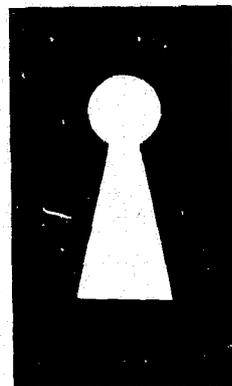


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BUILDING SECURITY



CODE
for
Texas
Cities

817115

A Building Security
Code for Texas Cities

An Explanatory Handbook
And Recommended Ordinance

Published by:

Texas Municipal League
1020 Southwest Tower
Austin, Texas 78701

Acknowledgements

Numerous persons and organizations made important contributions to this publication through their past and current involvement in residential security. Although space does not permit recognition of everyone involved in the preparation of this document, the Texas Municipal League extends its special appreciation to the following.

First, we wish to acknowledge the members of the TML Security Advisory Committee, who spent untold hours developing the "model security code." Members of the Committee included:

Chairman - Capt. Everett January, Crime Prevention Unit, Waco Police
Department, Waco
Armand L. Ablenedo, Asst. Director of Inspection, Austin
Bruce A. Belvin, Director of Planning, Housing Division,
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Prevention Program, Texas Criminal Justice Council, Austin
John Lee, City Manager, Victoria
M. S. Parmley, Building Official, Houston
Robert L. Peters, AIA, Peters and Fields Architects, Austin

TML also wishes to express its appreciation to the firm of Koepsell-Girard and Associates (KGA), Falls Church, Virginia. Working with the Committee and the TML staff, KGA developed the focus for the handbook and security code, and provided substantial input to the materials.

Finally, special recognition is extended the following TML staff members whose efforts made this publication possible: William I. Martin, Jr., Assistant Director; Gary Watkins, Research Assistant; Judy Plunkett, Research Secretary, and Jim Wiltshire, Publications Supervisor.

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Executive Director

January, 1975

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Introduction

Considering the past, present, and prospective record of community crime prevention efforts in Texas, the question must be asked: How can the effectiveness of local crime prevention programs be enhanced so that (1) residential and business security is improved to the maximum feasible degree; and (2) the level of the financial and physical burdens borne by citizens in the accomplishment of this goal is minimized?

The answer to this question is not an easy one. The rate of crimes against property is clearly rising, and its costs are being absorbed by those who are victimized. On the positive side, in localities where crime prevention programs have been implemented, increased security has demonstrated results--yet the police have been unable to reach everyone, nor is everyone willing (or able) to take the action needed to protect himself. Consequently, it can be predicted with some certainty that past crime patterns will persist in the future if definitive action is not initiated in a timely manner.

It is the purpose of this document to explore the feasibility of adding security provisions to local building codes as one means of altering this trend. In so doing, this discussion takes into account such factors as the citizen's ability to afford security devices and individual initiatives to upgrade existing facilities. This report also focuses on the security of homes and business establishments that will be constructed in the future; while this will not insure improved security in existing structures, it will be advantageous in the long term.

As a basis for local officials to assess the relative value of the model security provisions, points raised in the following pages address: the crime problem in Texas, common criminal techniques and preventative measures, model security provisions as a tool in reducing burglary, the value of model security provisions, and procedures for incorporating security procedures and standards into local building codes.

PART I

PROPERTY CRIMES IN TEXAS

A. Dimensions of the Problem

Crime, particularly crimes against property (i. e., burglary, felony theft, and auto theft), is a problem that is on the minds of most Texans, and trends indicate an even greater concern in the future. In 1963, 210,000 crimes against property were committed in Texas; their commission directly affected one in every forty-six Texans.¹ Ten years later, in 1973, the number of property crimes rose to 435,000, an increase of 107%, and one in twenty-seven Texans was affected.²

1. Property Crimes in Urban Areas

The general location of property crime in Texas is worthy of note. In 1963, 90% of all property crimes in Texas occurred in urban areas;³ by 1974, the level had risen to 92%. As to one category of property crimes--burglary--85% of all burglaries were committed in urban areas in 1963; by 1974, the proportion of urban burglaries had climbed to 90%. Insofar as gross numbers are concerned, it is notable that property crimes committed in urban areas in Texas have increased by 116% since 1963, as compared with an increase of 45% in property crimes committed in rural areas during the same time. Burglary alone increased by 176% in urban areas versus 79% in rural areas between 1963 and 1973.⁴

In the State's six largest cities, which collectively share more than half of Texas' total population, burglary is the most frequently reported Index crime by a wide margin. In Dallas, the number of burglaries has climbed by 270% since 1967 to become that city's most prevalent Index crime. During 1972, burglaries accounted for more than 70% of the Index crimes in San Antonio; thefts over \$50 accounted for more than 80% of the city's Index crimes during that year. In the same year, nine of every ten Index crimes committed in Fort Worth were crimes against property, with burglary accounting for over 50% of the total.⁵

With particular reference to burglary, the difference between urban and rural property crime rates may be accounted for in terms of the following reasons. First, large cities are wealthier than rural areas, and the wealth is concentrated in a relatively limited geographic space. This factor alone provides the burglar with a large, accessible, and lucrative "market" from which to select his victims. Second, the anonymity offered by urban areas permits burglars to move about with little danger of arousing suspicion. And finally, larger cities furnish the criminal with opportunities to "fence" stolen property.

2. Future Urbanization

As trends of the past two decades indicate, urbanism is becoming the dominant

pattern of life in the United States. Since 1950, the portion of the nation's population residing in Standard Metropolitan Statistical Areas (SMSA's) has nearly doubled, to the point that nearly two-thirds of all Americans now live in one of 248 SMSA's.⁶ By the year 2000, more than 80% of all Americans are expected to live in these areas.

Texas mirrors these patterns. During the 1960's, the growth of Texas surpassed that of Ohio and Illinois combined; and it was this kind of phenomenal increase that caused Texas to rise from sixth to the fourth most populous state in the nation in 1970.⁷ With an estimated 1973 population of 11,795,000, Texas has grown by 21% just since 1960.

The manifestations of this growth can be expressed relative to increases in selected urban areas. For example, in 1960, five Texas counties over 250,000 population accounted for 38.8% of the State's population. In 1970, the six Texas counties over 250,000 population accounted for 47.6% of the State's population. It is estimated that by 1975, Texas will have eight counties over 250,000 population that will account for more than 52% of the State total.⁸

Another indication of the State's increasing urbanization is in the numbers and sizes of its major urban complexes. Texas presently has 24 SMSA's--more than any other state in the nation--where more than 80% of the State's population resides. Most sources predict that Texas' population growth rates will continue to exceed national averages, and most of this increase is expected to occur in the State's 24 SMSA's.

3. The Role of Housing Modes

The increased production of multi-family housing units is another factor which has contributed to the rise in urban property crime.⁹ Nationally, single-family units comprised 90% of all housing starts during the 1950's. During the 1960's, however, of the 9.3 million housing starts in the U. S., 5.1 million, or 55%, were multi-family units.¹⁰

The number of single-family units constructed in Texas has been on a continual decline since 1958, and this decline has been accompanied by a tremendous growth in multi-family units--mostly apartments. During the decade of the 1960's, Texas sustained the fourth largest increase in multi-family units of all the states--314,000 units. Since 1970, multi-family units in Houston have comprised over 80% of all housing starts. In 1973, multi-family housing construction in Dallas and San Antonio represented 75 and 70 percent, respectively, of all starts.

The trend toward multi-family housing complexes may be rather new, but the security risks associated with such housing generally are predictable. In most cases, apartment complexes are constructed with minimum consideration of physical security, and tenants thus face several obstacles--some related to personal motivation, some to economics. For example, it is common for lease agreements to prohibit

tenants from installing replacement or additional locks on their exterior doors without the approval of the management. Further, if approval is granted, it is usually under the condition that the manager will receive a copy of the key to the new lock to permit entry for repair or inspection. Finally, even if tenants are motivated to purchase and install improved security devices, it is unlikely that they will proceed to completion if they are not permitted to remove the additional security hardware when they move.

The financial ability of tenants is another obstacle to improved apartment security. In particular, persons with low or moderate incomes are increasingly attracted to multi-family housing, and these persons are, of course, generally the very ones with the least incentive and economic ability to afford additional security equipment. Unfortunately, these people have historically been the most vulnerable to victimization--"living in buildings where crime is a major problem and where security hardware is necessary."¹¹

The number of childless couples and single persons who reside in apartments is another significant factor. Because so many from this group are employed, their apartments are often vacant during day-time hours; this condition, combined with the poor security systems found in most apartments, has led detectives to refer to many such complexes as "9 to 5 supermarkets" for the residential burglar.

B. Impact of Crimes Against Property

Although the impact of personal property crime on the victim can be viewed from many different perspectives, economic loss and emotional disorientation are commonly used as indicators. In economic terms, the impact of property crimes on Texans has been dramatic. Drawing from a national estimate of \$337 per incident, burglary losses in Texas amounted to \$51 million in 1973; losses from general theft averaged \$140 per incident, or \$34 million; and losses due to auto theft averaged \$1,100 per incident, or \$46 million. In sum, the 1973 economic loss to Texans as a result of property crimes exceeded \$130,000,000 in 1973.¹²

It is true that many people are insured against burglary, auto theft and, to a lesser extent, felony theft losses, but insurance does not always compensate the total losses of crime victims, because insurance policies generally are based on the current market value of lost articles and not on their original purchase price or replacement value. Moreover, in many cases of burglary and auto theft, perpetrators are not satisfied with their cache, and so resort to vandalism--which is not only an additional and often unrecoverable financial loss, but is emotionally debilitating as well.¹³ Finally, regardless of the level of insurance protection, there is still the cost in money and time of replacing or repairing stolen articles--if, indeed, either is possible.

With regard to emotional disorientation, although general statistics are lacking, the anxiety of feeling insecure or vulnerable to victimization is a cost known to both psychologists and past and "potential" victims of crime. In recent case studies in

Dayton, Ohio, and San Jose, California, for example, it was found that feelings of being unsafe or vulnerable to victimization caused many people to "modify their behavior and activities out of concern for crime."¹⁴ And these feelings led the same people to adopt, in turn, negative attitudes toward local law enforcement agencies.

The President's Commission on Law Enforcement and Administration of Justice also found that fear of crime has caused more than 50% of the total U.S. citizenry "to radically change their life styles by no longer going out at night, shunning any association with strangers, and moving their homes and families to what they believe are safer neighborhoods."¹⁵

C. Community Crime Prevention Programs

Although law enforcement agencies have devised a variety of new approaches over the years to reduce personal and property crimes, few have had a significant and lasting impact. One of the more successful approaches, which was developed in the mid-1960's and has grown to national prominence since 1971, involves community crime prevention.

1. The Concept

Community crime prevention is based on the belief that for a criminal act to be committed, two conditions must exist: (a) the desire to commit the misdeed; and (b) the belief that the opportunity to succeed is present. Social scientists are continuing to explore methods to reduce the "desire" to commit a misdeed; whether substantive progress toward this goal has been made is open to question. On the other hand, criminologists have found "opportunity" a far more predictable and controllable variable; therefore, it is toward this factor that most community crime prevention efforts have been directed.

In general, crime prevention activities draw from the knowledge that: (a) perpetrators of property crime are opportunists who use stealth as the primary cloak for their deeds; and (b) the targets of their criminal acts generally are selected on the basis of the degree of opportunity presented (e.g., maximum chance to succeed or, conversely, minimum chance of observation, detection and apprehension). In other words, to the potential thief, the opportunity to commit and succeed in a criminal act decreases as the risk of being discovered increases. Further, the risk of being discovered increases directly with such factors as the amount of time necessary to gain entry, the degree of lighting and/or physical exposure that exists at the point of entry, and so on.

2. Prevention Activities

By definition, crime prevention is "the anticipation, the recognition and the appraisal of a crime risk (criminal opportunity) and the initiation of action to remove or reduce it."¹⁶ In terms of the "action" taken to remove or reduce a crime risk,

community crime prevention differs significantly from traditional police operations. Sworn law enforcement officers traditionally have been viewed by the public as the exclusive protectors of persons and property. Further, police intervention into criminal activities has focused principally on investigation and apprehension--after the commission of a crime. Contemporary crime prevention theory, however, focuses on combining the resources of police agencies and the community at large by having the police educate the public as to self-protection and increased security strategies they can take before a crime is committed.

Working with groups of citizens, as well as with individual residents and businessmen, police departments throughout Texas have launched successful crime prevention programs focused on improved security. Fifty jurisdictions currently have such programs, and it is estimated that this number will almost double in 1975.¹⁷ In the main, these programs focus on reducing the potential for victimization through the installation and use of better security hardware and related devices by homeowners and businessmen.

Although statistical documentation remains sketchy because most of these programs are in early stages, available survey data clearly show that residences and businesses that use improved locks and related security hardware are significantly less susceptible to victimization. In addition, the value of improved security has been documented by many local police agencies.¹⁸

One crucial problem in the implementation of community crime prevention programs has not as yet been solved in Texas. This stems from the fact that, to improve residential and business security, citizens must act on their own initiative to purchase, install and use improved security hardware and systems. The police can only offer advice as to what must be done to establish the proper level of protection. But police crime prevention officers have shown marked success in contacting citizens, advising them of the need for and value of improved security, and witnessing the installation and use of improved security devices.¹⁹

Unfortunately, the resources and ability of even the most persevering crime prevention bureau has its limits. Not everyone is aware of the steps needed to protect himself and his property, and many simply cannot afford to make the necessary alterations to their homes or businesses. Furthermore, many people prefer to gamble that a criminal will not select them as his victims, rather than install adequate locks and alarms. As a consequence, property crimes in Texas have continued to increase.

PART II

CRIMINAL TECHNIQUES & PREVENTATIVE MEASURES

Physical security is a condition under which a person creates and maintains, either personally or by delegation, control over his physical assets.²⁰ Methods or

resources used to maintain this control include:

- (a) Living resources, such as watchmen or guard dogs on-premises, or private patrols and local law enforcement personnel off-premises;
- (b) Material resources, including doors, windows, locks, and other physical features, and psychological deterrent factors, such as lighting, peripheral shrubbery, etc.; and
- (c) Methods for managing security systems, together with the policies and procedures necessary for maintaining their effectiveness. Security provisions that are added to existing building codes, for example, are included in this category.

For purposes of this discussion, primary emphasis is placed on material resources and their effect on security. Reference also is made to the fact that various police agencies are utilizing security provisions which have been added to municipal building codes to enhance security. No attempt is made to differentiate between residential and commercial security in this discussion because the security techniques discussed are applicable in both situations.²¹

A. The Nature of Burglary

1. Standard Methods Employed By Burglars

According to police profiles, a burglar generally adheres to his "specialty" or modus operandi ("MO"). Criminologists tend to agree that the common burglar shows a marked narrowness of thought and a peculiar inability to vary his actions. A burglar's MO can be shaped by any number of factors, from local conditions and police procedures, to the burglar's nature, skill, courage and past success.

The MO of today's burglar consists of a few key elements. These include:

- (a) The type of target he generally burglarizes;
- (b) The objects he steals;
- (c) The techniques he uses to gain entry;
- (d) His disguise or front, if any;
- (e) His job planning, if any;
- (f) The time of day during which he works;
- (g) How frequently he works; and,
- (h) The number in his gang, if he works with others.

2. Who the Burglar Is

Although the stereotype burglar pictured in the minds of many is a gruff-voiced, shadowy character in his mid-forties, his actual profile is quite different. Among those apprehended for burglary in 1973, for example, 84% were 25 years of age or younger; and, somewhat surprisingly, of this total, nearly 65% were younger than 18.²² The vast majority were classified as amateurs, with their basic "MO" involving stealth and the identification of "easy targets."

3. When He Works

It has been traditionally held that most burglaries occur at night. But this pattern has changed significantly--to the extent that more than half of all reported residential burglaries now occur during daylight hours. Notably, the rate of daytime residential burglaries increased three-fold over nighttime occurrences between 1960 and 1970. (A similar rate of increase occurred in the case of nonresidential burglaries.) Between 1968 and 1973, although the percentage of daytime and nighttime burglaries grew at generally parallel rates (52% and 56%, respectively), the rate of increase of daytime burglaries outpaced nighttime burglaries substantially.

4. How the Burglar Enters

When it comes to entry, most Texas burglars are neither particularly skilled nor daring. They desire to gain entry (and, thus, seclusion) quickly and with the least possible noise and disturbance. Their tools commonly include a screwdriver, a "jimmy" or pry bar, a hammer, a hacksaw, or other hand tools.

Criminologists and police officials firmly support the contention that if sound locks and supporting security features are installed and used on doors and windows, a burglar ordinarily will not be willing to spend the time and make the noise required to gain entry. In most cases, however, sound security hardware is not used. And in numerous instances where security hardware and other barriers are used in a residence or business, a burglar simply needs to find a building or structure with an unlocked door, hidden keys, or easily defeatable locks to succeed.²³ In fact, 18% of all 1973 residential burglaries were perpetrated without forced entry as a result of poor security management.

Irrespective of the burglar's cunning or experience, doors and windows are the points of entry for nearly all residential burglaries. Although national figures are presently unavailable, a recent profile of Dallas residential burglaries indicates that doors are entered 65% of the time, and windows are used in the remaining 35% of cases.²⁴ In terms of commercial burglary, approximately 85% of all entries are through doors and windows (56% were through doors and 29% through windows.) The remainder (15%) of the burglars enter through roof openings, air vents, etc.²⁵

As these statistics illustrate, doors generally are the favorite points of entry for burglars. This can be attributed to a number of reasons. First, doors are formal access points to all buildings. Thus, even if a burglar is observed, people are far less likely to consider it out of the ordinary (to the extent that they would report the incident) if the burglar was entering or exiting through a door, as compared with a window. Second, doors offer other advantages--including their numbers, locations, ease of access, and generally poor security capabilities.

One of the primary reasons doors are easy marks is the widespread use of the "key-in-knob" lockset with a spring latch bolt.²⁶ Entry can be gained simply and quickly by slipping the spring bolt with a credit card or screwdriver, or by snapping or breaking off the knob with a wrench or hammer. (Because the lock itself is contained in the knob, there is no longer a lock if the knob is broken off.) Doors with windows also are easy prey, since entry can be gained by breaking a small pane of glass, reaching in, and turning the knob.

One answer to these problems is a deadlock. This is a type of lock which is so constructed that, when engaged, the bolt of the lock enters the door frame through the metal strike (which is attached to the frame) and becomes rigid. A deadlock must be operated manually with a key from the outside or with a key or thumbturn from the interior. As a result of its construction and operation, a deadlock is not susceptible to easy manipulation by burglars.

Although several different kinds of deadlocks can improve security, other factors must be considered. For example, because of poorly-fitted doors, it is not uncommon for some deadlock bolts to be insufficiently long to secure the door because it does not enter the door frame far enough. Thus, it is a simple matter for a burglar to spread the soft wood in the door and frame with a pry bar (or a modest kick or butt) and cause the tip of the bolt to lose contact. Consequently, police agencies and security specialists throughout the nation have suggested or are requiring that bolts on deadlocks be a certain minimum length, such as one inch.²⁷

Patio doors also are favorite points of entry for residential burglars. The marginal hook bolts commonly used on sliding glass doors frequently can be disengaged from the strike with just a screwdriver, or entire doors can be simply lifted off the track and removed. A variety of effective locking devices are available, but are seldom installed as standard equipment for these doors. As with the deadlock, police and security experts are suggesting and, in some instances, requiring the installation of such equipment through security provisions added to municipal codes.²⁸

Windows also provide the burglar with access opportunities. As such, they should also be made more secure through the use of some type of physical deterrent, with emphasis on windows that are secluded from exterior view. For example, unused or seldom-used windows can be screwed shut with tamper-proof screws. (Except one in each room for use as a fire exit.) Also available is a variety of secondary locks for windows that can be "keyed" alike so one key can be used for an entire residence or business.

Although effective security hardware is presently available, and construction techniques that would improve security have been developed (i. e., tightly-fitting door frames and solid core doors), they are not always effectively employed by homeowners, businessmen, or builders. In fact, the identification, installation and use of these devices remains an individual responsibility which--like all activities involving individual initiative--obviously has been only partially effective.

B. Citizen Crime Prevention Programs

More than 150,000 burglaries were committed in Texas in 1973--one every three minutes. The clearance rate (the rate at which these crimes were solved) was less than 20%. Clearly the police have not been able to effectively deal with property crime using traditional methods and working alone. The introduction and expanded use of the crime prevention techniques referred to earlier in this chapter offer the first real hope of successfully meeting the challenge of property crime in our society. To date, the crime prevention programs which rely on citizen involvement and participation to address the problem of property crimes can be grouped into four general categories: citizen patrol, citizen defense, citizen crime reporting, and citizen security.²⁹

1. Citizen Patrol

These programs seek to enlist citizen involvement in security patrols to supplement regular police monitoring of entrances and corridors in multi-family dwellings and in patrolling residential or business communities. In some cases, the citizens involved in these activities may be unpaid volunteers; in others, they may be compensated through state/federal program grants. Common program titles include "block security," "vertical policing" and "citizen patrol."

2. Citizen Defense

These programs promote citizen involvement in crime surveillance. Through community organizations and police services, citizens and businessmen are advised of the need to practice improved observation of their surroundings and thus increase the probability that potential offenders will be apprehended. "Neighborhood Watch" and "Friends For a Safer Neighborhood" programs are examples of citizen defense activities.

3. Citizen Crime Reporting

These programs encourage and promote improved citizen reporting of crime to counter the low rates of apprehension and clearance of property (and other) crimes. A variety of citizen crime reporting programs (including "Citizen Radio Watch," which enlists the aid of short-wave and ham radio operators) are sponsored by police agencies, civic clubs and trade organizations.

4. Citizen Security

These programs attempt to physically harden residential and business targets to illegal breaking and entering. Citizen security programs cover a wide range of activities, including public education and information on the need for and types of improved security hardware, training of prevention officers, involvement of police crime prevention officers in the city planning process, and other citizen training and education programs.

The results of programs such as these in Texas have been quite favorable. The cities of Wichita Falls, Abilene and Sweetwater, for example, are currently experiencing crime reductions, while Waco, Amarillo, Beaumont and Corpus Christi are realizing crime rate stabilization.³⁰ Even with this success, however, other broader crime prevention efforts must be launched, not only to stem the tide of property crime, but to substantially reduce it. One such program involves the incorporation of security provisions in local building codes.³¹

PART III

BUILDING SECURITY CODES

For thousands of years, man has used a variety of means to protect his property from theft. At first, natural obstacles or barriers such as rocks, caves, water and trees were used. Later, systems combining physical and mental barriers were developed to further deter unwanted entry (e. g., locks, labyrinths, etc.). Possession of a special instrument, such as a key, or knowledge of the system, permitted the possessor to remove the barrier.

The purpose of property security remains basically unchanged today. In relating security to today's needs, however, two contemporary purposes emerge. First, the high volume of property crime described earlier clearly points to the inability of the police, acting alone, to effectively deal with this kind of crime. The citizen, either through direct or other action, must play an active role. Second, delay of an intruder is the primary value of physical security. Given sufficient time and the proper tools, the most elaborate physical security system can be defeated; however, it has been shown that "if entry can be delayed for only four minutes, a burglar generally will give up on that entry and often can be caught."³²

1. Purpose of Building Codes

The building security code is one emerging crime prevention method for improving residential and commercial security. In general, the code is a derivative of building and related codes (i. e. fire, life safety, etc.) that have been operative for decades. By definition, a building code is: "A legal document which sets forth requirements to protect the public health, safety and general welfare as it relates to the construction and occupancy of buildings and structures. This is accomplished by establishing

the minimum acceptable conditions for matters found to be in need of regulation."³³

Due to the general neglect of security in the design of residential and commercial structures, the security code has emerged to augment municipal building regulations. In general, it can be designed either as a separate municipal ordinance or as a revision to current building codes for the purpose of increasing resistance to forced entry. It is intended to require construction methods that result in increased security and the addition of security hardware and other protective devices which make a structure less vulnerable.³⁴

2. The Legal Basis For Local Security Codes

The legal basis for security provisions draws directly from the same considerations that govern local fire and building codes and ordinances. The traditional aim of building codes is the protection of the health and safety of residents--requirements pertaining to structural soundness, fire protection and the prevention of health hazards. Building security, however, involves the protection of people and property in buildings, but it was not originally encompassed in the early health and safety concept because crime was not a pressing problem when most building codes were first developed.

There is no longer any doubt that the protection of property against criminal victimization is a necessary part of insuring community health and safety. Moreover, two pertinent considerations in embodying security within the legal base of building codes have been identified: the physical safety of individuals, and the psychological health and well-being that can be realized only from a reduction in the fear and emotional strain of crime.³⁵

Another consideration regarding the legal basis of security codes involves factors of "reasonableness." To be valid, a security code, or provisions thereof, must be: necessary, uniform in application, certain and not arbitrary, cost-effective, feasible in terms of material specifications, and capable of being tested and enforced.

With regard to the first point, security code provisions must be "... reasonably necessary to promote and protect the public health, safety, morals and general welfare." Such provisions cannot, according to this interpretation, be oppressive or excessive. For example, one principal purpose of the security code is to delay entry or, in other words, to deter and reduce the opportunity for crime. If security code provisions went beyond this purpose toward the end of eliminating crime (i. e., by requiring veritably impenetrable metal doors and bars on all residential dwellings) serious questions could be raised relative to "necessity."³⁶

The phrase, "uniformity of application" requires interpretation. A security code must be uniform to be constitutional, but it need not be uniform to the entire universe being regulated (i. e., a security code can validly be applied uniformly to defined classes of the universe being regulated). Thus, insofar as different types of structures require different security orientation, this approach is considered constitutional. For example, a security ordinance would be considered valid from

the standpoint of equal protection if it regulates commercial establishments in a fashion which is different from that applicable to residential dwellings.³⁷

Security codes also must avoid vesting arbitrary power or discretion in the officials responsible for code enforcement and implementation. Within this context, it has been stated that: "Such rules and regulations must fix an ascertainable standard by which the action of the enforcing authority may be guided and measured. Assuming a proper standard has been set by the legislature, the determination made by the enforcing authority pursuant to that standard will generally be upheld by the courts..."³⁸

Though more subjective in nature, cost-effectiveness also is an important consideration. If a city is to achieve the objectives of public health and safety within the framework of a security code, certain compromises may be necessary between what is perfect and what is practical; in other words, restraint must be exercised, lest standards result in costs disproportionate to the advantage gained. No real advantage is realized, for example, if the price of insuring maximum security in homes or businesses is so high that residents and entrepreneurs might be compelled to bear a substantial financial hardship.

Care likewise must be taken to insure that sufficient flexibility exists in material specifications. A security code may face severe legal difficulty if it requires that a specific brand, device, or method and no other be used, if it can be shown that another product or method can provide comparable or better protection.

Finally, if a security code is based on performance standards and general specifications, cognizance must be taken of available design and testing capabilities. For example, performance standards that go beyond the current state of the art of security systems and equipment can result in technological and supply gaps. Further, with regard to existing and new products, the capability must exist for relatively convenient testing. If this capability is not at hand, the variety of available security materials will be limited and the cost relatively high. In addition to production and supply problems, the legal issue of restraint of trade also could surface to further complicate code implementation. Thus, when performance specifications are formulated, care must be taken to consider the state of development of security systems and design techniques, together with the capability for testing and approving (or rejecting) such systems and techniques. During the development of the security provisions presented in this handbook, the reasonableness criteria discussed above were fully considered.

3. Implementation of Security Codes To Reduce Crime

Although the record of crime reduction as a result of security codes is still incomplete, the National Advisory Commission on Criminal Justice Standards and Goals conclude that such codes can help reduce certain types of crime.³⁹ In addition, the Commission found that security codes can:

- (a) Lay the groundwork to identify crime prevention as a responsibility of the community;
- (b) Reassure citizens of the responsiveness of government to their needs;
- (c) Increase citizen awareness of different means of crime prevention; and
- (d) Bring pressure on the security industry to improve its products.⁴⁰

Nearly two dozen local jurisdictions already have developed and implemented building security codes in the states of California (8), Connecticut (1), Florida (2), Illinois (2), Indiana (1), Maryland (1), New Jersey (1), Ohio (1), Oregon (1), Virginia (1), Washington (2), and West Virginia (1).⁴¹

4. Rationale For Model Security Provisions

"Model" security provisions for cities are developed for a number of reasons. First and foremost is the fact that most local governments lack the research resources necessary to build a full-scale security ordinance. With this in mind, the Texas Municipal League assembled the professional staff and advisory personnel necessary to formulate security provisions that can be used, in whole or in part, by all Texas cities. Cities thus will have full access to the most current and complete security provisions available without having to bear the cost of developing them on an individual basis.

Uniformity is another important reason for the use of standard security provisions. Through the use of minimum statewide security standards, hardware and systems manufacturers can proceed with confidence to develop efficient, effective and economical products. If manufacturers were required to meet different standards or levels of performance in several different cities, product choices would be limited and costs would increase substantially. Thus, the use of model provisions should increase the variety of security hardware, as well as the economies of mass production.

Finally, the use of security provisions oriented toward performance-type specifications encourages the use of new methods and techniques.⁴² Moreover, the approach that was used in developing the Model included in the Appendix to this handbook assures the public reasonable security standards, while promoting the development and use of new materials and methods of construction that will improve protection.

5. Development of Performance Standards

Efforts were made to develop the security provisions attached to this handbook on the basis of performance specifications. The amount of approved performance information on security materials and specifications in the U.S. is very limited at the present time, and the paucity of technical input from the local level is one reason this is so. Local law enforcement agencies, for example, are in a good position to offer input on methods of entry, but their ability to analyze the associated engineering problems are somewhat limited.

Another factor concerns the past practices of the lock and security hardware industry and other manufacturing interests.⁴³ Through the years it has been common for design and security performance to be compromised in the interest of marketability and competition. Although aggressive sales tactics cannot, in and of themselves, be held responsible for present conditions, it is unfortunate that many security products were developed with limited concern for the security needs of user groups.

A third contributor to the lack of effective security performance standards is the state and federal government structure. It is financially and technically impractical to expect manufacturing interests to establish and support materials testing laboratories which promulgate standards inconsistent with the free market approach and which are not based on maximum product output from minimum resources. It is far more practical, both in terms of financial and technical support for the state and/or federal governments to perform this function. It is only recently, however, that federal and state agencies have begun to perform this role.

6. National Bureau of Standards

Most security-testing activities presently focus on two fundamental aspects of the burglary problem: man's ability to attack, and the resistance capabilities of physical barriers. To gain entry to a secured facility, physical barriers must be defeated by means of mental and physical assault; if resistance withstands the assault, entry becomes impossible. However, since all barriers can be defeated if sufficient time is available, the success of any barrier must be based on its ability to resist entry for a predetermined period. This is the reason performance specifications for security devices and procedures are based on technical descriptions of their resistance abilities to meet or exceed a prescribed standard.

The National Bureau of Standards (NBS) represents the first U.S. government-sponsored effort to test security performance on the basis of this premise. Beginning in 1971, under a National Institute of Law Enforcement and Criminal Justice (NILECJ) grant, the Law Enforcement Standards Laboratory was made part of the NBS. Its mission is to develop voluntary national performance standards for equipment and devices for use by all levels of the law enforcement community, as well as by equipment manufacturers. The Laboratory's work on standards thus far has focused on protective equipment and clothing, emergency equipment, communications systems, concealed object detectors, vehicles, police weapons, alarm and surveillance systems, and security equipment and hardware.

Within the context of security equipment and hardware, several important efforts are underway within the Laboratory. With regard to physical security systems for windows and doors, specific performance standards are being developed; the final version of standards for door systems is expected to be released in early 1975. Final standards for window systems are scheduled for completion by the summer of 1975.⁴⁴

By mid-1975, A Selection Guide for Door and Window Systems will be available as a companion to these standards. This consumer-oriented document will be aimed at helping citizens assess the security needs of their residences and determine the types of security hardware and equipment that should be used. A leaflet on physical security terms and definitions also is being prepared and is scheduled for concurrent release with the door and window standards. Finally, a Catalog of Security Equipment and a Directory of Security Resources will be ready for distribution by January, 1975.

It is important to note that NBS's function is limited to the establishment of certain minimum national standards and to the distribution of information to consumers and businessmen on how to assess their security needs. NBS neither tests, certifies nor rates individual manufacturers or products. Reports on the results of NBS research are disseminated through the U.S. Government Printing Office, the National Criminal Justice Reference Service, and through news releases.

7. The California Experience

California Assembly Bill 3030, signed into law in late 1971, requires the California State Department of Justice "to develop and recommend to the Legislature, and thereafter continually review, building security standards for the purpose of reducing the likelihood of burglary in California."⁴⁵

In response to this bill, the Attorney General established a Building Security Commission. In its report to the State Legislature issued in January, 1974, the Commission recommended the establishment of:

- (a) Design and performance criteria for door systems to obviate the most common, non-tool and tool attack techniques employed in California burglaries;
- (b) A legal system to set forth authority to create and maintain standards, and to provide for Health and Safety Code violators for non-compliance;
- (c) A materials and equipment-listing procedure to enable security products manufacturers to procure certification of compliance;⁴⁶ and,
- (d) A statewide system for evaluating security needs, and for causing regular changes to be made in existing regulations.

Actual performance standards were developed by the California Crime Technological Research Foundation (CCTRF), which was activated in August, 1972. The Foundation established its testing procedures by focusing on methods of attack used in over 90% of forced entries in California during 1972. Minimum standards subsequently were established for single exterior doors. Efforts are now underway to develop standards for sliding doors and windows, hardware (including locks and hinges), and materials performance.

To implement these recommendations, the Commission chose to use a statewide minimum security code and a state-sponsored standards commission. In order for the code to become law, adoption is required by the Attorney General as called for in the State Penal Code. In addition, sections of the security code will be reviewed by the International Conference of Building Officials for possible incorporation as a part of the "Uniform Building Code" (the generally accepted model building code used in California).

8. Texas State Building Materials and Systems Testing Laboratory

The Texas State Building Materials and Systems Testing Laboratory (BMSTL) was established by the 1971 Texas Legislature.⁴⁷ Generally, the role of the laboratory is to:

- (a) Promote technological innovation in construction;
- (b) Provide uniform, competent and objective statewide testing and evaluation of building materials and building systems;
- (c) Cooperate with the construction industry and with state and local governments to improve building standards and codes;
- (d) In the absence of existing standards, establish acceptable criteria upon which performance testing and evaluation can be conducted (BMSTL uses existing test standards whenever possible);
- (e) Establish criteria for certifying that tests and evaluations conducted are in accordance with acceptable standards;
- (f) Develop and maintain a list of laboratories and personnel to perform tests and evaluations; and
- (g) Evaluate specific areas of greatest need in which the BMSTL can be most effective in helping to provide more and better housing.

BMSTL operates within the Texas Department of Community Affairs and is managed by a "Technical Testing and Evaluation Council" comprised of one member from each of the nine major universities in the State.⁴⁸ Testing is performed by research arms of one or more of these universities or by commercial testing facilities.⁴⁹ This arrangement offers a special opportunity to: use available facilities and talents at these institutions which might otherwise go untapped and remain idle; train student researchers in the field of materials testing and evaluation; provide government officials, construction industry representatives and materials manufacturers with a testing laboratory sanctioned by the State of Texas that objectively tests and certifies that products meet minimum performance criteria for the general health and safety of the community.

All testing undertaken by BMSTL is performed on a contract basis. A security device manufacturer, for example, must initially submit a formal request for his product to be tested. This request must be accompanied by \$100 to cover preliminary processing costs. Each request is reviewed by the Council to determine if testing can be performed under approved program guidelines.

Next, a determination is made as to whether university resources or a commercial establishment should be utilized to perform the testing.⁵⁰ The nine universities or commercial laboratories then are contacted to ascertain which, if any, of them wishes to undertake the testing. Based on a detailed proposal developed by the university or commercial facility, and prepared in cooperation with the manufacturer asking to have a particular product tested, the Council determines whether and by whom the work should be undertaken. The manufacturer and testing unit then enter into a separate, formal agreement. The agreement embodies the information which was presented in the proposal to the Council concerning testing methodology, timing, and cost, and binds the manufacturer to pay all expenses incurred by the testing unit in performing the evaluation. The testing is then undertaken in accordance with established and accepted performance standards.

At the conclusion of the testing, if the product meets or exceeds established standards, BMSTL so advises the Director of the Department of Community Affairs. The Director subsequently issues a "Performance Certification Statement" which, as a matter of public record, permits the use of the product, as certified, statewide. If a product fails to meet the established standards, no formal statement to this effect is made to the Department. Rather, the testing agency generally notifies the manufacturer and offers advice as to the weaknesses of the product or system, and steps which might be taken to achieve an acceptable level of performance.

Key To Footnotes

1. Texas Department of Public Safety, Texas Crime Report: 1964 (Austin: 1964).
2. Texas Department of Public Safety, Texas Crime Report: 1973 (Austin: 1973).
3. Texas Department of Public Safety, Texas Crime Report: 1963 (Austin: 1963).
4. Texas Department of Public Safety, Texas Crime Report: 1963 (Austin: 1963) and Texas Crime Report: 1973 (Austin: 1973).
5. Criminal Justice Division, Office of the Governor, State of Texas, 1974 Criminal Justice Plan For Texas (Austin: 1974).
6. U.S. Chamber of Commerce, 1970 Census of Population--Population of Standard Metropolitan Statistical Areas: 1950-1970 (Washington, D. C. : 1972).
7. Texas Municipal League, "For Texas: Another Explosive Decade," Texas Town and City (Austin: 1970).
8. Criminal Justice Division, Office of the Governor, State of Texas, 1974 Criminal Justice Plan For Texas (Austin: 1974).
9. Complete statistics comparing single-family vs. multi-family dwelling burglary rates are not available; however, one indication of the burglary risk of multi-family units was revealed in a recent California study. In Los Angeles, Oakland, Orange County, San Diego, and San Francisco, a total of 107 census tracts were selected and rated by the police in categories ranging from low- to high-crime risk. Although the number of tracts rated as low- and high-crime risks were relatively balanced (56 and 51, respectively), those categorized as high risk were comprised of a substantially larger number of apartments in the total housing stock than was found in the tracts rated as low risk. More specifically, tracts rated as high crime risk areas averaged 51% multi-family units. Tracts rated as low crime risk had an average of 37% multi-family units. Source: Crime Specific Burglary Prevention Handbook, prepared for the California Office of Criminal Justice Planning by the Systems Development Corporation, Sacramento, California, May, 1974.
10. U.S. Department of Housing and Urban Development, HUD Newsletter, Vol. 2, No. 14 (Washington, D. C. : 1971).
11. Janelle Blanchard, "Building Security Codes and Ordinances," Urban Design, Security and Crime; Proceedings of a National Institute of Law Enforcement and Criminal Justice Seminar, April 12-13, 1972 (Washington, D. C. : 1973).
12. Federal Bureau of Investigation, Crime in the United States: 1973 Uniform Crime Reports (Washington, D. C. : 1974).

13. Vandalism is common among young, amateur thieves. In 1973, for example, 54% of all were under 18 years of age.
14. National Criminal Justice Information & Statistics Service, Crimes and Victims: A Report On the Dayton-San Jose Pilot Survey of Victimization (Washington, D. C.: 1977).
15. President's Commission on Law Enforcement & Administration of Justice, The Challenge of Crime In A Free Society (New York: 1968).
16. This definition of crime prevention has been adopted by the National Crime Prevention Institute, the Texas Crime Prevention Institute, and numerous police agencies.
17. These statistics are based on information provided by the Criminal Justice Division, Office of the Governor, State of Texas. They are inclusive only of jurisdictions which have requested State Criminal Justice funding support.
18. In 1972, ten months after its inception of a crime prevention/security program, the Midland Police Department reported a 24% decrease in residential burglaries and a 28% decrease in commercial burglaries. Twelve months after a similar program was begun in Tyler, the city reported a 30% decline in commercial burglaries.
19. One index to gains in programs of this kind lies in the level of local sales of locking and alarm devices. One "problem" cited by Odessa's Crime Prevention Office was that "...dealers who normally sell locking devices were out of good locks, leaving only inadequate locks available." Source: Quarterly Report of the Odessa Crime Prevention Office to the Criminal Justice Council, July, 1974.
20. This discussion draws from Donald R. Hughes and Gary R. Cooper, Building Security Standards (Los Angeles: 1974).
21. In 1973, 62% of all burglaries in the U.S. were residential and 38% were commercial. Federal Bureau of Investigation, Crime in the United States: 1973 Uniform Crime Reports (Washington, D. C.: 1974).
22. Ibid.
23. Federal Bureau of Investigation, Crime In the United States: 1973 Uniform Crime Reports (Washington, D. C.: 1973). No statistics for commercial establishments were available.
24. Dallas Police Department, Dallas, Texas Residential Burglaries (Dallas: 1973).
25. Donald R. Hughes and Gary R. Cooper, Building Security Standards (Los Angeles: 1974).
26. The balance of this section draws from Richard Rhodes, "A Mighty Fortress Is Our Home," Texas Monthly, February, 1974.
27. For examples of such requirements, see the municipal security provisions in the codes of Austin, Texas, Oakland, California, and Miami, Florida.
28. Because their importance frequently is overlooked by residents, garage doors often offer a prime point of entry for would-be burglars. Garages are a source of valuable items (motorcycles, bicycles, campers, etc.); they also offer seclusion and, as often as not, the tools necessary to force entry into the home. Most standard-issue garage door locks are susceptible to physical defeat; however, simple latches installed in the rolling track of overhead doors, or padlocks for sliding doors or for doors with glass, can offer ample security.
29. From draft guidelines for the Crime Prevention Topic Area of the National Evaluation Program, developed by Richard M. Rau, Ph. D., Program Manager, Community Crime Prevention, National Institute of Law Enforcement and Criminal Justice, Law Enforcement Assistance Administration, Department of Justice, Washington, D. C.
30. Many crime prevention programs (especially citizen crime reporting) actually increase the number of reported crimes (not the incidence); therefore, a reduction--or even a stabilization--of crime rates can be viewed as a significant accomplishment.
31. The term "security code" is utilized throughout this section for convenience. It should be noted that "security provisions" which augment standard municipal building codes have an identical definition and use.
32. Law Enforcement Assistance Administration, LEAA Newsletter, Vol. 4, No. 3 (Washington, D. C.: 1974)
33. Richard L. Sanderson, Codes and Code Administration: An Introduction to Building Regulations in the United States (Chicago: 1969)
34. Donald R. Hughes and Gary R. Cooper, Building Security Standards (Los Angeles: 1974).
35. Janelle Blanchard, "Building Security Codes and Ordinances," Urban Design, Security and Crime: Proceedings of a National Institute of Law Enforcement and Criminal Justice Seminar, April 12 and 13, 1972 (Washington, D. C.: 1973).
36. International Association of Chiefs of Police, "Model Security Ordinance," Law Enforcement Legislative Research Digest (Washington, D. C.: 1972).
37. The security requirements of commercial establishments focus primarily on the protection of property during non-business hours. Residential buildings call for the protection of people as well as property at all hours of the day and night.

38. International Association of Chiefs of Police, "Model Security Ordinance," Law Enforcement Legislative Research Digest (Washington, D. C. : 1972).
39. Oakland, California, adopted the nation's first building security code in the late 1960's. During 1969-1973, residential burglaries in Oakland increased by just 4%; the city's commercial burglary rate dropped by 24% during the same period. Oakland's combined residential/commercial burglary rate decreased by 4.4% during this same period. Nationally, the overall burglary rate increased by 38% during 1969-1974. (Information provided by the Prevention Services Division of the Oakland Police Department to the Texas Municipal League, and Crime In the United States: 1973 Uniform Crime Reports.)
40. National Advisory Commission on Criminal Justice Standards and Goals, Community Crime Prevention (Washington, D. C. : 1973).
41. Notes of a July, 1974 telephone conversation between representatives of the Texas Municipal League and the National Crime Prevention Institute.
42. A "Specifications" code spells out precisely what is acceptable in every phase of building (i. e., specific styles, materials to be used, methods of assembly, etc.). Codes based on performance criteria prescribe the objective to be accomplished, thus allowing broad leeway to designers in selecting materials and methods to achieve required results.
43. This discussion draws from Donald R. Hughes and Gary R. Cooper, Building Security Standards (Los Angeles: 1974).
44. Draft standards are always reviewed by manufacturers, government agencies, trade associations, building code officials, and other interested parties, as well as independent testing organizations such as the American National Standards Institute and the American Society for Testing and Materials. Final versions will be promulgated as official NILECJ standards.
45. Donald R. Hughes and Gary R. Cooper, Building Security Standards (Los Angeles: 1974).
46. A system similar to that maintained by the California State Fire Marshal has been formulated: it provides for listing by the Attorney General of construction materials, assemblies of materials, equipment, methods of construction, methods of installation of equipment, and methods of installation of assemblies of equipment that conform to the requirements of the CCTRF. This listing is construed as sufficient evidence that a product meets or exceeds the Foundation's burglary resistance standards. It should also be noted that the California process provides for materials evaluation and testing: procedures are specified, including requirements for test reports from independent testing laboratories, the qualifications and re-

sponsibilities of organizations to be designated as an approved testing agency, and provisions for sample specimens to be taken from regular security materials production. See Building Security Standards.

47. Senate Bill 535, 62nd Texas Legislature, Regular Session. Compiled as Article 4413(39), Vernon's Texas Civil Statute.
48. These include Lamar University, Prairie View A and M College, Texas A and I University, Texas A & M University, Texas Tech University, University of Houston, The University of Texas at Arlington, The University of Texas at Austin, and The University of Texas at El Paso.
49. The research orientation of the work is the principal criterion used to determine if testing is to be performed by a university or by a commercial laboratory. Applied, routine testing is usually performed commercially; work calling for basic or systems research is generally undertaken at the university level.
50. Factors involved in identifying a university to test a particular product relate to the product type, the type or nature of certification sought by the manufacturer, and the nature of tests to be performed (i. e., the type of physical assault to be made on the product, the reliability of the product--sensitivity or proneness to false activation in cases of anti-intrusion alarms, etc.). Only universities with the laboratory and research capabilities to test the product under review are given serious consideration by the Council. The resources of two or more universities occasionally are combined to undertake certain kinds of research.

APPENDIX

Suggested Security Code

A. Introduction

The major focus of the suggested security code is on minimum standards for security devices and materials used in new residential and business structures. Although these provisions may be used as voluntary guides for application to existing structures, they are intended to be mandatory for all new construction.

1. Enforcement

Responsibility for enforcing the Code is placed in the hands of the city's building official. The reason for this selection (as opposed, for example, to giving this responsibility to the chief of police, fire marshal or city manager) lies in the building official's familiarity and regular involvement with the building construction industry. It is common practice throughout Texas for the building official to approve all plans for the renovation or construction of buildings; furthermore, this official must issue permits before construction is begun, and subsequently must monitor the building process. Finally, when construction is completed, the building official must issue a certificate which indicates that the structure complies with all applicable codes and ordinances. No other municipal official is so continuously involved prior to, during, and after construction.

While centralizing the responsibility for enforcement in one agency makes good organizational sense, procedures should be established to advise the police, legal, fire and other departments that a particular construction project has or has not met all security provisions. (See "Security Advisory Committee" below.) This is the only way to assure that all members of the city administration are kept posted on any problems associated with the implementation of the Code.

One problem might arise with respect to the enforcement of the Code--i.e., in the absence of thorough training in the purposes and provisions of the Code, as well as its enforcement, some building personnel may be reluctant to accept the responsibility for its administration. Anticipating this possibility, the Texas Municipal League, the Texas Department of Community Affairs and the Criminal Justice Division of the Texas Governor's Office are developing a training curriculum that will include such subjects as: the nature of crime prevention, the role of security provisions in local building codes, and the interrelationships between security criteria and other provisions of local building codes.

It is anticipated that training sessions would be for two to three days, with TDCA staff providing on-site services in cities across the state, and that all sessions would be provided on a no-cost basis to participating local officials. Building officials throughout Texas thus should be equipped to administer the Code in 1975:

hopefully, this fact, combined with the knowledge that security provisions are important to every Texan, will stimulate its timely and widespread adoption.

2. Security Advisory Committee

The Code calls for the creation of an ad hoc "Security Advisory Committee" to assist with the administration of the security provisions of the Code, provide counsel to interested parties, and insure that the provisions of the Code remain responsive to local needs. It is suggested that the Committee include representatives of the following departments: Building/Engineering, Fire, Police, and Legal. It is anticipated that the Committee will report to the chief executive or administrative official of the city.

Reference to the composition and responsibilities of ad hoc administrative entities usually is not included in municipal ordinances; however, members of the TML advisory committee considered specific mention of the Security Advisory Committee important for a number of reasons.

First, the addition of security provisions to municipal building codes will establish a significant departure from tradition--consequently, many questions likely will be asked of a variety of local officials in the course of their ordinary dealings with the public. (This will be particularly true in the case of the building official and fire marshal, both of whom are regularly involved in building code enforcement activities.) The press of other ongoing city business makes it presumptuous to assume that all of the concerned officials will keep each other informed of all of the Code-related questions and problems they have faced day-to-day; thus the Committee can help to promote flows of information between and among all of the departments with an interest in the Code.

Second, many of the questions raised with respect to the Code will require specialized knowledge--such as that possessed by a lawyer or a security expert. Building officials generally will not have sufficient training to cope with the variety of inquiries likely to be posed, which means that they will have to rely on the city attorney's office to provide legal interpretations, the police department to supply information on security-related issues, and so on. The Committee's role in such cases will be to provide centralized, coordinated responses from agencies which previously followed separate and independent paths.

Third, the Committee can significantly lighten the work load of the city's chief administrator vis-a-vis code implementation. In the final analysis, the chief administrative officer will always be the person called on to answer to the governing body and the public: The Committee can insure that he is regularly informed about all key aspects of the security provisions, thus relieving him of the chore of maintaining direct communications with the numerous departments involved in administering the Code.

3. Local Adoption of the Code

Adoption of the Code as an amendment to an existing building code should follow standard procedures. Subsequent to the city administrator's decision to recommend adoption of the Code, copies of the draft security provisions should be forwarded to the building official, chief of police (and crime prevention bureau, if one exists), fire chief, legal counsel and other pertinent officials for review. On the basis of the input provided by these officials, the city attorney or administrator's office can ascertain which portions of the city's building code need to be amended to accommodate the security provisions, and then move forward with the preparation of specific amendments. The last step involves drafting an ordinance for presentation to the governing body.

The sample ordinance which follows offers a format for the adoption of the Suggested Security Code as an amendment to an existing building code. Cities which have no building code may use a similar format, but the title and body of the ordinance should specify that a new and separate security ordinance is being adopted.

NO. _____

AN ORDINANCE OF THE CITY OF _____, AMENDING ORDINANCE NO. _____, THE BUILDING CODE FOR SAID CITY, BY ADDING A NEW SECTION _____ TO SAID ORDINANCE NO. _____, RELATING TO PHYSICAL SECURITY OF BUILDINGS AND OTHER STRUCTURES TO PREVENT AND REDUCE THE INCIDENCE OF BURGLARY; PROVIDING A FINE OF NOT MORE THAN TWO HUNDRED DOLLARS (\$200.00) FOR ANY VIOLATION THEREOF, AND PROVIDING THAT EACH DAY OF VIOLATION SHALL CONSTITUTE A SEPARATE OFFENSE; REPEALING ALL ORDINANCES OR PARTS OF ORDINANCES IN CONFLICT HEREWITH; PROVIDING A SEVERABILITY CLAUSE; AND DECLARING AN EMERGENCY.

WHEREAS, the City of _____ has sustained a continual increase in residential and non-residential burglaries at the rate of _____ over the past _____ years; and,

WHEREAS, the economic loss to the residents and businessmen of the community is approaching _____ dollars (\$ _____) annually; and,

WHEREAS, because of the increasing volume of burglaries in said city, it is imperative that the citizens and inhabitants of said city begin to use preventative measures to reduce and reverse this trend; and

WHEREAS, burglary prevention can be clearly enhanced by improving the physical security and burglary resistance at points of entry of all buildings and structures; Now therefore,

BE IT ORDAINED BY THE _____ OF THE CITY OF _____:
(governing body)

Section 1. Ordinance No. _____, passed on the _____ day of _____, 19____, and approved on the _____ day of _____, 19____, adopting a building code for the City of _____, is hereby amended by adding a new Section _____, to read as follows:

"Section _____. (here include the text of the Texas Model Security Code)."

Sec. 2. The violation of any provision of this ordinance shall be punished by a fine of not more than Two Hundred Dollars (\$200.00), and each day of violation shall constitute a separate offense.

Sec. 3. All ordinances or parts of ordinances in conflict with any of the provisions of this ordinance are hereby repealed to the extent of such conflict.

Sec. 4. If any of the provisions of this Ordinance or the application thereof to any person or circumstance is held invalid, such invalidity shall not affect other provisions or applications of the Ordinance which can be given effect without the invalid provision or application, and to this end the provisions of this Ordinance are declared to be severable.

Sec. 5. (Emergency clause, if required by charter).

PASSED AND APPROVED, THE _____ day of _____, 19____.

Mayor

ATTEST:

City (Secretary) (Clerk)

Cities without a building code may use a similar format, but the title and body of the ordinance should specify that a new and separate security ordinance is to be adopted.

4. Source Materials Used to Prepare Code

Numerous sources were reviewed in the development of the Suggested Security Code. Principal codes, ordinances, and other documents from which portions of these provisions were derived include: "Model Security Ordinance," Ordinance No. 4, International Association of Chiefs of Police, 1972 ed.; "Model Burglar Security Code, Minimum Standards," Oakland Police-Fire and Insurance Coordinating Committee, undated; "Building Security Regulations," Ordinance No. 6-73, No. 5, City of Richmond, California, May 7, 1973; "Building Security," Concord Municipal Code, Article III, Chapter 9 (1), Concord, California, February 5, 1973; and, "Initial Draft of Minimum Building Security Guidelines," Urban Design, Security and Crime, proceedings of a National Institute of Law Enforcement and Criminal Justice Seminar, April 12 and 13, 1972, U.S. Department of Justice, LEAA.

B. Text of Suggested Security Code

"Sec. _____. Purpose.

The purpose of the provisions of this Section is to protect the general health, safety and welfare of the public and the protection of persons and property by providing minimum requirements to safeguard property against burglary and other unlawful trespasses. These minimum requirements will achieve this purpose by regulating and controlling the design, construction and quality of materials and equipment as they relate to the security of all buildings and structures hereafter constructed, remodeled, or repaired within the boundaries of the City of _____.

SCOPE

The provisions of this Section shall apply to all new construction and, except as otherwise provided herein, to existing buildings and structures in the single-family, multi-family and business classes as defined in (appropriate chapter(s) or section(s) of city's building code) and/or these provisions to which additions, alterations, or repairs are made except as specifically provided herein. When additions, alterations or repairs within any twelve (12) month period exceed fifty per cent (50%) of the replacement value of any existing building or structure, such building or structure shall be made to conform to the security requirements for new construction.*

*The following phrase may be considered for incorporation in this section by January 1, 1976: "In addition, these provisions shall apply to existing individual residences and business establishments when a change in ownership and/or in occupancy takes place." Careful consideration also may be given to gradually upgrading the security qualities of existing multi-family residential units.

DEFINITIONS

The following definitions are in addition to those set forth in (the appropriate chapter(s) or section(s) of the city's building code.

Activate. To engage a locking device to make it effective in preventing unauthorized entry through a door, window, or other access point to which the device is attached.

Access Point. Any opening in the exterior of a building or structure which has a clear cross-section of 96 square inches or more and which has as its smallest dimension a span in excess of six inches, and which includes, but is not limited to, doors and windows.

Accessible. Any access point within 18 feet of the ground or within 18 feet of the roof of an adjoining building or structure; or within 14 feet from directly or diagonally opposite windows, fire escapes, ledges or roofs; or within 3 feet of another access point, fire escape, or ledge which projects from the same or an adjacent wall and which leads to another building or structure. A "roof" is any surface of a building or structure which provides a horizontal supporting surface of 6 feet or more in width. "Diagonally opposite" means that the angle measured from the horizontal planes of the access points or surfaces in question is not greater than 45 degrees.

Building Official. The Building Official of the City of _____ or his designated representative.

Business Establishment. An establishment which uses or occupies any building or structure or portion thereof for the purpose of manufacture, storage, warehousing, transfer, sale, display or purchase of goods, wares, merchandise or services.

Combination Deadlatch and Deadlock. A device combining a deadlatch operable by knobs from inside and outside with a deadlock operable from inside by a thumbturn or key and from outside by a key, both of which can be retracted from inside by turning the knob and from outside by a key.

Control Device. A key or similar mechanical implement that is normally used by authorized persons to activate or deactivate a locking device.

Flush Bolt. A deadlock normally used on inactive door(s) that is attached to the top and bottom and/or side of the door and engages in the frame and/or base of the door.

Cylinder. The part of a lockset that has an entrance for the key used to activate the locking mechanism.

Dead-Locking Latch. A latch equipped with a locking device which, when in a closed position, causes the latch to resist being retracted by pressure applied to it (also called springbolt with anti-shim device).

Deadlock. A locking device with a bolt that has no automatic spring action and, therefore, must be operated manually by a key cylinder, thumbturn, or lever, and is positively held fast when in the projected position.

Deadlock, Double Cylinder. A deadlock that can be activated only by a key from the inside and the outside.

Deadlock, Single Cylinder. A deadlock that is activated from the outside by a key and from the inside by a knob, thumbturn, lever, or similar mechanism.

Dwelling, Multiple-Family. A building, including hotels, motels and apartments, or portion thereof, designed for occupancy by more than one family living independently of other families.

Dwelling, Single-Family. A building, including duplexes, semi-detached dwellings and townhouses, designed exclusively for occupancy by one family.

Exterior. That portion of a building or structure that provides access from outside the building or structure. This shall include, but is not limited, to those portions of individual business establishments housed in a common building or structure which are accessible to the public, e.g. as in a shopping center, mall, hotel, motel, or apartment complex. This definition also includes doors leading from garage areas into single-family dwellings.

Hardened Steel. Heat-tempered steel. The steel is heated to a predetermined temperature and then quenched in oil or water for rapid cooling.

Locking Device. A mechanical implement or combination of mechanical implements attached to a door, window, or other access points of a building or structure, and which is designed to prevent unauthorized persons from entering the building or structure through the door, window, or other access point on which the locking device is activated.

Person. Any individual, firm, partnership, association, corporation, company, or organization of any kind.

Throwbolt. A manually-operated deadlock for an inactive leaf, which is normally placed on the inside portion of a door (e.g., flush bolt).

RESPONSIBILITY FOR ENFORCEMENT

These provisions shall be administered and enforced by the Building Official of the City of _____.

RESPONSIBILITY FOR COMPLIANCE

The owner of record or his designated agent shall be responsible for compliance with the provisions set forth herein.

RIGHT OF ENTRY

Whenever necessary, and with the consent of the owner, his agent, the tenant, or person in charge, the Building Official may make an inspection to enforce any of the provisions set forth herein. Such entry may be made at any reasonable hour. The Building Official shall present credentials which establish and provide evidence of his identity and authority. If the Building Official is refused entry, he may take action to gain access in accordance with and as provided by (appropriate chapter(s) or section(s) of the laws and ordinances of the city).

METHOD OF ENFORCEMENT, APPEALS AND VARIANCES

Methods for the enforcement, appeal and the grant of variances under these provisions shall be those set forth in (appropriate chapter(s) or section(s) of the building code of the city).

ALTERNATE SECURITY PROVISIONS

The provisions of this code are not intended to prevent the use of any other security devices, materials or methods of construction. The burden of proving to the Building Official that the requirements of these provisions have been met or surpassed shall be on the person responsible for compliance.

Such other security devices, materials or methods of construction may only be used upon the approval of the Building Official.

TESTING

Whenever there is insufficient evidence that any security device, material, or any method of construction does not conform to the requirements set forth herein, or in order to substantiate claims for alternate security devices, materials, or methods of construction, the Building Official may require the person responsible for compliance to submit any such alternate to such tests as the Building Official deems necessary and proper to determine if it is at least equivalent to that prescribed herein in quality, strength, effective-

ness, burglary resistance, durability and safety.

Such tests shall be conducted by the State of Texas Building Materials and Systems Testing Laboratory (BMSTL) or such other testing laboratory as may be approved by the State of Texas and/or BMSTL. All tests shall be conducted at the expense of the person responsible for complying with these provisions.

LIFE SAFETY FACTOR

None of the provisions set forth herein shall supersede any local, state, or federal laws, regulations, or codes dealing with the life safety factor. Enforcement of these provisions shall be in cooperation with the local fire authority to avoid conflict with fire laws:

SECURITY ADVISORY COMMITTEE

There is hereby created an ad hoc security advisory committee. The committee shall assist with the administration of the provisions set forth herein, provide counsel to interested parties as to these provisions, and periodically review these provisions to insure that they remain responsive to local needs and conditions.

The committee shall be comprised of officials representing the following departments: Building/Engineering; Fire; Police; and Legal Department. Members of the committee shall have a knowledge of these provisions and understand the purpose and intent of the City's crime prevention program, if one exists. The committee shall report to the chief administrative officer of the City.

GENERAL MINIMUM SPECIFICATIONS AND STANDARDS

The following minimum specifications shall be applicable to all building classes referenced in these provisions.

(1) Exterior Swinging Single Door Systems Performance Specifications*

Door assemblies shall be capable of withstanding the energy imparted on the door by an impactor weighing 180 lbs. with a velocity no less than 90 in. x sec.⁻¹ at the moment of impact. The response of the door to the dynamic force shall indicate a rise time of not less than \pm .01 seconds from zero to full load. The point of impact on the door shall be 12 inches from the lock-fastening point with the strike on a line to the center hinge. Alternatively, the door assembly shall withstand a static force no less than 1,500 pounds applied 12 inches from the lock fastening point with the strike on a line to the center of the middle hinge.

*See page _____ for a discussion of the configuration and alternate design specifications that may be utilized to satisfy these provisions.

In addition, door assembly jambs shall resist a static load of no less than 2,000 pounds applied between the jambs in a spreading action at mid-height from top to bottom. Under this loading, the maximum deflection at the latch shall be less than the throw of the bolt to be used in order to prevent its disengagement from the striker plate when the door is closed and its locking device is activated.

Hinges or pivots on all doors opening outward shall be secured in such a manner that the hinge or pivot cannot be removed when the door is closed.

(2) Lock Assembly Specifications for Exterior Single Swinging Door*

In addition to being equipped with a deadlatch with a half-inch minimum throw, each exterior single-swinging door shall be secured by a deadlock with one-inch minimum throw having hardened steel inserts; alternately the deadlock will be of a design which otherwise prevents a spreading threat. When activated, the lock must resist an impact load applied to the end of the bolt, parallel to its center line, of no less than 200 inch pounds.

The locking device also shall be so constructed and installed that when the door is closed the device cannot be made inactive through the removal of mounting screws or bolts.

Locking devices and parts of locking devices shall not be used if they bear any numbers or letters which would reveal a combination from which a key or similar control device could be fashioned or selected and used to deactivate the locking device.

When a padlock-type locking device is used, it shall not be capable of being deactivated through hammering or other shock techniques. The slide bolt or hasp-and-shackle to which the padlock is attached shall be constructed of hardened steel and shall be installed so that it cannot be removed when the door is closed and the padlock is activated.

(3) Exterior Window Specifications

Each exterior window shall be so constructed that when the window is locked, it cannot be lifted from the mounting frame. In addition, hinges or pivots on

windows opening outward shall be so constructed and installed that they cannot be removed when the window is closed.*

(4) Exterior Sliding-Type Doors at Ground Level or Which Are Otherwise Accessible From the Outside

Each exterior sliding-type door at ground level or which is otherwise accessible from the outside shall be so constructed that the movable section shall slide inside the fixed portion of the door. Alternately, the door may be so protected that when it is locked, the sliding portion cannot be lifted from the track.**

SINGLE-FAMILY STRUCTURES: ADDITIONAL SPECIFICATIONS AND STANDARDS

The following specifications and standards shall be applicable to single-family structures and shall be complied with in addition to, or--as appropriate--in lieu of the General Minimum Specifications and Standards section of these provisions.

(1) Garage Doors

Each metal, wooden or composition garage door, whether overhead, roller-type, swinging or sliding, shall be so equipped that it is capable of being locked. Specific locking devices to be employed shall be of one or more of the following types: throwbolt or flushbolt; cylinder-type lock; padlock and hasp; or an electronic power-operated mechanism with automatic locking

*More detailed specifications concerning windows and window locking devices may be considered for inclusion in the provision by January 1, 1976. Such specifications may be developed by the State of Texas Building Materials and Systems Testing Laboratory (BMSTL) and/or other testing laboratories approved by the State of Texas and/or BMSTL. Also, provisions may be considered regarding the location of exterior windows relative to exterior doors for inclusion herein by January 1, 1976. For example, a provision requiring a minimum distance of 40 inches or more between an exterior window and/or windows on an exterior door and the actual door opening might be added. Such a provision should take cognizance of a burglar's ability to break the window, reach in, and release the door locking device. Alternatives might include the use of non-breakable burglary resistant glass in all windows and/or the use of a double cylinder deadlock with key operation on the inside and outside, if exterior window(s) are located less than the prescribed distance from an exterior door.

**More detailed provisions and/or specifications may be developed and incorporated in this provision by January 1, 1976. Such provisions should concern types of locking devices that can be used with exterior sliding-type doors (such locking devices are currently available in a number of Texas cities). Such specifications may be developed by the State of Texas Building Materials and Systems Testing Laboratory (BMSTL) and/or other testing laboratories approved by the State of Texas and/or BMSTL.

*More detailed specifications concerning lock performance and cylinder design may be considered for inclusion in this provision by January 1, 1976. Such specifications may be developed by the State of Texas Building Materials and Systems Testing Laboratory (BMSTL) and/or other testing laboratories approved by the State of Texas and/or BMSTL.

capabilities. All such devices shall meet the General Minimum Specifications and Standards of these provisions or such other standards as may be approved by the State of Texas and/or BMSTL.

(2) Lighting

The street address of each single-family structure shall be illuminated by a light bulb of at least 60 watts, and shall be easily visible from the street. The bulb(s) shall be protected by a weather-and vandalism-resistant globe or cover.

MULTI-FAMILY STRUCTURES: ADDITIONAL SPECIFICATIONS AND STANDARDS

The following specifications and standards shall be applicable to multi-family structures, and shall be complied with in addition to, or--as appropriate--in lieu of the General Minimum Specifications and Standards section of these provisions.

(1) Exterior Single-Swinging Door Systems Specifications

Exterior single-swinging doors, including doors leading to and from garage areas into buildings, shall be equipped with self-closing devices, if not already required by other regulations, ordinances or codes.

(2) Lock Assembly Specifications for Exterior Doors

Entrance doors to individual units shall not be master keyed to exterior doors (i. e. garage, stairwell, lobby, etc.) located elsewhere on the premises of multi-family structures.

Single swinging doors shall be equipped with a combination deadlatch and deadlock.

Pairs of swinging doors shall be secured at the top and bottom of one leaf with vertical throwbolts, and secured at the center with the type of locking device required for single swinging doors in this subsection.

Swinging doors which do not permit a center lock, including but not limited to tempered glass doors, shall be secured at the top and bottom with locking devices meeting the requirements of this subsection for single swinging doors.

Entrance door(s) other than a door at the location of vehicle ingress and egress, to a garage, a lobby or stairwell, shall be equipped with a keyed, self-locking deadlatch.

(3) Lighting

The address(es) on the exterior door(s) of all dwelling unit(s) shall each be illuminated, at a minimum, by a 60-watt bulb(s). The bulb(s) shall be protected by a weather-and vandalism-resistant globe or cover. So as to be easily visible at all times, such light(s) shall not be switched except by a timer(s) or a light sensing device(s).

(4) Numbering

There shall be positioned at each dwelling complex, so as to be easily read from the street by responding emergency units, an illuminated diagrammatic representation of the complex which lists and locates each unit by address.

BUSINESS STRUCTURES: ADDITIONAL SPECIFICATIONS AND STANDARDS

The following specifications and standards shall be applicable to business structures, and shall be complied with in addition to, or--as appropriate--in lieu of the General Minimum Specifications and Standards section of these provisions.

(1) Lock Assembly Specifications for Exterior Doors

Single-swinging exterior doors shall be equipped with a double cylinder deadlock that can be deactivated, from the inside and outside, only with a key or similar control device, or with a single cylinder deadlock that cannot be deactivated from the inside, and that can be deactivated from the outside only with a key or similar control device.

Pairs of swinging doors shall be secured at the top and bottom of one leaf with vertical throwbolts and secured at the center with the type of locking device required for single swinging doors of this subsection.

Swinging doors which do not permit a center lock, including but not limited to tempered glass doors, shall be secured at the top and bottom with locking devices meeting the requirements of this subsection for single swinging doors.

Where a door is locked by electric power operation, the circuit controlling the door shall be locked by an electrical disconnect switch or by a signal locking device.

(2) Chain-and Crank-Operated Garage-Type Doors: Rolling, Solid, Swinging, Sliding or Accordion

All chain-and crank-operated garage doors, regardless of their method of opening, when not controlled by electric power operation with automatic locking capabilities, shall be specifically secured. Chain-operated doors

shall be equipped with a locking device for securing the chain. Crank-operated doors shall be equipped with a locking device for securing the operating shaft.

If such garage door or a hand-operated type is the only entrance to a building or structure, the door shall be secured by a locking device meeting the requirements of this section for single-swinging doors.

Where a door is automatically locked by electrical power operations, the circuit controlling the door shall be locked by an electrical disconnect switch or by a signal locking device.

(3) Metal Accordion, Grate and Grill-Type Doors

Metal accordion, grate and grill-type doors shall be equipped with a metal guide track at the top and bottom. Such doors shall be so constructed and installed so they may not be lifted from the track when the door is closed.

Such doors shall be secured with a single or double cylinder deadlock which may be activated only with a key, which is constructed with hardened steel inserts, and which has a bolt with a minimum one-inch throw. Alternatively, a padlock and hasp or other locking device that resists a spreading threat (e. g. interlocking bolt) may be used.

(4) Accessible Exterior Sliding Doors

Accessible exterior single-sliding doors shall be so constructed that the movable section shall slide inside the fixed portion of the door. Such doors shall be so constructed and installed that the movable portion of the door cannot be lifted from its track when the door is closed.

The movable portion of such doors shall be secured by vertical throw-bolts at the top and bottom and with a center locking device as required for single-swinging doors of this section. The bolt of the locking device shall engage the strike to sufficiently prevent its being disengaged by any possible movement of the door within the clearances provided when the door is closed and the locking device is activated.

Double sliding doors shall be secured by vertical bolts at the top and bottom of each door, and shall meet all other requirements set forth for single sliding doors for business structures.

(5) Roof Opening

Hatchways, doors to elevator shafts, roof doors, and skylights that can be opened shall be so designed that they can be locked from the inside.

Hinges or pivots on such openings that open outward shall be so constructed and installed that they cannot be removed when the opening is closed.

Where mechanical equipment is roof-mounted, it shall be fixed to the roof so it cannot be readily removed to allow access through a resulting opening. Additionally, such equipment shall be so designed that entry to a building or structure cannot be accomplished through the equipment.

(6) Accessible Access Points Not Covered By Other Provisions

All accessible access points not covered within the provisions of this section or the General Minimum Specifications and Standards section, including but not limited to air ducts and/or vent openings, shall be secured as follows: by steel bars of at least 1/2 inch diameter which are not spaced more than four inches apart, and have dividers of at least 1/4 inch flat steel bars spaced not more than 18 inches apart, placed on the inside of the opening; or, by an iron or steel grill of at least 1/8 inch diameter material of not more than 2 inch mesh placed on the inside of the opening.

(7) Lighting

The address(es) and the exterior door(s) of all buildings and structures shall each be illuminated at a minimum by a 60-watt bulb(s) so as to be easily visible at all times. The bulb(s) shall be protected by a weather- and vandalism-resistant globe or cover. Such light(s) shall not be switched except by a timer(s) or a light sensing device(s).

(8) Safes

Any safe that is installed shall be placed and illuminated so as to be clearly visible from the street. If the net weight of the safe is less than 1,000 pounds, or if it rests upon wheels or dollies, it shall also be securely fastened to the floor.

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C. Supplemental Specifications for Exterior
Swinging Single Door Systems

Common threats to exterior doors have been studied and tested by the California Crime Technological Research Foundation in order to define them in engineering terms.* The objective of the tests was to determine the forces and amounts of energy most likely to be employed in relation to these threats. The threats studied included human shoulder and foot impact, lifting, and force applied by a pry bar, battering ram, hammer or bumper jack.

As a result of these tests, which were conducted under controlled laboratory conditions, minimum performance standards were developed and incorporated in the General Minimum Specifications and Standards portion of the Texas Model Security Provisions. Until BMSTL or other state-sanctioned testing bodies provide an approved listing of manufacturers and products that conform with these standards, however, it may be difficult to determine compliance. Therefore, the following specifications are presented as an acceptable alternative to the prescribed performance standards.**

FRAMING

Standard FHA wooden framing as depicted in the figure which follows--including the special nailing schedule with studs and joint facing fastened together by nailing exterior plywood over the basic structure--shall be required. Fire struts shall be placed adjacent to the lock area and shall be well fitted.***

DOORS

Solid core 1 3/4 inch wooden doors shall be required on all buildings and structures. Core assemblies of hollow core flush wooden doors shall include, on the outside face, in addition to compliance with PS-51 (Commercial Standards and Product Standard, National Bureau of Standards, U. S. Government Printing Office, Washington, D. C.), a single layer of carbon steel expanded metal. The minimum requirement of this material is 1/4 inch opening, 20 gauge metal, 0.83 lbs. per square foot. This material is equivalent to 1,010 steel which meets MIL-M-17194C steel specifications. Solid metal doors having at least equal strength are also acceptable.

*For more detailed information with regard to the foundation, see: California Crime Technological Research Foundation, A Technological Approach to Building Security: Phase I (Sacramento: Office of the Attorney General, 1974); Donald R. Hughes and Gary R. Cooper, Building Security Standards (Sacramento: Office of the Attorney General, 1974).

**Donald R. Hughes and Gary R. Cooper, Building Security Standards (Sacramento: Office of the Attorney General, 1974), p. 27, 37 and passim. Alterations have been made as per recommendations offered by TML Building Security Codes Advisory Committee.

***Framing of this design has resisted a 2,000 lb. lateral load, with a 0.3 inch deflection.

Fasteners

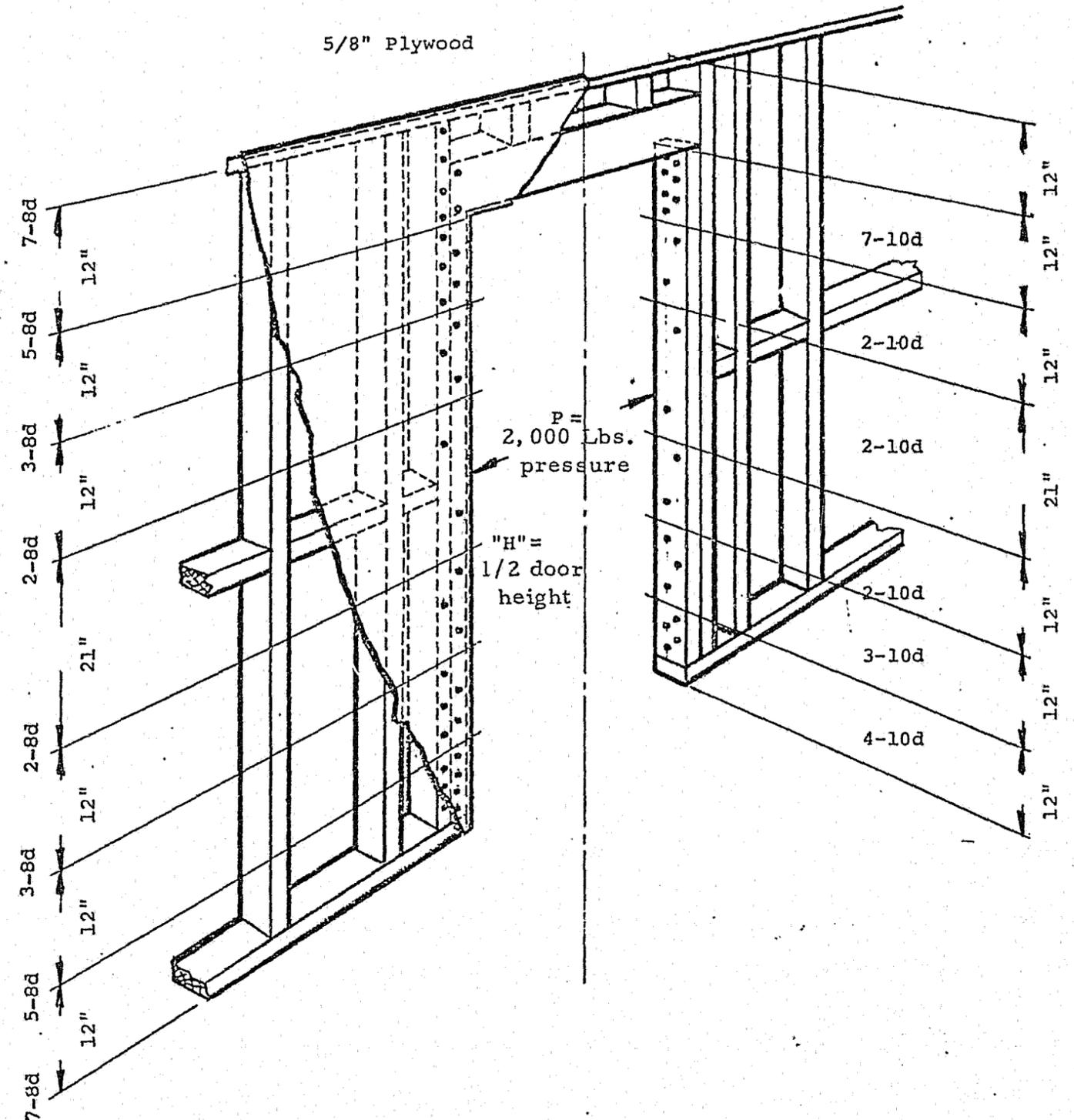
Three steel hinges using No. 9 screws, 3/4 inch long, on each leaf of each hinge shall be required.

Lock System

A lock system as described elsewhere in the Model equipped with a striker plate or plates mounted on the frame jamb facing, also shall be required.

The materials for the frame, doors, and siding shall comply with FHA (9) "Minimum Property Standards for One and Two Living Units" and all applicable revisions.

NAILING SCHEDULE TO REDUCE SPREADING OF DOOR JAMBS UNDER LATERAL LOADING a/



a/ Donald R. Hughes and Gary R. Cooper, Building Security Standards (Sacramento: Office of the Attorney General, 1974), p. 28.

It should be noted that under a force of 2,000 lbs, each jamb deflected .3 - in.

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