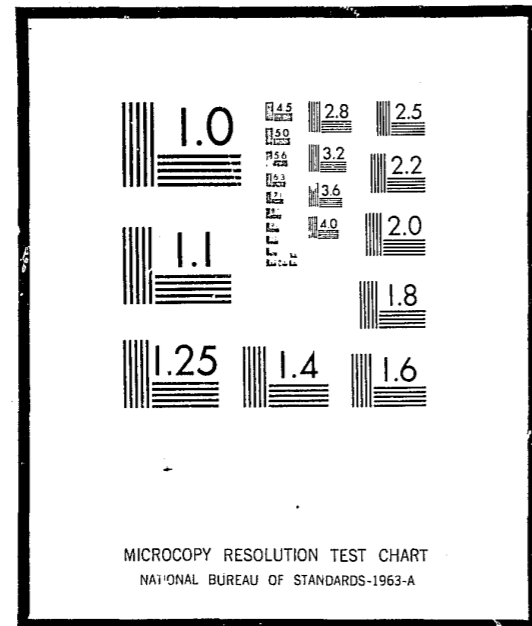


# NCJRS

This microfiche was produced from documents received for inclusion in the NCJRS data base. Since NCJRS cannot exercise control over the physical condition of the documents submitted, the individual frame quality will vary. The resolution chart on this frame may be used to evaluate the document quality.



Microfilming procedures used to create this fiche comply with the standards set forth in 41CFR 101-11.504

Points of view or opinions stated in this document are those of the author(s) and do not represent the official position or policies of the U.S. Department of Justice.

U.S. DEPARTMENT OF JUSTICE  
LAW ENFORCEMENT ASSISTANCE ADMINISTRATION  
NATIONAL CRIMINAL JUSTICE REFERENCE SERVICE  
WASHINGTON, D.C. 20531

Date filmed

10/9/75

Initial Draft

Minimum Building Security Guidelines  
and  
Cost Estimate for The Security Features

NATIONAL INSTITUTE OF LAW ENFORCEMENT  
AND CRIMINAL JUSTICE,  
LAW ENFORCEMENT ASSISTANCE ADMINISTRATION

May 14, 1971

10755

TABLE OF CONTENT

DRAFT

	<u>PAGE</u>
CODE: RULES AND REGULATIONS	3
MINIMUM BUILDING SECURITY GUIDELINES	6
Part 1. Commercial Security Guidelines	6
Part 2. Residential Security Guidelines	12
Single Family Dwellings	12
Multiple Family Dwellings, Motels and Hotels	14
COST ESTIMATES FOR THE SECURITY FEATURES	17

Note: The National Institute prepared the guidelines at the request of the Federal Insurance Administration in HUD, in order to support their standard development for the Federal Crime Insurance Program.

The security guidelines presented in the code represented, at the time of drafting, the best measures, at the lowest cost, available to secure residential and commercial property and safeguard public welfare against burglary. That is, the best available measures until such time when the National Institute can develop standards for the security features referred to in the guidelines. The language used is non-technical and should be easily understood by an owner, builder, or hardware dealer. In general, the guidelines were chosen not to conflict with local, state or federal laws, regulations, or codes dealing with the life-safety factors. In those instances where a guideline may conflict, the Exception sections, (Section VII in Part 1., and Section VI in Part 2.), state that the security guidelines shall be superseded by these laws, regulations, and codes.

Finally, the security experts that developed the National Institute guidelines included Sergeant John G. Kearns, Oakland, California Police Department; Professor Oscar Newman, New York University; Richard Stevens and Ronald Kirkpatrick, Research Analysis Corporation; and Joseph Mattare, Chief of the District of Columbia Fire Department. The Institute Project Supervisor for the guideline development was Richard M. Rau.

Code: Rules and Regulations

PURPOSE:

The purpose of this Code is to provide minimum guidelines to safeguard property and public welfare by regulating and controlling the design, construction, and quality of material as related to the security of building and structures within a city and certain equipment specifically regulated herein.

SCOPE:

The provisions of this Code shall apply to all existing and future buildings or structures.

ALTERNATE MATERIALS AND METHODS OF CONSTRUCTION:

The provisions of this Code are not intended to prevent the use of any material or method of construction not specifically prescribed by this Code, provided any such alternate has been approved, nor is it the intention of this Code to exclude any sound method of structural design or analysis not specifically provided for in this Code. Structural design limitations given in this Code are to be used as a guide only, and exceptions thereto may be made if substantiated to the enforcing authority.

The enforcing authority may approve any such alternate provided he finds the proposed design is satisfactory and the material, method or work offered is, for the purpose intended, at least equivalent to that prescribed in this Code in quality, strength, effectiveness, burglary resistance, durability and safety.

Tests may be required as proof of compliance at the discretion of the enforcing authority.

In those instances where a guideline conflicts with local, state or federal laws, regulations or codes dealing with the life-safety factors, the regulations are presented in the Exception Sections, (see Section VII in Part 1., and Section VI in Part 2.).

ENFORCEMENT:

Enforcement shall be the joint responsibility of the Building Commissioner or equivalent and the Chief of Police.

Plans and specifications for new construction must be approved by the enforcing authority.

RESPONSIBILITY:

The owner or his designated agent shall be responsible for compliance with this Code.

VIOLATIONS AND PENALTIES:

It shall be unlawful for any person, firm, or corporation to erect, construct, enlarge, alter, repair, move, improve, remove, convert or demolish, equip, use, occupy or maintain any building or structure in the city, or cause the same to be done, contrary to or in violation of any of the provisions of this Code.

Any person, firm, or corporation violating any of the provisions of this Code shall be deemed guilty of a misdemeanor.

APPEALS:

In order to prevent or lessen unnecessary hardship or practical difficulties in exceptional cases where it is difficult or impossible to

comply with the strict letter of this Code, and in order to determine the suitability of alternate materials and types of construction and to provide for reasonable interpretations of the provisions of this Code, there shall be created a Board of Examiners and Appeals (if none exist). The Board shall exercise its power on these matters in such a way that the public welfare is secured, and substantial justice done most nearly in accord with the intent and purpose of this Code.

## Minimum Building Security Guidelines

### Part 1. Commercial Security Guidelines

#### I. Exterior Doors:

(Any building requiring panic proof hardware locks on exit doors shall be exempt from the exterior door locking security).

All exterior doors shall be secured as follows:

A. A single door shall be secured with either a double cylinder deadbolt or a single cylinder deadbolt without a turnpiece with a minimum throw of one inch. Any deadbolt must contain hardened material to repel attempts at cutting through the bolt.

B. On pairs of doors, the active leaf (door) shall be secured with the type lock required for single doors in (A) above. The inactive leaf shall be equipped with throw bolts at top and bottom with a minimum throw of 5/8 inch. The throw bolts must contain hardened material.

C. All doors which require locking at top and bottom shall be secured with throw bolts at both top and bottom with a minimum throw of 5/8 inch. The throw bolts must contain hardened material.

D. Lock cylinders shall be designed or protected so they cannot be gripped by pliers or other wrenching devices.

E. Rolling doors, solid swinging, sliding or accordion garage-type doors, both vertical and horizontal, shall be secured with a cylinder lock, when not otherwise controlled or locked by electric power operation.

F. Metal accordion, grate, or grill-type doors shall be equipped with metal guide track at top and bottom, and a cylinder lock and/or padlock with hardened steel shackle and minimum five pin tumblers operation,

with non-removal key when in an unlocked position. The bottom track shall be so designed that the door cannot be lifted from the track when the door is in a locked position.

G. Outside hinges on all exterior doors shall be provided with non-removable pins when using pin-type hinges. If the hinge screws are accessible, the screws shall be of non-removable type.

H. Glass panel doors and glass panels adjacent to the door frame shall be secured as follows:

1. rated burglary resistant glass or glass-like material, or
2. the glass shall be covered with iron bars of at least one half-inch round or 1" x 1/4" flat steel material, spaced not more than five inches apart, fastened on the inside of the glazing, or
3. iron or steel grills of at least 1/8" material of 2" mesh fastened on the inside of the glazing.

I. Inswinging doors shall have rabbeted jambs.

J. Wood doors, not of solid core construction, or with panels therein less than 1 3/8" thick, shall be covered on the outside with at least 16 gauge sheet steel or its equivalent attached with 1/4" carriage bolts on minimum 18" centers penetrating through the door and fastened on the inside with nuts and flat washers.

K. Jambs for all doors shall be constructed or protected so as to prevent violation of the function of the strike.

L. All exterior doors shall be illuminated with a minimum of a 60 watt bulb. Such bulb shall be protected with a vapor-tight cover or cover of equal break resistant material.

II. Sliding Patio Doors opening onto patios or balconies which are at ground level or which are otherwise accessible from the outside:

A. All single sliding patio doors shall have the movable section of the door sliding on the inside of the fixed portion of the door, or so protected that when the door is locked it cannot be lifted from its track.

B. Dead locks shall be provided on all single sliding patio doors. The lock shall be operable from the outside by a key utilizing a bored lock cylinder of pin tumbler construction. Mounting screws for the lock case shall be inaccessible from the outside. Lock bolts shall contain hardened material and shall be capable of withstanding a force of 800 pounds applied in any direction. The lock bolt shall engage the strike sufficiently to prevent its being disengaged by any possible movement of the door within the space or clearances provided for installation and operation. The strike area shall be reinforced to maintain effectiveness of bolt strength.

C. Double sliding patio doors must be locked at the meeting rail and meet the locking requirements of "B" above.

III. Glass Windows:

A. All windows with opening sash within eight feet of ground level or otherwise readily accessible shall be protected with either of the following:

1. rated burglary resistant glass or glass-like material, or
2. outside iron bars of at least 1/2" round or 1" x 1/4" flat steel material, spaced no more than 5" apart, or
3. outside iron or steel grills of at least 1/8" material of 2" mesh, and the window barrier shall be secured with carriage bolts with the

head outside.

B. If the accessible window is of the openable type, it shall be secured on the inside with a locking device capable of withstanding a force of 300 pounds applied in any direction on the frame.

C. Jalousie windows shall not be used within eight feet of ground level, adjacent structures or fire escapes.

D. Outside hinges on all accessible windows shall be provided with non-removable pins. If the hinge screws are accessible, the screws shall be of non-removable type.

IV. Roof Openings:

A. All glass skylights on the roof of any building or premises used for business purposes shall be provided with:

1. rated burglary resistant glass or glass-like material, or
2. iron bars of at least 1/2" round or 1" x 1/4" flat steel material, spaced no more than 5 inches apart, inside the skylight and securely fastened, or
3. an iron or steel grill of at least 1/8" material of 2" mesh inside the skylight and securely fastened.

B. All hatchway openings on the roof of any building shall be secured as follows:

1. If the hatchway is of wooden material, it shall be covered on the outside with at least 16 gauge sheet steel flanged over the vertical edges of the hatch, or its equivalent attached with 1/4" carriage bolts on minimum 18" centers penetrating through the door and fastened on the inside with nuts and washers.

2. The hatchway shall be secured from the inside with a slide bar or slide bolts.

3. Outside hinges on all hatchway openings shall be provided with non-removal pins when using pin-type hinges. If the hinges screws are accessible, the screws shall be of the non-removable type.

C. All accessible air duct or vent openings exceeding 8" x 12" on the roof or exterior walls of any building shall be secured by covering the same with the following:

1. iron or steel bars of at least 1/2" round or 1" x 1/4" flat steel material, spaced no more than 5" apart and securely fastened, or

2. iron or steel grill of at least 1/8" material of 2" mesh and securely fastened, and if the barrier is on the outside, it shall be secured with carriage bolts with the head outside.

V. Special Security Measures:

A. Safes: Commercial establishments having \$1,000 or more in cash on the premises after closing hours shall lock such money in a Class"E" safe after closing hours.

B. Office Buildings (Multiple Occupancy): All entrance doors to individual office suites shall have a deadbolt lock with a minimum one inch throw bolt which can be opened from the inside. The throw bolt must contain hardened material.

VI. Intrusion Detection Devices;

A. If it is determined by the enforcing authority of this code that the security measures and locking devices described in this code do not adequately secure the building, he may require the installation and maintenance of an intrusion detection device (Burglar Alarm System).

B. Establishments having specific type inventories shall be protected by the following type alarm service:

1. Silent Alarm - Central Station - Supervised Service

- a. Jewelry store - Mfg., wholesale, and retail
- b. Guns and ammo shops
- c. Wholesale liquor
- d. Wholesale tobacco
- e. Wholesale drugs
- f. Fur stores

2. Silent Alarm

- a. Liquor stores
- b. Pawn shops
- c. Electronic equipment
- d. Wig stores
- e. Clothing (new)
- f. Coins and stamps
- g. Industrial tool supply houses
- h. Camera stores
- i. Precious metal storage facility

3. Local Alarm (Bell outside premise)

- a. Antique dealers
- b. Art galleries
- c. Service stations

VII. Exceptions:

No portion of this Code shall supersede any local, state, or Federal laws, regulations, or codes dealing with the life-safety factors.

Enforcement of this code should be developed with the cooperation of the local fire authority to avoid possible conflict with fire laws.

## Part 2. Residential Security Guidelines

### SINGLE FAMILY DWELLING

#### I. Exterior Doors:

A. Exterior doors (non-glass panel doors) and doors leading from garage areas into private family dwellings shall be of solid core no less than 1 3/4 inches thickness.

B. Exterior doors and doors leading from garage areas shall have self-locking dead latch devices with a minimum throw of one-half inch.

C. Glass panel doors and glass panels adjacent to the door frame shall be secured as follows:

1. rated burglary resistant glass or glass-like material, or
2. the glass shall be covered with iron or steel bars of at least one-half inch round or 1" x 1/4" flat steel material, spaced not more than five inches apart, fastened on the inside of the glazing, or
3. iron or steel grills of at least 1/8" material of 2" mesh fastened on the inside of the glazing.

D. Exterior doors swinging out shall have non-removal hinge pins. If the hinge screws are accessible, the screws shall be of non-removable type.

E. Exterior doors swinging in shall have rabbeted jambs.

F. Jambs for all doors shall be constructed or protected to prevent violation of the function of the strike.

II. Sliding Patio Type Doors opening onto patios or balconies which are at ground level or which are otherwise accessible from the outside:

A. All single sliding patio doors shall have the movable section of the door sliding on the inside of the fixed portion of the door, or be so protected that when the door is locked it cannot be lifted from its track.

B. Dead locks shall be provided on all single sliding patio doors. The lock shall be operable from the outside by a key utilizing a bored lock cylinder of pin tumbler construction. Mounting screws for the the lock case shall be inaccessible from the outside. Lock bolts shall contain hardened material and shall be capable of withstanding a force of 800 pounds applied in any direction. The lock bolt shall engage the strike sufficiently to prevent its being disengaged by any possible movement of the door within the space or clearances provided for installation and operation. The strike area shall be reinforced to maintain effectiveness of bolt strength.

C. Double sliding patio doors must be locked at the meeting rail and meet the locking requirements of "B" above.

#### III. Window and Transom Protection:

A. Windows shall be so constructed that when the window is locked it cannot be lifted from the mounting frame.

B. Window locking devices shall be capable of withstanding a force of 300 pounds applied in any direction on the frame and be unaffected by manually applied vibrating motion.

C. All windows within eight feet of ground level or otherwise accessible, with opening sash shall be protected with any of the following:

1. rated burglary resistant glass or glass-like material, or
2. the glass shall be covered with iron or steel bars of at least one-half inch round or 1" x 1/4" flat steel material, spaced not more than five inches apart, fastened on the inside of the glazing, or
3. iron or steel grills of at least 1/8" material of 2" mesh fastened on the inside of the glazing.

MULTIPLE FAMILY DWELLINGS, MOTELS & HOTELS

I. Exterior Doors:

Exterior doors into these structures shall be equipped with self-closing devices.

- A. Main Entrance Doors shall have a self-locking dead latch devices with a minimum throw of 1/2 inch requiring a key to be used to gain access to the interior.
- B. Secondary Doors to fire stairs, incinerators, and service areas shall have self-locking dead latch devices with a minimum throw of 1/2 inch. No provision of knob, key, or other hardware shall be provided on the exterior of the door.
- C. In Hotels and Motels where exterior doors give direct access to the dwelling unit, the dwelling unit door shall be secured the same as required by item III Interior Doors below.

II. Garage Doors:

Whenever parking facilities are provided, either under or within the confines of the perimeter walls of any multiple dwelling, such facility shall be fully enclosed and entrance doors provided with a locking device.

III. Interior Doors: (other than doors in living units)

The doors shall be equipped with self-closing devices.

- A. Garage doors shall have self-locking dead latch devices with a minimum of 1/2 inch throw requiring a key to be used to gain access to the interior.
- B. Stairwell doors shall have self-locking dead latch devices with a minimum 1/2 inch throw. The door shall allow entrance to the stairwell but not exit from the stairwell, except that exit from the stairwell will be provided on all floors six stories and above.
- C. Doors to Dwelling Units
  1. All wood doors shall be of solid core with a minimum thickness of 1-3/4 inches.
  2. Swinging entrance doors to individual units shall have deadbolts with one inch minimum throw and hardened material in addition to deadlatches with 1/2 inch minimum throw. The locks shall be so constructed that both dead-bolt and deadlatch can be retracted by a single action of the inside door knob.
  3. An interviewer or peephole shall be provided in each individual unit entrance door.
  4. Doors swinging out shall have non-removal hinge pins. If the hinge screws are accessible the screws shall be of the non-removable type.
  5. Doors swinging in shall have rabbeted jambs.
  6. Jambs for all doors shall be so constructed or protected so as to prevent violation of the function of the strike.



IV. Sliding Patio Type Doors:

(See Item II of Single Family Dwelling.)

V. Window Protection:

(See Item III of Single Family Dwelling.)

VI. Exceptions:

No portion of this Code shall supersede any local, state, or Federal laws, regulations, or codes dealing with the life-safety factors.

Enforcement of this ordinance should be developed with the cooperation of the local fire authority to avoid possible conflict with fire laws.

COST ESTIMATES

FOR

THE SECURITY FEATURES

Listed below are the preliminary estimates of the cost for, and installation of, the security feature in each individual code. Replacement cost estimates only are listed. New construction costs would be substantially lower.

Basic Installation Costs:  
\$10/hr.

Part I.

Commercial:

I. A - Item - \$24.00

Install - \$20.00

B - Item - \$5.00

Install - \$10.00

C - Item \$5.00

Install - \$10.00

D - Item \$10.00

Install - \$10.00

E - Item - \$8.00

Install - \$10.00

F - Item - \$8.00

Install - \$10.00

G - Item \$6.00

Install - \$10.00

H-1 2 to 5 times cost of plate glass (plate glass - \$2.00/sq. ft.)

- H-2 Average Window - 3'x5'  
Item - \$30.00  
Install - \$15.00
- H-3 Average Window - 3'x5'  
Item - \$15.00  
Install - \$10.00
- I - Item \$10.00  
Install - \$40.00
- J - Item - \$25.00  
Install - \$30.00
- K - Item - \$0  
Install - \$20.00
- L - Item - \$10.00  
Install - \$22.50  
(assume already wired)
- II. A - Item - \$2.00  
Install - \$5.00
- B - Item - \$8.00  
Install - \$40.00
- C - See II. A & II. B above
- III. A - (see I-H) above
- B - Item - \$3.50  
Install - \$0

- C - Item - (window replacement cost)
- D - (See I-G above)
- IV. A - Items (See I-H)
- B - 1. Item - \$20.00  
Install - \$20.00
- 2. Item - \$20.00  
Install - 10.00
- 3. (See I-G above)
- C - 1. Item - \$15.00  
Install - \$10.00
- 2. Item - \$10.00  
Install - \$10.00
- V. A - Item - \$150.00 - to \$500.00
- B - Item - \$24.00  
Install \$20.00
- VI. A - Unassignable
- B - 1. Install - \$500.00  
per month - \$50 - \$60  
(average small business)
- 2. Install - \$500  
per month - \$20 - \$30
- 3. Install - \$500  
(Lease) \$12 to \$15/month

Part II.

Residential Single Family

I-A Item \$26.00

Install \$40.00

B Item - \$5.00

Install - \$10.00

C (See I-H in Commercial Code)

D (See I-G in Commercial Code)

E (See I-I in Commercial Code)

F (See I-K in Commercial Code)

II-A Item - \$2.00

Install - \$5.00

B Item - \$8.00

Labor - \$40.00

C (See II A & II B above)

III-A Item - \$0

Install - \$5.00

B Item - \$3.50

Install - \$0

C (See I-H in Commercial Code)

Multiple Dwellings

I-A Item \$8.00/per door

Install \$10.00/per door

B Item \$8.00/door

II. Unassignable

III-A Item \$8.00

Install - \$10.00

B Item - \$8.00

Install - \$10.00

C - 1. Item - \$26.00

Install - \$40.00

2. Item - \$40.00

Install \$40.00

3. Item - \$5.00

Install \$5.00

4. Item - \$6.00

Install - \$10.00

5. Item - \$10.00

Install - \$40.00

6. Item - \$0

Install - \$20.00

IV. (See II Single Family)

V. (See III Single Family)

**END**