The first part presents a simplified floor and operations diagram of a typical small retail business that can be modified to fit the majority of business types. It then focuses on how to estimate the risk to business represented by each of the four types of crime in terms of the vulnerabilities of that business as it appears to criminals.

The second part requires your assistance and cooperation. Here we try to fit your business to our pattern and ask you to see how it applies. We recommend that you prepare a diagram of your store's floor plan and operations, using the generalized model as a guide. Four check lists are provided (one for each crime) to aid you in determining how vulnerable (and attractive) your own business may be to criminals.

### Typical Opportunities For Criminality In A Retail Business

#### Business Operations: Five Stages To Profit (Or Loss)

The basic purpose of a retail business is to sell goods and services to the public at a profit. For the operator of a small retail outlet, the

assumption is that the behind-the-scenes activity and costs incurred before merchandise is bought by customers will be paid for by the profits from sales.

In this generalized view, a business operates in five stages that are shown graphically below. Figure 1 depicts the Business Operations Model as a total unit. The five illustrations which follow focus on the specific phase of the business operation under discussion, that is, receiving, storage, display, sales, and cash transfer.

#### Receiving: Where Merchandise Comes Under The Proprietor's Custody

Figure 2 is an illustration of the receiving area. Generally, stores receive merchandise through a back entrance. When this occurs, custody passes from a vehicle driver or delivery service to the proprietor. This is when a check is made to ensure that the merchandise received is the same as that listed on the shipping order.

At this point in retail operations, the chief crime threat is internal theft: employees can make off with shipping cartons before they are included in a store's inventory system. Collusion between employees and drivers, or simply among employees, can mean that merchandise is spirited off without loss being noted in the hope that inventory shortage can be attributed to other factors, such as shoplifting.

The only other crime that is a real threat at the receiving stage is robbery, and this seems likely





**FIGURE 2**  
**STAGE 1 — RECEIVING**

only when high-value merchandise is involved. (This handbook does not deal with hijacking or with questions of fraud that might be associated with receiving.)

**Inventory/Storage: Where Merchandise Is Held Before Being Displayed**

After receiving, most businesses move merchandise into a storeroom (the most common exception to this is a business that receives perishable goods, such as proprietary baked

items, or date-related publications such as magazines and newspapers, where delivery and receiving take place in the display area). In the storage area, merchandise is held until it is needed in the display area, either to replace merchandise already sold or for delivery to the purchaser (as in the case of shoe stores). The only operations that are commonly undertaken involving merchandise in storage is periodic inventory auditing and rotation to ensure that first-in merchandise is also first-out. Figure 3 depicts graphically the Inventory/Storage area.



**FIGURE 3**  
**STAGE 2 — INVENTORY/STORAGE**

The major crime threats here are internal theft and burglary. Items in storage are, by definition, out of the way in areas of low visibility. Storage is designed to make items accessible when they are needed; but this same accessibility is a temptation to theft by employees. Essentially, the actions involved in an employee's movement of a case of cigarettes off the storage shelf and into a private automobile are not different from those required by movement into the display area. Burglary is likewise a threat because goods are grouped for the taking. On the display floor, merchandise displays are spread out to make individual items visible and accessible to customers. In storage, case lots of merchandise are packaged for easy bulk handling by employees; but these same characteristics also make handling easy for criminals.

In some stores, notably jewelry shops and pharmacies, robbery is sometimes a problem because of the value of the stored merchandise. This is not true for the majority of small businesses, however.

#### Display: Where Merchandise Is Accessible To The Public

The display area of a retail business, shown in Figure 4, is where the complex process of attracting customer interest to merchandise and then persuading them to spend money for it takes place. Modern merchandising techniques stress great accessibility for customers; the role of salesperson frequently is taken over by merchandise packaging. This means that customers

have considerable flexibility and freedom to examine and choose merchandise; they sell themselves. But these same conditions create the kind of permissive environment that makes shoplifting extremely easy. The chief threat of crime stems from the same conditions that make selling easy: ready access to packaged merchandise. Shoplifting begins the same way that ordinary customer transactions begin: with interest in the merchandise. In the case of the legitimate shopper, that interest leads to an exchange of money; in the case of the shoplifter, that interest leads to theft, notably when he or she hides merchandise and by-passes the cash registers.

A second threat exists from internal theft. The clerk rearranging merchandise has precisely the access needed to steal it by moving it off the display floor and into his or her own control (clothing, car, locker, etc.).

Robbery is sometimes a threat, as is burglary, especially where extremely valuable merchandise is involved.

#### Sales: Where Goods Are Paid For

The sales area (Figure 5) is where customers exchange cash (or some negotiable instrument like a signed check or credit card receipt) for merchandise. In most instances, the sales area is defined as that where the cash registers are located. The size of the business profit is largely dependent on the degree to which the number of dollars exchanged by customers exceeds the costs of merchandise and operations.

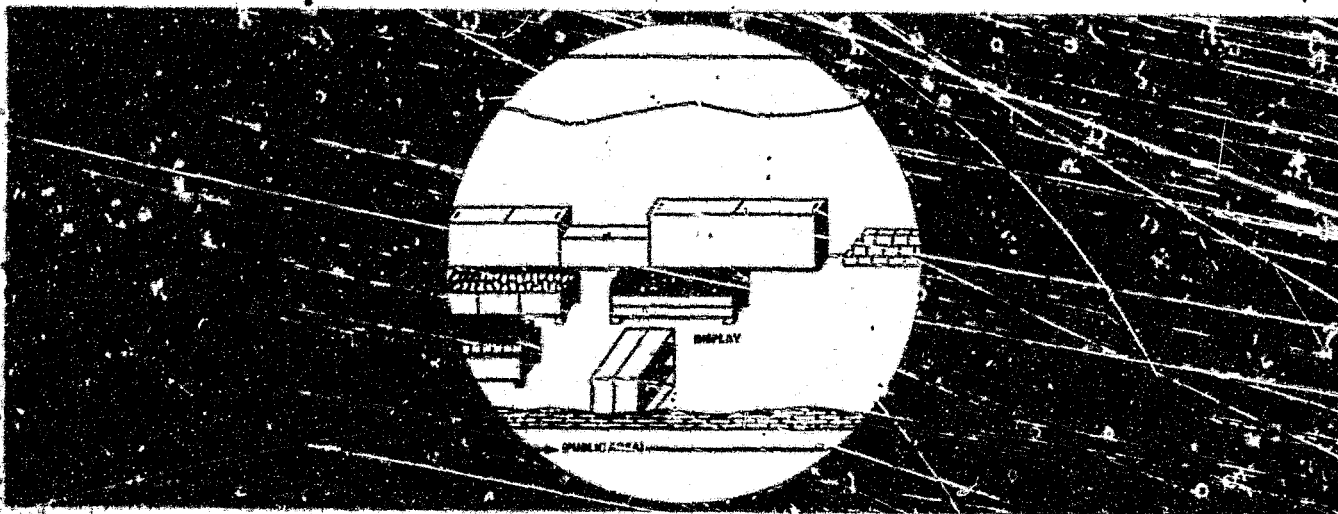


FIGURE 4  
STAGE 3 — DISPLAY



**FIGURE 5**  
**STAGE 4 — SALES**

(In this handbook, we are not considering the complicated questions of amortization, depreciation, loss carry-forward, and the like on the assumption that most users will be concentrating their efforts on maintaining high sales volume.) For this reason, most businesses concentrate on ensuring that handling of cash is carefully controlled.

The primary threat from crime in sales is clearly robbery. The instinct to safeguard cash by concentrating it in a single location where it is accessible only to a cashier makes it, by the same token, a supremely attractive target for a robber.

Burglary for cash, of course, is common; however, few store operators trust cash registers to safeguard funds overnight. Similarly, shoplifters have been known to steal cash from open registers, but this problem is solved by careful attention to the procedures for handling cash (e.g., locking unattended registers).

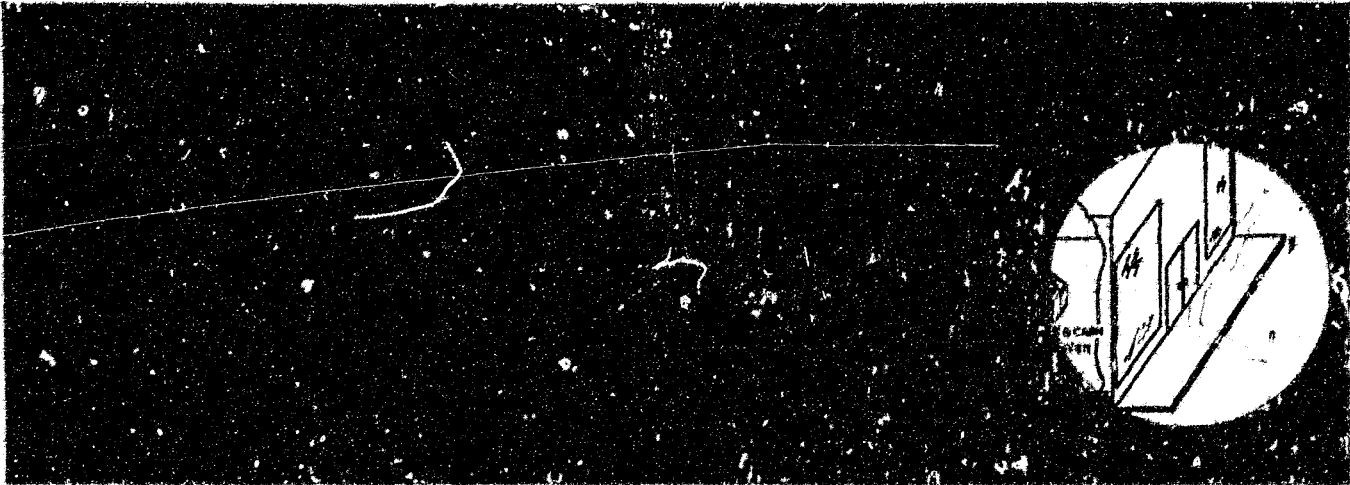
A very serious problem in sales is internal theft, especially because it is difficult to detect. Cashiers can manipulate cash handling in a variety of ingenious ways that drain profits rapidly, especially when in collusion with other employees or with customers. Cashiers can underring merchandise totals; they can fail to ring up certain sales and pocket the cash received; or they can claim to have been robbed, while keeping the cash allegedly taken.

**Cash Transfer: Where Money Is Moved From The Store To A Bank**

Figure 6 depicts the Cash Transfer Stage. Moving cash from a store to a bank is the last stage in the small business cycle. In a figurative sense, cash transfer represents harvesting the fruit of the business operator's labors. In many respects, the success of a business is indicated by the favorable ratio between the average daily operating cost and the average daily cash transfer.

Cash transfer, also, is a stage which is exceptionally vulnerable to two types of crime: robbery and internal theft. Ordinarily, cash moved to a bank represents an accumulation that may be several times the maximum level normally maintained in a cash register. The potential for an increased take means that robbery becomes a very serious threat. The problem is compounded when cash transfer takes place after the end of the business day, when stores are occupied only by employees and the likelihood of observation by the public is reduced. Robbers then can take advantage of the easy execution and opportunity afforded by light staffing coupled with the likelihood of readily portable amounts of cash to seriously damage the profit picture for small businesses.

Theft by employees is the only other credible threat during cash transfer. Ordinarily, employee theft would not be a chronic problem for the obvious reason that repetition would be suspect; however, fraudulent claims of robbery or night-deposit-box theft have served as covers for employee theft.



**FIGURE 6**  
**STAGE 5 — CASH TRANSFER**

### **Fitting Your Business To The Pattern**

Retailers of all types will find that the generalized portrait given above does not match the details of their business in every respect. Restaurants and service stations, for example, do not feature large merchandise display areas where shoplifting is likely. By the same token, businesses that provide service to the public (e.g., motels, recreation facilities, repair shops) are selling an intangible product that is consumed before customers leave the store area. Nevertheless, every retailer will recognize that much of the diagram does apply, if only as a way of illustrating the threat from crime.

Now, prepare a schematic of your store's exterior and interior layout using the skeletal outline of our model provided below. (A separate tearout sheet is provided for your use.) Be sure to depict graphically all five stages of your business.

### **Finding The Special Weaknesses Of Your Business To Robbery, Burglary, Shoplifting And Internal Theft**

The goal of this handbook is to permit business operators to choose security techniques that

match the needs of their businesses. This section is designed to help you answer two questions:

**How vulnerable is my own business to robbery, burglary, shoplifting, and internal theft?**

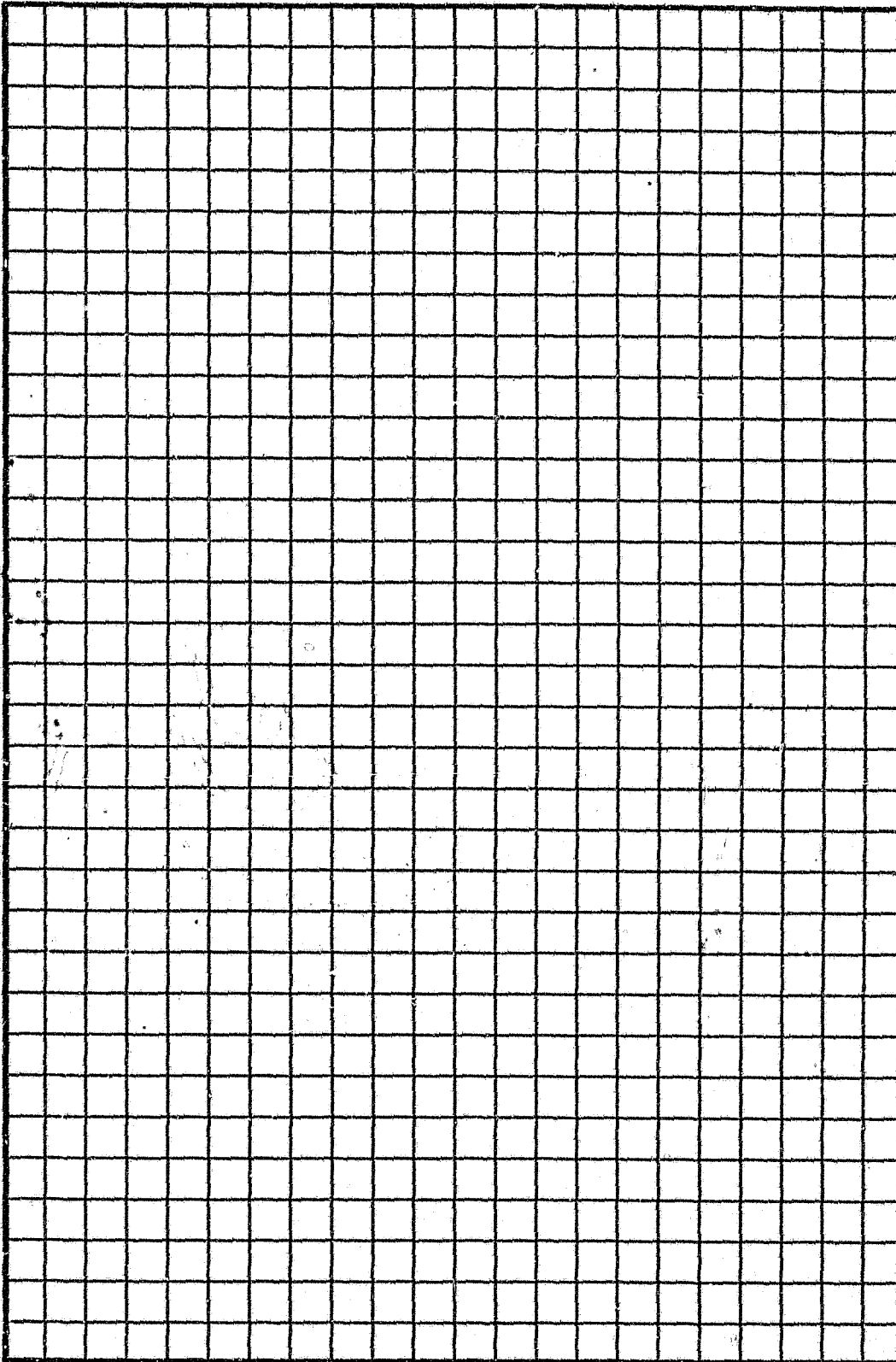
**What is the most sensible and economical approach to reducing vulnerability?**

To examine these questions, we will take the perspective of the criminal who wants to steal from your business. The object is to have you spot the features that make your business attractive to each type of criminal before the criminal can find them and take advantage of them.

In the pages that follow, there are checklists from a variety of sources that focus on retail crime. Use them to score your business. Be thorough and honest. What you find may be disturbing. But you may also find that you have the makings of good security already present and that you can make your business considerably more secure without a major investment.



rear



Receiving

Storage

Display

Sales/cash transactions

front

**Figure 7**  
**BUSINESS OPERATIONS OUTLINE**  
**FLOOR PLAN**

## SECURITY CHECKLIST

### ROBBERY

**Robbery**

Begin by looking at your business as a total environment. This will help you determine whether or not the ingredients for victimization are present. Remember, robbery is a crime of choice on the part of the criminal—it is a choice he makes based on several factors which can lead either to his success or to his failure. So, in making your business less vulnerable, you must work to create an aura of psychological deterrence through environmental design.

Put yourself in the place of the potential robber. Stand away, detached from your business, and try to determine its attractiveness to a robber. Are your exterior, access, and parking lot areas adequately lit? What about the interior of your business? Is your interior lighting sufficient so that major points of vulnerability are clearly visible from the outside? Do any and all window surfaces in your storefront provide unobstructed visibility? Do you have signs placed toward the lower portion of your door which say: "No Cash Is Kept Inside" or "Exact Change Only After 8:00 p.m."? Is your cash register clearly visible from the outside?

Using the security check list which appears below, identify your business' points of high vulnerability to the crime of robbery.

**A Security Checklist for the Crime of Robbery**

- Is your business a likely target for robbers?  

YES	NO
-----	----
- Is your business isolated from other businesses? \_\_\_ \_\_\_
- Does the business operate late at night? \_\_\_ \_\_\_
- Does the business make change after dark? \_\_\_ \_\_\_
- Is the business known to keep substantial cash on hand? \_\_\_ \_\_\_
- Is cash transferred according to a set routine? \_\_\_ \_\_\_

Is the business obviously operated by a single cashier? \_\_\_ \_\_\_

Does the business have little exterior lighting? \_\_\_ \_\_\_

If any answer is "Yes," check these techniques in the Catalog:

- Visibility Enhancement
- Money Handling Routines
- Lighting (Exterior)
- Guards
- Safes

Can a robber case your business easily?  

YES	NO
-----	----

Is your cash register partially hidden from the sight of other employees? \_\_\_ \_\_\_

Is the light level in your store much higher or lower than outside your store? \_\_\_ \_\_\_

Do posters and displays block the view of the cash register from outside? \_\_\_ \_\_\_

Is a telephone booth located in sight of the cash register? \_\_\_ \_\_\_

Is the cash register within reach of customers? \_\_\_ \_\_\_

Is there only a single courier for cash transfer? \_\_\_ \_\_\_

Do you have a set routine for cash transfer? \_\_\_ \_\_\_

Does the business lack a telephone? \_\_\_ \_\_\_

If any answer is "Yes," check these techniques in the Catalog:

- Guards
- Alarms
- Movement Controls
- Lighting (Exterior)
- Visibility Enhancement
- Money Handling Routines
- Cameras

Safes  
Cashier Enclosures  
Lighting (Interior)

If any answer is "Yes," check these techniques in the Catalog:

Guards  
Safes  
Lighting (Interior)  
Cashier Enclosures  
Visibility Enhancement  
Money Handling Routines  
Alarms  
Cameras  
Movement Controls

Can robbers approach your business without detection?

YES NO

Do posters and displays block employees' view of outside?

\_\_\_ \_\_\_

Is the light level much lower or higher than outside?

\_\_\_ \_\_\_

Are there blind spots adjacent to the business?

\_\_\_ \_\_\_

Are there blind spots within the store?

\_\_\_ \_\_\_

Is the entrance close to the cash register?

\_\_\_ \_\_\_

If any answer is "Yes," check these techniques in the Catalog:

Visibility Enhancement  
Movement Controls  
Cashier Enclosures  
Lighting (Exterior)  
Lighting (Interior)

Can robbers make a clean getaway from your business?

YES NO

Is the parking lot adjacent to the thoroughfare?

\_\_\_ \_\_\_

Are there blind spots in the parking lot?

\_\_\_ \_\_\_

If any answer is "Yes," check these techniques in the Catalog:

Guards  
Alarms  
Visibility Enhancement

Can robbers easily carry out a robbery in your business?

YES NO

Is the cash register within reach of customers?

\_\_\_ \_\_\_

Are there blind spots near the cash register?

\_\_\_ \_\_\_

Are cash registers partially hidden from the sight of other employees?

\_\_\_ \_\_\_

Is the safe or cash container easy to open?

\_\_\_ \_\_\_

Is the exit close to the cash register?

\_\_\_ \_\_\_

Do business doors open two ways?

\_\_\_ \_\_\_

Can robbers "get away with" robbing your business?

YES NO

Are there no standard procedures for reporting crime to police?

\_\_\_ \_\_\_

Are serial numbers of large bills not listed?

\_\_\_ \_\_\_

Are clerks untrained in observing robbers?

\_\_\_ \_\_\_

Are cash totals not recorded regularly?

\_\_\_ \_\_\_

Are clerks untrained in observing "getaway" vehicles?

\_\_\_ \_\_\_

If any answer is "Yes," check these techniques in the Catalog:

Visibility Enhancement  
Money Handling Routines  
Movement Controls  
Guards  
Cameras  
Alarms

Can robbers be successfully prosecuted if arrested?

YES NO

Are you not willing to participate in a trial or other legal proceedings? \_\_\_\_\_

Do you have no systematic procedures for developing evidence for police use? \_\_\_\_\_

If any answer is "Yes," check these techniques in the Catalog:

- Guards
- Alarms
- Money Handling Routines
- Cameras
- Prosecution Policy

## BURGLARY

### Burglary

Begin by determining whether your business is worth burglarizing. In effect, you will be performing your own security survey. So, take the required time—perhaps 2 to 3 hours—and do a thorough job. Your first step should be to prepare a list of the security devices you now have on hand, as well as the security procedures you presently employ. Next, refer to the schematic you prepared earlier and make certain you have included all access points (e.g., vents, transoms, air conditioning units, doors, windows). Now you are ready to put yourself in the place of a burglar who is thinking of stealing from your business. (It is probably a good idea to coordinate with local police and neighbors at this point, to avoid the embarrassment of investigation and possible arrest for prowling). Ask yourself, "If I were a burglar, what would be my easiest entry point?" Circle your building and walk through your alley. Are there pieces of equipment or other materials stored against your building that could be used to access a roof opening or other point of high vulnerability? What about foliage or debris which could provide the burglar with cover? How adequate is your lighting—both exterior and interior? Is it obvious that there is cash or valuable merchandise stored inside your business? Or are there signs that the operators of the business have taken prudent precautions (e.g., signs declaring that no cash is available on the premises or that an alarm is installed)? In doing the survey, remember that burglars have no regard for private property and will be as destructive as necessary to break in and obtain cash or valuable items. They will readily do hundreds—even thousands—of dollars worth of damage in order to steal.

Using the security check list which appears below, identify your business' points of high vulnerability to the crime of burglary.

### A Security Check List for the Crime of Burglary

- |   |            |           |
|---|------------|-----------|
| <b>Is your business a likely target for burglaries?</b> | <b>YES</b> | <b>NO</b> |
| Does your business lack perimeter protection?           | _____      | _____     |
| Does your business obviously store items of value?      | _____      | _____     |
| Is the business exterior not well lighted?              | _____      | _____     |

If any answer is "Yes," check these techniques in the Catalog:

- Fencing, Walls and Hedges
- Visibility Enhancement
- Guards
- Lighting (Exterior)
- Watchdog
- Display Cases

Can your business easily be cased by burglars?

YES NO

Can a burglar approach your business without being observed from outside?

\_\_\_\_\_

Do you keep your cash register drawer closed after business hours?

\_\_\_\_\_

Is your safe hidden from outside view?

\_\_\_\_\_

Have you decided against a watchdog?

\_\_\_\_\_

Have you decided against using a guard service?

\_\_\_\_\_

If any answer is "Yes," check these techniques in the Catalog:

- Fencing, Walls and Hedges
- Visibility Enhancement
- Miscellaneous Entry Protection
- Watchdogs
- Safes
- Door Protection
- Lighting (Exterior)
- Lighting (Interior)
- Window Protection
- Guards

Is your business easy to break into?

YES NO

Are there unprotected openings larger than 96 square inches?

\_\_\_\_\_

Can hinge pins be removed from exterior doors?

\_\_\_\_\_

Are your exterior door locks easy to pick or jimmy?

\_\_\_\_\_

Have you chosen not to install an alarm system?

\_\_\_\_\_

If any answer is "Yes," check these techniques in the Catalog:

- Fencing, Walls and Hedges
- Miscellaneous Entry Protection
- Window Protection
- Door Protection
- Alarms

Is it easy to collect cash and high-value items inside your business?

YES NO

Is your high-value merchandise accessible and not protected by security anchors?

\_\_\_ \_\_\_

Do you store cash in the business during non-operating hours?

\_\_\_ \_\_\_

Can your safe be moved?

\_\_\_ \_\_\_

Have you chosen not to install an alarm in the interior of the business?

\_\_\_ \_\_\_

If any answer is "Yes," check these techniques in the Catalog:

- Article Surveillance and Merchandise Anchors
- Visibility Enhancement
- Alarms
- Cashier Enclosures
- Lighting (Interior)
- Safes
- Display Cases

Is it easy for a burglar to leave your business with substantial amounts of loot?

YES NO

Is the parking lot poorly lit?

\_\_\_ \_\_\_

Do you allow boxes and other materials to collect near the inside of your fence?

\_\_\_ \_\_\_

Is there an exit leading to an alley or driveway?

\_\_\_ \_\_\_

Are some doors not equipped with double-cylinder deadlocks?

\_\_\_ \_\_\_

If any answer is "Yes," check these techniques in the Catalog:

- Fencing, Walls and Hedges
- Miscellaneous Entry Protection
- Guards
- Door Protection
- Window Protection
- Watchdogs

Can burglars be successfully prosecuted if arrested?

YES NO

Are you unable to identify items stolen from your business?

\_\_\_ \_\_\_

Are you willing to buy merchandise of dubious origin?

\_\_\_ \_\_\_

If any answer is, "Yes," check these techniques in the Catalog:

- Cameras
- Prosecution Policy
- Money Handling Routines

SHOPLIFTING

Shoplifting

Your goal should be to make the shoplifter's task as difficult as possible. So, right at the outset, ask yourself, "Is my business an easy target for the shoplifter?" Try adopting the outlook of the shoplifter yourself.

Storeowners exploit their customers: they rip off the community at large. You have a right—in simple justice—to boost merchandise for your own benefit. Only straights pay for goods. If you can get away with theft, what you're doing is simple income redistribution. If storeowners discover losses, they can cover them with insurance. Besides, if you're caught, they probably won't prosecute; if they prosecute, you probably won't be convicted. You're covered almost every way imaginable.

If the paragraph above upsets you, it should! It represents an important element in the attitude of shoplifters. Even though your annual income may be less than \$10,000 or in the low teens, you are considered part of the "establishment" because of your affiliation with the rest of the business community and because of your association with the orderly conduct of public affairs.

After you've developed a hostile attitude toward yourself (the proprietor of the business you want to rip off), enter the store as though you were the intended shoplifter. What do you see? Is the merchandise displayed in an orderly fashion so as to allow quick visual reference to its placement by the store's employees? Are there areas that are so crowded and congested that they provide a natural cover for the shoplifter as he steals merchandise? Are shelving and display cases kept at a fairly low level to provide an unobstructed view? What you want to do is to determine whether you can move merchandise from the display into your pockets without being observed. Consider interference with the line of sight of store clerks and other customers and the success you might have in overcoming the willingness of store personnel to interfere with your exit.

In the final analysis, one of the most important things you can do to minimize shoplifting is to make use of common sense combined with courtesy. Here are two basic principles you and your employees can apply. First, always be alert

and aware of who is in your place of business and what they are doing. And second, serve your customers as quickly as possible, and, if you're busy, acknowledge their presence and let them know you will help them as soon as you can. By the way, one of the most effective defenses against the shoplifter is this little phrase: "I'll be with you shortly. If you need anything, just nod . . . I'll be certain to see you." The honest customer will appreciate the attention you are giving him whereas the shoplifter will perceive your statement as a warning that you are watching him.

Using the checklist which appears below, identify your business' points of high vulnerability to the crime of shoplifting.

A Security Check List for the Crime of Shoplifting

Is your business a likely target for shoplifters?

YES NO

Does your business feature small, valuable items?

Do you feel it's too much trouble to call police when you've identified a shoplifter stealing from your business?

Have you decided not to post signs warning shoplifters against stealing from your business?

Do your employees ignore shoplifters?

If any answer is "Yes," check these techniques in the Catalog:

- Employee Motivation
- Article Surveillance and Merchandise Anchors
- Visibility Enhancement
- Display Cases
- Prosecution Policy

Can shoplifters enter your business bearing tools of their trade?

YES NO

Do you permit customers to carry shopping bags and other parcels?

Do your employees neglect to greet each customer as he or she enters the business?

Are your employees ignorant of the ways shoplifters operate? \_\_\_\_\_

If any answer is "Yes," check these techniques in the Catalog:

- Cameras
- Visibility Enhancement
- Employee Motivation
- Movement Controls

Can shoplifters enter unchallenged in areas displaying shopliftable items? \_\_\_\_\_

YES NO

Do your employees shy away from engaging the attention of customers who are observed remaining in remote areas of the business? \_\_\_\_\_

Do you permit groups of youngsters to hang out in your business? \_\_\_\_\_

If any answer is "Yes," check these techniques in the Catalog:

- Employee Motivation
- Visibility Enhancement
- Movement Controls

Can shoplifters conceal items (without being observed)? \_\_\_\_\_

YES NO

Are your cashiers or clerks unable to observe every corner and aisle in the business? \_\_\_\_\_

Can your price tags be switched easily? \_\_\_\_\_

Are your employees too busy (or too uninterested) to stay aware of potential shoplifters? \_\_\_\_\_

Is your business lighting level too low to permit easy observation of shoplifters? \_\_\_\_\_

Have you decided against using merchandise anchors or alarms for high-value items? \_\_\_\_\_

If any answer is "Yes," check these techniques in the Catalog:

- Article Surveillance and Merchandise Anchors
- Employee Motivation
- Visibility Enhancement
- Display Cases
- Lighting (Interior)
- Alarms
- Cameras

Can shoplifters exit from your business easily? \_\_\_\_\_

YES NO

Can customers leave your business without walking past a cashier? \_\_\_\_\_

Are your employees untrained in dealing with shoplifters? \_\_\_\_\_

Do you regard electronic price tags as too much trouble to use in your business? \_\_\_\_\_

If any answer is "Yes," check these techniques in the Catalog:

- Article Surveillance and Merchandise Anchors
- Visibility Enhancement
- Employee Motivation
- Alarms
- Cameras
- Lighting (Interior)
- Movement Controls

Can shoplifters be successfully prosecuted, if arrested? \_\_\_\_\_

YES NO

Are you reluctant to risk the potential loss of good will resulting from rigorous pursuit of shoplifting conviction? \_\_\_\_\_

Have you chosen not to train your employees in techniques for observing and detaining suspected shoplifters? \_\_\_\_\_

If any answer is "Yes," check these techniques in the Catalog:

- Article Surveillance and Merchandise Anchors
- Employee Motivation
- Prosecution Policy
- Cameras



## INTERNAL THEFT

### Internal Theft

Begin by acknowledging that anyone working for you may contribute to inventory shrinkage or cash loss. This isn't intended to make you suspicious of all your employees, but rather to point out that internal theft can occur throughout a business day, before and after hours, at all points in a business operation, and be committed by any employee who has an opportunity.

Casing a business to determine its vulnerability to internal theft involves a more complex type of analysis than for other crimes because part of the process calls for estimating the trustworthiness of employees, especially where it is unclear whether shortages are due to shoplifting or the actions of employees. Nevertheless, if you, as an employer, are going to make a serious effort at preventing and controlling internal theft, a first positive step might be to make all employees aware that there is a serious problem and that you, in the interest of your business and your honest employees (usually the majority are themselves victimized just as you are, since internal theft creates a strain on overhead and siphons off potential profits that could have meant raises for them) must take some action to thwart dishonest acts by employees.

If you don't have one already, then you will want to establish a loss prevention program. And, once your program has been established, you will need to monitor and audit it at regular intervals so as to deter employees who will be constantly looking for ways to defeat it.

Surprisingly, few small business owners perform adequate background investigations of their employees prior to hiring them. As an employer, you have the right to know certain things about your employees; however, to make sure you do not go beyond the ethical guidelines provided by federal and state laws, you should follow the general procedures outlined in the Consumer Protection Act governing employment.

The Act stipulates that investigative agencies or personnel divisions cannot require information concerning:

- Bankruptcies antedating the report by more than 14 years.
- Records of arrests, indictments, or convictions of crimes, where the disposition, release, or parole therefrom occurred

more than 7 years prior to the date of the application.

- Included in the aforementioned 7 year limitation are legal suits and judgements, paid tax liens, and accounts placed for collection or other information having a deleterious effect.

The following chart can be of assistance to you in avoiding practices that the law views as discriminatory.

### As an employer you can:

- Request an applicant to write his/her name and address on an application.
- Ask an applicant if a complaint has been placed against him/her or if he/she has been indicted for or convicted of a crime and under what name.
- Ask an applicant's age only if the information is an occupational qualification or if it is needed to comply with state or Federal minimum age laws.
- Explain to an applicant which days he/she will be required to work.
- Ask if applicant is a U.S. citizen, or if he/she has the intent to become one.
- Ask about schooling, both academic and vocational.
- Inquire into work experience.
- Inquire into his/her character.
- Ask for names, addresses, and relationship of persons to be notified in case of accident.
- Inquire into applicant's military experience in the U.S. Armed Forces.
- After Hiring, ask to see discharge papers.
- Ask an applicant about memberships in organizations which do not disclose race, religion, or national origin.
- Ask an applicant if he/she belongs to an organization advocating the overthrow of the U.S. government.
- Ask the sex of an applicant only where it constitutes a qualification for the job.

**As an employer you cannot:**

Ask an applicant whose name has been changed to disclose the original name.

Inquire as to the birthplace of an applicant or applicant's family if outside the U.S.

Ask an applicant his/her age when it is not relevant to the job.

Ask an applicant his religion, name of his/her church, parish pastor, or religious holidays observed.

Ask about an applicant's color or race. Nor can you require a photograph with application.

Inquire whether an applicant's spouse or parents are naturalized or native citizens.

Inquire as to the locations outside the U.S. of businesses belonging to an applicant's relatives.

Ask the place of residence of an applicant's spouse, parents, or relatives.

Ask a male applicant to provide the maiden name of his spouse or his mother.

Inquire into foreign military experience.

Require an applicant to produce discharge papers before employment.

Ask an applicant to disclose memberships in organizations which disclose race, religion, or national origin.

Your background investigation of prospective employees should always cover the following three areas:

1. Prior employment as far back as possible.
2. Credit references and credit checks with your local credit bureau. These sources can provide you with a great deal of useful information. For example, if an applicant has incurred a large amount of debt, can he/she live adequately on the salary you offer? If not, will the pressure become so great that he/she will be tempted to steal from you in order to pay those debts?
3. Personal references should always be checked. Although most job applicants list individuals from whom they expect good references, it is important to make contact. By asking carefully phrased questions as to the applicant's lifestyle and general character, you may be able to ascertain important information which will assist you in making your decision.

Remember to use all the information you have available to you. After the background information has been compiled, you can then determine if the applicant is a good risk.

It is easy to see, then, that casing your business for internal theft is a very large job indeed. Obviously, there are many other areas you will need to cover. For example, do you know your stock turnover accurately enough to detect losses within 1 week of when they occur? Do you monitor cash levels in registers often enough to detect shortages within 2 hours of when they occur? Do your employees regard you as someone who might prosecute them for theft?

**A Security Check List for the Crime of Internal Theft**

Are your employees inclined to steal from your business? YES NO

Do you neglect to check out employees' references and job histories? \_\_\_ \_\_\_

Do you conduct infrequent inventories? \_\_\_ \_\_\_

If any answer is "YES," check these techniques in the Catalog:

- Movement Controls
- Employee Motivation
- Key Control
- Employee Screening
- Visibility Enhancement
- Inventory Control
- Article Surveillance and Merchandise Anchors

Is your merchandise easy to steal? YES NO

Do you postpone moving and logging in new shipments of merchandise? \_\_\_ \_\_\_

If the answer is "Yes," check these techniques in the Catalog:

- Movement Controls
- Employee Motivation
- Article Surveillance and Merchandise Anchors
- Visibility Enhancement
- Key Control
- Inventory Control

Can price tags be switched on your merchandise? YES NO

Do you neglect to spot-check employee purchases? \_\_\_ \_\_\_

If the answer is "Yes," check these techniques in the Catalog:

- Cameras
- Visibility Enhancement
- Key Control
- Employee Screening
- Employee Motivation
- Shopping Services
- Article Surveillance and Merchandise Anchors
- Money Handling Routines
- Inventory Control

Are your cash registers prone to tampering? YES NO

Do you permit several cashiers access to a single cash drawer? \_\_\_ \_\_\_

Do you neglect to conduct surprise checks of cash registers? \_\_\_ \_\_\_

If any answer is "Yes," check these techniques in the Catalog:

- Key Control
- Employee Screening
- Employee Motivation
- Shopping Services
- Visibility Enhancement
- Money Handling Routines
- Movement Controls

Can your business operating property be stolen easily? YES NO

Do you feel it's too much trouble to hold employees accountable for equipment assigned to them? \_\_\_ \_\_\_

If the answer is "Yes," check these techniques in the Catalog:

- Key Control

- Employee Screening
- Employee Motivation
- Inventory Control

Can your employees enter or leave your business easily? YES NO

Are your business keys easy to duplicate? \_\_\_ \_\_\_

Have you decided against a key control system? \_\_\_ \_\_\_

Are there outside windows or doors in the business that can be used to remove merchandise? \_\_\_ \_\_\_

If any answer is "Yes," check these techniques in the Catalog:

- Fencing, Walls and Hedges
- Article Surveillance and Merchandise Anchors
- Window Protection
- Movement Controls
- Door Protection
- Key Control

Can employees who steals from your business be successfully prosecuted? YES NO

Do you tend to excuse minor instances of employee theft to avoid confrontation? \_\_\_ \_\_\_

If the answer is "Yes," check these techniques in the Catalog:

- Employee Motivation
- Prosecution Policy
- Employee Screening
- Shopping Services

### Interpreting Your Findings

After completing the surveys, you have probably learned—to your dismay—that your business is vulnerable. There is too much cash in the registers for normal operating needs. It would be easy to take money from you or your courier on the way to the bank. You don't have an opening or closing procedure that guards against robbery or burglary by stay-behind customers. Your doors and windows can be breached. Your skylight is easy to open from the outside. You're not sure how many keys can open your locks. You don't spot-check for inventory shortages or cash loss. You aren't sure how much inventory loss is due to shoplifting. You don't know whether every bill of lading is checked against merchandise. You can't guarantee that every sealed carton in the storeroom is actually full.

The extent to which these statements apply is the extent to which your business is vulnerable. Deciding which aspect of business vulnerability is most serious depends on your own priorities and on the history of your business. If you haven't had a problem with burglary, you might best start by concentrating on detecting inventory loss when it occurs and on reducing it. On the other hand, if you find your business is ripe for shoplifting and would be easy to rob, then concentrate first on techniques for reducing your vulnerability to both crimes. One word of encouragement: beginning a security program involves no more than an intensive application of techniques you are already using; furthermore, security techniques have a way of interlocking. Precautions you take against burglary, such as installing heavy-duty locks and controlling their keys, can also reduce the incidence of internal theft because they limit the easy passage of merchandise from the store. By the same token, careful monitoring of merchandise inventory both on and off the display floor to detect the actual level of shoplifting can reduce internal theft because you can determine when it happens more readily.

### Security Problems and Potential Solutions

Every business, no matter how small or large, should have a system of security. One lock, one

alarm system, or one internal security procedure by itself will not provide you with adequate protection. It takes the interplay of many security features and policies to successfully combat these four crimes. A security program is only as good as its weakest component; each component provides protection that strengthens the effectiveness of the others. In this manner, the safeguards you take represent a series of barriers for the criminal, so that he encounters an increasing level of security as he moves from the outside perimeter of your property, through the inside of your property, through the inside of your store, to certain high-risk areas within the store where valuables are located.

The next chapter (Chapter III of this handbook, see page 41) is a catalog of security techniques that can be employed against the four crimes. They are loosely classified in four categories corresponding to the kinds of protection they offer:

- Property Line Protection (those that provide your first line of defense)
- Entry Protection (the protection of points of entry)
- Internal or Space Protection
- Point Protection (of valuable merchandise, cash registers, safes, etc.).

Generally, they have one of two purposes: either to make commission of the crime more difficult by hardening the target or to reduce the cost of crime by limiting the potential take of the criminal.

We suggest that you turn now to a quick examination of Chapter III. In going through the techniques, it may be useful for you to begin by referring to your completed check lists. These will identify the areas where your business is most vulnerable. Then look up the techniques which can reduce that vulnerability by turning to the appropriate pages of the catalog in Chapter III. Lastly, you should return to Section 5 of Chapter II (see page 35) to complete the process of designing and setting up a security program for your business.

## Section 5: HOW TO DESIGN AND SET UP A SECURITY PROGRAM FOR YOUR BUSINESS

35

### Good Management: Good Security

Achieving an adequate level of security in a small business requires only the skills and knowledge required to operate a business generally. That is, no special talent is required to reduce a business loss to crime, only conscientious attention to the same kinds of details that lead to profitable operations.

This means that reducing loss to robbery, burglary, shoplifting, and internal theft requires the same savvy that goes into decisions affecting the layout of a store's interior, the selection of merchandise lines to carry, the level of prices to charge, and the display techniques that lead to higher sales. For this reason, this handbook treats security techniques as extensions of management practices, wherever possible, and not as special undertakings. Thus, careful attention to cash management—which is really no more than ensuring that the proprietor knows how much money is on the premises and where it is located—is an important countermeasure to three of the four target crimes: robbery, because the amount of the take can be reduced; burglary, because cash loss can be thwarted entirely; and internal theft, because the crime can be detected immediately.

### How Much Should Good Security Cost?

Like all business costs, the investment a business makes in security countermeasures should be as small as possible, consistent with prudence. Certainly this is remarkably vague advice, but there simply is no consistent rule of thumb for small businesses. Part of the difficulty in answering the question lies in gauging the seriousness of the crime problem for an individual business. One authority estimates that the basic cost for a protective system (primarily alarms, guards, or special equipment) should amount to 10 percent of the average value of all cash and high-value items in a store plus 5 percent of the average value of low-value items and property. (The average is computed over a 10-year period). Thus, a store that ordinarily has \$1,000 in cash, \$15,000 in high-value items, and \$10,000 in low-value items would begin with a base investment figure of \$2,100. That investment total is modified by a number of factors, especially where components of a security system are already installed and where there may be additional benefit besides loss reduction gained from the selection of a technique.

The security techniques described in Chapter III were chosen with economy in mind. Where possible, techniques have been selected that can enhance business operations as well as improve security. In figuring how much to spend for security, the business operator might consider using the procedure outlined below (Figure 8).

### Components Of Good Security

It is likely that good security exists when a business does not suffer serious loss from crime. Another way of saying this is to observe that, for most small businesses, the level of security to aim for depends on the real threat posed by crime to individual businesses. The object of a security program is to ensure that the loss to criminal activity is balanced by the success the business enjoys. Therefore, some level of crime-related loss may be inevitable whereas exceeding that level calls for countermeasures. Similarly, two or three colds may be inevitable during a winter season, but precautions must be taken against pneumonia or bronchitis.

The primary strategy for dealing with crime against small business is very like dealing with disease: first, avoid exposure to crime; second, take preventive measures against criminals; and, third, combat crime where it occurs. For the small business proprietor, avoiding exposure means reducing the attractiveness of a business to criminal attack; preventive measures involve making the performance of the crime unacceptably difficult for the criminal; and combating crime means employing mechanisms to apprehend and prosecute criminals as a consequence of detection and arrest during or after the commission of the crime.

In practical terms, a good security program for a small business consists of (1) a mixture of good door and window locks, sufficient lighting to discourage burglary, and an alarm system where one is warranted; (2) inventory procedures and access control to reduce internal theft; (3) careful attention to cash handling and the movement of the public into and out of the store to thwart shoplifting, along with interior modifications to improve visibility throughout the display area; and (4) a number of procedural steps such as keeping the maximum that may be retained in a cash register, and varying the routine for cash transfer, to counter robbery.

Here's how to estimate the amount you should consider investing in a security program.

1. Compute the total dollar value of all cash and high-value items in your inventory at any one time. (Use insurance value of replacement costs, if you expect the stock to increase in size or value during the next 10 years, estimate the average value over that period). Divide the average value by 10.
  - (High-value items) + 10 = A  
(High-value ÷ 10)
  
2. Compute the total dollar value of all other, lower-value items on hand at any one time, using the same procedure as for high-value items above. Divide the low-value item average value by 20.
  - (Lower-value item) ÷ 20 = B  
(Low-value ÷ 20)
  
3. Add A and B. Total Adjusted Value C
  
4. Now—evaluate your own security risk.
  - a. How much is your "stealable" merchandise and cash worth?
    - Less than \$100 (= 1/2)      \$100-\$1000 (= 1)      More than \$1000 (= 1 1/2)
    - Insert the rating number here D-1  
Value Rating
  
  - b. Does your type of business experience more crime or less crime than the average business?
    - Less crime (= 1)      More crime (= 2)
    - Insert the rating number here D-2  
Risk Rating
  
  - c. Where is your business located?
    - Rural area (= 1/2)
    - Suburbs (= 1)
    - Central City (borough) (= 2)
    - Central City (ghetto) (= 2 1/2)
    - Insert the rating number here D-3  
Location Rating
  
  - d. How often does a police patrol pass your business?
    - Twice a day, or more (= 1)
    - Once a day (= 1)
    - Less than once a day (= 1 1/2)
    - Insert the rating number here D-4  
Police Rating

Add the rating numbers for D-1 (value), D-2 (risk), D-3 (location), and D-4 (police) and insert the total here E  
Total Risk

e. Divide E (TOTAL RISK) by 4 and insert the result here F  
Risk Factor
  
5. Multiply C (TOTAL ADJUSTED VALUE) by F (RISK FACTOR) to calculate the minimum requirement cost.
  - Minimum Requirement
  - If you want "peace of mind" over and above the minimum, multiply the minimum requirement by 2
  - Peace of Mind Requirement
  - Insert the minimum requirement or "peace of mind" cost here (Basic System Cost) G  
Basic System Cost
  
6. Compute the dollar amount you need for physical protection (locks, bars, metal doors, etc.) and insert the cost here. H  
Physical Protection Cost
  
7. Add G (BASIC SYSTEM COST) and H (PHYSICAL PROTECTION COST) and insert the total here. I  
Basic Total Cost
  
8. Compute the total amount of insurance premium discounts for 10 years based on the presence of the security system and insert the total here. J  
Insurance Discounts
  
9. Subtract (INSURANCE DISCOUNTS) from I (BASIC TOTAL COST) to determine the total security cost for a 10-year period. K  
Total Basic Security Cost

Remember this total is a recommendation and is only a basic planning amount; it will be modified by differences in each business.

**FIGURE 8**  
**ESTIMATING SECURITY INVESTMENTS AND EXPENDITURES**

## What To Consider In Choosing Techniques And Equipment For Security

A good security program should include appropriate crime insurance to offset loss from criminal activity. The Bank of America offers the following suggestions for selecting an insurance policy:

Crime insurance supplements a merchant's security program. Although insurance does not deter crime, it does reimburse the retailer for losses sustained in a burglary, a robbery or from employee theft.

Prudent shopkeepers select an insurance broker or agent familiar with the particular type of business who can devise an insurance package tailored to meet their specific needs. Retailers should ask for a brief description of what the policies cover . . .

Retailers may buy a "3D" (comprehensive dishonesty, disappearance, destruction) blanket crime policy, or a broad storekeeper's policy, or obtain similar endorsements to existing policy forms. These reimburse retailers for losses due to employee dishonesty or counterfeit currency as well as loss of money, securities or merchandise through robbery, burglary, or mysterious disappearance. The policy also covers certain types of check forgery and damage to premises or equipment resulting from a break-in.

Store owners may prefer to cover specific needs with separate policies including:

- Mercantile safe burglary policy to reimburse the retailer for loss of money, securities and valuables from a safe or vault and pay for damage to the safe and other property resulting from the burglary.
- Mercantile open stock policy to ensure the retailer against burglary or theft of merchandise, furniture, fixtures, and equipment on the premises and pay for damage to property resulting from burglary.
- Fidelity bonds to reimburse the employer for loss due to embezzlement and employee thefts of

money, securities and other property. Employees who handle money, cash receipts and merchandise should be bonded.

- Forgery bonds to reimburse the merchant and/or the bank for any loss sustained from the forgery of business checks.

Insurance premiums vary according to the type of business, store location, number of employees, maximum cash value, amount of security equipment installed and prior losses. Typical premiums for a blanket crime policy range from \$150 a year and up for a \$2,500 limit to \$250 a year and up for a \$10,000 limit. Broad storekeepers' policies, designed for smaller operations, allow a maximum limit of \$1,000; annual premiums range between \$290 and \$580.

Merchants operating in high-risk, high-crime areas need the most insurance but are often the least able to afford it. Furthermore, they have difficulty finding insurance companies willing to underwrite them. And retailers who experience a number of burglaries face high premiums, or at worst, cancelled policies.

In an attempt to break this vicious circle, Congress authorized the Federal Crime Insurance Program to establish Federal insurance programs in those states where the problem is especially acute and where state programs have not been instituted.<sup>12</sup>

### Federal Crime Insurance

The Federal Crime Insurance Program may be an affordable solution to the insurance dilemma facing small businesses, especially those located where the need for coverage is greatest. This program became effective in mid-1971 and provides affordable crime insurance to both businesses and residences that cannot obtain insurance otherwise. It is administered by the Department of Housing and Urban Development and, at this writing, was available in 21 states and the District of Columbia. It covers losses due to burglary and robbery and may be obtained either through licensed insurance agents or a private company that acts as a servicing agent for the Federal Insurance Administration. There are a number of requirements concerning protective devices that must be met for a business to be eligible for a policy. In general,

they call for locks, bars, or alarm systems that meet Federal specifications. (Details are available on the application form.) Rates are dependent on a number of factors: amount of coverage, gross receipts of a business, and the level of crime in a given locale. For information, call toll-free (800) 638-8780, or write: Federal Crime Insurance, P.O. Box 41033, Washington, D.C. 20014, and ask for a commercial application form. (A copy of the commercial application may also be found in Appendix E.)

### Employee Relations

In a successful security program, employees are part of the solution, not part of the problem. Choosing security techniques should take into account the effect they will have on employee morale. Does the installation of new locks and key control system signal that you don't trust your staff? Can you provide incentives for employees to report loss and incidents of shoplifting that make them as concerned as you are about shortages? Does the technique encourage honesty or resentment? Consider these questions in making a selection.

### Community Involvement And Legal Questions

In selecting elements of a security program, consider the availability of police as a factor in deterring crime. It is probably worthwhile to learn about the precinct boundaries where your business is located and the types and beats of patrol officers.

By the same token, consider the legal aspects of individual security techniques: in some areas, certain countermeasures are illegal because they violate fire codes (e.g., double locks and sealed doorways) or other safety regulations. In some communities alarm systems may be tied into police headquarters providing they meet performance standards (but a false alarm may cost a fee).

### Statutory Obligations

If you're building or renovating and want to ensure a secure structure, make sure you check commercial security ordinances that apply in your community. (If there isn't such an ordinance, take a look at the Oakland, California, model ordinance in Appendix B for an example of a good set of security standards.)

### The Buying Public

Business operators don't need to be reminded that the public is their lifeblood. Public goodwill is essential to the successful operation of a

business, and goodwill can be lost when security becomes oppressive. For this reason, consider carefully what customers' reactions might be to armed guards, merchandise anchors, cashier enclosures, and electronic price tags! On the other hand, also consider the consequences of loose security: does the apparent absence of countermeasures encourage marginal criminals to take chances? A judgment on this question calls for the most deliberate examination of your relationship with your customers.

### The Applicability And Appropriateness Of Security Techniques

Choosing among the variety of techniques listed in Chapter III also involves making sure that what you choose fits your business operation. In particular, you probably don't want to install equipment that requires a training course to operate. Neither do you want countermeasures that either interfere with each other's operation (a watchdog would set off an acoustic alarm sensor), or that solve only part of the problem (e.g., a sturdy lock on a light wooden door).

### Consulting With Security Professionals And Architects

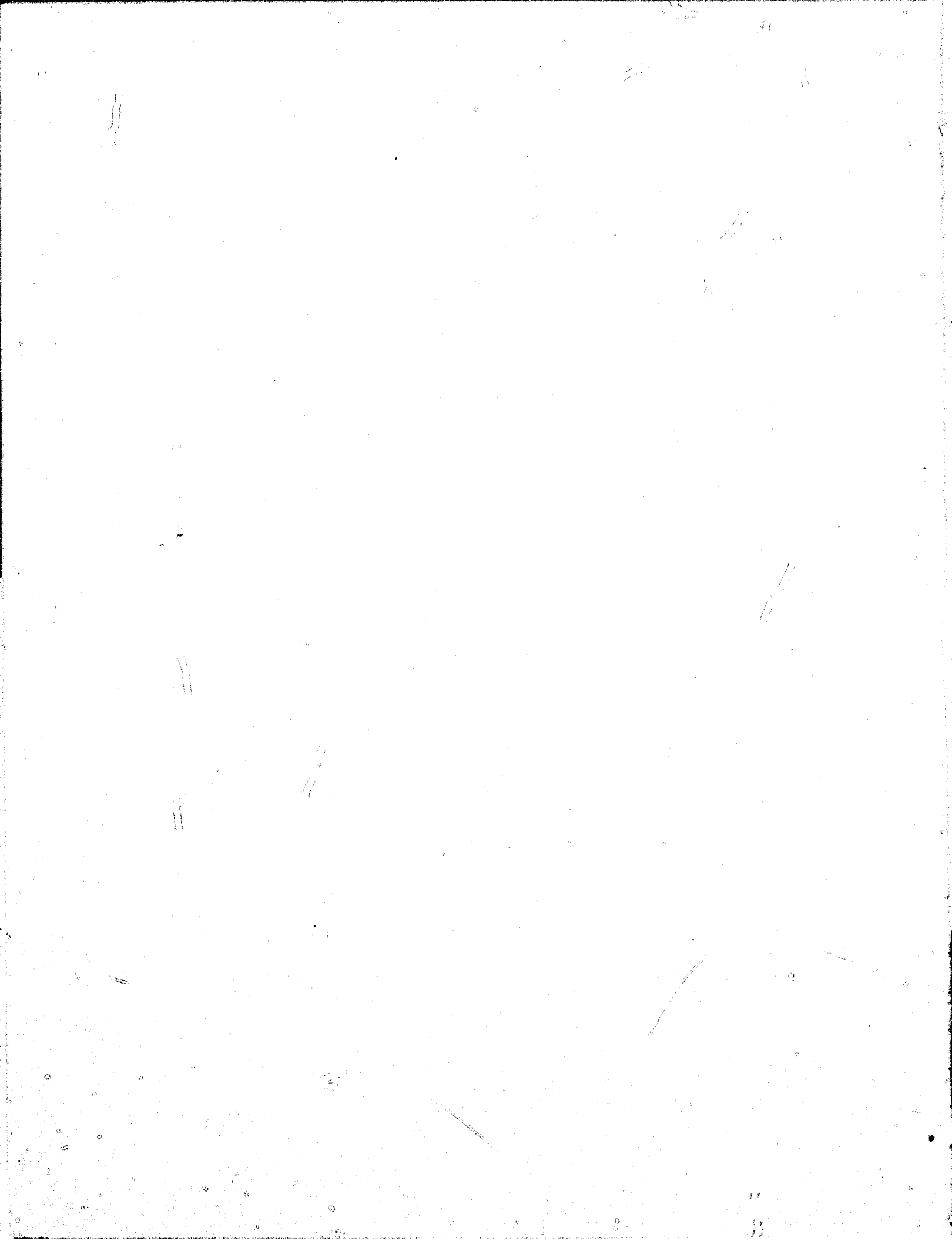
While most of this handbook concerns techniques that individuals can handle themselves, some items and judgments call for professional help. Techniques that do call for more than business proprietors ordinarily undertake are identified in Chapter III. In addition, a glossary of security terminology with the architect in mind can be found in Appendix D.

### REFERENCES

1. The sources for the statistics in this section include: Internal Revenue Service, Department of Commerce, and Bank of America reports, and *Crime Against Small Business, A Report of the Small Business Administration . . . to the Select Committee on Small Business, U.S. Senate, Washington, D.C., USGPO, 1969.*
2. According to figures given by the Small Business Administration (see the statement of Luis F. Laun, Acting Administrator, U.S. Small Business Administration) to the Joint Economic Committee, November 21, 1975.
3. Senator Hubert Humphrey, Letter to the Editor, *The Washington Post*, October 6, 1976.
4. *Crimes Against Business, A Management Perspective*, U.S. Department of Commerce, December 1976, p. 123.
5. *Security Management*, March 1975, p. 8.



6. Remarks by Deputy Assistant Secretary Murray S. Scureman, (U.S. Department of Commerce, in Proceedings of Seminars Held in New York, September 14, 1976.
7. **Crime in the United States, 1975 (Uniform Crime Reports)**, USGPO, 1976.
8. **Crime Against Small Business**, p. 2.
9. See, for example, **Police Response Time: Its Determinants and Effects**, Police Foundation, 1976.
10. **Security World**, January 1972, p. 26.
11. **Uniform Crime Reports, 1975**, p. 6.
12. **Bank of America Small Business System**.



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# **CATALOG OF SECURITY TECHNIQUES**

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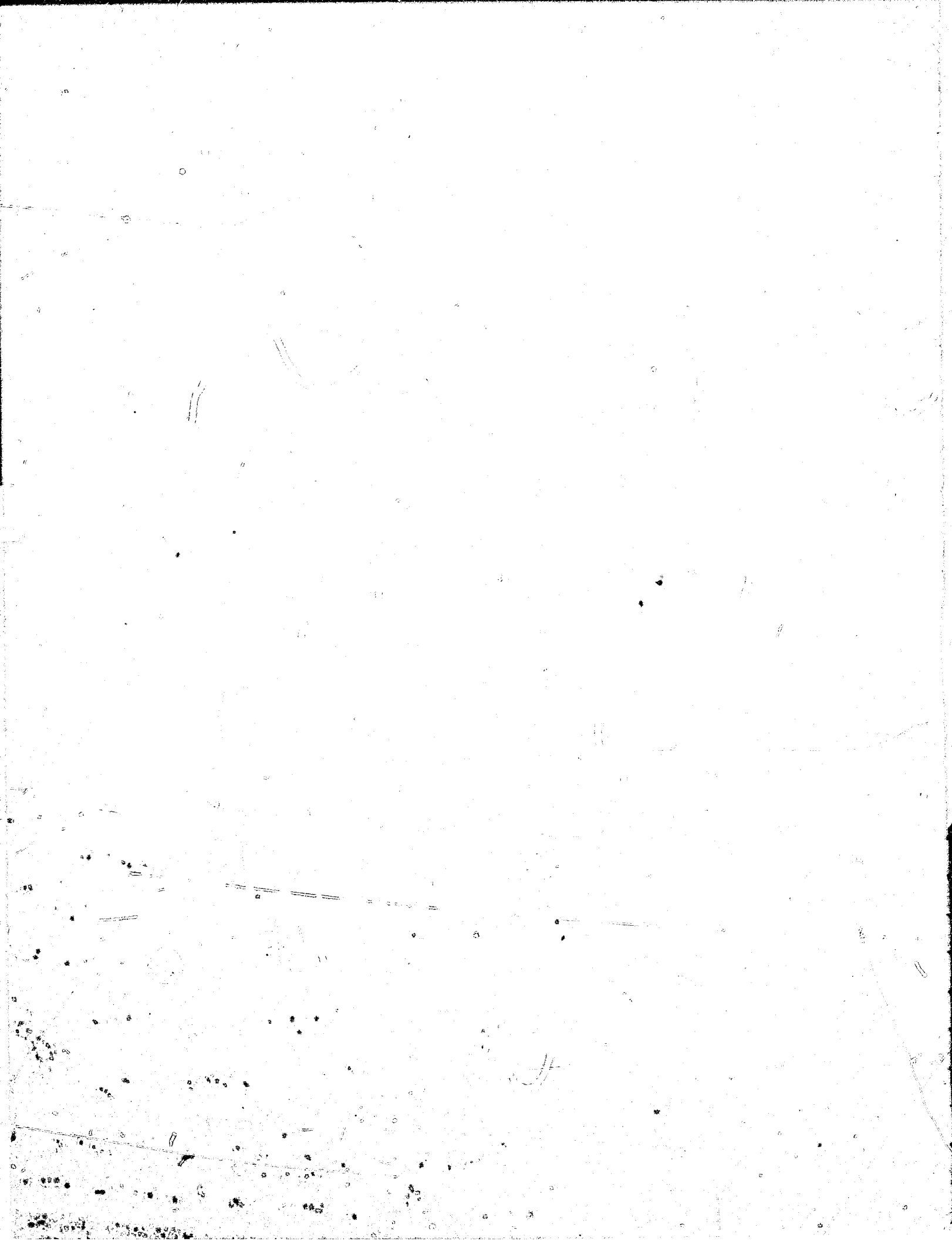
**Section 1:  
PROPERTY LINE PROTECTION**

**Section 2:  
ENTRY PROTECTION**

**Section 3:  
SPACE PROTECTION**

**Section 4:  
POINT PROTECTION**

**Section 5:  
ALARMS**



## CHAPTER III: CATALOG OF SECURITY TECHNIQUES

### Section 1: PROPERTY LINE PROTECTION

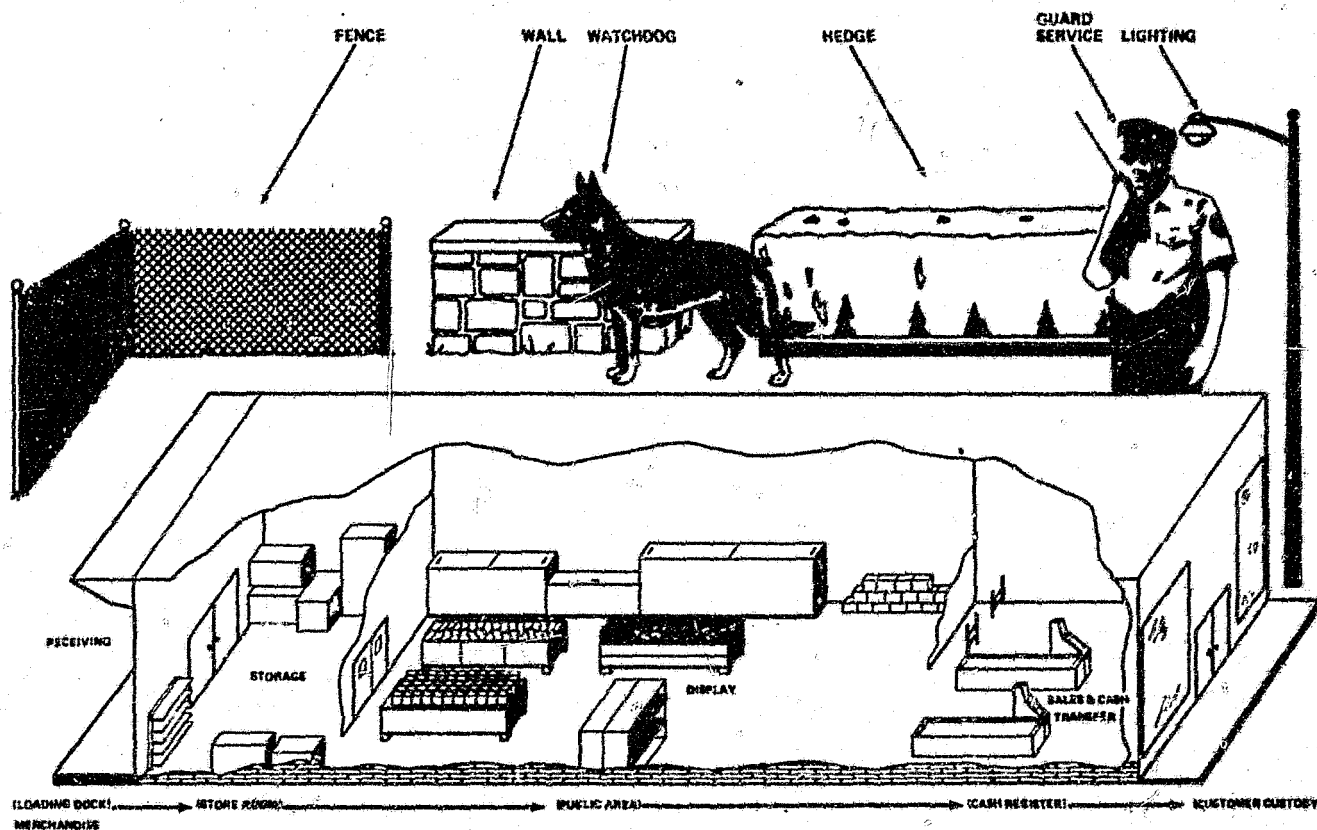
#### Crimes Targeted: Robbery, Burglary

Property line protection measures represent your first line of defense against intrusion. Their major impact on a potential intruder is psychological intimidation rather than physical barring. Their presence serves as a warning, an indication of your security-mindedness. One important consideration to remember—the measures you employ to establish a secure

property line may either aid or hinder police patrol of your premises.

#### Selected Measures

- Fencing, Walls and Hedges
- Watchdogs
- Guard Service
- Lighting (exterior)



**FIGURE 1**  
**PROPERTY LINE PROTECTION**

## FENCING

## Crime Targeted: Burglary

## DESCRIPTION

When considering property line protection, the first thing that comes to mind is some form of barrier or fence. This fence is often considered the first line of defense against intrusion and usually is just that—the first obstacle for any intruder to overcome in order to penetrate a facility. In some cases, the fence will provide enough of an obstacle so that an intruder will not even attempt to enter the facility, or it may make it too difficult for him to negotiate the fence when leaving with his loot. On the other hand, the fence may only serve as the beginning of a series of deterrents. Often the type of fence and the amount of protection provided for the fence will determine whether the intruder proceeds any further. Of course, if someone is determined to penetrate a facility and is willing to take the chances and risks inherent in an intrusion attempt on even a well-protected facility, no barrier will keep him out. However, a good fence will generally be a psychological deterrent to the casual intruder. Fences should be of the see-through type, solid fences and hedges should be no higher than 3 feet unless unusual circumstances are present. The reason for the 3-foot limit is that it is the maximum height a patrolman can see over while seated in a patrol car.

## HIGHLY RECOMMENDED

## Chain-link fencing (cyclone fence)

- Height not less than 7 feet
- Posts set in concrete
- Posts spaced no more than 10 feet apart

## Construction Fence

When cost is a major factor, any fence is better than no fence. If you are moving into a new building, modify the fence put up by the construction crew so that it provides protection and yet is attractive enough not to reduce your sales potential.

Standard Heights: 3', 3½', 4', 5', 6', 7'. A 6-foot fence costs only about 50 per cent more than a 3-foot fence, not twice as much because of the lower cost per foot for the posts and top rails.

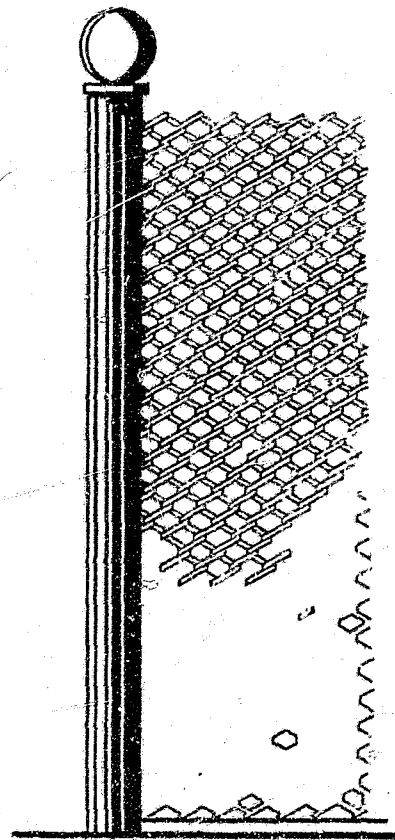
## Cost:

Economy Grade—11-1/2 gauge galvanized wire with 2 1/4" x 2 1/4" diamond-shaped mesh (large enough for a child to fit the toe of his tennis shoe into), 4' height at \$1 per linear foot (including standard 1 5/8" line posts 10 feet apart, 1 3/8" top rails, and aluminum tie wires)

## EXTRA:

- Corner posts \$7 to \$8
- Gate posts \$5 to \$7
- Gate \$20 (for single walk gate)

Medium Grade—11 gauge with 2" x 2" mesh (considerably stronger fencing) 10 percent more than economy grade

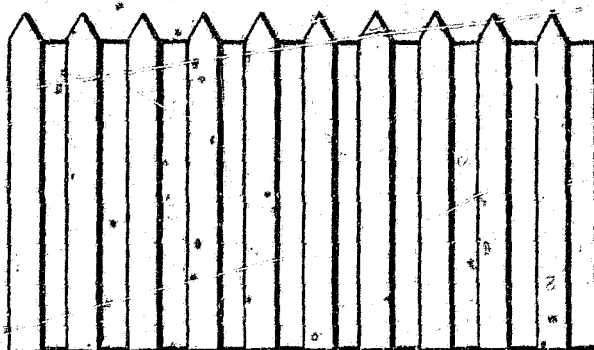


Heavy Duty Grade—gauge wire with 2" x 2" mesh, 50 percent more than economy grade, 10 cents extra per foot for vinyl coating

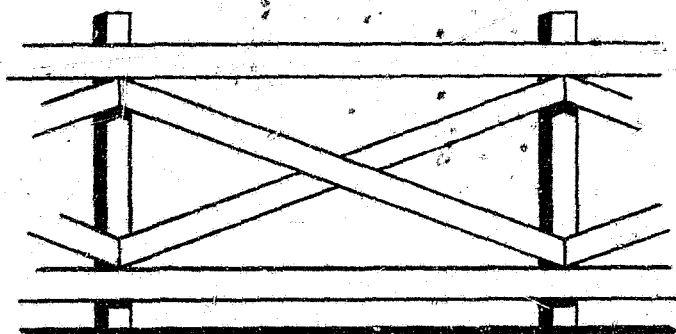
## RECOMMENDED

- Posts spaced every 6-8 feet.
- Post bottoms must be heavily coated with creosote to protect against wood-boring insects and rot.
- Unless in concrete, posts should be sunk 3 feet in the ground to give a solid base.
- Approximate costs

- No. 3, 1" x 6" pine boards, 23 cents per running foot
- 2' x 4', 20 cents per foot
- 7' posts (diameter 5"), \$1.75 each



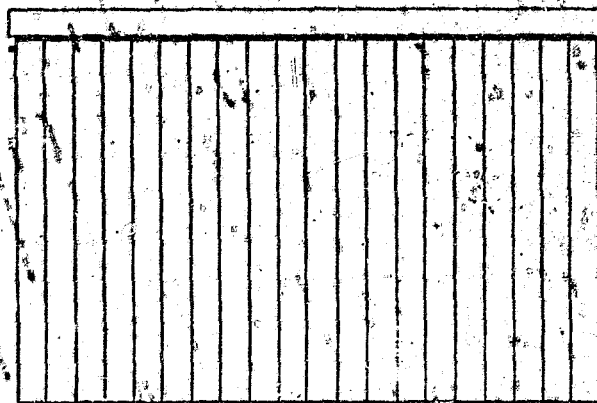
An ordinary picket fence is a good choice because the spaces between the pickets provide visibility from the street. The spaces between each upright picket should be as wide as the pickets themselves, but too small to provide a foothold.



Cross-Rail fences make good use of a minimal lumber supply, but are harder to build than other types of wood fencing.



Basketweave fencing's big advantage is that it looks the same on both sides and has a lot of appeal because of its extra flair.



### NOT RECOMMENDED

Dangerous wire fencing, barbed wire, and umbrella spikes on top of fences trap mostly the relatively innocent: these will not stop the professional thief who will simply throw a jacket or a tarp over the top of the fence and then climb over it. Such fences are prohibited in many areas of the country.

Privacy fencing high enough to obstruct the view into the store and yard area are favored by burglars because they can work behind them without being seen.

It is generally not practical to add an alarm system to the fence since so many environmental factors (dogs, wind, etc.) are responsible for high false alarm rates.

## WALLS AND HEDGES

### Crimes Targeted: Burglary

#### DESCRIPTION

A low wall or hedge does not provide the kind of protection possible with a good fence, but will tend to keep trespassers out merely by serving notice that it encloses private property. Trespassing is itself a misdemeanor in most communities, especially when the property is delineated with a barrier.

#### HIGHLY RECOMMENDED

Possibly your best bet in barriers is a combination of hedge and fence. The hedge should be wide rather than high, and of the prickly or thorny variety. Thorns are more of a discomfort than a hazard, but the discomfort can be considerable. The fence should be placed outside the hedge, partly to protect against scratching of passersby and children and partly to make for an uncomfortable landing in the event someone attempts to climb over the fence.

Hedging that does have thorns includes holly, barberry, and multiflora rose bushes. Such bushes cost about twice as much as ordinary hedging—30 or 40 cents apiece in dozen lots from most nurseries. They are also harder to take care of and require a great deal of watering. Thorny bushes should be kept low to avoid eye injuries and to maintain good visibility.

#### ACCEPTABLE

The ordinary privet hedge (an ornamental shrub of the olive family) is the most widely used boundary marker because this hardy plant grows almost anywhere and requires a minimum of care. Thickly growing hedges are often allowed to grow quite tall for the sake of privacy, but they should be clipped short to allow a clear view from the street.

Various municipal codes restrict the heights of walls, fencing, or hedges with the goal of giving a more pleasing atmosphere to the neighborhood. Some communities have an ordinance

against metal fences for the sake of conformity. Check with local officials before beginning any construction.

#### NOT RECOMMENDED

Walls are not generally cost-effective barriers, unless the wall is an already-existing one. Today's cost of constructing one is out of the range of the small business proprietor. A solid rock or brick wall cuts off the visibility needed for good security. Spike-studded walls or walls with broken bottles cemented along the top are illegal in most areas, as is barbed wire. Check with the police in your area for local ordinances.

#### Further Information:

Griffin, Al, *Home and Apartment Security*, Henry Regnery Co., Chicago, 1975.

Modman, Val, *Practical Ways to Prevent Burglary and Illegal Entry*, Cornerstone Library, New York, 1970.



## WATCHDOGS

### Crimes Targeted: Burglary

#### DESCRIPTION

A watchdog protecting the premises confronts the intruder with an immediate physical threat. The animal's extraordinarily keen sense of smell, acute hearing, courage, and loyalty—and, in the case of larger dogs, the willingness and capability to attack a human being—makes him useful in the protective role. Protective dogs are divided into three general categories. The alarm dog, the harassing dog, and the attack dog. Attack dogs are further sub-categorized based on their training as sentry dogs, home/business protection dogs, and guard dogs. Having a watchdog should never be considered a substitute for good locks and other security measures, but a four-legged burglar alarm can give an added sense of security.

#### HIGHLY RECOMMENDED

Alarm dogs bark at the approach or attempted entry of a stranger onto the premises, but make no attempt to attack the stranger, retreating if threatened, but continuing to bark.

"Yappers" are particularly effective alarm dogs. They are small, nervous dogs, too timid to attack anyone, but their high-pitched yapping can be heard all over the neighborhood. These include Chihuahuas, Pekingese, Pomeranians, Yorkies, Pugs, and Toy Poodles.



Because dogs can discern the slightest perspiration exuded by people under stress, they can sense those individuals who are afraid of them (including burglars). Stress perspiration contains an ingredient that irritates dogs, making anxious persons more subject to attack. This instinctive reaction makes even the most common mutt, without any special training, an effective burglar deterrent.

#### BEWARE OF DOG

Most burglars will avoid a store with a "Beware of the Dog" sign on the door or gate. Considering what he has at stake, the typical burglar will not take a chance if he has an alternative target. Some people buy a sign even if they don't have a dog. In such cases, they should

also buy a dog's feeding dish or dog house to be more convincing.

#### RECOMMENDED

Harassing dogs are somewhat larger dogs who bark at the approach of a stranger and will snarl, growl, and threaten to nip or bite the stranger if he attempts to enter the premises. This dog will continue to harass the stranger as long as he remains on the premises. Certain breeds of dogs do have innate characteristics that make them good watch dogs. These include Airedales, Russian Wolfhounds, Chows, Huskies, Mastiffs, Schnauzers, Spitz, Bloodhounds, Dalmatians, Labradors, and Weimaraners. English Bulldogs can be intimidating by their appearance alone.

#### NOT RECOMMENDED

Attack dogs are large, trained, and physically capable of stopping and seriously injuring a human being. German Shepherds and Doberman Pinschers are suitable temperamentally and physically to become attack dogs.



- A sentry dog accompanies his master to help locate prowlers and will attack only on-command or if his master is threatened. He will stop his attack on command.
- A home/business protection dog will be friendly to visitors welcomed while his master is present, but will attack any intruders in his absence, unless they are family members. He will also stop his attack on command.
- The guard dog works alone in an enclosed area. He will attack any human being who enters that area except his master. The guard dog makes no distinction between proprietor, burglar, or policeman. These dogs are delivered to the protected premises after employees have left at the close of business and are picked up before the employees return in the morning.

These animals are not recommended for use by small-business persons because of the risk and cost factors. The individual who keeps a vicious,

dog stands the same legal risks as a man who keeps a loaded gun around. He is held liable, not the company who leases attack dogs. The costs of courses for training attack dogs and their masters range from \$500—\$800. In addition, dogs require weekly refresher sessions for an additional \$10. The cost of leasing a guard dog ranges from \$200—\$500 per month.

\* **Further Information:**

Griffin, Al, **Home and Apartment Security**, Henry Regnery Co., Chicago, 1975.

Mandelbaum, Albert J., **Fundamentals of Protective Systems**, Charles C. Thomas, Springfield, Illinois, 1973.

## GUARDS

### Crimes Targeted: Robbery, Internal Theft, Burglary, Shoplifting

#### DESCRIPTION

Private security guards are often hired to limit access to or to protect property. The guards' uniforms, shoulder patches, gold braid and badges are for identification only and denote no special legal authority. These guards (unless deputized) have no greater police powers than the right to stop and detain a person witnessed in the act of committing a crime—a right that belongs to every citizen, and they are subject to the same weapons laws as everyone else. The average 8 to 10 hours of training guards receive are far more likely to stress what they cannot do than to provide them with special crime-fighting skills; however, guards as citizens do not have full police powers and are therefore not subject to the various laws and court decisions which govern the conduct of public police officers. Private guards do not have to conform to the Miranda decision, for example (advise suspects of their rights before questioning). A citizen has only the right to detain a suspect. Police officers make the arrest and that's when the Miranda rights are recited. Therefore, any confession blurted out to a private guard before the police arrive can be used in court. So can other evidence seized or discovered by methods denied to police officers.

#### RECOMMENDED

An on-site guard patrolling your property in uniform and on foot can be an effective robbery and burglary deterrent. A highly visible guard is particularly discouraging to the juvenile offender. For small operations, such services can be prohibitively expensive; rates range from \$6 to \$8 an hour. However, by pooling their



resources, a group of businesses could substantially lower their individual costs by having one guard patrol a group of stores.

#### LEGAL RESTRICTIONS

The employer hiring a guard can be held liable for any injury inflicted by that guard on a fleeing suspect while on the employer's property.

Some states now have training and licensing requirements for private guards; check minimum standards in your area before hiring.

Most state citizen arrest statutes limit the use of force to circumstances where the citizen "reasonably believes" it is necessary and where the suspect is one "who in fact has committed such offense." If the suspect is found not to have committed the crime for which he was detained by a citizen, the citizen can be sued for false arrest and damages.

#### NOT RECOMMENDED

Some agencies offer security patrols who check the store at regular intervals, testing the doors and looking for suspicious persons. This method usually does not act as a deterrent because of the patrol's relatively low profile. Some smaller firms do not have adequate communications equipment available in their vehicles for contacting the police, and the training of personnel is very limited. Also, the store checks are usually performed at the same times each night, so they can be anticipated by the potential burglar.



#### Further Information:

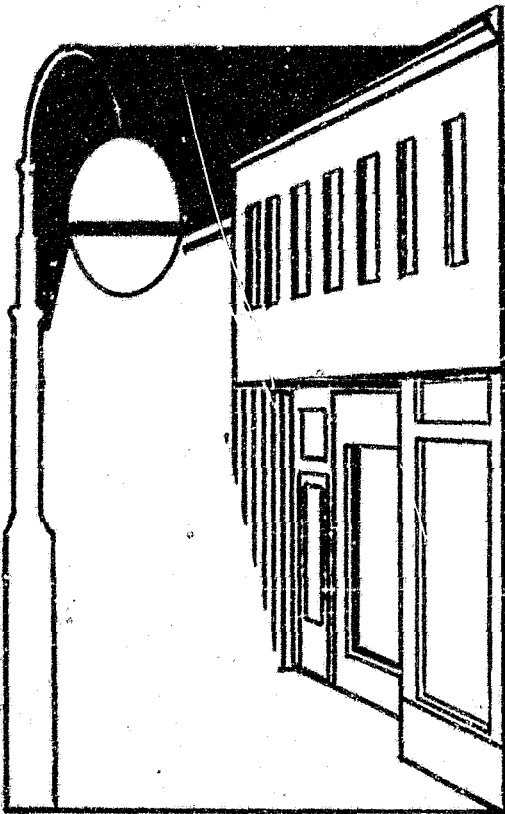
Milton and Lipson, *On Guard—The Business of Private Security*, Quadrangle, 1975.

## LIGHTING (EXTERIOR)

**Crimes Targeted: Burglary, Robbery**

### DESCRIPTION

The value of adequate lighting as a deterrent to crime cannot be overemphasized. In fact, good lighting is now considered such an effective crime control measure that the law, in many parts of the country, requires business establishments to maintain acceptable lighting levels at all times. There are two kinds of lighting which should concern you: exterior and interior. Both are essential components of your establishment's security, and, with good planning on your part, can be accomplished in a



manner that is cost-effective and energy conserving (see Space Protection section for interior lighting).

### HIGHLY RECOMMENDED

The kind of exterior lighting you will need is directly dependent on the location of your business. Regardless of location, however, you will want to remember this general rule of thumb: light up all the dark areas outside your store!

There is only one sure-fire way to know your building is adequately lighted. Go to your place of business at night, and, putting yourself in the position of the potential burglar, search for any and all points of possible entry. Carefully look around to see if there are any places where a burglar could remain concealed from view while breaking into your store through a door, window, ventilator, or other points of possible entry.

If your building is isolated, you may need to light up all sides of your store.

If your building is small, four vandal-proof lights mounted on fixtures at the corners of the building may be adequate.

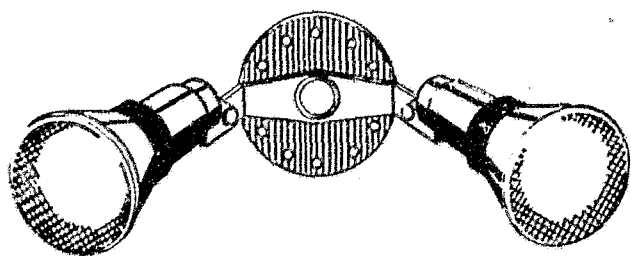
Your exterior lights should be permanent fixtures, well installed and maintained properly. Mount them so that they will be difficult to reach.

If your building is part of a shopping complex, street lighting may be adequate for the front of your store but will provide no protection for the rear. You can install a light at the rear of your store, usually over a rear door or other points of high vulnerability.

Clearly, the least expensive thing you can do is to get together with the other merchants in your complex and petition the city or county government to install adequate lighting the entire length of your alley, thereby making any intruder clearly visible to a police officer or other person who happens by.

Ideally, exterior lights should be on light standards at the perimeter of the property, directed toward the building. This lights both the grounds and the building exterior.

On a business that does not have any grounds of its own, but common grounds only, lights should be extended from the building by metal supports approximately 4 feet long. Fixtures mounted in this fashion should be angled in slightly, toward the building. Mounting exterior lights directly on the building does not illuminate the exterior, but rather tends to blind anyone looking at the building. Burglars say this type of light affords them double protection, by allowing them a place to work in the dark and, additionally, allowing them a good view of anyone approaching.



## TYPES OF EXTERIOR LIGHTS AND THEIR COSTS

### Floodlights

Many businesses, especially those in isolated areas, mount floodlights high on the corners of their buildings to cover sides of buildings not illuminated by streetlights. Double-socketed holders, such as the one shown here, cost about \$5.00, and the bulbs average slightly under \$3.00 each.

### Incandescent light Bulbs

Warehouses, in particular, use these bulbs screwed into the middle of a metal reflector. A typical, weather-resistant one, with an aluminum reflector 14" in diameter, costs about \$5.00.

### RECOMMENDED

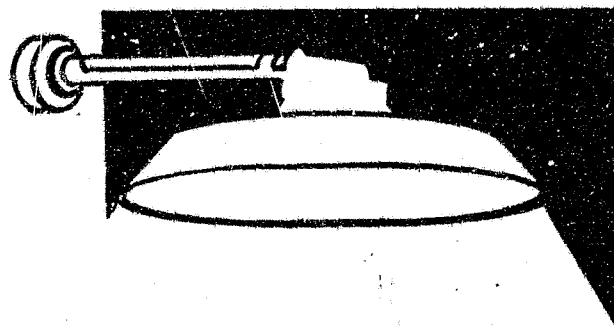
Although the initial investment is considerable, mercury vapor and high-pressure sodium lighting systems are now widely used for

general streetlighting in shopping center complexes and other areas frequented by the public. Mercury vapor bulbs, for example, last many times longer than conventional incandescent light bulbs and give considerably more light per watt as well. However, the most energy-efficient light source on the market today is high-pressure sodium lighting reported to use approximately 50 percent less energy to produce the same amount of light as mercury vapor lighting. Unfortunately, the costs associated with the implementation and maintenance of these lighting systems make them prohibitive for most small business retailers. Again, it is suggested that your city or county government be made aware of your lighting needs. You may be eligible to become part of a city—or county—sponsored lighting program, especially if your business is part of a complex or an area that is considered part of a high-crime corridor.

### Further Information:

Griffin, Al, *Home and Apartment Security*, Henry Regnery Co., Chicago, 1975.

Post, Richard S. and Arthur A. Kingsbury, *Security Administration: An Introduction*, Charles C. Thomas, Springfield, Illinois, 1973.



## Section 2: ENTRY PROTECTION

### Crime Targeted: Burglary

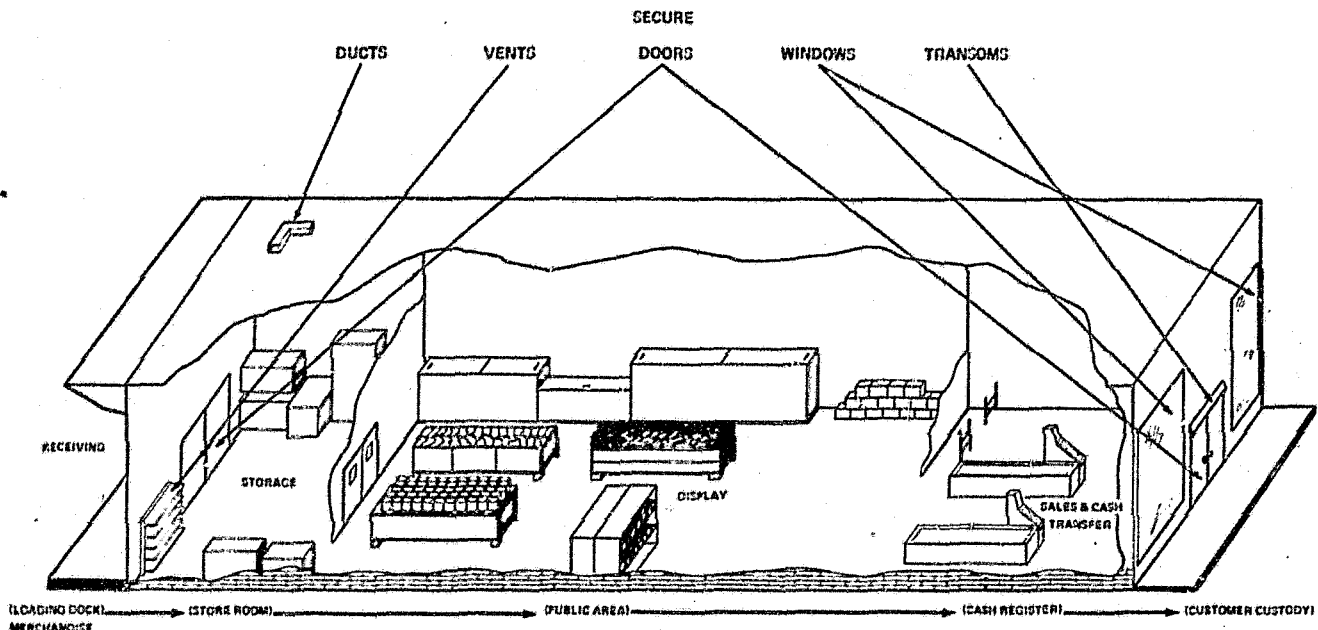
Entry protection includes all security applications at points of entry and at vulnerable spots in roofs and walls. Creating a delay is perhaps their most important function, since few techniques are completely burglary-resistant; however, there is a decided deterrent effect for those intruders who recognize the apprehension risk involved in a long delay. Finally, if the deterrent effect fails and a break-in occurs, the security hardware will show physical evidence

of the intruder's attack—an aid to police and a must for recovery of your losses.

### Selected Measures

- Door Protection
- Window Protection
- Miscellaneous Entry Protection

Although certain types of alarms clearly fall within the category of entry protection measures, information on these and other alarm types may be found in the special Alarm section at the end of the Catalog.



**FIGURE 2**  
**ENTRY PROTECTION**

## DOOR PROTECTION

### Crime Targeted: Burglary

#### DESCRIPTION

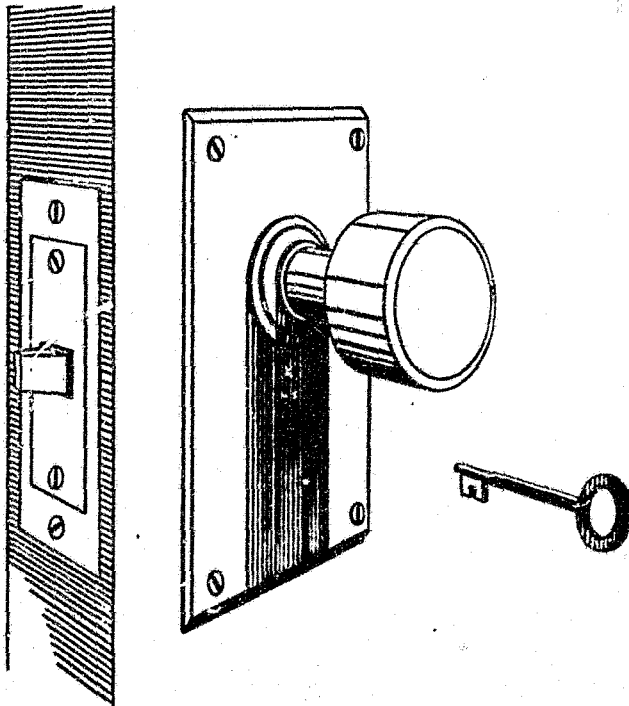
Without a doubt, the most vulnerable area any business has in regard to intrusion is doors. According to the FBI, over 75 percent of all burglaries involve entry through the front or back door. One reason is that a door is only as strong as its lock. Doors too fragile for adequate protection, doors improperly fit in jambs, and exposed hinges—all add to the problem. Doors, however, are most often the easiest points to secure as well as the least expensive. In this section is a description of basic lock and door types. Note that construction materials used in each door type may pose special problems in terms of security and should influence your choice of locks and/or other fasteners. In reviewing the locks, we will begin with the weakest (those not recommended) in order to introduce the basic lock components, and show how additional features on the stronger locks make them effective in counteracting burglar attacks.

#### TYPES OF LOCKS

##### NOT RECOMMENDED

##### Skeleton Key Tumbler Lock (Warded Lock)

A warded lock is operated with a shaft-and-tang key, and is the easiest type of lock to pick. In a

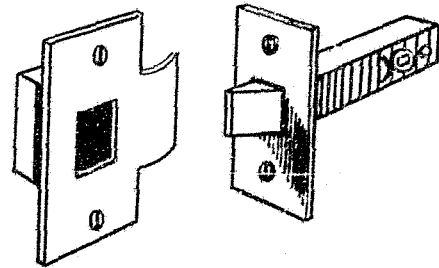


warded lock, the key tang engages the bolt directly and slides it back into the door as the key is turned. To prevent any tanged key from

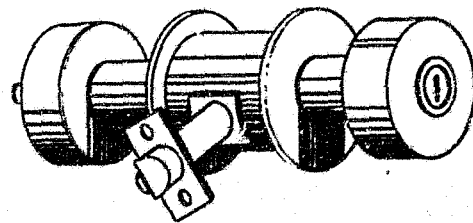
unlocking the door, the lock has metal projections to block contact with the bolt by unmatched keys. The key must be cut so as to allow it to pass over the wards when it is turned. However, a collection of skeleton keys purchased at a dime store will open most warded locks, because their thin tangs simply bypass the wards. A warded lock is just as easily picked by using a strong metal strip about 3/16" wide to evade the wards and flip back the bolt. Since it has to be locked from the outside with a key, the warded lock is actually a deadbolt and was once the only type of lock in existence. Many older buildings still are secured only with warded locks.

##### Key in Knob Locks (Spring Latch and Tumbler Cylinder)

These types of locks have the locking mechanism and keyhole in the doorknob. The spring latch has a bolt cut on a diagonal to allow



anyone going through the door to shut the door and have it lock automatically. An intruder only needs to slide the bolt back into its channel with a piece of celluloid or a knife blade to gain entry. The spring latch is recommended for interior doors only. In a cylinder lock the key turns only the cylinder and does not make direct contact with the bolt itself. The keyhole is slotted to admit only a key whose slots have been cut on its flat side to conform to the pat-

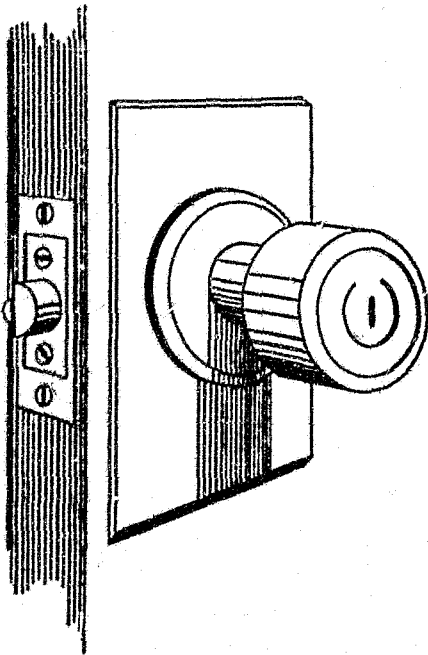


tern. Notches cut into the edge of the key (bitting) activate interior discs or pins and, if the pins fall (tumble) into the notches to the proper

depth, they line up evenly across the edge of the cylinder, allowing it to turn. The cylinder lock is much more difficult to defeat than the warded lock because three to seven pins or tumblers must be manipulated one at a time for this lock to be picked. While key-in-knob locks may be reasonably difficult to pick, they are nevertheless quite vulnerable to physical attack. An intruder can break off the whole door knob with one hammer blow, exposing the locking mechanism, which can then simply be pulled out.

#### RECOMMENDED Deadbolt Latch

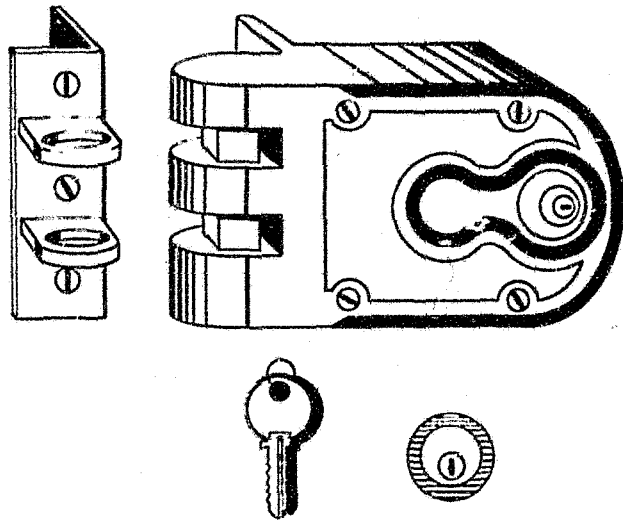
At less than \$1.00 expense, an existing spring latch can be modified with the addition of a deadbolt latch. This latch has a small bar alongside the latch bolt. When the door is closed, the bar pushes into the locking mechanism and prevents the latch bolt from being forced back. The locking system can no longer be compromised by "loiding" (celluloiding). However, the key in the knob configuration still leaves it open to physical attack.



#### Deadbolt Lock

Deadbolt is a straight bar, usually rectangular, that is squared off at the end and locked only by turning a key or knob. The deadbolt of a lock used to backup a primary lock should be at least 5/8 inch square of steel or solid brass,

and should stick out of the lock at least 1 inch. Many deadbolts are so short that they barely go into the strike plate's cavity when the doors are locked. When the door is jimmied (bent or stretched away from the frame), the bolt slips out of the strike very readily. A full 1-inch throw eliminates this possibility. A vertical type of deadbolt is particularly effective in resisting the jimmying efforts of an intruder. Instead of a cavity in the strike plate, the vertical bolt is received by two heavy rings mounted against the inside of the door frame. Cost is from \$10 to \$15. With both regular and vertical deadbolts, the outside lock is on the door, not in the knob. The cylinder sides should be beveled or tapered to resist tampering.



#### Combination Lock

Some locks on the market have no keyhole of any kind: they work with push buttons and a combination. A mechanically operated latch will retract when the numbered buttons are pushed in the right sequence. One button pushed from the inside makes all of the buttons inoperative even with the correct combination. The door can be opened from the inside by pushing a single unlock button, certainly more time-saving than a key in the event of fire. Locking the door from the outside is accomplished by pushing a reset bar. The combination can be changed by removing an inside cover plate and replacing two combination slides which cost \$2.50 a pair. The total cost of these locks is between \$25 and \$40 per door.

#### Application of Locks to Door Types Crime Targeted: Burglary

##### Wooden Doors

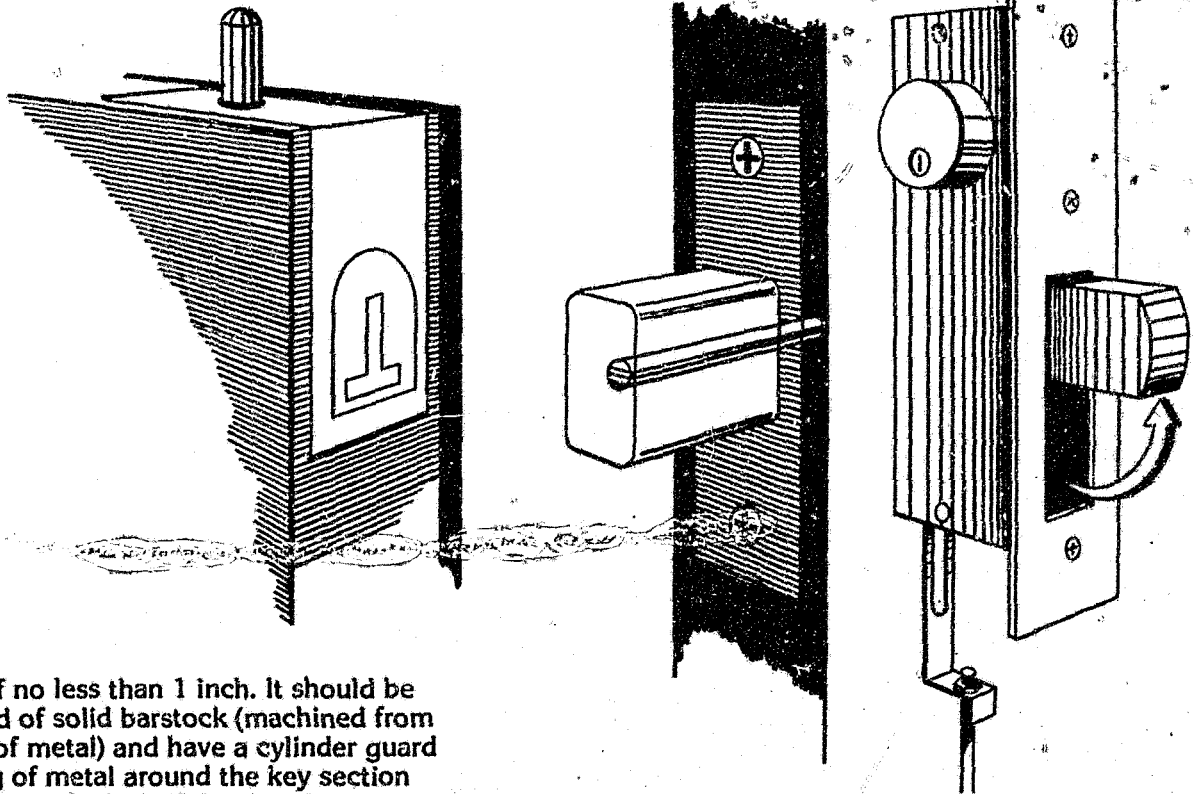
Door security has diminished over the years as the cost of building materials has continued to



rise. The average door being built today is a skeleton of poor-grade wood and cardboard filler with a thin covering of decorative softwood. This hollow-core construction makes it possible to smash a hole in the door with a fist, reach in and unlock the door from the inside. A hollow-core door should be replaced with one of solid construction, 1¾ inches thick. If replacement is too costly, hollow-cored doors or doors constructed of thin wood paneling should be reinforced with at least 16-gauge sheet steel attached with screws. A single door should be equipped with either a double-cylinder deadlock that unlocks from both the outside and inside by a key, or with a cylinder deadlock that unlocks from the outside by key and from the inside by a knob, or a deadlocking latch that unlocks from the outside by key and from the inside by a knob. This lock should have a bolt throw (the distance the bolt travels into the

### Aluminum Extrusion Doors Cylinder Vertical/Horizontal Bolt Steel Insert

Generally used for customer entrance, this door type is constructed of a thin, extruded aluminum shell with glass covering the majority of the surface area. These doors are vulnerable because the aluminum frames and extrusions can be easily spread with pry bars or other leverage tools. One vulnerable point is the lock cylinder which must by necessity be extended out from the surface of the door, since aluminum doors are thinner than standard wood doors. To prevent removal of the cylinder with prying tools a beveled, case-hardened cylinder guard is required. Adding an armored steel



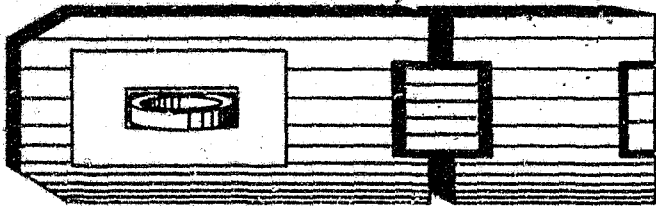
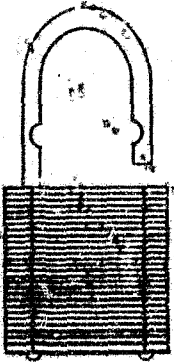
receiver) of no less than 1 inch. It should be constructed of solid barstock (machined from one piece of metal) and have a cylinder guard ring (a ring of metal around the key section having a beveled edge). If the door has nontempered glass panels within 40 inches of the doorknob, only a double cylinder deadlock that unlocks from both inside and outside by a key is recommended to prevent reaching in through broken glass to unlock the door from the inside. Double doors should be equipped with these types of locks on the active leaf and flush bolts should be installed at the top and bottom of the inactive leaf.

strike plate will discourage attempts to peel the door jamb of the aluminum frame away from the latching bolt by distributing the force of a burglar's tool over a larger area. As in the case of wooden doors with glass, the lock should be a dead bolt requiring a key to unlock both sides. The bolt may still be vulnerable to hacksawing through the space between the

edge of the door and the door frame. For this reason the bolt should extend from the vertical to the horizontal position (a configuration which is more difficult to defeat than the standard bolt in-and-out action). An alternative is a dead bolt having a free-turning steel insert which makes it impossible to saw through.

#### Overhead or Receiving Doors

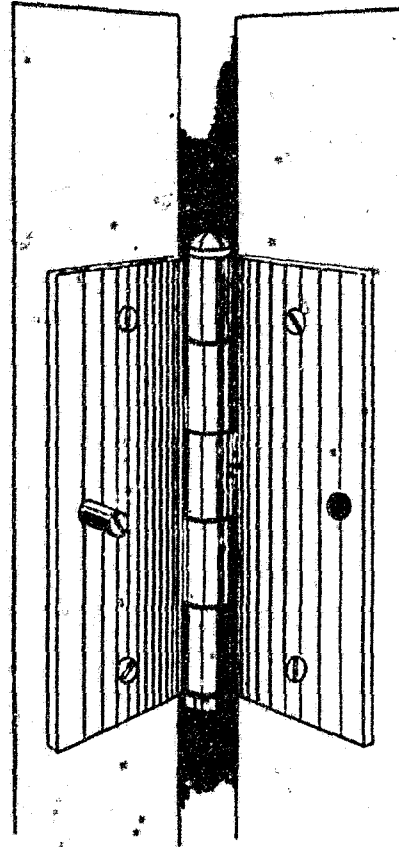
These doors are used primarily for loading and unloading of stock, or moving merchandise into or out of a location. Some are merely wooden panels, while others are made of aluminum or steel; they may be rolling overhead, solid overhead, swinging, sliding, or accordion garage-style doors. Whatever the type, the large expanse of these doors requires that lightweight materials be used in their construction to facilitate their movement and operation. For this reason, in addition to their customary location in the rear or side of the store, they are particularly susceptible to attack. Overhead doors of the roll-down type should be locked either by electric power or equipped on the inside with slide bolts on the bottom bar and with a cylinder deadlock. The other garage-type doors should be secured with a cylinder deadlock, padlock, and/or metal slide bar, bolt,



or crossbar on the inside. If a padlock is used it should be of hardened steel, 9/32" shackle, with a double-locking mechanism-heel and toe, a fire-pin tumbler, and a key-retaining feature that prevents removal of the key when the lock is unlocked. The hasp should also be of hardened steel and installed with carriage bolts.

If any door should have outside hinges, you can prevent its being lifted from its hinges through

the removal of the pins by following these easy steps. Remove two screws, opposite each other, from both leafs of your hinge. Insert screw or concrete nail into the jamb leaf protruding 1/2". Drill out the opposing screw hole in door. Do this in the top and bottom hinge of the door. When closed, the pins may be removed, but the door will remain firmly in place.



One of the most common ways a burglar breaks through doors is by breaking the strike plate out of the door frame. The strike is the metal plate attached to the side of the door frame where the bolt latches the door. Frequently, the screws used to attach the strike to the frame are too short, so the strike is easy to pull loose from the frame. Using a longer-than-normal strike as well as screws long enough to go all the way through the frame and into the wall studs will make the strike more burglary-resistant.

#### Further Information:

Moolman, Val, *Practical Ways to Prevent Burglary and Illegal Entry*, Cornerstone Library, New York, 1970.

## WINDOW PROTECTION

### Crime Targeted: Burglary

#### DESCRIPTION

Most entries occur by force through an existing opening in a building, such as a door or a window. Windows offer easy access to the building unless adequately protected. Display windows in retail stores are susceptible to hit-and-run tactics. Other windows, poorly protected, permit the intruder to enter the building, often-times undetected, particularly when the windows are poorly lighted. Windows should offer light, ventilation, and visibility, but not easy access. In this section, window types and the most effective means of securing particular window types will be discussed. In addition, some general rules apply in all cases.

#### RECOMMENDED

- Windows and frames must be secure and in good condition: the best of locks do little for a window with a rotten frame or one that can be pried loose.
- Locks should be designed and located so they cannot be reached and opened by breaking the glass. All windows should be equipped with key locks.
- Properly installed grates, while not always aesthetically pleasing, give maximum security to all types of windows. Many ironwork companies specialize in designing attractive grills that both complement the store's decor and discourage burglars.
- Glazing (safety glass) and glass bricks are expensive, but highly effective in preventing burglaries, since they are so resistant to conventional burglary tools.
- Cleaning windowsills periodically will permit clearer fingerprints to be left by an intruder.
- Alarm systems can be very effective for protecting window openings and are discussed separately in the section on alarms.

#### NOT RECOMMENDED

- Do not depend on locks mounted on windows as original equipment. Burglars expect to encounter these devices and they are easily defeated.
- Avoid, whenever possible, window displays that obstruct the view into the building. Do not protect window entry by piling heavy materials in front of the opening.

- Do not lock a window in a ventilating position overnight. If windows are locked in a ventilating position with a key-locking device, they should also be pinned to counter prying attempts.
- Do not leave expensive or small items in windows overnight. These items invite burglaries.

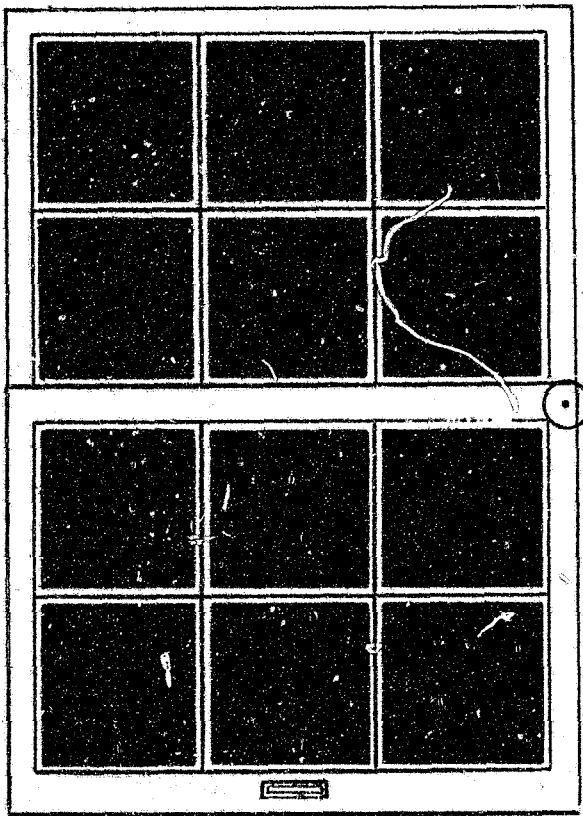
#### A Word about Glass . . .

Cutting or breaking a hole in window glass is a common method burglars use to gain entrance into a store. The replacement of standard glass with burglary-resistant glazing in store-front display windows is a good defense against the smash and grab technique. Burglary-resistant glazing is available in polycarbonate and acrylic materials as well as in a laminated construction. (Laminated glass has a tough, high-tensile plastic inner layer pressed between two sheets of glass.) In other windows where appearance is not the main consideration, wire-mesh safety glass may be used. However, while it may seem to the casual observer that wire mesh safety glass provides a much stronger barrier than ordinary window glass, the sections actually can be broken out very easily, and it simply does not justify the additional cost. Both types of glass are extremely expensive, and, unless you have a jewelry store or other highly vulnerable business, it is more cost-effective to stick with regular glass. You should consider burglary-resistant glass if you are located in a high-crime area and consider the advantages carefully in line with cost. Wire-mesh safety glass costs about \$2.50 per square foot (more than twice as much as regular, double-strength window glass), and the laminated safety glass costs about \$6.00 per square foot plus installation.

#### Sash or Double-Hung Windows

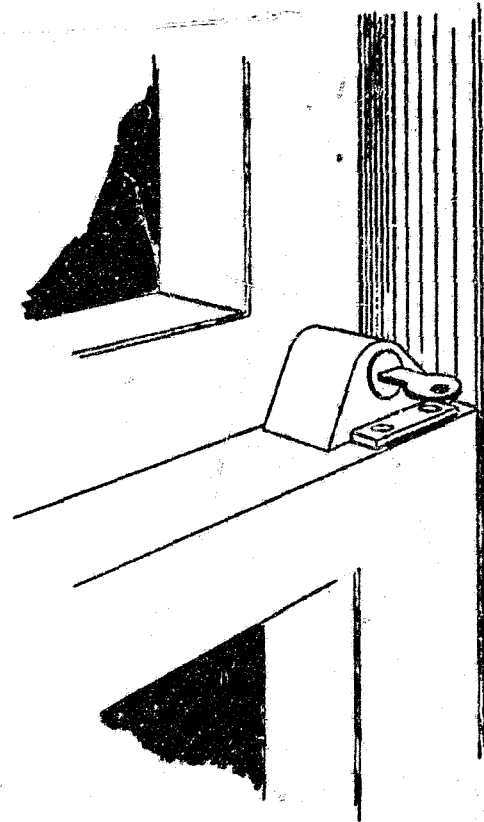
The most common window type is a double-hung, wooden-framed-sash, having top and bottom halves that can be locked together with a sash lock. The sash lock consists of a curved turnknob on the top edge of a bottom window and a receptacle on the bottom edge of the top window. Usually, the two parts of the window do not fit snugly together, so that a knife can be inserted between the two sashes to maneuver the latch out of its catch. If the fit is too tight for a knife, an intruder may grasp both sides of the lower sash and rotate the window until the

latch arm rides out on its catch. Obviously, the existing sash lock is not sufficient security and is not recommended as the sole means of window protection. To thwart these tactics, police crime prevention units recommend that windows not being used be screwed shut. All windows in use should be secured with key-controlled window locks that can secure a window in a closed position as well as in a slightly open position to provide ventilation. The only keyless lock that is recommended resembles the conventional sash lock which, when the turn latch is rotated to a closed position, pulls the two parts of the window so tight that even a knife blade cannot be inserted between sill and frame. It also has an extra lever that serves as a snap lock so that no amount of shaking will dislodge it. Cost of both the keyless and key-controlled locks runs between \$3 and \$4. Even



less-expensive windows may be secured by drilling a downward-sloping hole into the top of the bottom window through and into the bottom of the top window and inserting a pin or nail to form an inner wedge. This pin should be cut so

that the end is flush to the wood. In the event a burglar breaks the glass and reaches in, he will not be able to pull the pin out even with needle-nosed pliers. If the pin needs to be moved for any reason, you can draw it out with a magnet which the burglar is not likely to be carrying around with him.

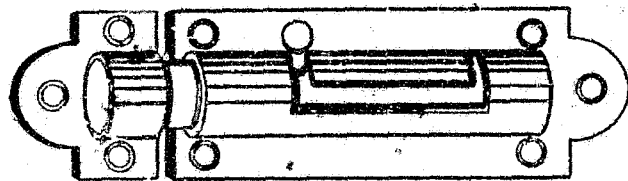
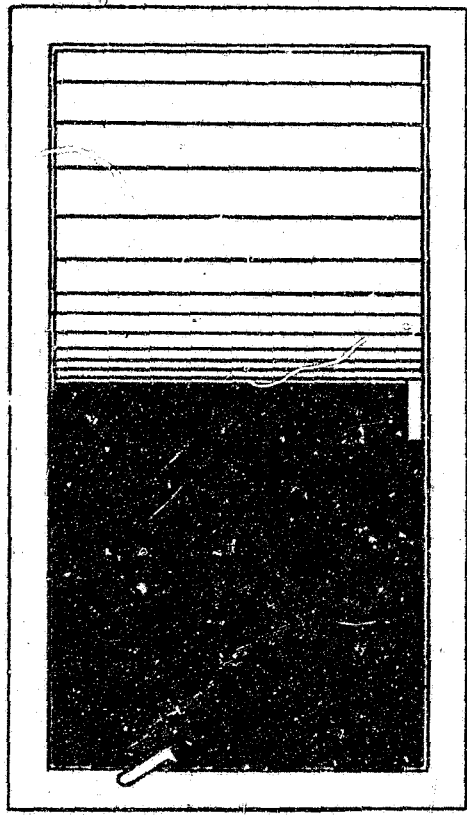


#### Casement Windows

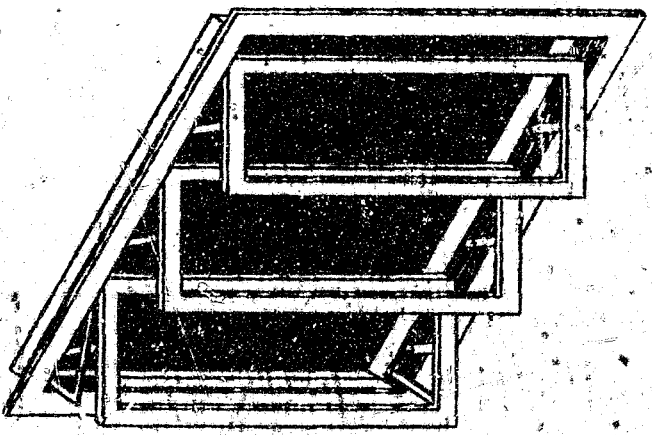
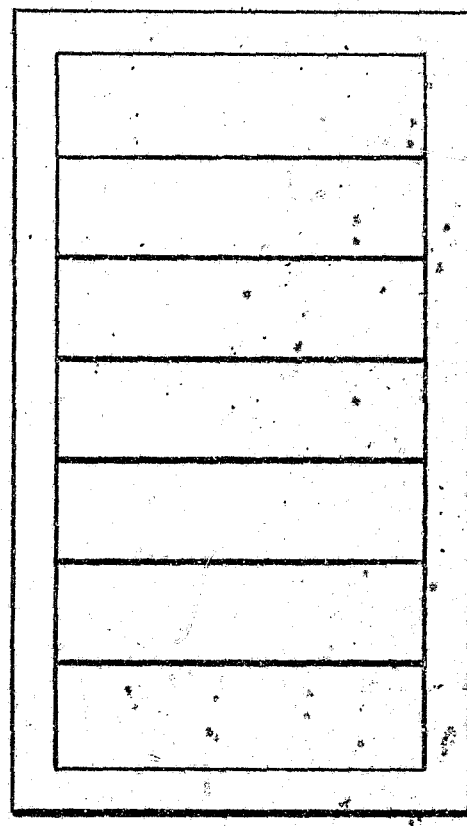
Casement windows are usually hinged at the sides and swing out from the wall, with any screening inside the window. They are operated from the inside with a hand crank which has no locking mechanism, thus allowing an intruder to pry the window open by springing the weak crank device. The edges of the window can be locked with a clamp or latch, making it necessary to break glass to obtain entry. Basement windows are casement windows hinged at the top and opening inwards. The original catches can be quickly unlocked after cutting a hole in the glass. A 29 cent surface bolt (barrel

**Louvre (Jalousie) Windows**

Louvre windows are a bad security risk because the individual panes of glass can be removed by simply sliding them out of the frame. If possible, remove louvre windows and replace with the awning type. Awning windows are split into three panels which open out from the bottom with a crank. The crank, which also serves as a locking system, secures each panel making it very difficult to force any of them open from the outside. The cost of replacement is about \$30-\$45 a window.

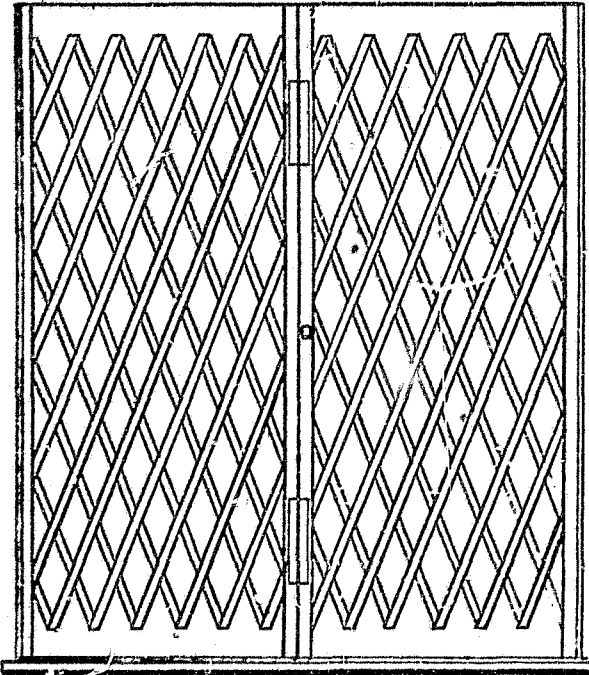


bolt) mounted at each side of the window will slow down a burglar by costing him time to locate them.



**Bars and Grills**

Display windows, window-mounted air conditioners, and rear windows should be protected by some kind of grillwork, bars, or grates. A steel-framed window guard with heavy-gauge mesh (slightly heavier than chain-link fencing) costs less than 20 cents per square foot and is difficult to defeat with wire cutters. Window guards should be removable or hinged at the top or side to allow for removal during business hours and for emergency exit. Some window guards are made of crisscross steel slats, of the same design as wooden "baby gates" and may be seen in high-crime districts to cover entire



store fronts at night. Inside locks should be covered to prevent tampering and hinges should be plugged to prevent their pins from being pushed out. Barred windows are most often built with both tops and bottoms cemented in masonry and cost from \$25-\$30 a window. They are practically burglar-proof, but obstruct the exit in case of fire.

**Further Information:**

Barnes, R.E., *Are You Safe From Burglars?*,  
Doubleday and Co. New York, 1971.

## MISCELLANEOUS ENTRY PROTECTION

### Crimes Targeted: Burglary

#### DESCRIPTION

There are usually many openings into a business building other than windows and doors. Anywhere an opening exists is a potential point of entry for the criminal. Some adult-sized burglars can enter your business through an opening as small as 8 inches across, so don't take chances. Accessory openings are often shielded from view, located on roofs or at the side or rear of the store, allowing ample time for entry without observation. In stores where such openings serve no purpose, proprietors can have them permanently sealed. Before doing so, however, the store owner should check with the fire department to determine whether safety requirements are met.

#### RECOMMENDED

##### Roof Openings

All roof openings should be barred or covered with heavy-gauge screening from the inside.

- Skylights should be protected with
  - Iron bars at least 1/2-inch round or 1-inch x 1 1/2-inch flat steel material under the skylight and securely fastened.
  - A steel grill of at least 1/8-inch material, but not more than 2-inch mesh.
- Hatches should be secured as follows:
  - If wooden, they should be covered on the inside with at least 16-gauge sheet steel attached with screws.
  - They should be secured from the inside with a slide bar or slide bolts.
  - Outside hinges should be provided with nonremovable pins. Such hinge pins may be welded, flanged, or secured by a screw.
- Air ducts or vent openings should be provided with
  - Iron bars of at least 1/2-inch round or 1-inch x 1/4-inch flat steel material,

spaced no more than 5 inches apart and securely fastened

- A steel grill of at least 1/8-inch material of 2-inch mesh and securely fastened.

#### Transoms

All exterior transoms larger than 8 inches x 12 inches on the side and rear of the buildings should be protected by

- Outside iron bars of at least 1/2-inch round or 1-inch x 1/4-inch flat steel material, spaced no more than 5 inches apart
- Outside iron or steel grills of at least 1/8-inch material but no more than 2-inch mesh.

#### Fire Escapes

Because human life must, of course, be valued above any possible property loss, a fire escape may be a necessary weakness in your security system. However, it is generally possible to construct a fire escape making access difficult from the ground by counter-balancing the lowest section of steps so that it remains in a raised position when not in use. A window that leads to a fire escape should be properly locked (see Window Modifications) with window keys kept near at hand.

#### NOT RECOMMENDED

- A crossbar or padlock should not be used to secure any accessible opening that may be considered as a fire exit during hours when your business is open.
- Bars, screens, grills, and other barriers generally should not be installed on the outside of an opening. If the barrier is on the outside it should be secured with rounded headflush (carriage) bolts instead of screws.

#### Further Information:

Cule, Richard B., *The Application of Security Systems and Hardware*, Charles C. Thomas, Springfield, Illinois, 1970.

## Section 3: SPACE PROTECTION

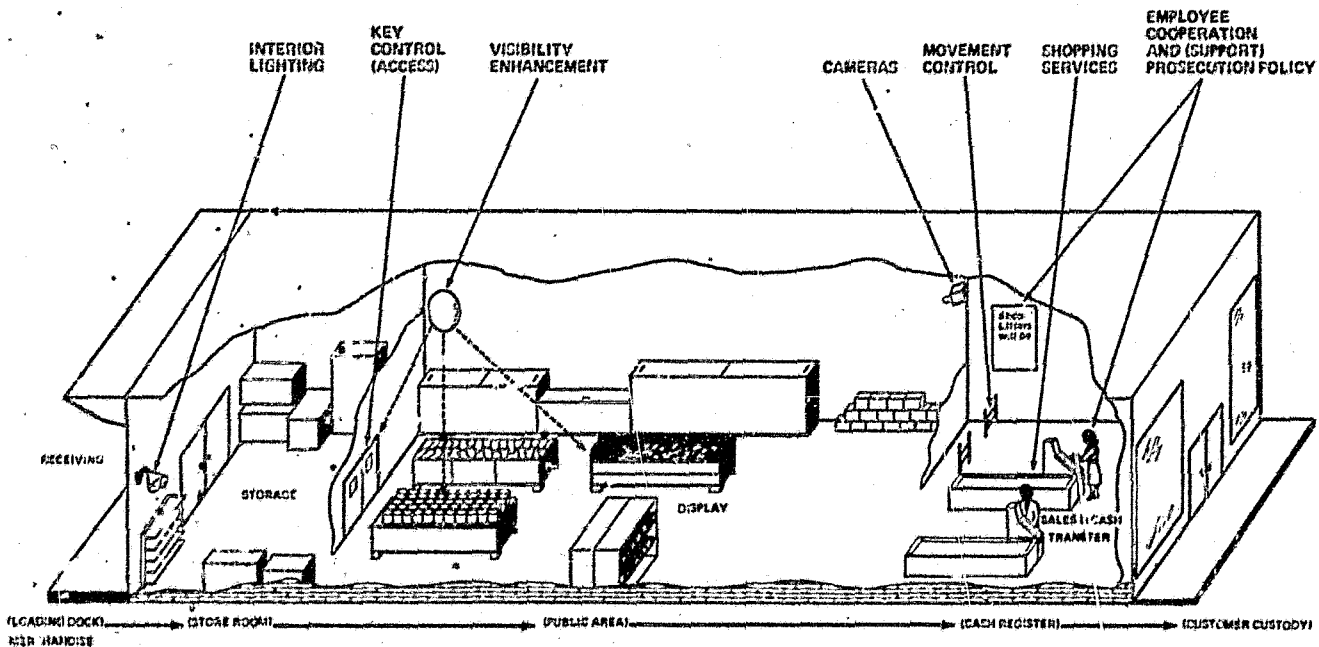
### Crimes Targeted: Robbery, Burglary, Shoplifting, Internal Theft

Space protection includes all those methods of monitoring the interior spaces or areas of a facility. They are of crucial importance in deterring or detecting the crimes of shoplifting and internal theft in a retail facility where the objective is to encourage rather than to prevent free access by the public. In terms of robbery and burglary control, they should be considered only as support or back-up measures to primary entry protection, in the event it is compromised or to detect the presence of a "hide-behind" burglar.

#### Selected Measures

- Lighting (Interior)
- Key Control
- Visibility Enhancement
- Cameras
- Movement Controls
- Shopping Services
- Employee Motivation and Screening
- Prosecution Policy

Although certain types of alarms clearly fall within the category of space protection measures, information on these and other alarm types may be found in the special alarm section at the end of the catalog.



**FIGURE 3**  
**INTERNAL (SPACE) PROTECTION**

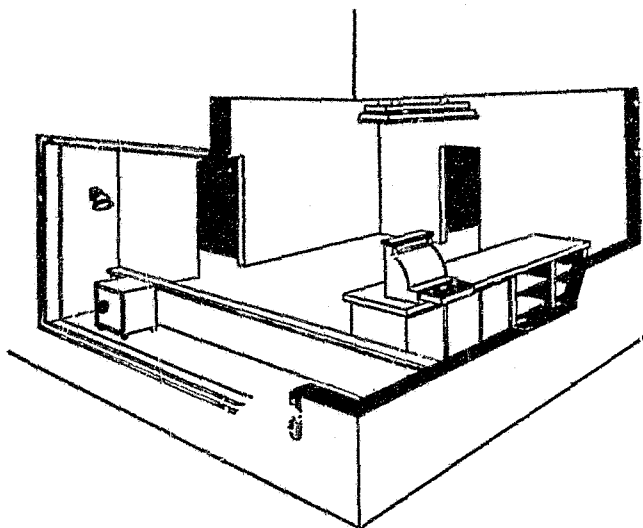


## LIGHTING (INTERIOR)

**Crimes Targeted: Burglary, Robbery, Internal Theft, Shoplifting**

### DESCRIPTION

The value of adequate lighting as a deterrent to crime cannot be overemphasized. In fact, good lighting is now considered such an effective crime control measure that the law, in many parts of the country, requires business establishments to maintain acceptable lighting



**Safe Lighted And in Open View  
Building Interior Well Lighted**

levels at all times. There are two kinds of lighting which should concern you: exterior and interior lighting. Both are essential components of your establishment's security and, with good planning on your part, can be accomplished in a manner that is cost-effective and energy conserving. (See Property Line Protection section for Exterior Lighting.)

### HIGHLY RECOMMENDED

Night lighting the interior of your business is just as important as lighting the exterior. Most stores and retail outlets today use an "open front" design. This means that store fronts are designed so that it is possible to stand on the sidewalk and observe a large portion of the store's interior. This type of design is excellent when combined with proper interior lighting since it will do much to discourage the potential burglar who uses the cover of darkness to pursue his craft. Additionally, good interior lighting is excellent advertising for your business. During the hours when you are closed, a well-lighted interior becomes one giant display window for advertising your wares.

Make certain your safe and cash register are in clear view from the street and well-lighted. Mount a small light over the safe: usually it needn't be more than a 15-watt bulb. The important point to remember is to always leave that light burning at night. The police will get used to seeing it, and will respond quickly if they observe that the light is out. For the display area, a single fluorescent overhead light is recommended. Although you may require extensive lighting during daylight hours, you will find that comparatively little wattage will adequately illuminate the interior of your business at night.

### RECOMMENDED

If you can afford it, a lighted sign which advertises your business, and which does not obstruct the view of your interior from the street, could be an excellent security measure to counter burglary. Essentially, the rationale for good interior lighting is the same as that for having good lighting around the exterior of your business. Visiting your business at night will give you the perspective you need regarding lighting. See how well you can light up the interior of your business with a minimum number of lights. You may be surprised at how easily you can implement a security lighting system that is cost-effective.

### Burglars Fear Light

If your business is the type which does not lend itself to full lighting of the display area, make certain that all valuable merchandise is kept in areas that are observable from the street and well lighted. Mount a light at the far end of the aisle containing the valuable stock. This light will silhouette any person in your store and will make it extremely difficult for a burglar to work undetected.

### Further Information:

Griffin, Al, *Home and Apartment Security*, Henry Regnery Co., Chicago, 1975.

Post, Richard S., and Arthur A. Kingsbury, *Security Administration: An Introduction*, Charles C. Thomas, Springfield, Illinois, 1973.

## KEY CONTROL

### Crimes Targeted: Burglary, Internal Theft

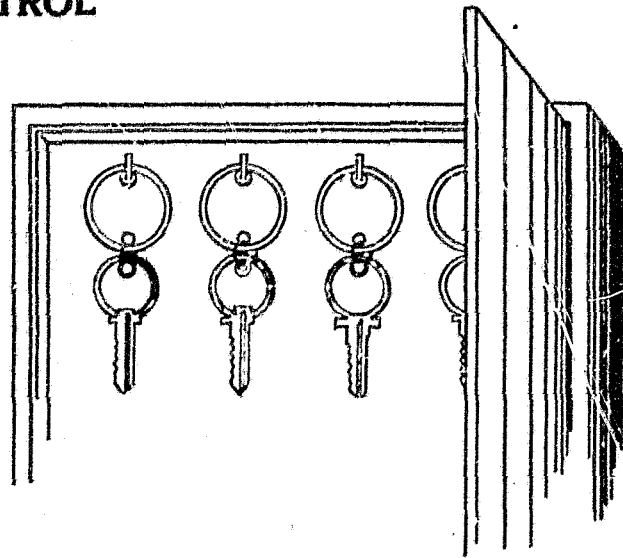
#### DESCRIPTION

Key control is just as important as having good secure locks on all of your doors. In the words of one security expert, "Locks are only as good as the care you take of your keys." If, for example, an employee or someone else is able to gain unauthorized entry into your business, he may be able to gain access to valuable records in addition to the more obvious danger of his being able to steal cash or merchandise. If you can restrict the number of your employees with keys or combinations, the number of suspects for an overnight loss will automatically be reduced. All keys should be tightly controlled and inventoried. Below are some suggestions for instituting good control.

#### RECOMMENDED

##### Guidelines to Key Control

- Keep a written record of all key identification numbers. Numbers should be coded so that keys cannot be matched with corresponding locks.
- Maintain an individual key record for each key, indicating dates and individuals to whom the key was assigned.
- Hold periodic inspections to assure that possession of keys corresponds to the assignment record.
- Employees should turn in all keys in their possession before leaving your employ. As a safeguard, all locks should be rekeyed in the event keys have been duplicated. You can do this most cost-effectively by obtaining an open end continuing contract with a locksmith in your vicinity.
- Have the keys you issue to employees engraved "do not duplicate." Even if an employee were to try duplicating the key, the engraving will likely stop most locksmiths from honoring his request.
- If your business is operated in a fairly large area, you should consider a master key system. This system will allow you to control which doors can be opened by which employees.
- Keys should not be maintained where they are accessible to the public or even to your employees in general. A cabinet with numbered pegs should be used to store file keys, loan keys, and loan tags. File



keys should be tagged with a label indicating that they are not to be loaned out, and they should be attached to the peg so that they cannot be removed except by you. Duplicates of file keys should be labeled "duplicate" and hung together on a separate peg. Loan tags with date and borrower's name may be hung on the peg from which the key was taken.

#### A Special Note About Opening and Closing Procedures

If possible, you should have another person with you when opening your business. First, carefully observe the exterior for any suspicious circumstances or indications of forced entry. If everything appears to be okay, you should then enter the premise singly. The person who enters first should routinely scout the interior before signaling to the second person that it is safe to enter the store. After the second person has entered, the door should be relocked until you are officially ready to open for business.

At closing time, make certain that the same door is used by everyone who exits the premises. If you have at least one employee working for you, station that person at the exit while you check all doors and windows to make certain your building is secured. If you have an alarm system, let activating the system be the last thing you do before exiting.

#### Further Information:

Cole, Richard B., *The Application of Security Systems and Hardware*, Charles C. Thomas, Springfield, Illinois, 1970.

## VISIBILITY ENHANCEMENT

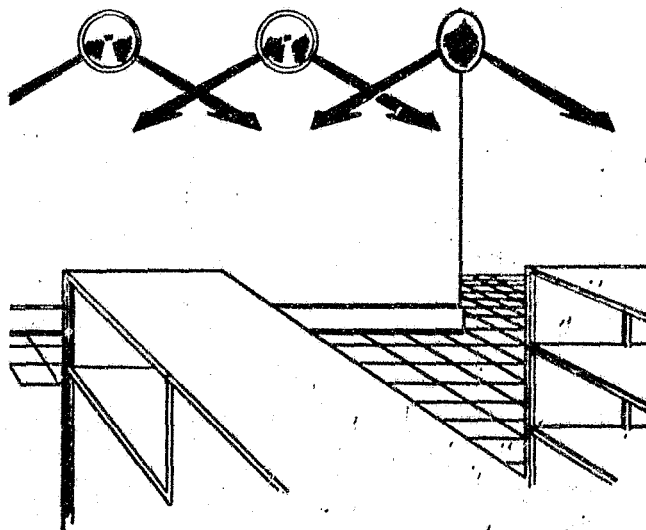
### Crimes Targeted: Shoplifting, Internal Theft

#### DESCRIPTION

For the small business retailer, the main goal of security is to prevent the loss of your company's goods and properties. Your store's entire layout can discourage or encourage theft, and the observation of attempts to conceal and remove property is absolutely essential to preventing its loss and to apprehending would-be thieves.

#### RECOMMENDED

- Wide-area detection mirrors to increase aisle visibility and to eliminate blind spots. Usually, these mirrors come in round, rectangular, or round-tangular shapes and in sizes from 10" to 36" in diameter. You should mount these mirrors up on the wall in strategic locations so the entire shopping area comes clearly into view. In this way, the mirrors serve both as observation aids and as deterrents to potential thieves who, viewing them, become aware that everything can be seen by anyone looking at the mirrors. These mirrors are especially useful to the small business retailer who may be alone in the store, since they allow you to see what is going on in your store while you are performing other duties. Incidentally, the convex mirror is also extremely advantageous for fitting room situations. Here, it serves at least two purposes: (1) it allows you to observe would-be thieves who might try to use an unauthorized exit to get away with stolen goods and (2) it allows honest customers to observe any stranger who might be in the area.



- The two-way mirror which presents the customer's reflection of himself but can be seen through from behind is now part of the security equipment being used by a number of retailers. The real expense associated with the two-way mirror is for the personnel needed to monitor it. Most small business retailers cannot afford the costs of monitoring personnel. In such cases, mount a dummy two-way mirror, high up and flush against the wall with a frame which gives the clear-cut impression that yours is a genuine two-way mirror. This will definitely create a psychological deterrent to the potential thief.

#### NOT RECOMMENDED

Peepholes, small lenses arranged in such a way as to provide magnified wide-angle vision, are an excellent detection device, but provide almost no deterrent effects. They require an ongoing security system with adequate personnel to detect offenders and make arrests. Usually, the costs associated with such a system are prohibitive for the small business retailer.

#### A Note About the Physical Layout of Your Business

Your best defense against thieves is your alert employee. You can improve his level of alertness by keeping the following pointers in mind:

- Try not to have blind spots in your layout, and avoid counters that are exceptionally high. We recommend a counter that is just under waist height. Also, keep small, high-value items out of reach in locked cases.
- Don't have too much stock displayed in your store area. Cluttered displays attract thieves; neat displays repel them. Additionally, it is much easier to take visual inventory of the neat display than of the cluttered one.
- Line your merchandise up in such a way that missing items immediately become noticeable. We recommend you set your display cases in broken sequences. If you can, run them for short lengths with spaces in between.

#### Further Information:

Post, Richard S., *Combating Crime Against Small Business*, Charles C. Thomas, Springfield, Illinois, 1972.

Security World, "War on Shoplifting," November 1975.

## CAMERAS

**Crimes Targeted: Robbery, Burglary, Shoplifting, Internal Theft**

### DESCRIPTION

Cameras, according to professionals in the fields of crime prevention and security, have proven to be very effective in the deterrence, surveillance and apprehension of individuals engaging in the crimes of robbery, shoplifting, burglary, and internal theft. The costs associated with the purchase, installation, and maintenance of most cameras are, however, prohibitive for the small business retailer. Nonetheless, there are certain applications which appear to be reasonably cost-effective and will be discussed here.

### RECOMMENDED

Closed-circuit television (CCTV) can provide you with a simple, high-performance security system that is neither complicated nor overly expensive. This illustration demonstrates a basic system consisting of (1) a television camera, (2) a monitor, and (3) a coaxial cable. To install, you need only to plug the camera and monitor into wall outlets, connect the cable between them and turn the units on. Although it is widely recognized that the dummy camera has some deterrent effect, we recommend that the small business retailer invest in a real camera for several reasons. First, dummy cameras are usually interspersed among a series of real cameras with photographic and transmission capability. If you can only afford a single unit, as is often the case with a small business, you are far better off with the genuine article. Second, a real camera with a live monitor serves as a psychological deterrent. Viewing themselves, most would-be thieves would conclude that they were being watched from some central monitoring point and will be effectively deterred.

By far, the most frequently utilized CCTV system in use by the small business retailer is the simple television camera with visible monitor. These should be mounted high up in an area which overlooks as much of your showroom space as is possible; your customers should be able to see that the cameras are actually functioning. We do, however, strongly recommend using a CCTV with a recording capability.

You should advertise the presence of your CCTV system through the use of decals, posters, and other display materials. Rotate them frequently to make sure they are noticed. Place your decals on prominent places like cash registers, checkout counters, etc. to add to the deterrent effect of your camera.

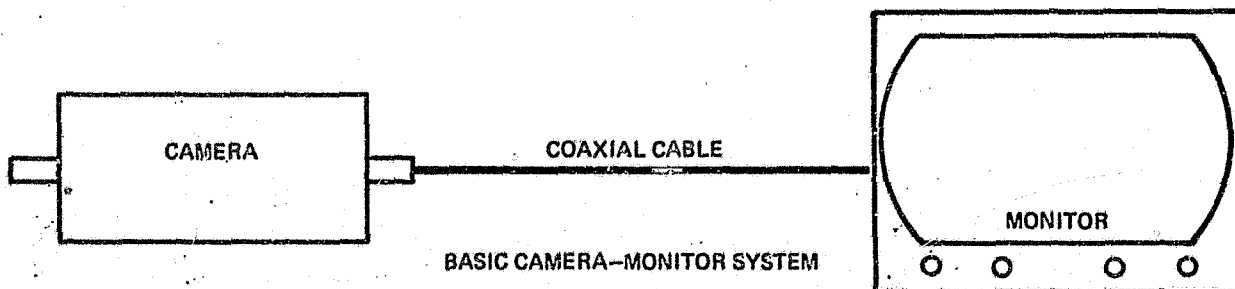
A CCTV monitor with a 9" or 15" screen retails for between \$280 and \$380.

### OTHER RECOMMENDATIONS

Photographic cameras have a range of prices and speeds — from once every 2 seconds to full motion-picture speed. Research indicates that surveillance cameras can effectively reduce the probability of robbery or provide detailed accounts of actual robberies, burglaries, or shoplifting in progress. One camera, when triggered by a remote control switch or external detection device, shoots 3 1/4 minutes of movies at 18 frames per second.

This camera retails for around \$315.

A second camera, called \_\_\_\_\_ by its manufacturer, takes individual still pictures at preset intervals to keep a continuous eye on your premises. You can use the time-lapse



capability of this camera to provide continual recorded surveillance for more than a week around the clock with each 100 feet of film.

Although somewhat expensive, cameras such as these with their stop-motion capabilities have pretty much revolutionized technology in the photography field. Moreover, efforts are being made to put the cost of continuous film surveillance at a level that is more economical and practical.

#### **NOT RECOMMENDED**

A video tape recorder (VTR) can be set to photograph one position at intervals over a period of time, or it can be automatically switched from camera to camera, lingering a

few seconds in each station as desired. One type of video tape recorder is considered ideal for recording burglaries, robberies or other events in real time. Another type, called a time-lapse recorder, will record up to 60 hours of recorded information for review in 60 minutes. For the small business retailer, however, neither device is considered cost-effective due to the initial outlay of cash involved (around \$1500 for the VTR and \$2500 for the time-lapse version), as well as maintenance costs.

#### **Further Information:**

The following articles appearing in **Security World**: "The War on Shoplifting," November, 1975; "The Small Security Solution," April 1976; or "Creating a Climate for Honesty," October 1971.

## MOVEMENT CONTROLS

### Crimes Targeted: Shoplifting, Robbery, Internal Theft

#### DESCRIPTION

Although the merchandiser normally desires a constant flow of products to the customer, movement controls serve to restrict the flow of customers and merchandise into and out of the store. The control of movement inside the store, particularly around critical entrance, fitting room, and cash register areas, will limit the opportunity for theft by shoplifters, employees and even potential robbers, and at the same time will increase the likelihood of their apprehension. The presence of movement controls may also be viewed as a psychological deterrent, because they provide visual evidence of the owner's attention to security. Always check with fire regulations before installing control devices or instituting movement-limiting procedures.

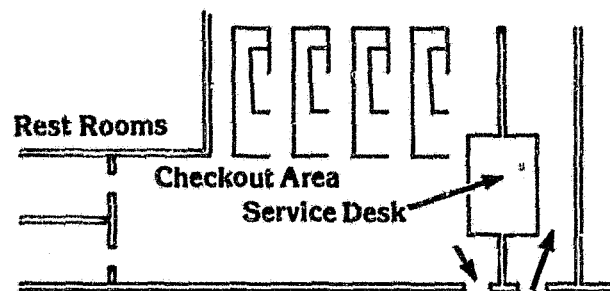
#### RECOMMENDED

The following suggestions outline the type of procedures recommended for dealing with common problem areas. These guidelines are by no means comprehensive, but should give you an idea of the kind of commonsense approach that can be applied effectively to prevent theft of merchandise during business hours.

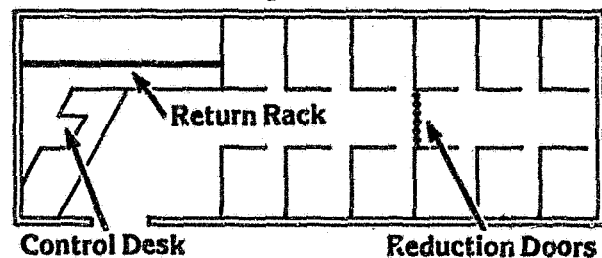
- Provide an entrance for employees separate from the customers' entrance.
- Employees should not be permitted to carry purses or packages into sales and merchandise areas.
- Employee parking should be located a reasonable distance from exits to counter attempts to remove unpaid for merchandise to personal vehicles.
- If possible, provide separate entrance and exit points so that customers entering are separated from the completed sales and exit areas.
- Check all incoming packages from customers.
- If cost permits, install turnstiles at entrances to prevent customers from exiting without passing through cash register areas.
- All registers should be enclosed by a counter that fastens with a snap lock and a spring door, requiring a key from the outside.
- Entrances to fitting rooms should have a checker who issues color-coded tickets or hangers signifying the number of pieces of

clothing taken inside. The control desk should have a view into the fitting room aisle and the return rack behind it for unwanted garments.

- A large fitting room may be equipped with reduction doors to reduce the use of fitting rooms during periods of low traffic.



#### Fitting-Room Control



#### NOT RECOMMENDED

Some stores follow a policy of denying entrance into a fitting room to any individuals accompanying garment-carrying customers. The degree of security achieved by restricting entrance in this manner is not likely to be worth offending your customers. A less objectionable procedure is to furnish these individuals with a coded ticket or hanger indicating that they carried no items into the fitting room.

#### Further Information:

Cole, Richard B., *The Application of Security and Hardware*, Charles C. Thomas, Springfield, Illinois, 1970.

## SHOPPING SERVICES

### Crime Targeted: Internal Theft

#### DESCRIPTION

Employee honesty, courtesy, efficiency, and effectiveness all contribute to your operation and eventually, your profit.

Knowing how to rate an employee in these areas — let alone knowing what to look for — is a task beyond most small business owners. After all, you have the business to look after.

A professional agency, called a shopping service, has been used successfully by many retail firms to take the burden of employee monitoring off the owner. While the cost of this service may be prohibitive for the very small business, the service has proven its worth time and time again by accurately evaluating employee conduct.

Also, shopping services have added to profits by reducing the amount of theft and by improving employee attitudes and thus, employee worth to the employer.

While no guidelines exist for determining whether your business could use a shopping service, just your feeling that employee theft and misconduct on the job are happening may make this service worthwhile. At the very least, you would be assured that your employees are acting properly.

The following sections will help you determine the kinds of services offered which might meet your needs, how much they cost, and where to find a shopping service.

#### A Primer of Shopping Service Functions

- Spotting dishonest employees
- Spotting rude employees
- Singling out excellent employees
- Making theft difficult
- Spotting weak areas in existing store security
- Aiding in employee training
- Helping to increase your gross sales and net profit
- Finding mispriced and outdated stock

#### RECOMMENDED

Most small businesses are interested primarily in employee dishonesty. If this is your problem, you may ask the service to test any one or all of

your employees. One fairly common test of salesclerks involves two shoppers who enter your business separately, acting as customers. One buys an item, pays with the exact monies and leaves, while the second, acting as a browser, observes whether the salesclerk rings up the sale or pockets the money.

Ask the service to take note of your clerks' general demeanor when waiting on customers. Research indicates that a large amount of business revenues are lost due to the curt or even abrasive behavior of some sales personnel. A shopping service can accurately determine whether you have a problem in this area, whereas you could never do so, because your employees are always going to be on their best behavior in your presence.

#### What Shopping Services Cost

Most large retailers contract for these services on a yearly basis at a set fee, and inspections are made periodically throughout the year. However, there are other arrangements which may be more suited to your budget. For example, you may require a one-time-only survey to unearth a specific problem. Prices for this type of service usually range from \$150 to \$200. Some month-to-month clients with on-going pilferage problems pay between \$20 and \$30 per visit. If you find these fees too costly, you may be able to share expenses with other small businesses or get together and perform these services for each other. Check your Yellow Pages or check with your business associates for recommendations of reputable shopping services.

If shopping services are simply too expensive, have a friend or relative come in and shoplift as much as possible to determine blind spots, employee weaknesses, etc.

#### Further Information:

Green, G. and R.C. Farber, *Introduction to Security*, Security World Publishing Co., Los Angeles, 1975.

Security World, "Can a Shopping Service Help Your Business?", April 1976.

Small Business Reporter: Crime Prevention for Small Business, Bank of America, 1975.

## EMPLOYEE MOTIVATION

### Crimes Targeted: Internal Theft, Shoplifting

#### DESCRIPTION

Today, the small business is struggling to survive in what amounts to a war against internal theft, waste, carelessness, and absenteeism. Each year, employees in this country steal more than \$1 billion. Absenteeism accounts for an additional \$10 billion in losses annually, and it is impossible to accurately calculate the dollar loss due to waste and carelessness, but the amount is considerable. Employee motivation or morale is a major factor in combating each of these problems. Research indicates that losses decrease when employee morale is high. Following are some recommendations you can use to increase motivational levels among your employees.

#### RECOMMENDED

Develop an employee relations policy for your business. Make certain your employees know that you are genuinely concerned about their problems. A high level of morale is directly linked to adequate communication. By your actions, let it be seen that you are approachable.

Discipline should be strict and meted out on an equitable basis. You should develop a set of written procedures regarding security. Let everyone know your policies on employee theft. Make it clear that any employee caught stealing will be dismissed, no matter how small the value of the item. In cases of a very serious nature, inform your employees that the guilty ones will be turned over to the authorities for prosecution.

Develop an employee training program which improves job skills and opens the way for advancement. If possible, prepare a written job description for each position you fill.

Regularly review wages and your wage policies to make certain you are paying your employees wages competitive with the average for your area.

Make certain the physical surroundings of your business are maintained at a high level.

Have clear statements of your business policies and clear procedures for airing grievances and

personal problems. If your employees are familiar with all your rules and policies, they will feel that they are appreciated on a human level. If they feel they are an important and functioning part of your business, they will usually respond with increased efficiency and your pilferage problem will diminish significantly.

Establish a suggestion box and really take into consideration what your employees have to say. Hold periodic meetings with employees and allow them to air their grievances.

Recognize the efforts of valued employees. This does not always have to be done in a remunerative sense. You will be surprised at the positive results you can achieve merely by letting an employee know of your pleasure for a job well done.

#### NOT RECOMMENDED

In your valid concern over internal theft, don't allow a police-state atmosphere to develop wherein your employees become aware that you are spying on them. Such an atmosphere of mutual suspicion and mistrust will only serve to make the problem worse.

#### A Brief Note on Employee Motivation and Shoplifting

Your best defense against the shoplifter is the alert employee. He or she must watch both the people shopping in your store and your merchandise simultaneously. In case your employee observes a shopper concealing an item of merchandise on his person, he must continue the observation until the shoplifter has passed through the checkout area and has attempted to leave the store. Once the shoplifter is apprehended, your employee may be required to testify in a court of law. Only the alert and highly motivated employee can be expected to fulfill these responsibilities adequately.

#### Further Information:

Post, Richard S., *Combating Crime Against Small Business*, Charles C. Thomas, Springfield, Illinois, 1972.



## EMPLOYEE SCREENING

### Crime Targeted: Internal Theft

#### DESCRIPTION

The small business retailer's first line of offense against internal theft is to hire honest employees at the outset. All too often, employee screening is performed in the most cursory fashion imaginable, with the prospective employer focusing almost solely upon the applicant's ability to perform the job for which he or she is being considered. Research indicates that almost no small business retailers perform background investigations of their employees. Yet this function is so critical to the control and prevention of internal theft that we have devoted a large section of the preceding chapter to basic procedures associated with employee screening. The following discusses more of these procedures.

#### HIGHLY RECOMMENDED

A fairly comprehensive application form should be completed by every prospective employee. Such a tool can be used to gather insights as to a candidate's abilities and personality. Further, references listed and former employers cited can and should be contacted to gather a more complete picture of the applicant's total job readiness.

Telephone all references and speak directly with all former employers. For the small business retailer, the telephone is a far more useful mechanism than writing. In the first place, a busy schedule may make the receipt of a written response untimely and, in the second place, you are likely to learn more from a telephone call. Even when former employers hesitate to give negative information your call can be useful. One expert has suggested that an effective tactic is to ask, "Would you hire this person again?" An unhesitating "Yes" response is clearly a positive indication; a reluctant or evasive response may confirm any nagging suspicions you might have.

No one knows the special problems and risks associated with your business better than you. If the position you plan to fill is a high-risk one, you should do extra spadework to dig up any and all facts left out of the interview — intentionally or by mistake. Credit agencies, former landlords, and friends are also possible sources of information. If you find you simply do not have the time to do the research yourself, there are numerous private agencies you can call upon. It may be fairly expensive, but not nearly

so expensive as the losses you may incur because of having hired an employee who will later proceed to steal you blind.

#### RECOMMENDED

Obtain a pre-employment agreement in writing between yourself and the employee that he or she will submit to a polygraph test as a condition of hiring. The polygraph is an electrically driven instrument that makes written recordings (i.e., tracings) on a moving strip of paper. It records the action of heart, lungs, and electrical system of the body. Thus, the polygraph is a collection of measuring and recording devices which are able to leave a permanent written record of responses to questions asked during the course of a test. Where its use is legal, the polygraph can be an excellent tool in determining the past and current record of applicants for employment or promotion to positions of considerable responsibility. These exams are expensive and can cost from \$50 to \$200, depending on the length of the test.

Pre-employment psychological tests which are EEQ-approved are less expensive screening tools and may be used as substitutes for polygraph tests. These tests rate dishonest tendencies and can be administered for under \$20.

#### NOT RECOMMENDED

The Psychological Stress Evaluator (PSE) works similarly to the polygraph; however, in this case, a recording is made of the subject's replies to the questions put to him. These recordings analyze and reproduce the sound-wave characteristics of the voice. By running these tapes through the instrument at different speeds, different aspects of the sound-wave activity can be recorded on a graph for evaluation. Certain patterns produced by the autonomic (involuntary) nervous system indicate the truth or falsity of a given response. Although the costs associated with this test are comparable to those for the polygraph, PSE has not been in use very long and has, therefore, not yet proven itself.

#### A Note on Polygraph and PSE Legality

Although adherents of both these systems claim a high degree of accuracy, their use remains extremely controversial. It will be necessary for you to determine the limitations on the use of such instruments in your state. Some states, for

example, forbid their use as a requirement for employment but permit them to be used on a voluntary basis, while others prohibit their use altogether.

There is a continuing controversy over the use of these machines and many states that formerly exercised indifferent, little, or no supervision over their employment are now enacting

legislation requiring that certain minimum training and qualifications be established to govern their use.

**Further Information:**

**Crimes Against Business: A Management Perspective, Proceedings of Seminars Held in New York, September 14, 1976, Department of Commerce, December 1976.**

## PROSECUTION POLICY

### Crimes Targeted: Internal Theft, Shoplifting

#### DESCRIPTION

Every business has been faced with the problem of establishing policies regarding the prosecution of cases involving employee theft and shoplifting. Research indicates that 90 percent of all employees discovered to be engaging in internal theft are merely dismissed from their employment, yet the Department of Commerce estimates that employees are responsible for 75 to 80 percent of all retail shortages. Similarly, most apprehended shoplifters are never prosecuted; yet, in 1975, an estimated 140 million shoplifting incidents depleted retailers' inventories by \$1.9 billion. Prosecution, believed by many experts to have a deterrent effect on the commission of these two crimes, is both costly and fraught with legal problems. Nonetheless, it is being recommended by increasing numbers of crime prevention officials in the wake of substantial increases in employee theft and shoplifting.

#### RECOMMENDED FOR THE PROSECUTION OF SHOPLIFTERS

It is absolutely essential that you establish a policy as to the best method of coping with your shoplifting problem, and each of your employees should follow your established policy when encountering a shoplifter.

You should become thoroughly familiar with your state's law governing shoplifting because there are several problems associated with making an arrest of a shoplifter. First, there is the possibility of liability for false arrest. Since the laws of the different states vary so widely in their latitude regarding arrest procedures, you would be better off getting legal advice to guide your policies in these matters.

Your business policies regarding arrest and detainment should be based on sound legal advice. Always try to avoid physical contact with the suspect. Be polite but firm. Let the shoplifter know that it is part of your duties as the owner or as an employee of the business to protect merchandise being offered for sale.

Notify the police as soon as possible. Generally, when an individual is detained and neither an admission of guilt is obtained nor a form releasing the store from liability has been signed, you will have to prosecute to avoid a possible suit for false arrest.

An essential element in the successful prosecution of a shoplifter is proof positive of the individual's failure to pay for merchandise in his

or her possession. This may be established through personal observation and/or the testimony of your cashier, along with the omission of the item in question from your cash register receipt. Allow the person either to pass through your check-out area or to exit the store prior to apprehension. This final step established intent not to pay for the merchandise.

#### What You Need to Know about Evidence Procedures and the Shoplifter

When you appear at the hearing of a shoplifter, make certain you have all the evidence you need to substantiate your charge. These are the things you will need to have done in preparation:

- Reclaim from the shoplifter all items stolen. This should include price tags, wrappers, cartons, etc. If the items are perishables, remove and retain the labels and containers as evidence.
- Initial and date each item of evidence. If the shoplifter purchased some items at the same time the theft occurred, be sure to save the cash register receipt tape as additional evidence of items taken but not paid for.
- If you have a camera, take a photograph of the evidence.
- Inventory each item of evidence and have the arresting officer sign a receipt for it before turning the evidence over to him. In the event the officer does not accept custody of the evidence, secure it yourself in a place to which only you have access.
- Written statements should be obtained from all witnesses to the incident whenever possible. These statements should be made part of the police report.

#### RECOMMENDED FOR THE PROSECUTION OF INTERNAL THEFT

Where guilt is clearly established and the incidents of internal theft have become the general knowledge of the remainder of your staff, guilty parties should be prosecuted. A circumstance which mitigates against prosecution, however, involves the normally honest employee who finds himself in financial difficulty, steals out of desperation but voluntarily admits his guilt.

When an employee has been guilty of employee theft and has been prosecuted, you should make your actions known to other individuals in your employ. This incident will have a deterrent effect if your employees fully recognize you will not hesitate to act decisively when an individual in your employ, regardless of position, tenure, or past performance, is found guilty of employee theft.

When you suspect an employee may be guilty of internal theft, call your local police department and ask for an appointment with the Office of Crime Prevention. Free of charge, the Office of Crime Prevention will perform a complete survey of your business. This survey may take no more than 1 or 2 hours or it may require several days. Whatever it takes, you can be assured the office will work with you toward identifying problem areas and will make recommendations as to whether prosecution is a feasible strategy.

Establish policies governing your employees and stick to those policies, judging every employee by the same objective criteria. If an individual is caught red-handed and the decision is made to prosecute, remember, it is an expensive process. You or your employee will likely be called to court (a process usually requiring several days) and additional monies may need to be expended both in investigating and establishing a case against the accused. Additionally, costly legal fees may be involved. Nonetheless, we recommend that strong, positive action be taken where it is warranted, since prosecution is a recognized positive deterrent to internal theft.

**Further Information:**

Small Marketers Aid, Reducing Shoplifting Losses, Small Business Administration, 1967; or "Shoplifting Apprehensions Can Be Made to Stick." Security World, January 1977.

## Section 4: POINT PROTECTION

**Crimes Targeted: Robbery, Burglary, Shoplifting, Internal Theft.**

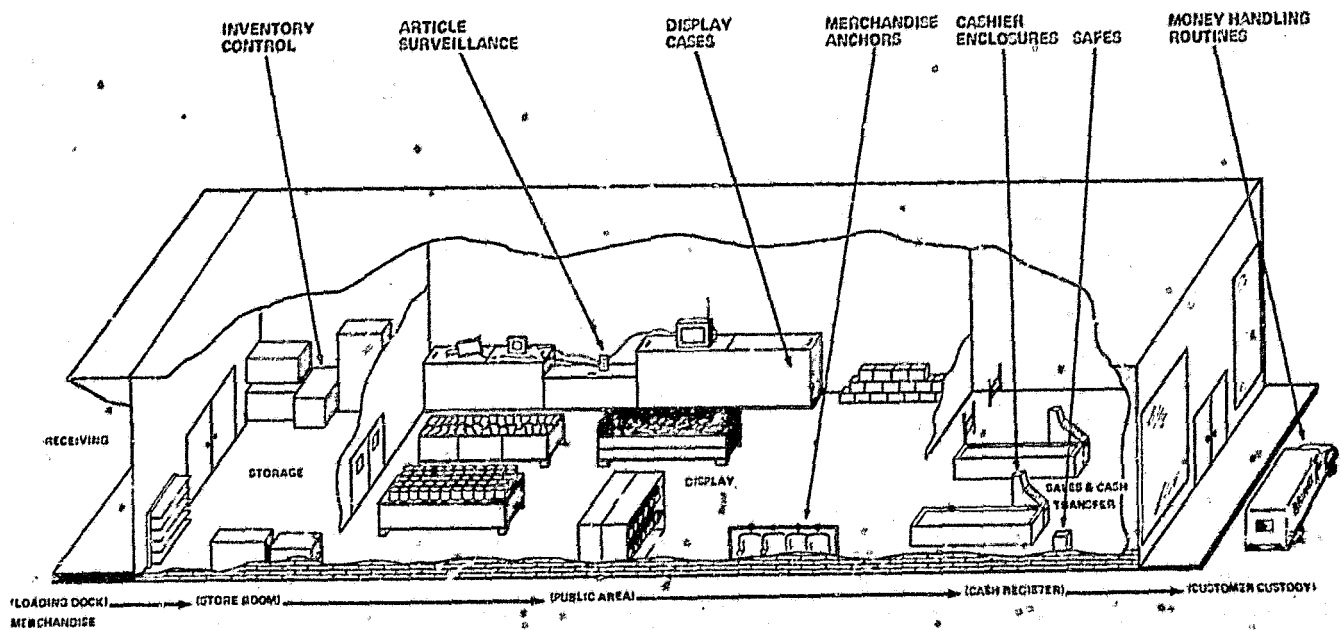
As the name implies, this method of security emphasizes point or object protection. In a business environment, specific items that call for extra protection include high-value merchandise, safes, cash registers, etc. This added protection is necessary in a retail store where potential thieves may not be readily distinguished from other customers or employees present in the store until he or she makes an actual attempt to steal cash or merchandise. This added security is particularly recommended for stores carrying liquor,

jewelry, furs, drugs, or other items attractive to burglars and robbers.

### Selected Measures

- Inventory Control
- Article Surveillance and Merchandise Anchors
- Display Case Protection
- Cashier Enclosures
- Safes
- Money Handling Routines

Although certain types of alarms clearly fall within the category of point protection measures, information on these and other alarm types may be found in the special alarm section at the end of the catalog.



**FIGURE 4  
POINT PROTECTION**

## INVENTORY CONTROL

### Crime Targeted: Internal Theft

#### DESCRIPTION

Perhaps the best strategy for the prevention and control of internal theft is the institution of internal controls, and an essential ingredient of good internal control is accountability for merchandise through inventory measures. Without them, thefts of merchandise may range from simple pocketing of an item to larger-scale stealing concealed by accounting cover-ups.

#### Methods of Merchandise Theft

- Giving employee discounts to friends
- Handing over merchandise to accomplices across the counter
- Shoplifting during lunch or other break periods
- Hiding merchandise under clothing or in purses and carrying it out of the store
- Intentional damaging of merchandise so employees can buy it at reduced prices
- Smuggling stolen merchandise out in trash containers
- Stealing from the stockroom by concealing in packages or on person
- Stealing from reduced goods or lay-away room
- Taking sales slips to put on stolen items
- Making false entries to pad inventories so shortages will not be discovered
- Picking up a receipt discarded by a customer and putting it on stolen merchandise which is kept or turned in for a refund
- Putting "Return to Manufacturer" label on merchandise and sending them to the employee's own address

#### RECOMMENDED

- Check all incoming merchandise against purchase invoices. Make certain quantities, prices, shipping charges, and other information are current.

- Be wary of the employee who stays late when there is no need to do so.
- Do not allow any employee to make sales to himself.
- Require all employee packages to be checked into a separate room.
- Restrict all employees to a single exit, if possible.
- Keep your storage room under strong lock and key so that access to your inventory and supplies is strictly controlled.
- Lock up all valuable items.
- Require that all employees sign for equipment or tools issued to them.
- Inventory all supplies, equipment, and merchandise systematically. **Keep records.**
- Package merchandise so that price tags are inside the wrapping.
- Conduct surprise inventory checks with other than stock room personnel.
- All your disbursements, including payroll, should be paid by serially numbered checks. Your checks should also have the name and address of your business printed on them.
- Examine storeroom, lockers, and trash bins periodically.
- Be sure you void all paid bills or invoices. This prevents their being used a second time. Make certain each check has an accompanying invoice from a legitimate supplier or vendor.
- Establish firm price and discount policies. All credits and returns should be approved by you or your manager.

#### Further Information:

**Crimes against Business: A Management Perspective, Proceedings of Seminars Held in New York, September 14, 1976, Department of Commerce, December 1976.**

**Memboisse, Raymond M., Industrial Security for Strikes, Riots, and Disasters, Charles C. Thomas, Springfield, Illinois, 1968.**

## ARTICLE SURVEILLANCE AND MERCHANDISE ANCHORS

### Crimes Targeted: Shoplifting

#### DESCRIPTION

Article surveillance through a series of systems for protecting merchandise is a fairly recent innovation in the field of retail security. In electronic tagging, the basic principle calls for the tagging of all property with a substance or circuitry that elicits a response from a matching sensor when the two get within specified range of each other. In the use of security hangers, the hanger is locked on to the garment so that it can only be released by a clerk. Rack alarms operate in a similar manner except that an alarm is sounded when unauthorized attempts are made to remove a garment. In all of these cases, the object is to protect your merchandise, but in a manner that is generally inoffensive to your customers while providing ample opportunity for examination of items being displayed.

#### RECOMMENDED

- Attach electronic wafers or pellets to items so that they cannot be removed without tearing the merchandise. If an individual shoplifts an item, an alarm will sound and alert you to the theft. Although these devices were originally used exclusively by apparel stores, they now are suitable for use on drugs, records, cosmetics, and other small items.
- Use tamperproof gummed labels that rip apart when an attempt is made to remove them, or attach price tickets by plastic strips that must be cut with scissors and hard-to-break plastic string for softgood tickets.
- Staple items in a special way so that shoplifters cannot transfer price tags easily and use stapling patterns that are recognizable to you and your personnel.

- Utilize security garment hangers made either with looped shafts so that they cannot be removed from the rack, or made with the usual "U"-shaped shaft but hooked onto a garment rail that locks into position to prevent removal. Only you or your sales clerk can remove these hangers. When you do, stay with the customer, assisting him or her in trying on the item.
- Never hang ordinary clothes hangers in the same direction on a garment rack; rather, alternate the direction of the "U"-shaped shaft. If nothing else, this will prevent a would-be thief from grabbing a large number of hanging garments and fleeing with them.

#### A Note about Electronic Tags

Electronic tags are the most popular anti-shoplifting device on the market today. Some tags can be deactivated and allowed to remain on the garment. In these cases, the tags make the cash register ring dependent on inserting the tag into an attachment to the register that locks it until the tag has been deactivated.

Other tags are reusable and can be recycled many times over, thus minimizing your original investment.

Tags vary in size from a strip the width of an ordinary bias tape to a plastic disk the size of an average merchandise tag. Of course, the key to the system is the alarm response from the sensors that is activated by the tag. You can get an effective alarm mechanism for around \$100. Tags, in volume, cost around 20 cents each.

#### Further Information:

Crime Prevention for Small Business, Small Business Reporter, Bank of America, 1975; or "The War on Shoplifting," Security World, November 1975.

## DISPLAY CASES

### Crimes Targeted: Burglary, Shoplifting

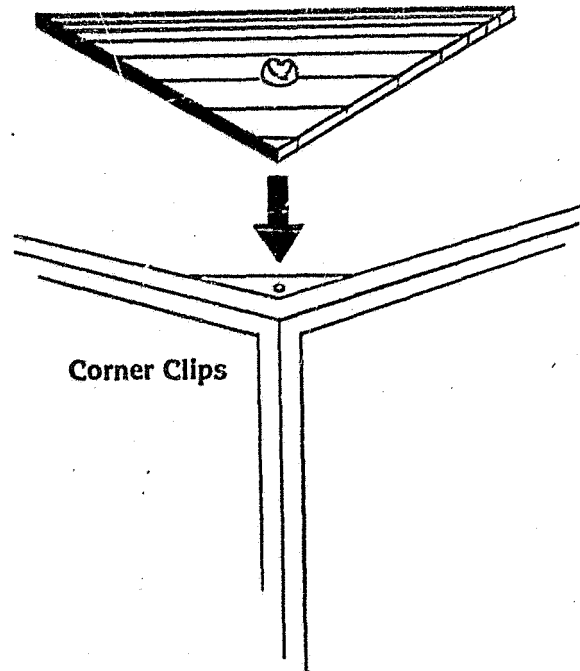
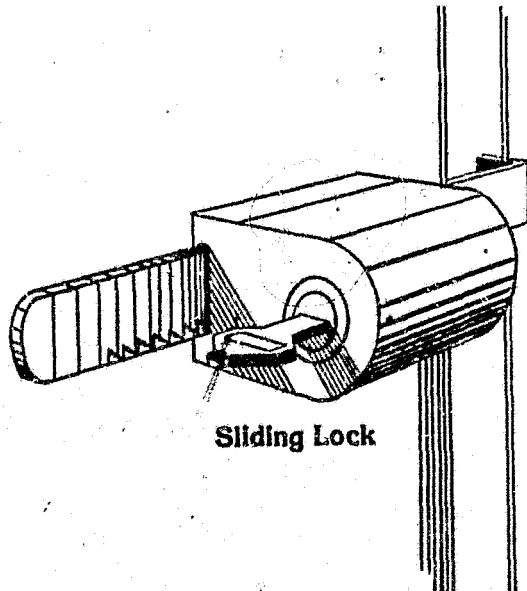
#### DESCRIPTION

Display cases perform an important sales function in retail operations by setting off merchandise in a visual display that prompts impulse buying. They are particularly effective in jewelry stores and other stores carrying high-value items. For this reason, they tend to be the most likely targets for burglars and shoplifters who will assume that your showcases will hold a large concentration of valuable merchandise. Ideally, these items should be secured as carefully as your cash, but the sales advantage of visual display necessitates compromise. Nevertheless, good protection is possible by taking simple, inexpensive precautions.

#### RECOMMENDED

Display cases are particularly vulnerable to smash-and-grab attacks. The use of laminated glass (a sheet of clear plastic pressed between two sheets of glass) can provide additional protection. It has a high tensile strength that makes it resistant to hard blows and mounts like ordinary glass. A less expensive alternative is burglar-resistant plastic which has the disadvantage of scratching if cleaned with abrasives. Cleaning with soft cloths and occasional buffing should keep it in good condition, however. Showcase items that may justify the need for special glazing include jewelry, cameras, guns, and personal electrical appliances. (See Window Modifications for glazing material costs.)

Care should be taken to inspect cases for weak construction. Sliding access doors are often made of flexible fiberboard cut undersize so



that they will slide easily. Fiberboard should be replaced with a more firm material, if possible, to prevent the doors from being spread away from display case locks. At the least, fiberboard doors should be equipped with a metal strip (similar to those found on car doors) on vertical edges to reduce their flexibility, and on horizontal edges to tighten the fit.

Glass tops of showcases should be fastened down at the corners with metal retaining clips held by clutch-head screws (a type of screw which must be removed by a special screwdriver). The clips should extend 1/4" to 1/2" over the glass at each corner.

Showcase doors may be secured by a sliding lock where the vertical edges of the inner and outer doors meet. This lock consists of a steel strap which slides through a locking cylinder to a locked position. The depth of the locking cylinder should be at least 1 inch to prevent pulling the outer door away from the inner door and thereby allowing it to pass over the locking device. Further, fastening the lock at the lower edge, rather than at the center, where the door is less flexible will insure a tight fit. The proper location for the sliding lock may be marked on the door as a guide for employees.

#### Further Information:

Cole, Richard B., *The Application of Security Systems and Hardware*, Charles C. Thomas, Springfield, Illinois, 1970.



## CASHIER ENCLOSURES

**Crimes Targeted: Robbery, Burglary, Internal Theft, Shoplifting**

### DESCRIPTION

The cash register is an item common to all retail businesses. It also is a prime target for robbery, burglary, and internal theft. Thus it represents the single largest potential site within your store. Cashier enclosures include those physical methods necessary to secure your cash without creating a hostile environment for customers and employees.

### RECOMMENDED

Registers should be enclosed by a counter approximately 52 to 60 inches in height on the outside section. The inner height of the counter should be low enough for package wrapping while providing little access to individuals reaching over the higher outside perimeter.

The door providing entrance into the register enclosure should be equipped with a snap lock that is out of the reach of individuals on the outside of the enclosure.

In the case of a string of cash registers, where the customer aisle of one register is adjacent to the cashier of the next register, a sheet of plexiglass may be installed as a separator. At a height of 60 inches, this barrier will prevent till tapping from neighboring aisles.

Additional security can be attained by supplying lockable cash trays to registers which are themselves capable of being locked when the cashier is absent. During business hours, registers so equipped should be tray locked as well as drawer locked when vacated. The lockable tray will also make the transfer of full cash drawers from the registers to a central location a more secure procedure.

If possible, a general service counter raised on a platform should be installed to provide a vantage point from which to supervise the register area. This counter may be manned by an employee who is also responsible for price checks, refunds and exchanges, merchandising information, and a variety of other duties.

### NOT RECOMMENDED

#### Security Glazing (Protective Glass)

It is with reluctance that we must renounce the use of glazing material to secure cashier enclosures. For most small businesses, this excellent robbery deterrent is simply not cost effective. The bullet-resistant material frequently found in this application has a cost four times that of regular glass. However, if you operate a jewelry or drug store in a high-crime district or have already experienced a number of holdups, we urge you to seriously consider this option. We offer the following precautionary notes:

- The surrounding enclosure must be solid, without weak spots. The glazing should supply protection from the side as well as the front.
- The opening allowing the transference of cash, whether a slot or drum, should not permit the insertion of anything that may be used to threaten the cashier.
- The enclosure should be high enough to prevent someone vaulting over the top.
- A means of communication with customers must be provided that does not compromise the integrity of the enclosure.
- The above considerations of framing methods, arrangement of desk tray, voice panels, and height of the barrier are important to determine before making an investment in such an installation. The buyer is urged to seek professional help. This decision should not be left to an amateur.

#### Further Information:

Cole, Richard B., *The Application of Security Systems and Hardware*, Charles C. Thomas, Springfield, Illinois, 1970.

The following articles from *Security World*: "A Unique Liquor Store Security Installation," April 1970; "Protective Screens for Cashiers," September 1970; and "Small Business' Ace-in-the-Hole Against Robbery," April 1976.

## SAFES

### Crimes Targeted: Burglary, Robbery, Shoplifting, Internal Theft

#### DESCRIPTION

There are three types of security containers currently in common usage: fire resistive and burglary resistive files, safes, and vaults. Vaults are generally too costly and impractical for the use of the small business retailer, and files offer only minimal protection from the burglar. In terms of security, your safe may be your final line of defense against a robber or a burglar. Every business establishment has its own particular needs in this area and the choice of the proper safe is influenced both by the value and the vulnerability of the items to be stored in it. Although fairly expensive (prices range from \$350 to \$400 for money safes), a wise selection can be one of your most important investments in security.

#### Classes of Safes

There are two basic classes of safes: fire resistive and burglary resistive. The classic fire resistive safe has a square or rectangular door. It also has light steel walls and doors that contain heavy insulation. Depending upon your need, you can obtain a fire resistive container for any price along a spectrum ranging from very few (\$30 to \$60) to several hundred dollars. In the past, the classic burglary resistive safe almost always had a round door and was built with thick walls and especially strong doors. The round door design was thought to offer extra resistance against tools and explosives. However, almost all of the newer burglary resistive safes are being designed with square or rectangular doors.

These safes were each designed to perform a particular job for a specific level of protection. The fire resistive safe should never be used to store valuables nor should the burglary resistive safe be used to store important papers. The former will offer virtually no protection for your valuables, whereas, were a fire to occur, your important documents would be reduced to ashes if stored in a burglary resistive container. Therefore, most small business retailers will find that they have a real need for both kinds of security containers.

The burglary resistive or money safe is a far more costly item than the fire resistive or record safe. Before purchase of either or both, check with several manufacturers to obtain the most economical prices, and remember to look for the Underwriters Laboratories (UL) Rating.

These are usually mounted on the inside of the safe's door.

#### Recommended Procedures

Think of your burglary resistive or money safe as protection against daytime robbery, principally. However, for the very best protection of your cash intake, we recommend that you make several bank deposits during the day. Vary the times of day when you make deposits and don't always travel the same route.

Anchor your safe in concrete, if possible, making certain it is in a well-lighted area and clearly visible from the street. Burglars have been known to haul away an entire safe so that they could work on it at their leisure.

Where there is moderately heavy cash flow during the day, use a drop mechanism. Keep as little money in your cash register as possible. Place all large bills in the drop immediately and do so in full view of your customers. Explain the drop is being made so that your business will be less attractive to would-be robbers.

The combination safe is a lot less vulnerable than the key-actuated safe. With a combination safe, you can obtain a delayed-action time lock which offers very effective additional security against daylight robberies. If the safe you select has a combination dial, we recommend: (a) that you never leave a written copy of your combination anywhere on the premises; (b) that you be certain to spin the combination dial several times after each use to ensure locking; (c) that the combination be changed when an individual knowing it leaves your employ; and (d) that you turn the front of the safe away from store-front windows so that the combination is not visible to ambitious burglars watching from the outside with binoculars.

#### A Note About Ratings

Burglary resistive safes are still rated alphabetically to describe the degree of protection they afford. These safes are rated down from Class "A"; however, the required protection is usually obtained with safes reaching a Class "E" rating or higher. A Class "E"-rated safe has a 1" steel body and a 1 1/2" door and can resist ripping or cutting with ordinary tools. Manufacturers now label fire resistive safes Class 350—1 hour, 350—2 hours, and 350—4

hours. A Class 350—1 hour rating, for example, means a sample safe was submitted to Underwriters Laboratories (UL) and tested. It withstood their rigid standards to meet an average 1-hour fire. This also includes a droptest to insure the safe will not break open should it fall through a third story floor and crash onto a pile of rubble during a fire. This new method of labeling is thought to be much easier to understand, because the amount of time is actually printed on the label.

The best safes all have the Underwriter Laboratories rating. To receive this UL rating, a

burglary resistive safe must have a UL-listed combination lock, UL-listed relocking device, cast or welded-plate body, and a door of special metal alloys which can resist carbide drills.

#### Further Information:

Green, G. and R.C. Farber, *Introduction to Security*, Security World Publishing Co., Los Angeles, 1975.

Weber, Thad, *Alarm Systems and Theft Prevention*, Security World Publishing Co., Los Angeles, 1973.

## MONEY HANDLING ROUTINES

### Crimes Targeted: Burglary, Robbery, Internal Theft

#### DESCRIPTION

For the small business retailer, money handling procedures are of extreme importance. The small business person, either because of location or the type of merchandise sold, is more vulnerable than other businesses. Often the small business retailer is located in a high-risk crime area and may handle valuable inventories—liquor, drugs, etc.—which can create a reasonably heavy cash flow. Having large amounts of cash on hand makes it imperative that money handling procedures be adopted which make your business less attractive to robbers and burglars.

#### RECOMMENDED

You should develop a set of procedures to cover every phase of money handling associated with your business. Cautious business managers need to be especially mindful of their cash accumulation during the day and its storage by night. Making frequent bank deposits on a random basis is sure-fire protection against sizable losses of cash.

Armored car services will make deposits for you on a schedule suitable to your needs. Pickups may be arranged only once a week or as often as several pickups a day. Costs will vary, depending on the number and size of pickups, from \$25 to \$125 a month.

If possible, employees handling cash and/or checks should be prohibited from working alone. Additionally, if you have money coming in through the mail, make certain the employee who opens your mail is not one who has access to your recordkeeping system. The latter employee can retain monies received in the mail and simply not record them, while the former may be able to conceal his wrongdoing by changing or altering records to which he would otherwise have no access.

Autographic registers are excellent control devices because they automatically drop a copy of your sales form into a locked container. If it is feasible, one should be used.

Your cashier should be prohibited from maintaining or using the key to the register and from replacing tapes or replenishing forms in the register. These procedures are necessary to prevent the cashier from having access to records.

Your cashier should be given a specific amount of cash to start each day and the register should

be checked by you periodically during the day. All monies in excess of what the cashier absolutely needs to operate should be placed in a money chest or drop safe until such time as the next bank deposit is due to be made.

If you allow credit or the use of credit cards, all credit applicants should be investigated by you or by someone not involved in sales. This will prevent your salesperson from taking merchandise and from using fictitious accounts to cover themselves.

You should establish a strict policy requiring that all disbursements be made by check and supported by a voucher or a receipt.

#### Cashier Procedures

Cash register controls are extremely important since it is here that employees have direct access to incoming cash. Make each cashier responsible for his or her own cash drawer, counting all cash received at the beginning of the shift and signing the register tape.

Instruct your cashiers to ring up each sale in proper sequence and for the exact amount. This will prevent the simultaneous ringing up of two or three sales, a process which would allow the pocketing of cash from exact change sales.

Instruct your cashiers to close the cash drawer following each transaction. This will prevent the making of change without recording sales.

Instruct your cashiers to provide customers with sales receipts for every transaction concluded. This procedure will prevent cashiers from pocketing cash on even-money sales, since each sale must be rung up to issue a receipt. Additionally, it prevents your cashier from under-ringing a sale and pocketing the difference.

Instruct your cashier to call out audibly the price as each item is entered. This procedure serves three purposes: (1) it reassures customers they are being charged correctly, (2) it prevents carelessness, and (3) it makes under-ringing difficult to do without being caught.

Have a policy that all voids and overrings beyond a certain amount must be approved and signed by you or your manager. This prevents your cashier from correcting an overring by under-ringing another customer's purchase. Not only does this procedure distort figures on sales receipts and your records, but it also gives clerks a seeming license to ring up incorrect

prices and to manipulate records of sales transactions.

Instruct your cashiers to replace receipt or detail tapes immediately when these run out and check periodically yourself to see that they are doing so. This procedure prevents an employee from simply letting the tape run out while continuing to ring up unrecorded sales. You would have no record of the sales and your employee could pocket the money from these sales.

All purchases made by your employees should be rung up and checked out by you or an employee designated by you. This prevents discounting items for friends, family or other employees. You should adopt a policy which states that no employee is to wait on a member of his or her own family in your store, and make certain the policy is enforced.

Have a special area, away from the display floor and check-out stand, where your employees can keep all of their personal belongings. This area should be secured, and access to and from this area should be tightly controlled by you or your manager.

**A Special Word About the Use of Bait Money**  
The use of bait money, first mandated for banking institutions by the 1968 Federal Bank Act, is quite simple in practice. Any retail merchant can manage it simply by maintaining in his cash register drawer a small packet of extra bills which he never gives out in change to customers. Each bill has both a serial number and a series year number. Both numbers should be noted on two separate lists and kept in different places that are readily available.

We are recommending the use of bait money according to a plan developed by the Seattle

(Washington) Police Department as follows:

- Maintain a packet of 1-dollar bills in a spare compartment of your cash drawer. The money should be in full view and no different from other bills segregated by their face value. The amount of 1-dollar bills in a bait money packet can be tailored to the size of the business, perhaps from a minimum of 5 bills through 20 or more.
- Of the two lists of numbers, one could be kept on the person of the owner with the second or backup list in another secure place on the premises. In the event a crime occurs, you should immediately telephone the police to supply all the facts which include your list of bait-money numbers. Any person apprehended who fits the description of the suspect and has in his possession the bait money will have difficulty explaining why.

While bait money is most effective as an apprehension tool in cases where identification is difficult to impossible (e.g., where a crime is committed by a masked bandit), the system is also valuable in crimes other than armed robbery. Two other possible applications in apprehending might be: (1) the thief who simply snatches cash from a drawer, runs, and is later caught with the identifiable bills in his possession, or (2) the burglar who enters your premises after closing, takes the bait money as part of his haul, and is later found with the bait money in his possession.

**Further Information:**

Post, Richard S. and Arthur A. Kingsbury, **Security Administration: An Introduction**, Charles C. Thomas, Springfield, Illinois, 1973.

## Section 5: ALARMS

For those business proprietors willing to invest the extra time and money to achieve added protection above that provided by physical security devices and procedures, we have devoted the following section solely to a discussion of alarms. Alarms are being treated separately in this handbook because their applications span the four types of protection into which the other methods of security have been classified.

Alarm systems can be a very important tool in reducing crimes against small businesses. For many small business crimes, offenders are typically unskilled, and offenses committed are opportunity crimes. What this means for you is that, in the majority of cases, all that is required for your protection is a relatively simple alarm system.

Alarm systems prove their effectiveness in three ways. First, the mere presence of an alarm system often serves as a deterrent. If the potential intruder is aware of the existence of an alarm system, he will generally divert his attentions to some easier target. Second, when a potential intruder is unaware of the existence of the system, but activates it upon entry or while in your business, the alarm system takes on the active role of announcing his presence. And, finally, alarm systems can play a key role in crime reduction by acting as a communication link with authorities.

The three deterrent activities described above can make alarm systems a very powerful tool for the reduction of crimes against small businesses. There are, however, two major limitations which tend to inhibit the increased use and effectiveness of alarm systems: costs and operational difficulties. Crime prevention professionals are a major source of free expertise in regard to both of these areas. Before doing anything about the purchase of a system, or if you desire to know more about the operational difficulties associated with many systems, be sure to consult your local Office of Crime Prevention or local police.

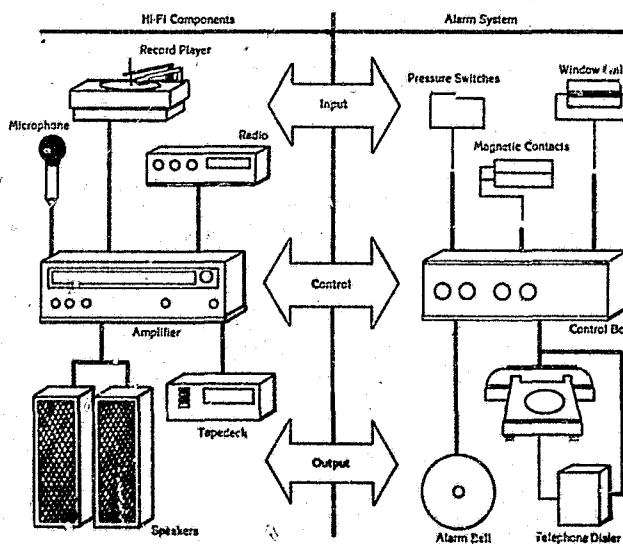
Since there is a great variety of alarms available, each designed for different purposes, each with its own merits and weaknesses, we will begin with an introduction to those basic components common to all alarms, and then compare general alarm types.

**Alarm Systems—Don't Worry About Them**  
Do not let the technological aspects of alarms worry you! Alarm systems have the same three basic components that are found in high fidelity

home units. In a high fidelity unit, the (a) **basic control** is provided by an amplifier, which can take (b) **inputs** from record players, radios, tape recorders, and microphones; and it can also provide (c) **outputs** to speakers, other recording devices, and strobe lights.

The center of an alarm system is a control device much like an amplifier in a hi-fi. The **control box** is normally plugged into a household circuit and has a back-up battery. The **inputs** to the control box can be any of literally dozens of alarm triggers: temperature gauges, pressure switches that activate when they are stepped on, closed switches that activate when they are opened, smoke alarms, etc. All of these correspond to input devices in hi-fi systems: microphones, record players, and tape decks. Unlike most hi-fi systems, some alarm triggers may not need to be wired into the control box. These kinds of triggers contain miniature radio transmitters that eliminate the need for wire.

The **output** for an alarm system is like the speakers for a hi-fi: it can be alarm bells, signals to telephone an alarm monitoring company, signals to a relay system to turn on lights, etc. The illustration below shows the similarities:



## ALARMS

### Crimes Targeted: Robbery, Burglary, Shoplifting, Internal Theft

#### DESCRIPTION

All burglar alarm systems have three common functions or components, as described on the preceding page. These are detection, control, and alarm signaling. They may all be incorporated into one box or be separated into many pieces. When we use the term "system," we are referring to a complete set of these three functions. Detectors or sensors perform the function of detecting or sensing a condition which exists or changes, with no ability to discern if the cause is authorized or unauthorized. They are equivalent to the animal senses of sight, smell, hearing, touch, and taste. Generally, detectors consist of switches or relays that are activated by entry, movement, pressure, sound, etc. One of the most common and simplest detection devices, for example, is a magnetic contact on a door. Each time the door opens, the device is activated, no matter who is opening the door. The control function provides the power, receives and evaluates the input from the sensor, and triggers the alarm-signaling function. Telephone lines, radio waves, or coaxial cables may be used to relay information to the alarm signal. Controls often contain on/off switches, time delays, standby batteries, and terminals for tying the system together. The control can be designed to differentiate between authorized and unauthorized actions. The alarm signal alerts the police, responsible individuals, or the general public by means of a bell, siren, silent alarm, light, or automatic telephone dialer. Since alarm systems basically differ only in the way they detect and report an alarm, sensors and signals should be major considerations in making your selection. Below, we have listed the general classifications of each, along with some advantages and disadvantages. Finally, we offer recommendations in each of the four areas of protection coverage.

#### SENSORS

The physical layout of your store and the area to be protected should be major factors in selecting a sensor device, since their relative effectiveness varies with different environments and applications. Sensors are grouped here according to the type of protection they offer.

#### SPACE PROTECTORS

##### Ultrasonic—

Emits inaudible soundwaves that are sensed by a receiver. If an intruder enters the area, the wave pattern is altered,

changing the frequency and activating the alarm. Ultrasonic waves do not penetrate, but are reflected by walls, glass, and physical barriers. Therefore, an intruder will be shielded from detection if he moves behind bookcases, filing cabinets, displays, etc. Air movement may also be the cause of false alarms with ultrasonic systems. (Approximate cost: under \$1000 for the first 300 sq. ft.)

##### Microwave (Radio Frequency)—

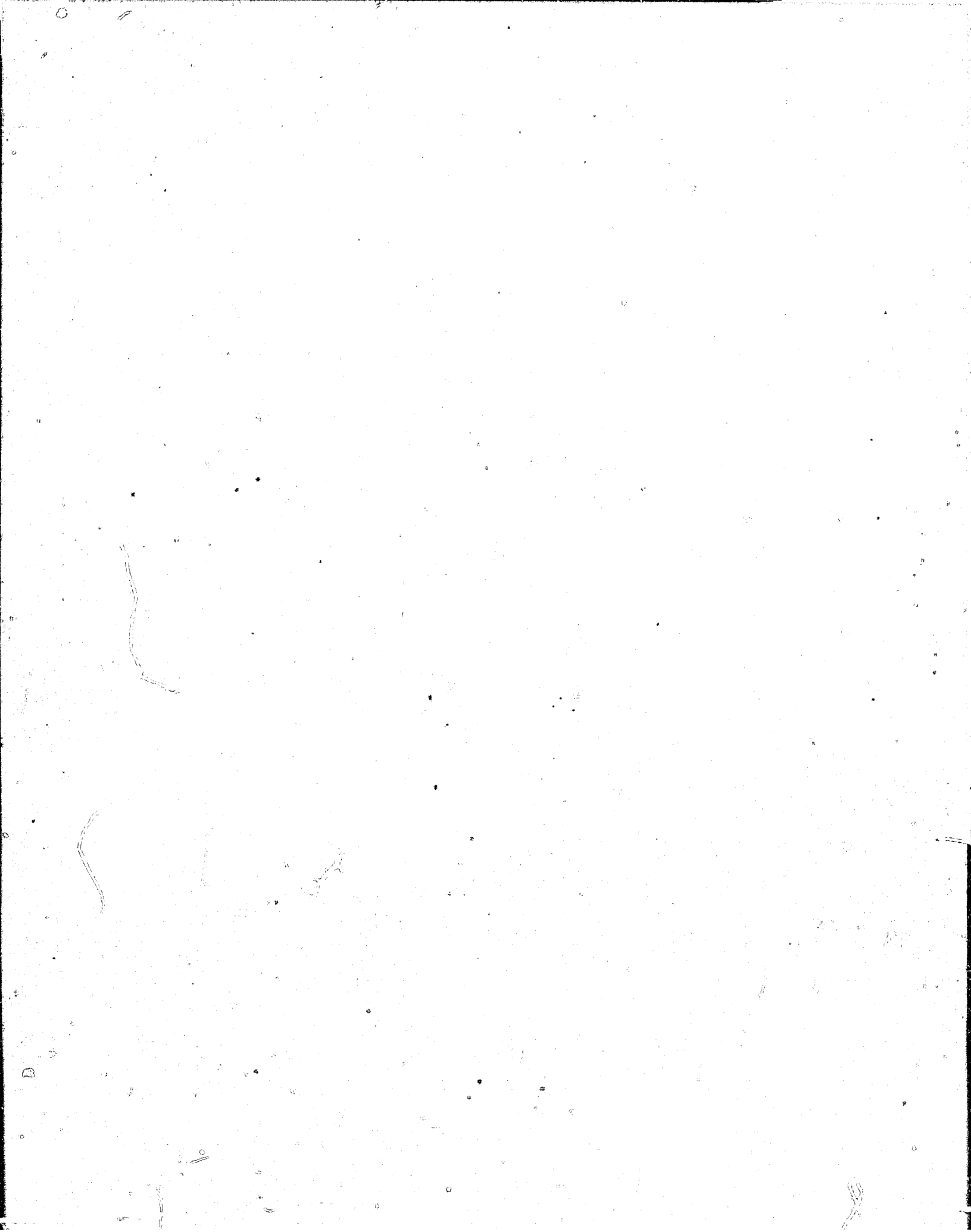
Transmits an electromagnetic field into the area to be protected. As with ultrasonics, motion will activate the alarm. The area of protection can be adjusted by switching antennas, thus widening or narrowing the energy field. Unlike ultrasonic protection, this device is not sensitive to air turbulence. However, microwave energy passes through glass and many other barriers and may pick up outside movements, such as traffic, passersby, or moving branches. For this reason, it should be used in a totally enclosed area or beamed away from windows. (Approximate cost: \$800 to \$1,000.)

##### Photo Electric—

Directs invisible infrared light beams at a receiver. Any interruption of the beam results in an alarm. The greater the distance between the transmitter and the receiver, the more easily the two may become misaligned. Light beams do not penetrate physical objects and therefore cannot protect areas behind them. Auto headlights or other beamed light sources may paralyze the photoelectric unit so that no alarm can be sounded. (Approximate cost: \$150 to \$250 per unit.)

##### Audio Or Sound—

Consists of sensitive pickup microphones that transmit sound to the alarm activator. These systems can be adjusted to ignore extraneous noises such as ventilation blowers, thunder, etc. The most reliable sound discrimination method involves an audio accumulation of possible sounds made by a burglar and extraneous sounds. The alarm goes off only when a certain threshold of sound is reached during a preselected period of time; that is, a buildup of sound "overloads" the system. (Approximate cost: \$150 to \$300 for an





**CONTINUED**

**1 OF 2**

audio accumulator system and one pickup microphone.)

## POINT PROTECTORS

### Vibration (Shock)—

Makes use of "contact microphones" to detect vibrations of the surfaces on which they are mounted. One of their most effective applications is on plate glass windows. They are not usually affected by the flexing of glass and can be adjusted to respond only to shock of sufficient magnitude to break the glass. Also, they are often used on showcases. (Approximate cost: \$25 to \$45 per unit; this does not include cost to connect to an alarm activating system.)

### Pressure-Sensitive—

Consists of weight-sensitive mats or switches placed at entrances or on stairways, generally hidden by carpeting. Mats may be purchased in varying degrees of sensitivity from 5 lbs. to 20 lbs. per square foot and may be cut to the desired area to be protected. Damp areas may cause the more sensitive mats to fail. (Approximate cost: \$15 for a 2' x 4' mat of 5 lb. per sq. ft. sensitivity.)

### Capacitance—

Protects single units such as safes or cash registers by detecting changes in an electrostatic field. The device creates an electric circuit between two conductors separated by an insulator. An electrical charge builds up a constant, measurable amount of stored energy, called capacitance, at the insulator. When a mass such as a human body approaches, the measured energy is altered and registers an alarm. A capacitance unit is sensitive to body proximity but relatively insensitive to environmental factors. Objects to be protected should be placed on insulating blocks. (Approximate cost: \$300.)

## ENTRY PROTECTORS

### Magnetic Contact Switch—

Consists of two parts, a magnet and a self-contained magnetically operated switch. The magnet is mounted on a door and the magnetically operated switch on the door frame. A magnetic field is generated when the door is closed by bringing the two units in proximity to one another. When the door is opened (generally beyond two inches), the magnetic field is interrupted and results in an alarm. (Approximate cost: \$4 to \$6 per unit.)

### Foil—

Foil is a thin metallic tape which is attached to windows and other glass areas which are located on perimeter building walls. The breaking of glass tears the foil, which causes an electrical circuit to be broken and initiates an alarm. Foil is highly subject to false alarms and easily tears with time and wear, and so requires a good deal of maintenance. (Approximate cost: \$6 for a 300' roll of foil.)

## SIGNALS

There are four types of signals: local alarm, central station alarm, proprietary alarm, and police department alarm. All except the local alarm are connected directly or indirectly with the police. A local alarm may be used in combination with any of the other three.

### Local—

The alarm is announced only at the protected premises, generally by means of a bell or a light. Because it is dependent on police patrol or passerby response, it serves primarily as a deterring influence, frightening away the intruder before arrival of police. Local alarms can be ineffective in secluded or deserted downtown areas. Initial installation of a local alarm is approximately \$100, with a \$10 to \$12 monthly leasing and maintenance charge.

### Central Station—

This silent alarm does not sound locally, but is received at a central monitoring facility, independently owned by an alarm agency. Police are then notified of the active alarm. The initial installation fee is approximately \$200, with monthly payments ranging between \$10 and \$40, depending on the number of service options selected.

### Proprietary—

This system is similar to the central station arrangement except that the monitoring facility is maintained by the owner of the property to be protected. The costs of maintaining such a station are generally prohibitive for the small business retailer.

### Police Department—

There are two methods by which messages may be sent directly to police headquarters: (1) the alarm is connected directly to a signal panel at the station, or (2) an automatic telephone dialer calls the police on existing phone lines and plays a prerecorded message. Generally, police

departments charge no fees for alarm connections; however, there is a growing negative police reaction to both direct-connect and dialer systems because of the high rate of false alarms and phone tie-ups. Some departments refuse to monitor either type. Dialers may be purchased for about \$300.

#### RECOMMENDED

We have selected a few of the inexpensive alarm systems designed with small businesses and residences in mind. Recommendations have been made for entry, space, and point protection.

We do not, however, recommend the use of alarm systems for protecting the outside perimeter of your property. External environmental conditions are simply too variable to permit effective protection.

#### ENTRY PROTECTION—

Door switches, such as the magnetic contacts described previously, are the simplest and most reliable intrusion system available. They may be wired or wireless, the main difference being that the latter use a small transmitter—not wiring—to send a sensor signal to the control box. Wired systems are of the normally closed (NC) type, in which the electrical circuit is broken by opening a door or window and an alarm is sounded. The cost of an entry system is dependent on the size of your facility and on the number of perimeter openings. A look at the estimated cost required to protect a building with 2 doors

and 11 windows reveals a range of \$100 to \$170 for seven selected wired systems and a range of \$225 to \$680 for four sample wireless systems.

#### SPACE PROTECTION—

Ultrasonics or microwave detectors are generally your best bet for space protection. Most space protectors consist of a transmitter and a receiver in a single housing. Since they are wireless, they are easy to install; however, care should be taken in their placement to reduce false alarm rates. Inexpensively priced ultrasonic units are available from \$60 to \$180. One manufacturer advertises a microwave unit for \$280.

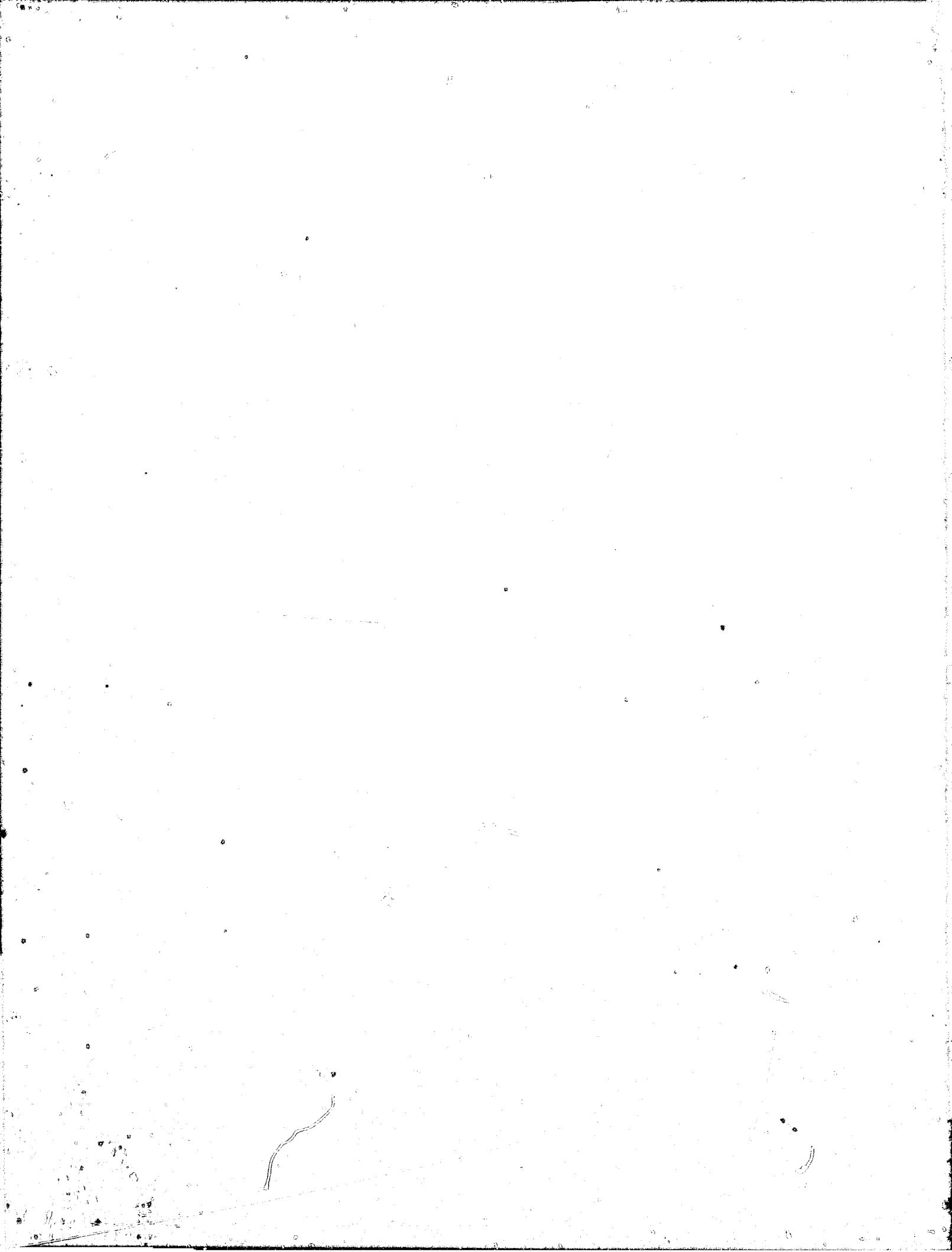
#### POINT PROTECTION—

Capacitance alarms, while expensive, are very reliable and should be considered if cash is maintained in a safe overnight or if high value items are carried. Pressure switch mats are recommended for use around cash registers. One manufacturer offers a cash register guard which keeps the register locked until a concealed mat is stepped on to release the drawer. (Cost: \$37.50.)

#### Further Information:

Cole, Richard B., *The Applications of Burglar Alarm Hardware*, Charles C. Thomas, Springfield, Illinois, 1971.

Consumer Reports, Vol. 42, No. 2, "Burglar Alarms," February 1977.



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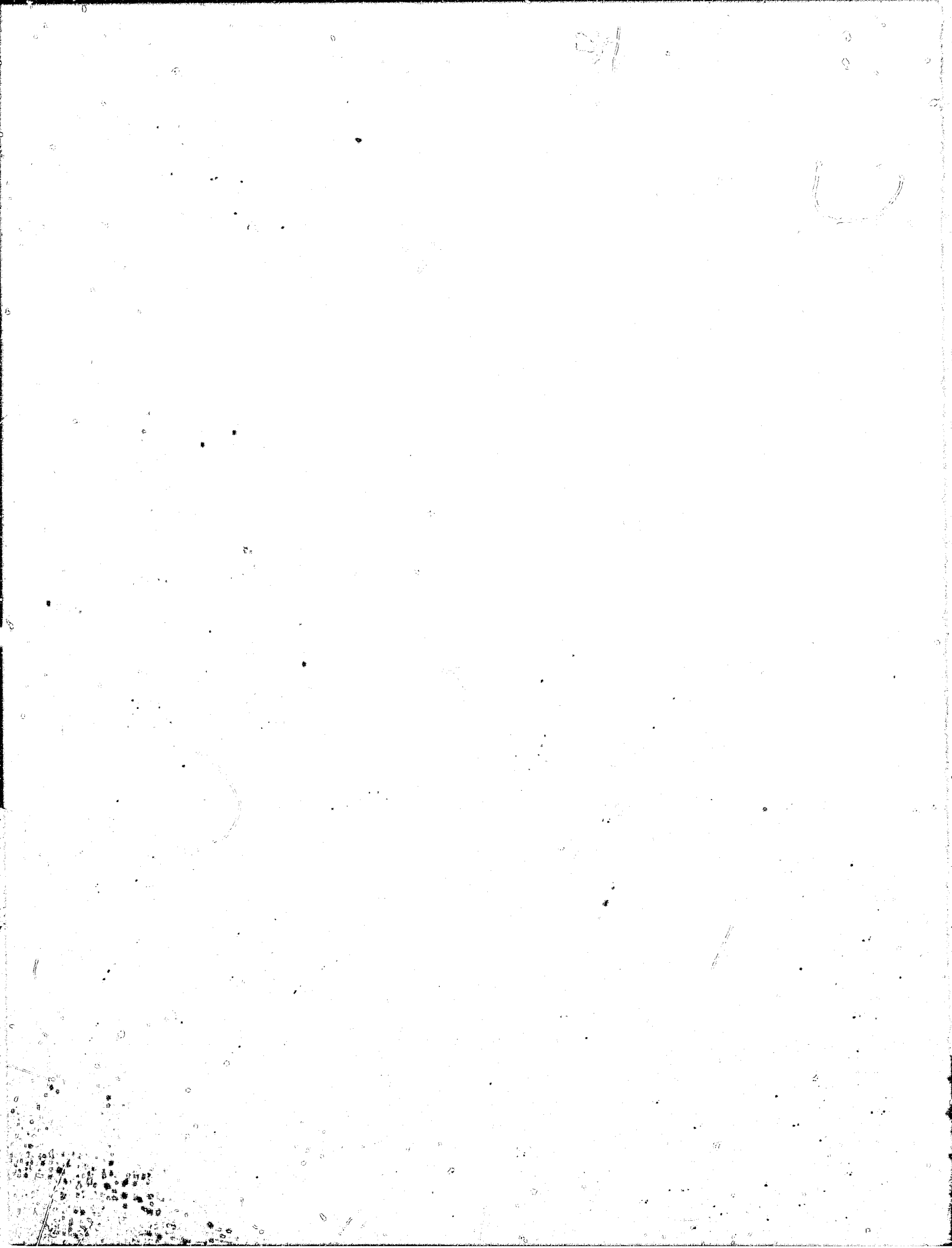
# **APPENDIX A**

## **SHOPLIFTING POLICY GUIDE FOR RETAILERS**

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## SHOPLIFTING POLICY GUIDE FOR RETAILERS

by Roger Griffin

Important information for everyone concerned with security in the retail store. . . the general manager of a commercial shopping service sets forth guidelines vital to everyone from employee to manager.

### INTRODUCTION

When a person removes merchandise from your store without paying for it, you are entitled to recover the items that have been taken.

**IT IS MOST IMPORTANT TO REMEMBER, HOWEVER, THAT A PERSON IS NOT NECESSARILY GUILTY OF SHOPLIFTING JUST BECAUSE HE DID NOT PAY FOR CERTAIN ITEMS.**

For a person to be found guilty of the crime of shoplifting it is necessary to be able to prove that the person did, in fact, intend to steal.

It is not a crime to forget to pay for something. The proof required to make a crime of the 'act of taking' is the formal proof, obtained and presented according to strict rules of evidence that will satisfy all of the procedural and constitutional requirements imposed by the courts.

The person who apprehends a shoplifter must have a basic knowledge of those requirements. He must have them in mind each time he contemplates taking a shoplifter into his custody.

Persons experienced in the apprehension of shoplifters agree that the shoplifter sometimes wins . . . That the shoplifter sometimes gets away with a theft because all of the elements necessary to make a sound apprehension are not present.

The experienced person controls his emotions and bides his time knowing that another shoplifter will be along shortly or that the same one will return at a later time.

Patience learned from experience is a basic requirement for anyone contemplating the shoplifting problem.

### IMPORTANT FACTORS

In the past eight years Commercial Service Systems has made a detailed study of some 85,000 shoplifting cases.

Under 30% of those shoplifters were turned over to the police. A pertinent question is, "Was it possible to handle the 70% which were

released with any less care and caution than was required in handling the 30% which were prosecuted?" The answer, from the standpoint of policy, must be that all shoplifters, prosecutions and non-prosecutions, adults and juveniles, must be handled with equal care and caution.

The obvious reason is that the person who makes the apprehension often changes his mind about the course of action he is to take after he has apprehended and interrogated the subject.

The apprehending official finds himself in a difficult, if not untenable, position if he has ignored the basic rules outlined in this policy guide.

### DECISION TO ARREST

Only the manager should have the responsibility for apprehending a shoplifter; but he may delegate the responsibility to those employees considered by him to be competent to handle such matters.

### CITIZEN'S ARREST

A citizen who sees a misdemeanor committed in his presence may arrest the individual who committed the offense.

It is important to note that this arrest is legal only if it is made by the citizen who SEES the offense committed.

If an employee other than the manager sees the offense committed, he must make the arrest. The manager must have delegated the authority to arrest to that employee; or, he must have confidence in the employee's ability to judge that a crime has been committed and then accompany the employee who will make the arrest.

### LEGAL STEPS TO APPREHENSION

You must see the shoplifter take your property. You may then testify that it was, in fact, your merchandise.

You must see the shoplifter conceal the merchandise on his person. (Concealment contributes greatly toward establishing that the shoplifter intended to steal the merchandise and did not merely forget to pay for it.)

You must watch the shoplifter continuously and see that the merchandise is not "ditched."

If you are diverted so that there is a break in your surveillance of the shoplifter, you are taking a poorly calculated risk to later apprehend the person.

You must be able to testify personally, of your own knowledge, that the merchandise was not paid for.

It is not sufficient to ask the person operating the cash register if the merchandise was paid for.

If you did not see the shoplifter fail to pay for the merchandise in question, then you do not have personal knowledge that a crime has been committed and you do not have the authority to make a citizen's arrest.

Apprehend the shoplifter outside the store . . . either on public property, the parking lot or on the sidewalk. (By permitting the shoplifter to exit the store prior to making the arrest you have allowed the person to go that much further in establishing his true intent to steal.)

### THE SHOPLIFTER IN YOUR CUSTODY

When apprehending the shoplifter, be sure, be firm, and be positive.

Identify yourself by name and as a store employee.

Always take one or more employees with you when you make the apprehension. (There is safety in numbers and at least one other person can act as corroborating witness.)

Address the shoplifter politely and directly. Words such as the following are effective:

"Ma'm, I am the store manager. You have a can of our hair spray in your purse which you did not pay for. Please come back into the store with me so that we can straighten this out."

Reasonable force can be employed if the shoplifter refuses to return; but your safety and the safety of those you are responsible for must always be foremost in your mind.

Have the employee who is backing you up follow to see that the shoplifter does not discard the stolen merchandise.

Attempt to recover at least one item before you take the shoplifter back into the store.

Your most important asset will be an attitude that conveys confidence and self assurance. If you show doubt or indecision, the shoplifter will sense your uncertainty and exploit it to your disadvantage.

If the shoplifter escapes before you recover your merchandise, telephone the police. Give description, and the description and license

number of the automobile if you were able to obtain it.

Inform the police; but make sure they understand that you are making an advisory report only and that you DO NOT want the person apprehended. When the police pick up such a suspect they must do so on their own and for their own investigation.

(At that point, the suspect has always discarded the evidence; and it is difficult if not impossible to convict a shoplifter unless you can produce the merchandise you recovered from him.)

### QUESTIONING THE SHOPLIFTER

Your purpose in interrogating the shoplifter is three-fold:

- To recover all of your merchandise.
- To obtain a confession from the shoplifter.
- To obtain the shoplifter's signature on the form which releases the store and all parties involved in the apprehension from Civil Liability.

Utilize a private room off the sales floor.

Always have a witness present. If the shoplifter is a female have a female witness present.

Being able to name the item and the place of concealment will go a long way toward convincing the shoplifter that he has been caught redhanded.

Instruct the shoplifter to place all of the items not paid for on the table or desk.

A positive attitude and persistence on your part will usually produce results.

If the shoplifter refuses to produce the stolen merchandise you may decide to call for uniformed police assistance.

Be very alert that the shoplifter does not ditch the merchandise while you are waiting for assistance to arrive.

Most shoplifting subjects appear to cooperate because they are interested in getting their predicament resolved with as little trouble as possible.

Most shoplifters will claim that it is the first time they have stolen merchandise. Admissions of prior thefts are not greatly important; one should not accept restitution for prior thefts, and if prosecuted the shoplifter will be convicted of the current offense only.



The only way restitution for prior thefts should be accepted is at a later time and at the company's main office — with proper representation on both sides to foreclose entirely the possibility of any claim of extortion.

A standard civil release form, which also contains all of the information pertinent to the circumstances of the theft, should be used routinely and should be kept on hand in all stores.

#### **COMPLETING THE CIVIL RELEASE FORM (and the Identifying Information)**

Ask the shoplifter for identification.

Fill out all blanks and answer all questions on the release form. It is impossible to try to remember details at some later time.

After you have completed the release form ask the shoplifter to read it aloud.

When you are satisfied that the shoplifter understands the release form ask him to sign.

Language such as the following will be helpful in obtaining a signature:

"If I have the information all correct I would like you to indicate so by putting your signature on this line. You may use my pen" . . . At that point hand the shoplifter your pen.

If the shoplifter indicates that he or she is reluctant to sign because of not wanting to admit in writing that something was stolen, explain that the statement is not an admission of theft — but rather an agreement that he or she did leave the store without paying, and that it was reasonable for you to recover your merchandise.

If you have already made the decision to prosecute the shoplifter, obtaining the signature on the form is less important. A criminal conviction is perhaps the best kind of protection against civil liability in a shoplifting case.

If you intend to release the shoplifter, the civil release is of great importance.

If the shoplifter refuses to sign the release, that person should be prosecuted unless there are circumstances which make it obvious to you that it would be difficult to obtain a conviction.

#### **SITUATIONS WHERE IT APPEARS PRUDENT TO PROSECUTE ADULT SHOPLIFTERS**

The shoplifter refuses to sign the civil release form.

The shoplifter has no identification.

The shoplifter resists or attacks store personnel.

The shoplifter appears to be under the influence of drugs.

The shoplifter appears to be intoxicated. (In this case the police may book the person on a drunk charge rather than a shoplifting charge.)

The shoplifter has a prior record.

The theft involves a large amount of merchandise.

The person appears to be a professional shoplifter:

He employs a booster box or other device.

It appears that he has other stolen merchandise in his vehicle.

The theft involves cartons of cigarettes.

The theft involves liquor.

The theft involves fresh meat in a quantity which causes you to suspect that the stolen merchandise is to be sold.

Any other unusual circumstances which cause you to believe that it would be wise to call the police into the case.

#### **SITUATIONS WHERE IT APPEARS PRUDENT TO RELEASE ADULT SHOPLIFTERS IN- STEAD OF INITIATING PROSECUTION**

The manager may elect to release the shoplifter instead of having him booked any time the civil release form has been signed or when extenuating circumstances suggest release rather than prosecution.

Following are situations where judgment may indicate release:

You are convinced as a result of your observations and as a result of your interrogation that the subject honestly forgot to pay and did not intend to steal the merchandise.

The subject is senile and would probably receive great sympathy from a jury or a judge.

The subject is pregnant and would receive sympathy.

The subject appears to be contrite or at least gives you complete cooperation following the apprehension.

You have recently booked so many shoplifters that you are concerned about the

amount of time you may have to spend in court.

Our yearly surveys show that slightly more than 70% of all shoplifters apprehended are released without the police being brought into the case.

#### **METHODS OF HANDLING JUVENILE SHOPLIFTERS (under 18 years of age)**

In some stores, juveniles make up at least half of the shoplifting problem. Therefore, it is obvious that the juvenile's contribution to shoplifting losses must be treated seriously. A standard policy must be followed in handling all juvenile offenders.

The portion of the release form which contains identifying information must be completely filled out in each case.

The juvenile should be released only to his parents or to your local police agency.

[The temptation with juveniles (and particularly with the younger ones) is simply to recover the merchandise and eject them from the store.]

In California, for example, the usual procedure is for juvenile officers to interview the subject and check their card file for prior problems. If there are no prior problems, the juvenile people release the subject to his parents. The procedure described above is to be recommended. It accomplishes the following:

- It makes a far greater impression on the juvenile and his family when the offense is handled in an official manner.

- You establish within the juvenile community the fact that shoplifting is not tolerated in your stores.

- You foreclose that rare possibility that something will happen to the juvenile between the time you release him and the time he reaches home, for which you may be blamed.

- You foreclose the possibility of the juvenile concocting an untrue story in his own defense concerning your mistreatment of him.

Some companies have the juvenile sign the release form. The thought is that the more official the procedure seems the more impressed the juvenile will be.

Most companies call parents directly in many juvenile cases. This is perfectly acceptable anytime your judgment dictates that course of action.

#### **SIGNING OF COMPLAINTS**

When you have a shoplifter booked, the police present the facts to the appropriate prosecutor. The prosecutor then issues a criminal complaint against the shoplifter.

This complaint must be signed by the person who made the citizen's arrest.

It is good policy to ask the transporting officer(s) where and when the complaint is to be signed. (If they do not know, ask them for the telephone number of their watch commander so that you can call him and inquire.)

The signing of the complaint is crucial. It must be the responsibility of the person who made the arrest. If the complaint is not signed the case cannot proceed and there will be no prosecution of the shoplifter.

Do not rely on someone calling you with a request to appear and sign the complaint. Take the initiative yourself to determine what is necessary.

If an oversight occurs and the complaint is not signed, the shoplifter will probably go free and then may very well bring a civil suit against you and your company.

#### **POLICY FOR HANDLING EVIDENCE WHEN A SHOPLIFTER IS BOOKED**

Recover all stolen items from shoplifter.

Recover all wrappers, boxes, blister packs, etc., that the shoplifter may discard after removing merchandise. Treat these things as evidence.

Recover all price tags, even if they are mutilated, that the shoplifter may remove from merchandise and discard. Treat as evidence.

If perishable merchandise is involved, remove labels and treat the labels as evidence.

If the shoplifter paid for some of the recovered merchandise, locate the cash register receipt tape and treat as evidence.

Initial and date each item of evidence.

Request the (transporting) police officer to initial and date each item of evidence.

Request police officer to accept evidence and book it.

If police decline to accept the evidence, follow these procedures:

- Seal evidence in bag or other suitable container.

- Identify the contents on the outside of the package with the name of the shoplifter,

date, name of the person who made the apprehension, names of witnesses and any other pertinent data.

Place package in a safe place until it is determined if the shoplifter pleads guilty or if a trial is scheduled at which time the evidence will be required.

In case notification of the disposition of a shoplifter's case has not been received within thirty days, the store manager should call the police and inquire. Information may be available that will permit the return of the evidence to stock.

When the evidence is retained in the store and you are summoned to testify at a shoplifter's trial, always take all evidence to court with you.

#### **POLICY TO BE FOLLOWED WHEN APPEARING IN COURT AS A WITNESS**

Make notes of the circumstances when a shoplifter is apprehended.

Review your notes prior to taking the witness stand and offer your notes to the prosecutor.

Make the best impression by being neat and by dressing conservatively when appearing in court.

Do not chew gum on the witness stand or any time court is in session.

Do not talk or visit with others while court is in session.

While on the witness stand speak clearly enough so that you will not be required to repeat your answers.

Remember you can testify only to what you saw personally. (No hearsay.)

Remember you cannot repeat any conversation which took place out of the hearing of the defendant.

Remember you must adhere to the facts. Your conclusions or assumptions are not allowed as testimony.

Answer all questions directly and in as simple terms as possible.

The natural tendency is to be overly expansive when you think a question does not engender an adequate answer.

Rely on the prosecutor to ask additional questions which will clear up any misunderstanding.

Do not make voluntary statements while on the witness stand.

Suggest to the prosecutor any testimony you have in mind before you take the stand.

Rely on the prosecutor's judgement about what should be brought out as testimony.

If you do not know the answer to a question say so in a direct way.

If you do not hear a question, politely ask that it be repeated.

If you do not understand a question, say so in a direct manner.

Do not fall into the trap of trying to match wits with defense counsel.

You will not win and you will damage the impression you make.

Make your answers polite, direct and straightforward.

Do not fall into the trap of letting defense counsel make you angry. It is his job to test your memory and your credibility.

When either the prosecutor or the defense counsel objects to a question, STOP!!! Withhold your answer until the court rules on the objection.

#### **RESPONSIBILITY OF STORE EMPLOYEES**

It is the responsibility of store employees to try to protect merchandise from theft.

Each person is expected to do what he can to prevent shoplifting and to apprehend shoplifters when his action is consistent with instructions based on company policy.

However, company policy should provide that no employee is to take any action in the apprehension of a shoplifter that will bring harm to himself, to other employees, or to customers.

All employees are urged to exercise ordinary common sense in this area and to consult with a superior when there is any doubt about the course of action to follow.

The best rule to follow is "be SURE before you take any action". If you have any doubt in your mind about whether a person has actually stolen something, it is far better to take no action. Wait until you are sure.

Make a mental note of any person who has aroused your suspicions. If someone stole from you successfully on one occasion, he will probably bring you more of his "business" — and the next time he or she is in the store you will have the opportunity to do all that is required before you take action.

## **SUGGESTED POLICY FOR ESTABLISHING AND MAINTAINING A GOOD WORKING RELATIONSHIP WITH YOUR LOCAL POLICE AGENCY**

Police agencies are ready, as a matter of course, to answer your requests for assistance in the prosecution of shoplifters. However automatic you believe their response to be, you can contribute materially to the smoothness of your working relationship by taking the initiative to establish liaison with the police agency which will handle your shoplifters.

Following are suggestions for opening lines of communication:

When written policy exists (and it should in every case) the commander of each division or the chief of police of each municipality where you have a store should be made aware of your policy.

The store manager or security officer, or both, should call on the appropriate official and discuss your policy with him. At the time you will get an understanding of his feeling for the problem as well as an understanding of how shoplifters are processed.

Once you have opened up lines of communication keep them open. Drop in on your contact and discuss any problems or misunderstandings. Do not hesitate to write a letter of appreciation when it is deserved. Police officials like everyone else are grateful to know that their efforts are appreciated.

### **FOLLOWING ARE BASIC POINTS WHICH YOUR LAW ENFORCEMENT AGENCY WILL BE INTERESTED IN**

That you have policy and procedures for handling shoplifters.

That such policy emanates from your company's upper management and that it is observed by all concerned.

That your security force and responsible store employees understand the basics of citizen's arrest.

That you are not going to use the police to try to scare shoplifters; that when you call uniformed officers to the store it is because you desire to have a shoplifter transported and booked.

That once the shoplifter has been booked, you are prepared to follow through with the prosecution. This includes your signing the criminal complaint at the appropriate time and your producing the witness required by the prosecution.

That you understand when uniformed officers respond to your call they do so for the purpose of transporting and booking the suspect and not for the purpose of making the arrest.

That you understand that all calls for assistance are assigned a priority. A call concerning an armed robbery in progress will take precedence over a call concerning a shoplifter in custody at your store. That there may be delays in answering your call for this reason.

**REMEMBER** that your police officials will probably understand and respond to your needs **BASED** upon your approach to them, and in **PROPORTION** to your understanding of their problems and limitations.

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**APPENDIX B**

**SECURITY ORDINANCES**  
**OAKLAND CALIFORNIA**

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## OAKLAND

### POLICE-FIRE AND INSURANCE COORDINATING COMMITTEE MODEL BURGLARY SECURITY CODE MINIMUM STANDARDS

#### I. Purpose

The purpose of this Code is to provide minimum standards to safeguard property and public welfare by regulating and controlling the design, construction, quality of materials, use and occupancy, location, and maintenance of all buildings and structures within a city and certain equipment specifically regulated herein.

#### II. Development Of Model Code

The following City Ordinances were used as guides in developing the model code: General Ordinance No. 25, 1969, as amended, City of Indianapolis, Indiana -- Section 605-3 -- F211 Housing Inspection and Code Enforcement, Trenton, New Jersey -- Section 23-405 of the Arlington Heights Village, Illinois. Code -- Section 614.46 Chapter 3 of the Arlington County, Virginia, Building Code -- Section H-323.4 of the Prince George's County, Maryland Housing Code -- City of Oakland, California Building Code -- Burglary Prevention Ordinance, Oakland, California.

#### III. Scope

The provisions of the Code shall apply to new construction and to buildings or structures to which additions, alterations or repairs are made except as specifically provided in this Code. When additions, alterations or repairs within any 12-month period exceed 50 percent of the replacement value of the existing building or structure, such building or structure shall be made to conform to the requirements for new buildings or structures.

#### IV. Applications To Existing Buildings

(It is the Committee's recommendation that the Code apply only to new construction, additions, alterations or repairs. However, some cities may wish to include present structures. If so, the following paragraph may be substituted for III. above.)

All existing and future buildings in the city shall, when unattended, be so secured as to prevent unauthorized entry, in accordance with specifications for physical security of accessible openings as provided in this Code.

#### V. Alternate Materials And Methods Of Construction

The provisions of this Code are not intended to prevent the use of any material or method of construction not specifically prescribed by this Code, provided any such alternate has been approved, nor is it the intention of this Code to exclude any sound method of structural design or analysis not specifically provided for in this Code. Structural design firm ratings given in this Code are to be used as a guide only, and exceptions thereto may be made if substantiated by calculations or other suitable evidence prepared by a qualified person.

The enforcing authority may approve any such alternate provided he finds the proposed design is satisfactory and the material, method or work offered is, for the purpose intended, at least equivalent of that prescribed in this Code in quality, strength, effectiveness, burglary resistance, durability and safety.

#### VI. Tests

Whenever there is insufficient evidence of compliance with the provisions of this Code or evidence that any material or any construction does not conform to the requirements of this Code, or in order to substantiate claims for alternate materials or methods of construction, the enforcing authority may require tests as proof of compliance to be made at the expense of the owner or his agent by an approved agency.

#### VII. Enforcement

The Multiple Dwelling and Private Dwelling Ordinances shall be included in the Building Code and enforced by the Building Official. The Commercial Ordinance shall be administered and enforced by the Chief of Police.

#### VIII. Responsibility For Security

The owner or his designated agent shall be responsible for compliance with the specifications set forth in this Code.

#### IX. Violations And Penalties

It shall be unlawful for any person, firm, or corporation to erect, construct, enlarge, alter, repair, move, improve, remove, convert or demolish, equip, use, occupy or maintain any building or structure in the city, or cause the same to be done, contrary to or in violation of any of the provisions of this Code.

Any person, firm or corporation violating any of the provisions of this Code shall be deemed guilty of a misdemeanor and shall be punishable by a fine of not more than \$500, or by imprisonment for not more than six months, or by both such fine and imprisonment.

#### X. Appeals

In order to prevent or lessen unnecessary hardship or practical difficulties in exceptional cases where it is difficult or impossible to comply with the strict letter of this Code, and in order to determine the suitability of alternate materials and types of construction and to provide for reasonable interpretations of the provisions of this Code, there shall be created a Board of Examiners and Appeals (if none exist). The Board shall exercise its powers on these matters in such a way that the public welfare is secured, and substantial justice done most nearly in accord with the intent and purpose of this Code.

#### MODEL COMMERCIAL BURGLARY SECURITY ORDINANCE MINIMUM STANDARDS

##### I. All Exterior Doors Shall Be Secured As Follows:

- A. A single door shall be secured with either a double cylinder deadbolt or a single cylinder deadbolt without a turn-piece with a minimum throw of one inch. A hook or expanding bolt must contain hardened material to repel attempts at cutting through the bolt.
- B. On pairs of doors, the active leaf shall be secured with the type of lock required for single doors in (A) above. The inactive leaf shall be equipped with flush bolts protected by hardened material with a minimum throw of 5/8 inch at head and foot. Multiple points locks, cylinder activated from the active leaf and satisfying (I, A and B) above may be used in lieu of flush bolts.
- C. Any single or pair of doors requiring locking at the bottom or top rail shall have locks with a minimum 5/8 inch throw bolt at both the top and bottom rails.
- D. Cylinders shall be so designed or protected so they cannot be gripped by pliers or other wrenching devices.
- E. Exterior sliding commercial entrances shall be secured as in (A, B, & D) above with special attention given to safety regulations.
- F. Rolling overhead doors, solid overhead swinging, sliding or accordion garage-type doors shall be secured with a cylinder lock or padlock on the inside, when not otherwise controlled or locked by electric power operation. If a padlock is used, it shall be of hardened steel shackle, with minimum five pin tumbler operation with non-removable key when in an unlocked position.
- G. Metal accordion grate or grill-type doors shall be equipped with metal guide track at top and bottom, and a cylinder lock and/or padlock with hardened steel shackle and minimum five pin tumbler operation with non-removable key when in an unlocked position. The bottom track shall be so designed that the door cannot be lifted from the track when the door is in a locked position.
- H. Outside hinges on all exterior doors shall be provided with non-removable pins when using pin-type hinges.
- I. Doors with glass panels and doors that have glass panels adjacent to the door frame shall be secured as follows:
  1. Rated burglary-resistant glass or glass-like material, or
  2. The glass shall be covered with iron bars of at least one half-inch round or 1" x 1/4" flat steel material, spaced not more than five inches apart, secured on the inside of the glazing, or
  3. Iron or steel grills of at least 1/8" material of 2" mesh secured on the inside of the glazing.
- J. In-swinging doors shall have rabbeted jambs.
- K. Wood doors, not of solid core construction, or with panels therein less than 1 3/8" thick, shall be covered on the inside with at least 16 gauge sheet steel or its equivalent attached, with screws on minimum 6-inch centers.



L. Jambs for all doors shall be so constructed or protected so as to prevent violation of the function of the strike.

M. All exterior doors, excluding front doors, shall have a minimum of 60 watt bulb over the outside of the door. Such bulb shall be protected with a vapor cover or cover of equal breaking resistant material.

## II Glass Windows:

A. Accessible rear and side windows not viewable from the street shall consist of rated burglary resistant glass or glass-like material. Fire Department approval shall be obtained on type of glazing used.

B. If the accessible side or rear window is of the openable type, it shall be secured on the inside with a locking device capable of withstanding a force of 300 pounds applied in any direction.

C. Louvered windows shall not be used within eight feet of ground level, adjacent structures or fire escapes.

D. Outside hinges on all accessible side and rear glass windows shall be provided with non-removable pins. If the hinge screws are accessible the screws shall be of the non-removable type.

## III. Accessible Transoms:

All exterior transoms exceeding 8" x 12" on the side and rear of any building or premises used for business purposes shall be protected by one of the following:

A. Rated burglary-resistant glass or glass-like material, or

B. Outside iron bars of at least 1/2" round or 1" x 1/4" flat steel material, spaced no more than 5" apart, or

C. Outside iron or steel grills of at least 1/8" material but not more than 2" mesh.

D. The window barrier shall be secured with rounded head flush bolts on the outside.

## IV. Roof Openings:

A. All glass skylights on the roof of any building or premises used for business purposes shall be provided with:

1. Rated burglary-resistant glass or

glass-like material meeting Code requirements, or

2. iron bars of at least 1/2" round or 1" x 1/4" flat steel material under the skylight and securely fastened, or

3. A steel grill of at least 1/8" material of 2" mesh under the skylight and securely fastened.

B. All hatchway openings on the roof of any building or premises used for business purposes shall be secured as follows:

1. If the hatchway is of wooden material, it shall be covered on the inside with at least 16 gauge sheet steel or its equivalent attached with screws.

2. The hatchway shall be secured from the inside with a slide bar or slide bolts. The use of crossbar or padlock must be approved by the Fire Marshall.

3. Outside hinges on all hatchway openings shall be provided with non-removable pins when using pin-type hinges.

C. All air duct or air vent openings exceeding 8" x 12" on the roof or exterior walls of any building or premise used for business purposes shall be secured by covering the same with either of the following:

1. Iron bars at least 1/2" round or 1" x 1/4" flat steel material spaced no more than 5" apart and securely fastened, or

2. A steel grill of at least 1/8" material of 2" mesh and securely fastened, or

3. If the barrier is on the outside, it shall be secured with rounded head flush bolts on the outside.

## V. Special Security Measures

A. Safes:

Commercial establishments having \$1,000 or more in cash on the premises after closing hours shall lock such money in a Class "E" safe after closing hours.

B. Office Buildings (Multiple occupancy):

All entrance doors to individual office suites shall have a deadbolt lock with a

minimum 1-inch throw bolt which can be opened from the inside.

#### VI. Intrusion Detection Devices:

- A. If it is determined by the enforcing authority of this ordinance that the security measures and locking devices described in this ordinance do not adequately secure the building, he may require the installation and maintenance of an intrusion detection device (Burglar Alarm System).
- B. Establishments having specific type inventories shall be protected by the following type alarm service:
  1. Silent Alarm — Central Station — Supervised Service
    - a. Jewelry Store — Mfg., wholesale, and retail
    - b. Guns and ammo shops
    - c. Wholesale liquor
    - d. Wholesale tobacco
    - e. Wholesale drugs
    - f. Fur stores
  2. Silent Alarm
    - a. Liquor stores
    - b. Pawnshops
    - c. Electronic equipment
    - d. Wig stores
    - e. Clothing (new)
    - f. Coins and stamps
    - g. Industrial tool supply houses
    - h. Camera stores
    - i. Precious metal storage facility
  3. Local Alarm (Bell outside premise)
    - a. Antique dealers
    - b. Art galleries
    - c. Service stations

#### VII. Exceptions:

No portion of this code shall supersede any local, state or Federal laws, regulations, or codes dealing with the life-safety factor.

Enforcement of this ordinance should be developed with the cooperation of the local fire authority to avoid possible conflict with fire laws.

### MODEL PRIVATE DWELLING SECURITY ORDINANCE MINIMUM STANDARDS

#### I. Exterior Doors:

- A. Exterior doors and doors leading from garage areas into private family dwellings shall be of solid core no less than 1 3/4 inches thickness.
- B. Exterior doors and doors leading from garage areas into private family dwellings shall be of solid core no less than 1 3/4 inches thickness.
- C. Vision panels in exterior doors or within reach of the inside activating device must be of burglary-resistant material or equivalent as approved by the Building Official.
- D. Exterior doors swinging out shall have non-removable hinge pins.
- E. In-swinging exterior doors shall have rabbeted jambs.
- F. Jambs for all doors shall be so constructed or protected so as to prevent violation of the function of the strike.

#### II. Sliding Patio-Type Doors Opening Onto Patios Or Balconies Which Are Less Than One Story Above Grade Or Are Otherwise Accessible From The Outside:

- A. All single sliding patio doors shall have the movable section of the door sliding on the inside of the fixed portion of the door.
- B. Dead locks shall be provided on all single sliding patio doors. The lock shall be operable from the outside by a key utilizing a bored lock cylinder or pin tumbler construction. Mounting screws for the lock case shall be inaccessible from the outside. Lock bolts shall be of hardened steel or have hardened steel inserts and shall be capable of withstanding a force of 800 pounds applied in any direction. The lock bolt shall engage the strike sufficiently to prevent its being disengaged by any possible movement of the door within the space or clearances provided for installation and operation. The strike area shall be reinforced to maintain effectiveness of bolt strength.

- C. Double sliding patio doors must be locked at the meeting rail and meet the locking requirements of "B" above.

### III. Window Protection

- A. Windows shall be so constructed that when the window is locked it cannot be lifted from the frame.
- B. Window locking devices shall be capable of withstanding force of 300 pounds applied in any direction.
- C. Louvered windows shall not be used within eight feet of ground level.

### IV. It Shall Be Unlawful To Furnish Overhead Garage Doors With Bottom Vents.

### V. Exceptions:

No portion of this Code shall supersede any local, state or Federal laws, regulations, or codes dealing with the life-safety factor.

Enforcement of this ordinance should be developed with the cooperation of the local fire laws.

## MODEL MULTIPLE DWELLING SECURITY ORDINANCE MINIMUM STANDARDS

### I. Exterior Doors:

- A. Exterior doors and doors leading from garage areas into multiple dwelling buildings and doors leading into stairwells below the sixth floor level shall have self-locking (dead latch) devices, allowing egress to the exterior of the building or into the garage area, or stairwell, but requiring a key be used to gain access to the interior of the building from the outside or garage area or into the hallways from the stairwell.
- B. Exterior doors and doors leading from the garage areas into multiple dwelling buildings and doors leading into stairwells shall be equipped with self-closing devices, if not already required by other regulations, ordinance, or code.

### II. Garage Doors:

Whenever parking facilities are provided, either under or within the confines of the perimeter walls of any multiple dwelling, such facility shall be fully enclosed and provided with a locking device.

### III. All Swinging Doors To Individual Motel, Hotel, And Multi-Family Dwellings:

- A. All wood doors shall be of solid core with a minimum thickness of 1 3/4 inches.
- B. Swinging entrance doors to individual units shall have deadbolts with one-inch minimum throw and hardened steel inserts in addition to deadlatches with 1/2-inch minimum throw. The locks shall be so constructed that both deadbolt and deadlatch can be retracted by a single action of the inside door knob. Alternate devices to equally resist illegal entry may be substituted subject to prior approval of the Police Department.
- C. An interviewer or peephole shall be provided in each individual unit entrance door.
- D. Door closers will be provided on each individual entrance door.
- E. Doors swinging out shall have non-removable hinge pins.
- F. In-swinging exterior doors shall have rabbeted jambs.
- G. Jambs for all doors shall be so constructed or protected so as to prevent violation of the function of the strike.

### IV. Sliding Patio-Type Doors Opening Onto Patios Or Balconies Which Are Less Than One Story Above Grade Or Are Otherwise Accessible From The Outside:

- A. All single sliding patio doors shall have the moveable section of the door slide on the inside of the fixed portion of the door.
- B. Dead locks shall be provided on all single sliding patio doors. The lock shall be operable from the outside by a key utilizing a bored lock cylinder or pin tumbler construction. Mounting screws for the lock case shall be inaccessible from the outside. Lock bolts shall be of hardened material or have hardened steel inserts and shall be capable of withstanding a force of 800 pounds applied in any direction. The lock bolts shall engage the strike sufficiently to prevent its being disengaged by any possible movement of the door

within the space or clearances provided for installation and operation. The strike area shall be reinforced to maintain effectiveness of bolt strength.

C. Double sliding patio doors must be locked at the meeting rail and meet the locking requirements of "B" above.

**V. Window Protection:**

A. Windows shall be so constructed that when the window is locked it cannot be lifted from the frame.

B. Window locking devices shall be capable of withstanding a force of 300 pounds applied in any direction.

C. Louvered windows shall not be used within eight feet of ground level, adjacent structures or fire escapes.

**VI. Exceptions:**

No portion of this Code shall supersede any local, state or Federal laws, regulations, or codes dealing with the life-safety factors.

Enforcement of this ordinance should be developed with the cooperation of the local fire authority to avoid possible conflict with fire laws.

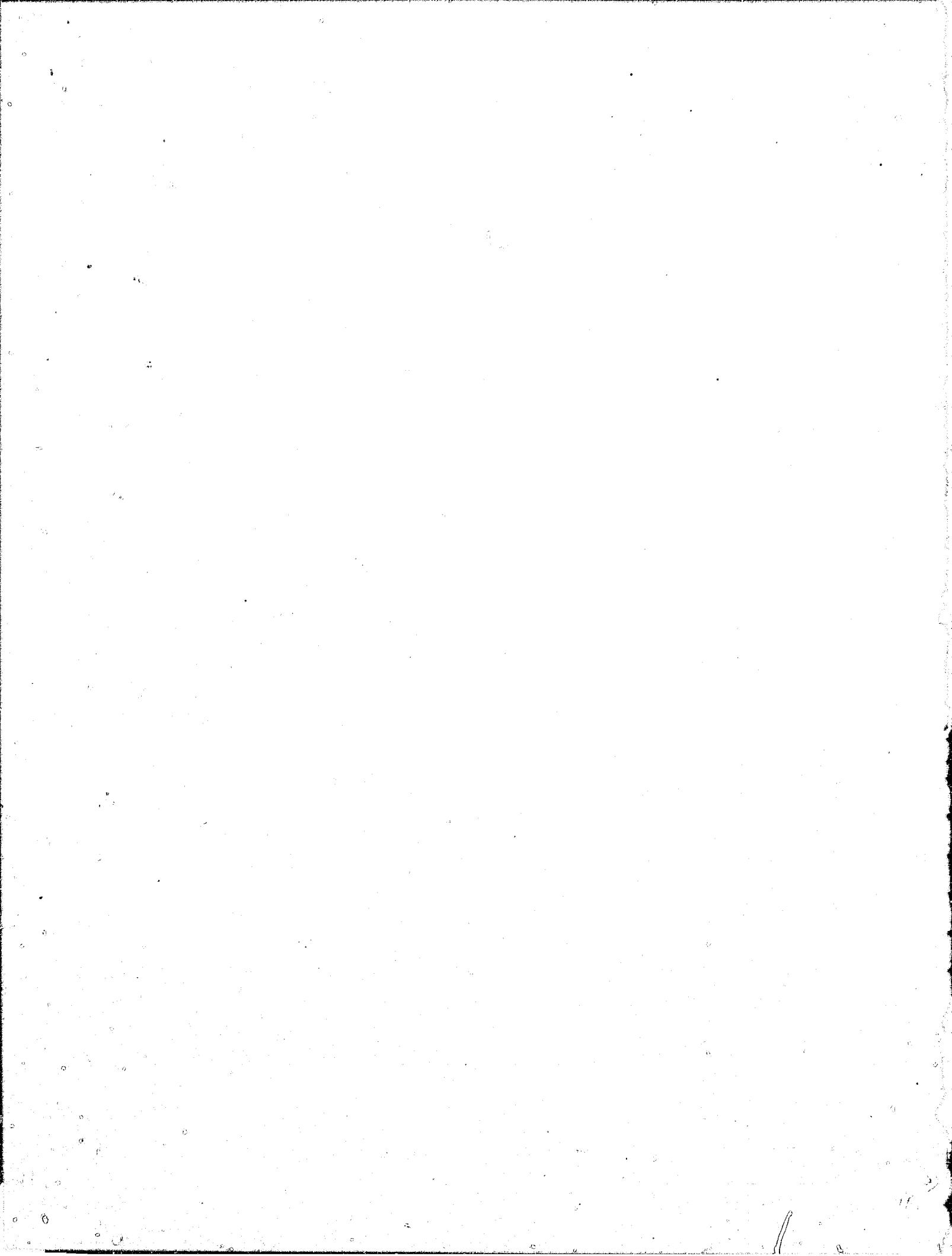
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# **APPENDIX C**

## **SECURITY CONSULTANTS**

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for Small Business," Vol. 13, No. 1, Small Business Reporter, Copyright © 1975.



## SECURITY CONSULTANTS

Help in pinpointing crime problems and charting prevention programs is available from security consulting services which provide a broad range of information on the practical and financial aspects of crime prevention. Alarm company representatives, locksmiths and other specialists, although they have a firm command of their own fields, are limited in scope. Security consultants, on the other hand, have acquired extensive knowledge of all areas of crime and working experience with many management techniques and security devices. Furthermore, they are not advocates for any specific equipment or particular approach. And their objective stance permits thorough appraisals of businesses to discover security loopholes and recommend corrective measures.

For various reasons, small businesses have been reluctant to call on these professionals. The costs of such services deter some; for others, allowing outsiders to pry into business affairs is tantamount to treason. But many simply do not know how the experts can help. Yet today, more than ever, small business entrepreneurs need expert assistance to keep their criminal losses at a minimum.

Security consultants can be especially helpful to those business owners who know only that they are losing money. "Obviously, the more specific details the business person gives, the easier it is to diagnose the trouble and prescribe treatment," says one professional. Nevertheless, a probing discussion on all aspects of the business helps the consultant determine what to investigate. A security expert — or a team of them — then combs through the operation, becoming acquainted with all procedures. Book-keeping records, inventory control systems, shipping and receiving procedures — as well as

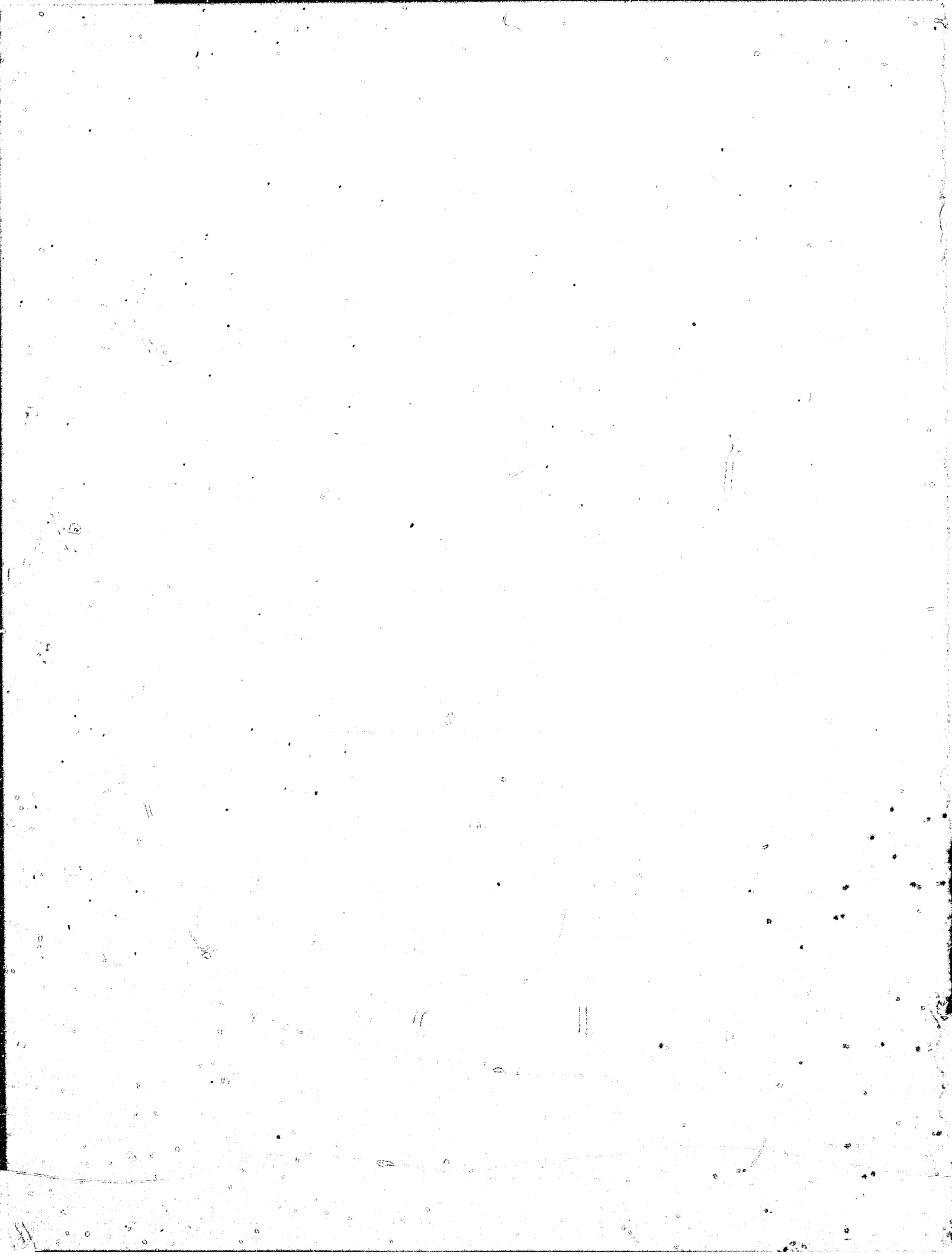
physical premises — are studied both for efficiency and security. Once the weak spots are found, preventive measures can be suggested.

Although consultants' fees can be expensive — \$150 to \$300 a day — their recommendations are usually well worth the investment. The business owner in effect pays for an accurate appraisal of the crime threat and subsequently budgets the funds necessary to help battle the problem. While the initial outlay may seem hefty, in the long run money can be saved.

Occasionally, business associations engage consulting firms to discuss major security problems with member retailers. Experts address themselves to specific crimes threatening particular types of businesses. By attending these group lectures, individual store owners not only take advantage of reduced fees, but also get an opportunity to decide whether hiring a consultant would be beneficial.

Security consulting firms are listed in the yellow pages of local telephone directories and advertised in various security magazines. Business people can also ask friends and associates for recommendations.

Security experts strongly urge owners to check references of any firms they consider retaining. When contacting various consulting firms, merchants should not hesitate to ask for resumes or inquire about other accounts. A quick check with previous customers may reveal interesting experiences. Additionally, retailers should ask prospective consultants for estimates — both of time and money. Smart business people can judge whether a bid is in the right proportion to the size of potential losses. Ultimately, a consultant's most important qualification is the quality of service: if the problem is uncovered, and satisfactorily remedied, the work more than pays for itself.





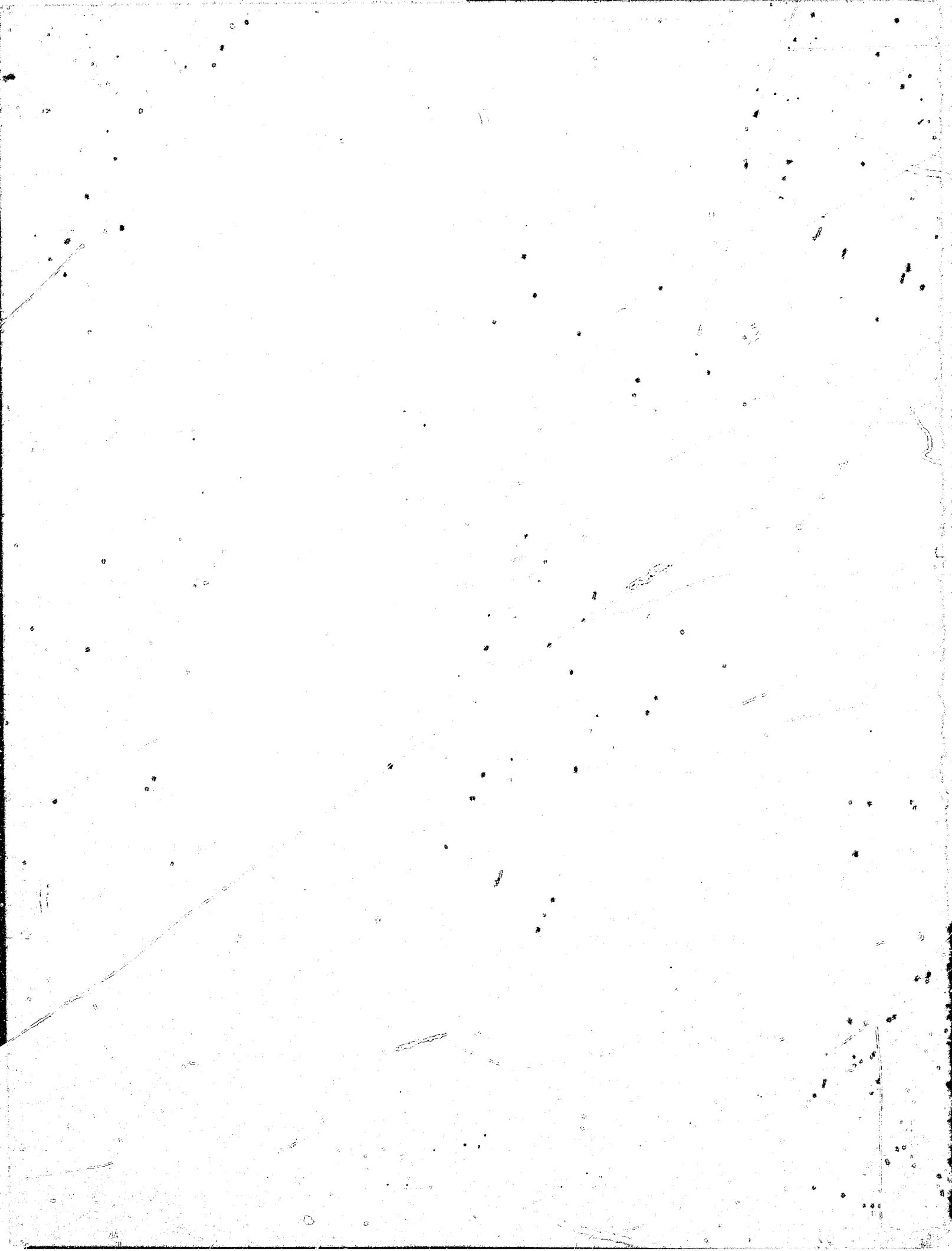
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# **APPENDIX D**

## **DICTIONARY OF ANTI-INTRUSION DEVICES FOR ARCHITECTS AND BUILDERS**

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## DICTIONARY OF ANTI-INTRUSION DEVICES For Architects & Builders

\*Technical information in this article was researched from the extensive library and files of Don D. Darling and Associates; and access to the reference material was granted by Don Darling, president of the security and management consultant firm, who also gave generously of his time and expertise in verification of the finished manuscript for SECURITY WORLD.

Security has become a vital offering in today's world. Buildings that have it, and can demonstrate that it works effectively, are bound to have an edge in selling their occupancies to prospective tenants. This holds true from the residential building to the office building, and for categories in between.

Wives, children, the elderly need to be safe at home during the daytime hours or any evening hour they may find it necessary to come or go. In the office, employers must guarantee the safety and security of their employees during the working day and often during afterhours, when occupancy of the premises is light.

Builders and developers of all premises thus are linked together by the common problem of security for their occupants. No longer a luxury item available only to wealthy people or large corporations, security today more and more determines the choice modest income families make in their places of residence.

And, for increasing numbers in today's hazardous society, security even limits neighborhoods of conditions in which employment is considered acceptable when offered.

New building plans are thus being drawn with built-in provisions for security facilities and equipment; and owners or landlords of older buildings are looking for effective means of converting unprotected to protected space.

Security information has therefore become a primary need. Planners first need some notion of what it means to use security equipment to protect space, occupied and unoccupied. They need to know that occupied space requires a different system for protection than unoccupied space, and that the same space may need either kind of protection at different times of a 24-hour day. Further, any given building may have different kinds of protection operating simultaneously in different parts of the building or around its perimeter, as parking tiers, pool or sports areas, lounges and recreation areas, etc.

What this special issue of SECURITY WORLD intends is to provide input data for the architect, builder, developer, planning management, and others who approve final plans for remodeling, or for the new building project. In particular, this issue points toward one vital decision area in any security project — the selection of anti-intrusion planning and systems.

### Basic Information for the Security Layman In Easy-To-Use Reference And Question- Answer Format . . .

by J.E. Thorsen

Clearly, the opinion of a good solid security consultant who can look at your individual blueprints or premises and tailor-make a system that will best serve your needs is indispensable.

But it is also useful for you as architect, builder, or developer to have some mental framework on which to hang the recommendations you do receive. Such is the purpose of an overview like the one that follows.

Let us begin with some common questions:

#### Question:

What do anti-intrusion devices or systems do?

An anti-intrusion device creates an alarm that notifies, by one means or another, of an unwanted or unauthorized presence. Particularly in unoccupied space that offers a tempting target, alarms are used to protect against potential criminal intrusion.

The anti-intrusion system may include multiple devices, alarms, and/or other kinds of security equipment. It more broadly aims to protect everyone and everything that could be harmed by criminal intrusion.

In the case of occupied buildings, for example, a foolproof anti-intrusion system would eliminate assaults on women, children, or the elderly; armed robbery of occupants; theft of property from occupants; vandalism of the building and its premises or its property, as well as vandals' damage to the premises or property of the occupants, etc.

While the foolproof system would be uncontestedly rare, the aims of good security are to reach higher and higher percentages of total success.

**Question:**

**What is the difference between anti-intrusion devices and systems?**

Anti-intrusion devices, commonly called alarms but including a somewhat broader category, protect either mechanically or electronically by using a number of standard principles of physics. They are not mysterious, and any individual who is reasonably informed about basic science can quickly develop a fair grasp of each.

When anti-intrusion devices operate as part of a system, the system may be simple or extremely complex, depending upon the needs of the security situation. A simple situation would have, for example, one anti-intrusion device wired to set off a bell, flashing light, or other signalling device, the moment it detects an unwanted presence.

The more complex situation might require many anti-intrusion devices along with sensors for fire or other disaster and signals for personal emergency. Reports or signals from these components often travel over hardware to a central location in the building.

Even more complex are those systems in which the alert is carried beyond the building to a central location several blocks or miles distant.

[The simplest alarm described above is usually called a local alarm; the more complex system that reports within a building or a complex of buildings is a proprietary alarm system; and the last is referred to as a central station alarm system].

**Question:**

**What is the most commonly used anti-intrusion device?**

The oldest and most fundamental kind of anti-intrusion device is the lock. The lock forms a basic barrier between the privacy and safety of the individual and that portion of his environment beyond the lock that he may not wish to encounter.

The problem arises when criminals or other unwanted intruders become skilled in attacking or circumventing this first line of defense.

There are many circumstances in which additional protection is essential for the safety of the individual. The tamperproof lock adds a percentage of advantage on the side of security, but does not provide a total answer because it

cannot act as a substitute for surveillance or automatic alert in the face of intrusion.

An example of this need is daily obvious in hundreds of apartment buildings with locked front doors, operable by a buzzer system and intercom that is not properly used and permits the admittance of intruders. The parking area entrance, opened only by a key, whose overhead door permits someone to run through at the same time the car is passing inward or outward, is another example. Key-operated elevators into which a stranger will step while the possessor of the key amiably starts the elevator by turning the lock and introducing the intruder into the main floor of the building is yet another example.

Security systems should ideally be composed, therefore, not only of locks for individual privacy and protection, but also other anti-intrusion, sensing, and inspection devices calculated to further protect the individuals occupying the premises.

**Question:**

**Are there building security devices not related to criminal intrusion?**

Along with protection against criminal intrusion, it is vital to protect both individuals and property against the intrusion of fire, smoke, and other life-threatening or property-threatening hazards. In addition, such things as temperature, continuing operation of a machine, elevator status, safe and efficient operation of all building support equipment, all can be monitored by these sensors. Personal emergency alarm devices are receiving increased use, also.

**Question:**

**What is the dictionary of anti-intrusion devices?**

The dictionary, intended for use by builders, architects, and developers of residential and commercial real estate, as well as for the information of management and security-responsible persons everywhere, is a highly simplified overview of the majority of sensing devices operative now in the security field to detect either intrusion or hazard. The list begins on the opening spread of this feature and continues along beside it.

## PHOTOELECTRIC BEAM

### Principle:

Electro-optical device using visible light or infrared beams (pulsed); interruption of the beam causes an alarm signal.

### Operation:

Protection of perimeter and/or points of entry. Narrow light beam is transmitted to a receiver across distances that can range from the width of a doorway to 200-1,000 ft. Beams can be reflected by mirrors to create a crisscross pattern for protection inside a premise, or to go around corners.

### Uses:

Provides protection against entry at doors, windows, service chutes, etc. Could limit accessible area after entry by setting up an internal or second barrier. Protects against crossing boundaries of outdoor areas other than through an allowable entrance-way, provides perimeter coverage application to private facilities where appropriate.

### Comment:

In outdoor applications, coded pulses are used to reduce false alarms from weather (fog, rain, snow, etc.) or natural phenomena (leaves, birds, etc.). A carefully planned beam path (avoiding a straight line) can be advantageous in protecting a specific area or pathway. Costs range from \$50 for simple systems to up to \$2,000 for the most elaborate with long-range capability and anti-false alarm provisions.

## MICROWAVE

### Principle:

Electromagnetic waves are utilized in frequencies from 400,000 c/s (40 MHz) upward to 10.5 GHz (10,500 MHz) in the X-band region. The detection of motion through the Doppler frequency shift principle identifies the presence of an intruder and signals an alarm.

### Operation:

Microwave transmitter(s) fill the designated area with a pattern of standing waves. Receiver picks up waves reflected from standing objects, also

gets direct unreflected waves as reference. Both reference and reflected waves carry same frequency. But, if something or someone moves within the area, the reflected wave from the moving matter will differ in frequency from the direct wave, and signal an alarm. Total volumetric coverage is thus provided.

### Uses:

(Unoccupied premises or portions of premises containing merchandise to be protected, warehouse or storage areas, even access routes designated to be unused during vulnerable time periods) can be protected. Outdoor capability offers use in protection of sites, grounds, etc., during periods of inactivity. Residential or apartment use capability if proper allowances are made to avoid penetration through walls onto sidewalks, adjacent hallways, etc., where persons moving in unprotected space could trigger an alarm.

### Comment:

Microwave may be used outdoors as well as indoors because of its lack of susceptibility to environmental conditions. To avoid false alarms outdoors from temperature/humidity changes that cause frequency drifts, fluorescent lamps, flying insects, and large objects moving beyond the intended limits of surveillance, microwave units can be juxtaposed to one another with ancillary devices that determine if signal is valid for an alarm. This same procedure can, of course, be applied indoors. Microwave detectors are among the more complicated of available systems. An advantage is that they are easily concealed, tend to be stable, and are tamper-resistant. Costs range with areas to be covered (3,000-10,000 sq. ft.), complexity of equipment, tamper-resistance, from \$250 upwards of \$1,200.

## ULTRASONIC

### Principle:

Ultrasonic waves are utilized in 18,000-45,000 c/s (18-45 kHz) range, create standing wave pattern for detection of motion through Doppler Effect.

### Operation:

Inaudible sound waves are radiated from a transducer (which transmits the waves) to a

receiver. They fill an inside area volumetrically and detect any intrusion when differential in frequency between transmitter and receiver occurs.

#### Uses:

Because of extreme sensitivity to environment use is mainly indoors. Well-suited to protection of areas within a building where hard surfaces reflect sound: emergency stairwells, entry ways, should be considered, as well as storage areas or restricted areas when otherwise unoccupied, etc. Soft-covered areas, i.e., carpeted, draped, porous or thick wall covering, etc., will require different adjustment from large glass, metal, or finished wood surfaces. Equipment can provide total coverage of designated area without penetrating walls, ceilings, or floors.

#### Comment:

Can be set so sensitively that the detector will pick up any motion, no matter how slight. Trip counters and other devices that require certain pre-conditions before issuing an alarm signal are being used to depress alarm response to rattling doors or windows, on-off of heaters and air conditioners, sonic booms, earthquakes, and mice—to name a few. Costs start at around \$275 and go upward to \$1,000, depending on distance and area to be covered, and number of transmitter-receiver units needed.

### ACOUSTIC/AUDIO

#### Principle:

Transmission of audible frequencies picked up by microphones from within designated area or range, utilized to trigger alarm signal.

#### Operation:

Microphones connected to an amplifier 'listen' for sounds that will signal an intrusion. So that they will not react to 'normal' background noises or other non-dangerous sounds, technicians are developing a discrimination capability within the equipment; an oscilloscope can be set to discard sound without alarming until a 'dangerous noise' indicates that a genuine alarm situation is likely to be in progress.

#### Uses:

Generally used indoors. Heavily employed in places with low ambient noise level where 'listening' capability is especially fruitful, i.e., bank vaults, heavily walled storage areas, etc. Have also had outdoor application on international borders for monitoring of infiltration routes. Will detect activities of lock-ins, and is therefore particularly useful in combination with other anti-intrusion devices in a systems approach.

#### Comment:

Architects or developers with commercial property that includes vaults or sequestered warehouses or storage space might consider this type of system as one alternative. Must be set carefully in areas where noises from plumbing, heating or cooling equipment, elevator machinery, etc., can be expected. Cost is governed by sensitivity of equipment for range of 'listening,' sophistication of sound discrimination controls; range \$250-\$675.

### SONIC

#### Principle:

Audio frequency in the sonic range transmitted to receiver; phase/frequency shift triggers alarm.

#### Operation:

A sensitive receiver detects echoes coming back from all pre-set objects in the area, so that if the situation changes by means of motion such as that of an intruder there is a phase/frequency shift that is picked up by the receiver, and an alarm is caused. Similar to ultrasonic.

#### Uses:

Provides volumetric coverage inside an enclosure such as office, shop, living room, warehouse, etc. Sonic wave is longer than ultrasonic and therefore less sensitive to air currents; uses are therefore broader than inaudible frequencies, but longer waves can penetrate windows and similar openings more readily.

**Comment:**

Recently introduced product operates in the 700-800 c/s (Hz) range, claims the lower frequency requires intruder of human size and is unaffected by rodents, etc.

**CAPACITANCE DETECTOR****Principle:**

Electrostatic; electrical capacitor creates protective field that alarms on interruption.

**Operation and Uses:**

Also called proximity sensors/detectors; these devices protect ungrounded metallic storage containers. They work by making the protected object part of an electrical capacitor system. One half is the object and the other is the ground in a tuned electrical circuit. If the body of the intruder, tools, or other devices are placed on or close to the protected object, the circuit is altered and causes an alarm response.

**ELECTROMECHANICAL SYSTEMS  
Metal Foil, Switches****Principle:**

Electromechanical systems here include metal foil and switches.

**Operation and Uses:**

Doors, windows, and openings such as skylights and hatches, can be protected with snap-action switches that signal an alarm if anyone tries to open them. Wire or metallic tape can be laced across permanently closed windows and skylights. (Pressure sensitive mats can be placed on stairwells and landings. See also "Pressure Detectors.")

**Comment:**

Electromechanical systems are probably simplest, cheapest, and easiest of all systems to install in new construction and, when properly placed, they can be virtually invisible. Because it is fairly easy to jumper the circuit, an electromechanical system is often overlooked in favor of more sophisticated security systems. However, this very drawback can be an advantage if the system is designed using a combination of open and closed circuits so that a signal will be activated upon jumpering.

Another technique is to make an obvious electromechanical installation which, when bypassed, gives the intruder a false sense of security so that he blunders into a second system. Costs are low in new installations, though the costs of retrofit after construction can sometimes be prohibitive. This is particularly true in facilities where there is a slab floor and a flat roof that would make hardwiring difficult.

**PRESSURE DETECTORS****Principle:**

Electromechanical; switch response.

**Operation and Uses:**

Also known as pressure sensors, these switches are frequently designed as 'floor mat contacts' because of their heavy use in that application. They are activated by pressure from the step of an intruder and are frequently contained in mats, ribbons, etc., under carpets. Proper installation of mats under carpeting could protect corridors from unwanted intrusion or could be an alarm block on a stairwell. Residential areas and new homes, for example, have these switches built in at strategic places in window or door frames. Since pressure applied can activate them, (as at a doorway, on a staircase, or along a passageway, at an entrance, etc.) pressure removed may also be used to activate. Thus, the devices may be set to react to an intruder who is merely entering a protected area, or to an intruder who removes an object that had been exerting the pressure of substantial weight, such as an electric typewriter, adding machine, etc.

**Comments:**

For a builder or developer seeking to offer particular security advantages to his residents or occupants, pressure-sensitive mats might be installed to protect sleeping families from surprise by intruders or to alarm at intrusion during times the occupants are away. Cost is low and degree of protection against the inexperienced intruder is great.

## COMPRESSION SENSORS Balanced Pressure Detectors

### Principle:

Hydrostatic; liquid compresses within a closed area to register pressure from surface.

### Operation:

Two flexible pipes or hoses are filled with equal proportions of liquid (i.e., balanced) and buried about a foot beneath the ground parallel to the access point(s) to be protected, and lying about four feet apart. Any intruder crawling or walking across these hidden sensors sets off an alarm caused by compression of the soil above the pipes.

### Uses and Comments:

This system has had some recent affirmative development in perimeter protection applications. Questions still to be fully answered concern the response of flexible piping in rocky soil, when soil becomes frozen, or in presence of nearby heavy vehicle traffic, or tree root vibrations. One source quotes cost as from \$95-\$125 a foot in 300 ft. systems.

## MAGNETIC SWITCHES

### Principle:

Electromechanical, magnetic field characteristics superimposed on performance.

### Operation and Uses:

With the magnets added, an extra aspect is added to the basic electromechanical switch. A balanced or unbalanced magnetic field is created by open doors or windows, which directly affect the field. Can be used on doors, windows, balcony openings, storage rooms, building supply closets, etc. Uses are many for switches may be placed in virtually any position and carry low voltage — which makes for ease of both installation and maintenance. The magnet penetration technique fails when high security switches with multi-circuits are installed.

### Comment:

Compromise occurs by placing a magnet parallel to a single circuit to simulate the required field, or by shorting or opening the circuit according to its design. Well-hidden

switches also improve resistance to defeat by experienced or inexperienced intruders and secondary system can be easily added for extra protection. Costs range from \$20-\$50.

## VIBRATION DETECTORS

### Principle:

Vibration conduction; contact microphone attached to vulnerable surface signals alarm.

### Operation:

Elemental form of microphone ranging upward to very sensitive microphones are attached directly to what is being protected (i.e., wall, safe, door, etc). Can be set to detect vibrations as small as picking a lock; or will pick up 'silent' drilling, other types of physical compromise of protected surfaces. (More elaborate vibration detectors that utilize seismic geophones can detect vibration set up in a building structure by a footfall.)

### Uses:

Provides protection against forced entry through walls, ceilings, floors; also against doors, panels, sides of containers such as safes, filing cabinets, etc., being entered by any mechanical means (saws, drills, crowbars, etc.). Perimeter protection of vaults, strong rooms, etc. Used as back-up device for other anti-intrusion systems. Applicable to all situations where objective is to signal alarm under circumstances where intruder chooses to force entry through part of the structure of building or item he wishes to penetrate.

### Comment:

Device will not react to airborne noise (unlike the audio detector) and is relatively resistant to false alarms if placed and set so that heavy vehicular traffic or low-flying aircraft are not likely to trigger it. Device offers moderate cost perimeter protection if applicable, runs from \$5-\$65 depending on coverage and refinement of the equipment.

## INFRARED

### Principle:

Electro-optical, pulsed beam, line of sight. (See also 'Comment' below.)



**Operation and Uses:**

Miniature infrared systems have been developed that plug into standard wall receptacles, operate over a range of up to 50 feet. Standard infrared systems range from 200-500 feet. Beams are pulsed to reduce sensitivity to alarming by birds, twigs, etc. Explanation on operation of photoelectric sensors (which see), along with uses and cautions, is similar to infrared. Miniature systems run under \$100 in cost, and more sophisticated standard systems from \$250-\$750.

**Comment:**

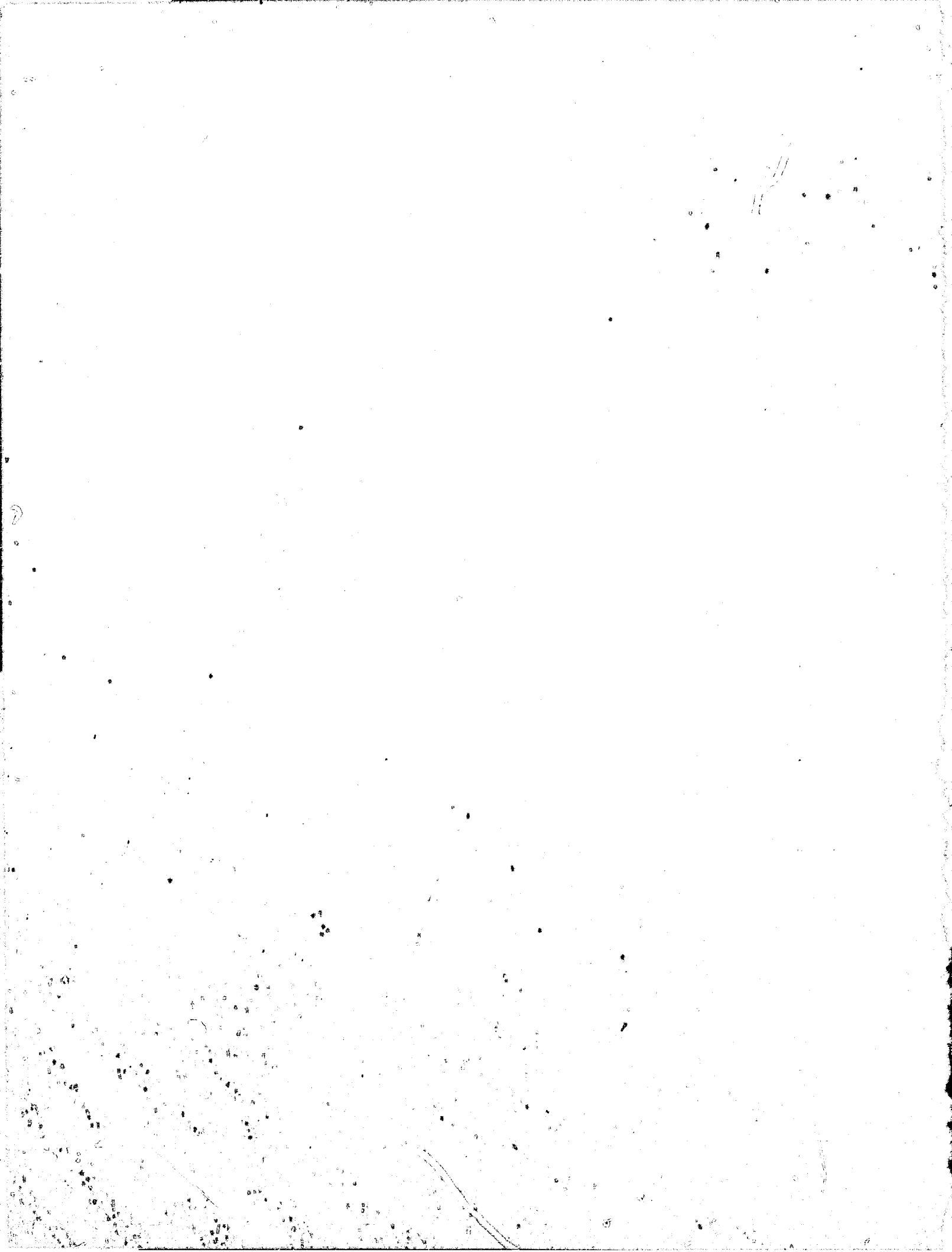
The passive infrared sensor employs the fact that various kinds of machinery, certain alarm conditions, and humans radiate an infrared energy. (In humans, it is about 9.3 microns.) This energy, or heat, can be detected and caused to register an alarm.

**LASER SYSTEMS****Principle:**

Electro-optical; operates within approximately the same region of the electromagnetic spectrum as infrared; pulsed beam, line of sight.

**Operation and Uses:**

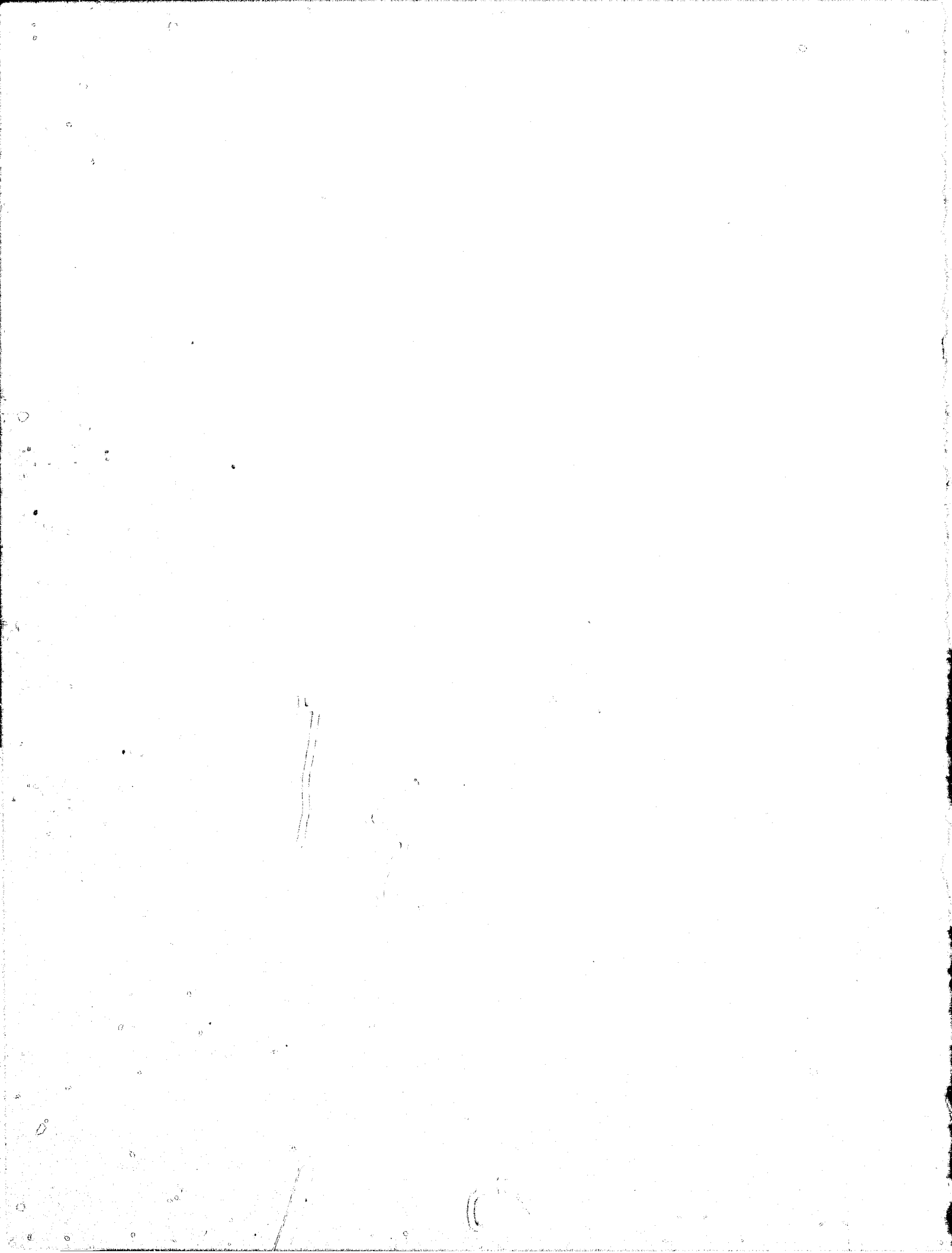
Laser systems have been made available commercially with capability for creating invisible 'fences', are claimed to have a range up to 10,000 ft. These systems utilize pulsed gallium arsenide diodes, emit energy in the 9,000 Angstrom region.



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**APPENDIX E**  
**FEDERAL CRIME**  
**INSURANCE APPLICATIONS FORMS**

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**FEDERAL CRIME INSURANCE PROGRAM**

Form Approved  
OMB No. 63-R1366

Form No. 3

**COMMERCIAL CRIME INSURANCE POLICY**

This Policy (of which this Application is a part) covers losses in accordance with the option selected on the Application, subject to applicable limits and to a deductible, as stated below, and to Federal law and regulations.

**FEDERAL INSURANCE ADMINISTRATION**

(An Agency of the U.S. Government)  
U.S. Department of Housing and Urban Development,  
Washington, D.C. 20410

**APPLICATION**  
(Type or print heavily in ball point pen)

Policy No.

(Insert IRS Employer Identification Number and add suffix "0" for the first application. Add suffix "A," "B," "C," etc., for each additional separate application where multiple premises are involved.)

Insured's Name, Telephone No., and Mailing Address (Include County, and Zip Code): \_\_\_\_\_  
\_\_\_\_\_

Location of Premises (Include County and Zip Code, if different from mailing address): \_\_\_\_\_  
\_\_\_\_\_

Effective Date \_\_\_\_\_  
(Not earlier than noon on day following date on which applicant signs Application)

Expiration Date \_\_\_\_\_  
(One year from effective date)  
Producer's Name, Address, and Telephone Number \_\_\_\_\_  
\_\_\_\_\_

Servicing Company's Name and Address: (To be filled in by Agent or Broker) \_\_\_\_\_  
\_\_\_\_\_

1. Describe type of building and (if multiple occupancy) portion or rooms occupied by applicant, including room and floor number: \_\_\_\_\_

2. Describe class and type of business (i.e., grocery store or drug store, etc.): \_\_\_\_\_

(Use description of business used on tax return, plus any additional information needed to clarify or expand this description)

3. (a) Does Applicant cash personal checks in excess of the sale?  YES  NO  
 (b) Does Applicant cash payroll or welfare checks?  YES  NO  
 4. Does premises contain a Class E safe?  YES  NO  
 5. Has applicant ever previously been insured under a Federal Commercial Crime Insurance Policy?  YES  NO

6. Insert amount of insurance applied for: (\$15,000 maximum in each category)

- Option 1 (Burglary, safe burglary and robbery) ..... \$ \_\_\_\_\_  
 Option 2 (Robbery only) ..... \$ \_\_\_\_\_  
 Option 3 (Burglary, safe burglary only) ..... \$ \_\_\_\_\_  
 Option 4 (A combination of Options 2 and 3 in varying amounts) ..... \$ \_\_\_\_\_ & \$ \_\_\_\_\_  
(OPTION 2) (OPTION 3)

**PREMIUM COMPUTATION:** (To be filled in by Agent or Broker)

Territory:  1  2  3 Class:  1  2  3  
(Check one) (Check one)

Annual gross receipts for preceding year as shown on most recent tax return. If new business with no previous tax return, estimate annual gross receipts. If public or non-profit organization, use operating budget ..... \$ \_\_\_\_\_

Annual premium from Quick-Reference Rate Tables Manual based on above factors ..... \$ \_\_\_\_\_

One half of the annual premium must accompany the Application in the form of a check or money order, payable to the Federal Insurance Administration. (Round to higher dollar above \$0.49): ..... REMITTED HEREWITH \$ \_\_\_\_\_

Note: Coverage is subject to a deductible which is based upon gross receipts as shown below, or 5% of the gross amount of any loss, whichever is greater:

GROSS RECEIPTS	DEDUCTIBLE	GROSS RECEIPTS	DEDUCTIBLE
Less than \$100,000	\$50	\$300,000-\$499,999	\$150
\$100,000-\$299,999	\$100	\$500,000 or over	\$200

The deductible for non-profit or public property risks is \$50 or 5% of the gross amount of any loss, whichever is greater.

**PROGRAM UTILIZATION DATA:**

Racial or ethnic background of applicant: (If applicant is a corporation or partnership, provide data for controlling stockholders or general partners.)

- (Check One) 1.  White 3.  American Indian 5.  Spanish American  
 2.  Negro/Black 4.  Oriental 6.  Other Minority

(The information concerning Minority Group Categories is requested for statistical purposes so the Department may determine the degree to which its programs are utilized by Minority families, in accordance with 24 C.F.R. 60.2, 36 F.R. 10782, June 3, 1971.)

**CERTIFICATION BY APPLICANT:** "I certify under penalty of Federal law for fraud or intentional misrepresentation as set forth in 18 U.S.C. 1001, (1) that the statements I have made in the Application including the signature data set forth below are true and correct to the best of my knowledge and belief, (2) that I have read the applicable eligibility requirements set forth in the Application. If I have selected Option (1), (3) or (4) (all of which contain burglary insurance), I understand that if the premises are not presently insured against burglary losses under the Federal Crime Insurance Program, insurance coverage is conditional upon the premises being found to be in compliance with protective device requirements at the time of an inspection which will be conducted after receipt of this Application."

\_\_\_\_\_  
(Signature of Applicant)

\_\_\_\_\_  
(Date)

**STATEMENT BY AGENT OR BROKER:** "I certify under penalty of Federal law (1) that I am an agent or broker licensed in the State in which the premises are located, and (2) that the date of the Application is correct. I also agree that in the event of cancellation of any Policy I shall ratably refund to the Federal Insurance Administration commissions on the unearned portion of premiums at the same rate at which such commission was originally paid."

\_\_\_\_\_  
(Signature of Agent or Broker)

\_\_\_\_\_  
(Date)

## ELIGIBILITY REQUIREMENTS AND UNUSUAL POLICY PROVISIONS:

1. This Policy is subject to the crime insurance provisions of Title VI of the Housing and Urban Development Act of 1970 (P.L. 91-209, December 31, 1970; 12 U.S.C. 1740bbb-1(a) et seq.) and the Regulations of the Federal Insurance Administration issued pursuant thereto (24 C.F.R. 1930 et seq.). Renewals of this coverage shall be subject to the Regulations in force at the time of such renewals.
2. One half of the annual premium must be paid at the time of application. The second installment of the premium will be billed approximately 45 days before its due date. If premium due is not received by the Servicing Company on or before the due date, policy coverage will terminate. No further notice will be sent.
3. All losses of property above the deductible under this Policy must be reported to the Law Enforcement Authorities (whether or not a claim is filed). Willful and repeated failure to report losses to such authorities may be grounds for cancellation by the insurer.
4. Any material false statement in the Application voids the Policy. Intentionally false or misleading statements may result in criminal prosecution under 18 U.S.C. 1001.
5. To be eligible for an insurance Policy under the Federal crime insurance program, which includes burglary insurance, the insured premises MUST meet the requirements for protective devices established by the Federal Insurance Administration for that type of property. A list of these requirements is shown below.

All premises to be insured under the program for the first time or after a lapse in coverage will be inspected upon receipt of the Application and insurance is conditional upon the premises being found to be in compliance with protective device requirements. If the inspection establishes that a premises meets the protective device requirements, the Policy will be effective as of noon of the day following the date of application (unless a later date is specified by the insured).

If an Application is submitted to obtain a Policy replacing a Policy in force on the date of this Application and insuring the same premises, no inspection will be conducted unless requested by the insured upon payment of a fee.

If this Policy includes burglary insurance on any premises which has not previously been found by inspection to be in compliance with protective device requirements, it will be considered void from its inception if at the time of adjustment of a robbery or burglary loss the insured premises is found not to be protected in the required manner. In such a case, the claim will be denied and only the portion of the premium not absorbed by administrative expenses in connection with the issuance of the Policy and investigation of the claim will be refunded.

## PROTECTIVE DEVICE REQUIREMENTS:

In order to be eligible for Federal crime insurance a nonresidential premises insured under Options (1), (3) and (4) (all of which contain burglary insurance) shall meet the following minimum standards: (These requirements do not apply to policies written only under Option 2 which insure against losses from robbery only.)

- (a) Except for doorways that are completely protected during nonbusiness hours by heavy-duty overhead doors or metal security screens or the equivalent, each exterior door shall be equipped with either a heavy-duty dead lock (utilizing either interlocking vertical bolts and striker or else a 1-inch dead bolt that extends at least one-half inch into the frame of the door), or a heavy-duty padlock (with case-hardened steel shackle and five-pin tumbler operation), or a comparable dead lock or padlock that provides equivalent protection. Where applicable fire and safety laws permit their use, double-cylinder locks are recommended.
- (b) All exterior grate or grill-type doors, overhead doors, and security screens or grillwork (unless permanently installed) shall be equipped with locks that meet the requirements of paragraph (a) of this section.
- (c) Except for doorways that are completely protected during nonbusiness hours by heavy-duty overhead doors or metal security screens or the equivalent, each exterior door shall be of heavy gauge metal, tempered glass, or solid wood core (not less than 1-3/8 inches thick) construction, or else shall be covered with metal sheathing of at least 16 gauge (1/16 inch thick) or its equivalent, or with grillwork, to give like protection.
- (d) Outside hinge pins shall be welded, flanged, or screw-secured, nonremovable pins, unless the hinge is constructed so as to provide equivalent protection against the removal of the door to which it is attached when the door is in the closed position.
- (e) Except where expressly prohibited by applicable laws pertaining to fire protection, accessible openings exceeding 96 square inches in area and 6 inches in the smallest dimension (other than storefront display windows), shall either meet the standards for exterior doors, or else shall be protected by inside or outside iron bars one-half inch in diameter, or by flat steel material, spaced not more than 5 inches apart and securely fastened, or by iron or steel grills of 1/8-inch material of 2 inch mesh, securely fastened or by other heavy-duty material that provides equivalent protection. The requirements of this paragraph shall not apply to skylights protected by alarm systems. For the purposes of this paragraph, an "accessible opening" is an opening such as a window, transom, skylight, or vent, regardless of whether it is made to be opened, which exceeds 96 square inches in area and 6 inches in the smallest dimension, any part of which is—
  - (1) 18 feet or less above either the ground or the roof of an adjoining building, or
  - (2) 14 feet or less from directly or diagonally opposite windows, fire escapes, or roofs, or
  - (3) 3 feet or less from openings, fire escapes, etc., in or protecting from the same wall or an adjacent wall leading to other premises.
- (f) The following types of establishments whose inventories pose a particularly heavy risk shall, as a minimum, in addition to the requirements of paragraphs (a) through (e) of this section, be protected by the type of alarm system indicated. If the system specified in sub-paragraph (1) of this paragraph is not available in the community in which the premises are located, the type of system specified in sub-paragraph (2) of this paragraph shall be permitted.
  - (1) Central station, supervised service, alarm systems shall be required for the following:

(i) Jewelry—manufacturing, wholesale, and retail;	(iii) Wholesale liquor;	(v) Wholesale drug; and
(ii) Gun and ammunition shop;	(iv) Wholesale tobacco;	(vi) Fur store
  - (2) Silent alarm systems shall be required for the following:

(i) Liquor store;	(iv) Wig shop;	(vii) Industrial tool supply house;
(ii) Pawn shop;	(v) Clothing (new) store;	(viii) Camera store; and
(iii) Electronic equipment store;	(vi) Coin and stamp shop;	(ix) Precious metal storage facility;
  - (3) Local alarm systems shall be required for the following:

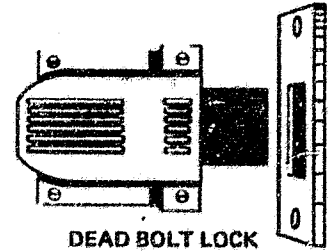
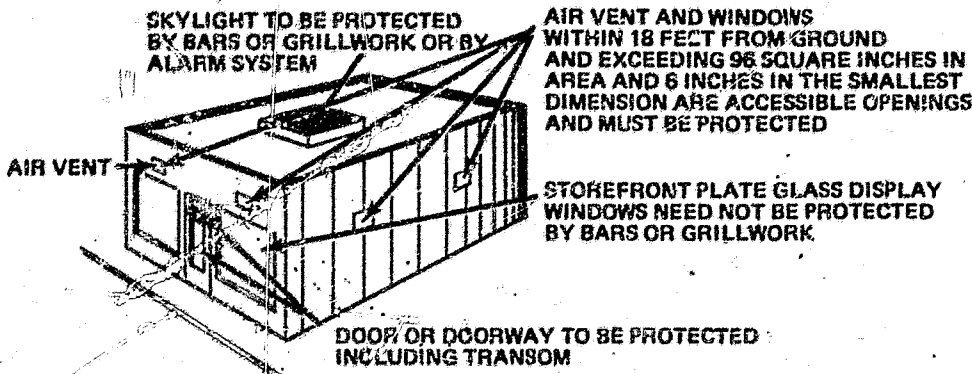
(i) Antique store;	(ii) Art gallery; and	(iii) Service Station
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**FEDERAL CRIME INSURANCE PROGRAM  
PART V—RATE TERRITORIES' BY COUNTIES**

STATE	TERRITORY 1 (Low Crime)	TERRITORY 2 (Average Crime)	TERRITORY 3 (High Crime)
Arkansas	All except Terr. 2 or 3	Crittenden, Miller, Puleaski, Saline	
Colorado		Remainder of State	Adams, Arapahoe, Boulder, Denver, Jefferson
Connecticut	Windham, City of Meriden	All other counties not shown under Territories 1 or 3	None
Delaware		Entire State	
District of Columbia	None	Entire District of Columbia	None
Florida		Escambia, Orange, Orlando, Pensacola, Santa Rosa, Seminole, Tallahassee, Remainder of State	Alachua, Broward, Dade, Daytona Beach, Duval, Ft. Lauderdale, Gainesville, Hillsborough, Hollywood, Jacksonville, Miami, Palm Beach, Pinellas, St. Petersburg, Tampa, West Palm Beach
Georgia	All except Terr. 2 or 3	Bibb, Chattahoochee, Clayton, Cobb, DeKalb, Fulton, Gwinnett, Houston, Muscogee, Richmond, Walker	Chatham
Illinois	All except Terr. 2 or 3	Boone, Champaign, Cook DuPage, Henry, Kane, Lake McHenry, Macon, Madison, Peoria, Rock Island, St. Clair, Sangamon, Tazewell, Will, Winnebago, Woodford	None
Kansas	All except Terr. 2 or 3	Butler, Johnson, Sedgwick, Shawnee, Wyandotte	None
Maryland	All except Terr. 2 or 3	City of Baltimore; Counties of Anne Arundel, Baltimore, Carroll, Cecil, Harford, Howard, Montgomery, Prince Georges	None
Massachusetts	None	All except Territories 1 or 3	Bristol
Minnesota	All except Terr. 2 or 3	Anoka, Clay, Dakota, Hennepin, Ramsey, St. Louis, Washington	None
Missouri	All except Terr. 2 or 3	City of St. Louis; Counties of Boone, Cass, Clay, Franklin, Greene, Jackson, Jefferson, Platte, St. Charles, St. Louis	None
New Jersey	None	All except Territories 1 or 3	Mercer, Atlantic
New York	All except Terr. 2 or 3	Albany, Erie, Livingston, Madison, Monroe, Niagara, Onondaga, Orleans, Oswego, Rensselaer, Saratoga, Schenectady, Wayne	Bronx, Kings, Nassau, New York, Queens, Richmond, Rockland, Suffolk, Westchester
Ohio	All except Terr. 2 or 3	Allen, Butler, Clark, Clermont, Cuyahoga, Delaware, Franklin, Geauga, Greene, Hamilton, Lake Lawrence, Lorain, Lucas, Mahoning, Medina, Miami, Montgomery, Pickaway, Portage, Preble, Putnam, Richland, Stark, Summit, Trumbull, Van Wert, Warren, Wood	None
Pennsylvania	All except Terr. 2 or 3	Allegheny, Beaver, Bucks, Chester, Cumberland, Dauphin, Delaware, Erie, Lehigh, Montgomery, Northampton, Perry, Philadelphia, Washington, Westmoreland	None
Rhode Island	None	Entire State of Rhode Island	None
Tennessee	All except Terr. 2 or 3	Anderson, Blount, Davidson, Hamilton, Knox, Shelby, Sumner, Wilson	None
Virginia	All except Terr. 2 or 3	Cities of Alexandria, Chesapeake, Fairfax, Falls Church, Hampton, New Port News, Norfolk, Portsmouth, Roanoke, Va. Beach and Counties of Fairfax, Loudon, Prince William, Roanoke, and York	City of Richmond, and counties of Chesterfield, Hanover, Henrico.

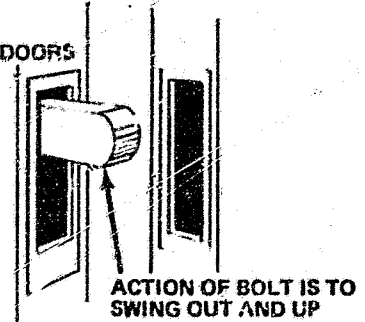
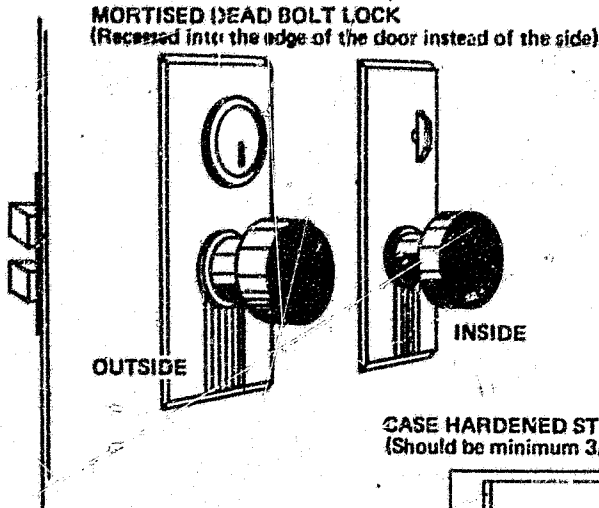
**Federal Crime Insurance Program  
COMMERCIAL PROTECTIVE DEVICE REQUIREMENTS**

(EXAMPLES OF ACCESSIBLE OPENINGS AND LOCKING DEVICES REFERRED TO IN THE PROTECTIVE DEVICE REQUIREMENTS)



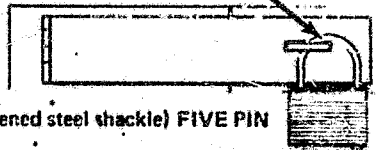
**SIDEWALK DOORS TO BE PROTECTED BY DEAD BOLT LOCKS OR HEAVY DUTY PADLOCKS**

**DEAD BOLT LOCK FOR NARROW FRAME DOORS**



**THE THROW OF THE LOCK IS ILLUSTRATED BY THE DISTANCE WHICH THE BOLT EXTENDS FROM THE EDGE OF THE DOOR WHEN THE LOCK IS IN A LOCKED POSITION MINIMUM OF 1 FOR COMMERCIAL**

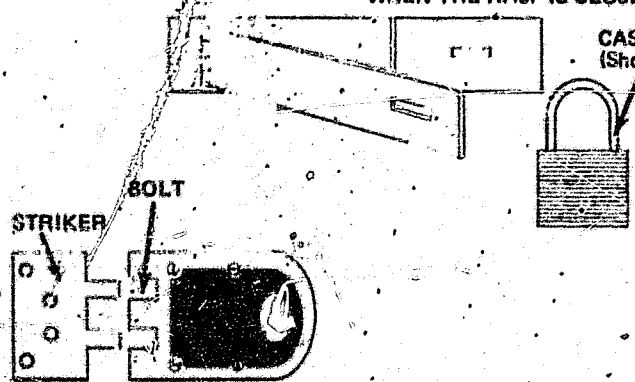
**CASE HARDENED STEEL SHACKLE (Should be minimum 3/8" thick)**



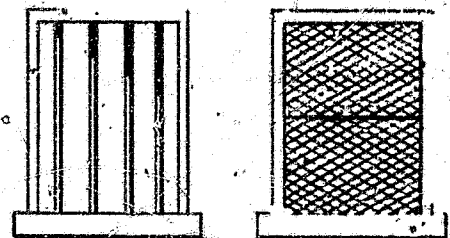
**A HEAVY DUTY PADLOCK (3/8" Case hardened steel shackle) FIVE PIN TUMBLER OPERATION**

**THE STEEL BAR AND STAPLE OF THE HASP SHOULD BE CASE HARDENED AS IS THE PADLOCK SHACKLE RECESSED SCREWS SHOULD BE CONCEALED WHEN THE HASP IS CLOSED**

**CASE HARDENED STEEL SHACKLE (Should be minimum 3/8" thick)**



**EXAMPLE OF BARS AND GRILLWORK**







**END**