



## WHY BUILDING CODES?

**B**uilding codes regulate the design, construction and maintenance of buildings. Codes are adopted as laws and regulations, and they apply to new construction and generally to existing buildings that undergo reconstruction, rehabilitation or alteration, or when there is a material change in occupancy.

Building codes establish **minimum acceptable standards** necessary for **preserving public health, safety and welfare** and for **protecting property**.

Three model code organizations promulgate model building codes for adoption by state and local governments. These organizations

have joined to form the International Code Council (ICC), which is in the process of developing the **International Building Code** based upon provisions of the three model codes. This composite code is expected to be available by the year 2000.

ICC is responsible for the promulgation of the One and Two Family Dwelling Code. The provisions of this code are adopted by reference in the National Building Code and are included as appendix chapters in the Uniform Building Code and Southern Building Code.

ICC also promulgates the International Plumbing Code and the International Mechanical Code.

The National Electric Code, promulgated by the National Fire Protection Association, is referenced by all three of the existing model building codes.

It is anticipated that ICC will have a complete package of model codes (e.g., Building, Plumbing, Mechanical, Fire Prevention, and One and Two Family Dwellings) by the year 2000.

### MODEL CODES

Code Names	Sponsoring Organization	General Area Where Adopted
National Building Code (NBC)	Building Officials and Code Administrators International	Northeast and Central
Uniform Building Code (UBC)	International Conference of Building Officials	Upper Midwest and West
Standard Building Code (SBC)	Southern Building Code Congress International	South and Southeast

## BENEFITS OF CODES

The purpose of building codes is to build safe buildings, thereby **reducing deaths, injuries and property damage**. This **preserves the built environment**, both residential and commercial; **reduces public and private disaster aid**, including insurance claims payments; and **maintains employment** in businesses and institutions that otherwise might be forced to close following a catastrophe.

In addition, building codes:

- | Promote a **level and predictable playing field** for designers, suppliers and builders.
- | Promote a **degree of comfort** for buyers, who are entitled to rely upon minimum construction standards for the safety and soundness of a building.
- | Allow **economies of scale** in the production of building materials and construction of buildings.
- | Contribute to the **durability** of buildings.
- | Help maintain **quality of life** and **property values**.

## PERFORMANCE VERSUS PRESCRIPTIVE CODES

Codes are classified as **performance** codes if they require the completed work to satisfy specified standards (such as 120-mile-per-hour hurricane winds) without describing in detail how to satisfy those standards. Codes are classified as **prescriptive** if they require that certain materials be used and describe how to build in some detail (e.g., use 8d nails, 6 inch oc). There are also variations that combine elements of performance and prescriptive codes.

Performance codes allow the designer and builder to use any combination of materials

and methods that will provide the resistance necessary to satisfy the code. Such codes allow wide latitude, and some say this makes them more difficult to enforce. A plan reviewer or inspector may require additional information in order to determine how the combinations of materials and methods in a set of specifications will perform to satisfy the code requirements.

Prescriptive codes, on the other hand, set forth in detail the materials and methods to be used. The plan reviewer and inspector can determine by observation if the code is being followed. Of course, the specifications set forth in the code have to be such that they satisfy minimum standards of performance, which should be stated in the code.

## ENFORCEMENT IS CRITICAL

Good building codes have little value if they are not enforced. Independent studies of damage following Hurricane Andrew and the Northridge Earthquake revealed that lax code enforcement contributed to the total damage.

Building codes are generally enforced by building departments at the local level. These departments are often funded by permit fees, which average less than one percent of construction costs.

Plan reviewers and building inspectors are key to the success of building codes. Unless these functions are adequately funded and staffed with qualified, trained, tested and certified personnel, the full value of building codes will not be realized.

## INSURANCE COMPANIES BENEFIT FROM GOOD BUILDING CODES

Insurers benefit from sound building codes and effective enforcement the same way the general public benefits: through **reduced deaths, injuries and property damage**.

Codes and their enforcement provide a level of comfort for insurers, because codes help assure that a certain minimum level of construction quality is strived for in a community. Codes provide a reference point for determining the insurability of properties.

Codes also help mitigate the intangible (emotional, etc.) losses that insurance does not cover, but which often make the claims adjusting process more difficult for insurers.

The **Building Code Effectiveness Grading Schedule**, developed by the Insurance Institute for Property Loss Reduction and turned over to the Insurance Services Office for implementation and management, rates local communities on the quality of building code provisions and enforcement. The entire country will be graded by the year 2000. Insurers will be able to use the Grading Schedule the same way they use the Fire

## STATEWIDE BUILDING CODES

The Institute for Business and Home Safety (IBHS) supports:

- | adoption by states, without technical amendment, of a model building code promulgated by a nationally recognized model code organization;
- | statewide application of the code to all types of public and private structures;
- | timely updating of the state code as the corresponding model code is updated;
- | prohibiting local governments from weakening or diluting provisions of the state code; and
- | uniform, statewide certification by examination and continuing education of those charged with code administration and enforcement.

## BENEFITS OF STATEWIDE CODES

Statewide building codes that meet the IBHS criteria outlined above produce substantial benefits:

**Consistency:** A statewide code provides consistent standards in construction quality from one jurisdiction to the next. All involved in the construction process – designers, suppliers, builders, code administrators, owners, etc. – work from a common understanding of what is required.

**Safety:** There are no gaps in community protection due to failure of local government to enact an appropriate code.

**Efficiency:** Construction costs are kept down because designs, materials and construction practices can be more uniform. Suppliers and builders can operate on a larger scale at lower unit cost.

**Technical Soundness:** The model codes are developed through consensus processes with input from a variety of interests and technical experts. Such expertise and breadth of input are not readily available to local jurisdictions.

**Timeliness:** The model codes are continuously updated to make buildings safer and less prone to damage, as well as to take advantage of new technology and techniques. Local rule-making bodies lack the resources and expertise to keep abreast of these developments.

**Professionalism:** Local building officials benefit professionally from working with the latest codes and from the training in code administration and enforcement provided by model code organizations.

**Openness:** Each of the model codes is developed in an open process where all parties have an equal opportunity to be heard.

**Uniform Enforcement:** A statewide code promotes uniform and nondiscriminatory enforcement throughout the state.

NOTE: See IBHS's *Summary of State Mandated Codes* for status of building codes by jurisdiction.

Suppression Rating Schedule, which measures community firefighting capabilities.

## **COST VERSUS VALUE**

Builders often oppose changes in building codes on grounds that proposals:

1. don't produce benefits commensurate with the cost or
2. make buildings so expensive that potential buyers are forced out of the market.

The *incremental costs of many code improvements are nominal*, and in the context of the final cost of the property to a buyer they are inconsequential. However, the benefits of such improvements may have far-reaching effects on life-safety and property-damage issues.

For example, a requirement that roof coverings withstand commonly encountered winds and hail would not only protect the roofing material from damage, but would also keep wind and rain from entering and doing major damage to the interior. The same holds true for requirements that door and window openings be secure enough to avoid penetration by wind-borne objects.

A survey by the Institute for Business and Home Safety revealed that 91 percent of homeowners in hurricane-prone coastal areas believe builders should be required to follow stricter building codes even though it might add as much as \$5,000 to the cost of a \$100,000 house.

