1
Building Codes

The existence of building regulations goes back almost 4000 years. The Babylonian Code of Hammurabi decreed the death penalty for a builder if a house he constructed collapsed and killed the owner. If the collapse killed the owner's son, then the son of the builder would be put to death; if goods were damaged, then the contractor would have to repay the owner, and so on. This precedent is worth keeping in mind as you contemplate the potential legal ramifications of your actions in designing and constructing a building in accordance with the code. The protection of the health, safety, and welfare of the public is the basis for licensure of design professionals and the reason that building regulations exist.

"If a builder build a house for some one, and does not construct it properly, and the house which he built fall in and kill its owner, then that builder shall be put to death.

If it kill the son of the owner, the son of that builder shall be put to death.

If it kill a slave of the owner, then he shall pay slave for slave to the owner of the house.

If it ruin goods, he shall make compensation for all that has been ruined, and inasmuch as he did not construct properly this house which he built and it fell, he shall re-erect the house from his own means.

If a builder build a house for some one, even though he has not yet completed it; if then the walls seem toppling, the builder must make the walls solid from his own means."

Laws 229–233
Hammurabi's Code of Laws
(ca. 1780 BC)

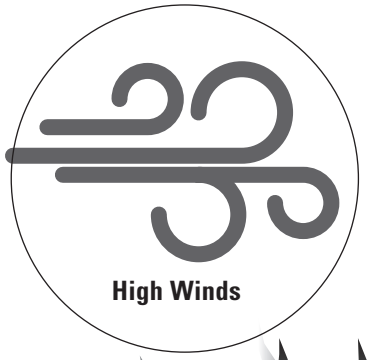
From a stone slab discovered in 1901 and preserved in the Louvre, Paris.

Various civilizations over the centuries have developed building codes. The origins of the codes we use today lie in the great fires that swept American cities regularly in the 1800s. Chicago developed a building code in 1875 to placate the National Board of Fire Underwriters, who threatened to cut off insurance for businesses after the fire of 1871. It is essential to keep the fire-based origins of the codes in mind when trying to understand the reasoning behind many code requirements.

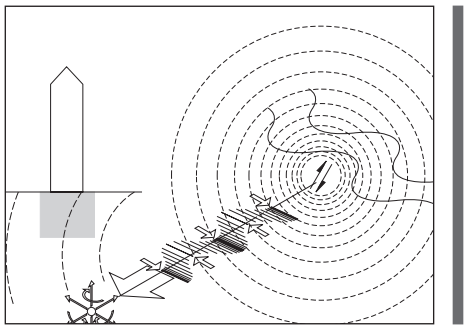
As the nation's population has increased, people have moved nearer to bodies of water, to regions subject to high winds, and into wooded areas on the edges of towns. Mitigating the impact of hazards such as floods, high winds, earthquakes, and wildland fires in populated areas, has increasingly been included in each new edition of the model codes. While fire safety is still a very large component in model codes, new model code documents now also include many provisions above and beyond the traditional fire-based requirements.

The often conflicting city codes were refined over the years and began to be brought together by regional nongovernmental organizations to develop so-called model codes. The first model codes were written from the point of view of insurance companies to reduce fire risks. Model codes are developed by private code groups for subsequent adoption by local and state government agencies as legally enforceable regulations. The first major model-code group was the Building Officials and Code Administrators (BOCA), founded in 1915 and located in Country Club Hills, Illinois. Next was the International Conference of Building Officials (ICBO), formed in 1922, located in Whittier, California. The first edition of their *Uniform Building Code* (UBC) was published in 1927. The Southern Building Code Congress (SBCCI), founded in 1940 and headquartered in Birmingham, Alabama, first published the *Standard Building Code* in 1946. The first BOCA *National Building Code* was published in 1950.

Flooding



High Winds



Earthquakes

Fire
Urban, suburban, and wildland/urban interface

These three model-code groups published the three different building codes previously in widespread use in the United States. These codes were developed by regional organizations of building officials, building materials experts, life safety experts, and design professionals to provide communities and governments with standard construction criteria for uniform application and enforcement. The ICBO UBC was used primarily west of the Mississippi River and was the most widely applied of the model codes. The BOCA *National Building Code* was used primarily in the north-central and northeastern states. The SBCCI *Standard Building Code* was used primarily in the Southeast. The model-code groups merged in the late 1990s to form the International Code Council (ICC), and BOCA, ICBO, and SBCCI ceased maintaining and publishing their "legacy" codes.

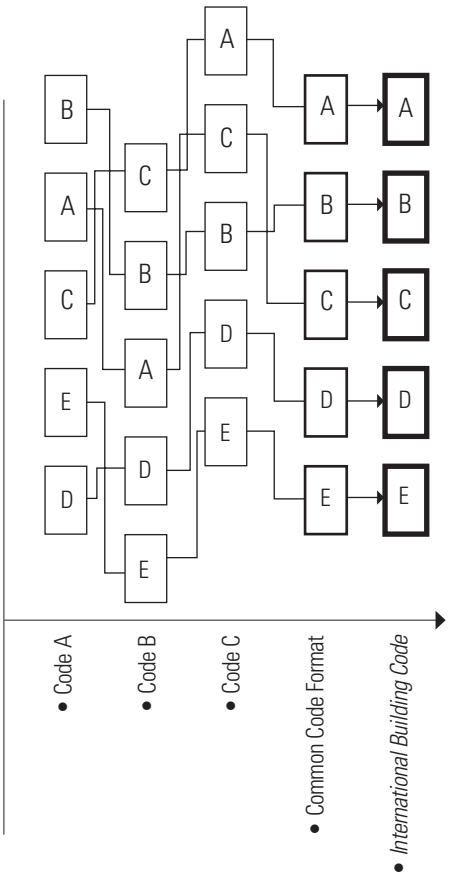
The International Building Code

The new ICC process was a real revolution in the development of model codes. There was recognition in the early 1990s that the nation would be best served by a comprehensive, coordinated national model building code developed through a general consensus of code writers. There was also recognition that it would take time to reconcile the differences between the existing codes. To begin the reconciliation process, the three model codes were reformatted into a common format. The ICC, made up of representatives from the three model-code groups, was formed in 1994 to develop a single model code using the information contained in the three current model codes. While detailed requirements still varied from code to code, the organization of each code became essentially the same during the mid-1990s. This allowed direct comparison of requirements in each code for similar design situations. Numerous drafts of the new *International Building Code*® (IBC) were reviewed by the model-code agencies along with code users. From that multiyear review grew the original edition of the IBC, first published in 2000. There is now a single national model code maintained by a group composed of representatives of the three prior model-code agencies, the ICC, headquartered in Washington, D.C. The three organizations accomplished many years ago a full merger of the three model-code groups into a single agency to update and maintain the IBC.

When working on existing buildings constructed under one of the "legacy" codes, research will be required to locate corresponding chapters and sections in the older codes, which will need to be rearranged to correlate with the current IBC since the organization of the IBC is different than that of prior model codes.

Note that in addition to the IBC, most code users should also be familiar with two other "I" codes. The first is the *International Residential Code*® (IRC). This code is meant to regulate construction of detached one- and two-family dwellings and townhouses that are not more than three stories in height. This code supplants residential requirements in the IBC in jurisdictions where it is adopted.

The second code is the *International Existing Building Code*® (IEBC), which contains provisions for additions, alterations, and repairs to existing buildings as discussed further below.



Note also that most local jurisdictions make other modifications to the codes in use in their communities. For example, many jurisdictions make amendments to require fire sprinkler systems where they may be optional in the model codes. In such cases, mandatory sprinkler requirements may change the design trade-offs offered in the model code for inclusion of sprinklers where "not otherwise required" by the code. It is imperative that the designer determines what local adoptions and amendments have been made to be certain which codes apply to a specific project.

Many jurisdictions have not adopted the latest versions of the model codes. It is critical that designers familiarize themselves with the applicable edition of the model codes. All too often, practitioners assume that codes they have been using in one jurisdiction are the same as those in a new locale for their practice. That is often not the case and can lead to a lack of code compliance for some projects.

A major revision took place in the 2015 IBC. The provisions for existing buildings, contained in Chapter 34 of the previous code, were removed. Therefore, the IBC applies only to new buildings. The provisions for existing buildings are now contained exclusively in the IEBC and refer back to the IBC or adopt similar requirements, but the two codes are now intended to be used separately. For the purposes of this book, assume that the requirements discussed are to apply to new buildings or to additions to new buildings unless noted otherwise. Alterations and repairs occur within existing buildings and therefore are to be done under the IEBC.

For jurisdictions that have not yet adopted the 2015 IBC or subsequent editions of the IBC, the existing building provisions may still be found in Chapter 34 of the adopted code. This is yet another reason to determine which code has been adopted for a project's specific location. See Chapter 23 for a more detailed discussion on how to use the IBC and the IEBC together.

There are also specific federal requirements that must be considered in design and construction in addition to the locally adopted version of the model codes. Among these are the Americans with Disabilities Act (ADA) of 1990 and the Federal Fair Housing Amendments Act (FFHAA) of 1988.

Americans with Disabilities Act

The ADA of 1990 is federal civil-rights legislation requiring that buildings be made accessible to persons with physical disabilities and certain defined mental disabilities. The original *ADA Accessibility Guidelines* (ADAAG) were administered by the Architectural and Transportation Barriers Compliance Board (ATBCB), and the regulations are administered by the US Department of Justice. Enforcement of the law is through legal actions brought by individuals or groups asserting violations of their rights ofah access, as civil rights. A new version of the ADAAG known as the *2010 ADA Standards for Accessible Design* (2010 Standards) went into effect on March 15, 2012. Designers can obtain copies of the guidelines from the Access Board at www.access-board.gov/ada.

It is critical for designers to understand that unless adopted as the access regulations for a jurisdiction or state, the ADA is not subject to interpretation by local building officials; it is enforced by legal action, through the courts. Access is to be provided for all disabilities, not just for people with mobility impairments. These include hearing, vision, speech, and cognitive impairments, as well as persons of short stature and with limited mobility not necessarily requiring the use of a wheelchair. The ADA applies to all new construction. The ADA also requires that barriers to access be removed from existing buildings where such work is readily achievable. The definition of readily achievable is an economic one and should be addressed by the building owner, not by the building architect.

The ADA is one of the few building regulations—in this case a law, not a code—that requires retrofitting of projects apart from upgrading facilities during remodeling or renovation. Most codes apply to existing buildings only when renovation is undertaken. Under the ADA, those access improvements that are readily achievable should be undertaken by the owner, whether or not any other remodeling work is to be done. The ***owner***, not the architect, must make this determination.

As the ADA is not enforced by local building officials, we will concentrate here only on those accessibility codes that are enforced locally and subject to review and interpretation as part of the permit process. Designers must first concentrate on complying with codes and standards adopted locally but must also keep national statutory requirements such as the ADA in mind. It is prudent to review design work against the 2010 ADAS at the same time as the model-code review. It is often a judgment call as to which is the most stringent requirement where requirements between codes and legislation differ. In these situations, it is essential and prudent to make the client aware of these discrepancies and have them actively participate in any decisions as to which set of requirements will govern the design of project components.

Space requirements for accessibility are related to ergonomics. Bigger is not automatically better. The 16"–18" (406–457) required range between the centerline of a water closet to a side wall or partition with grab bars is based on reach ranges and leverage for movement using one's arms. A longer reach reduces leverage and thus may be worse than too little space.

Federal Fair Housing Amendments Act

The FFHAA of 1988 includes Department of Housing and Urban Development (HUD) regulations requiring all residential complexes of four or more dwelling units constructed after March 13, 1991, to be adaptable for use by persons with disabilities. For example, residential complexes must provide access to all units on the ground floor, and all units must be accessible from grade by a ramp or elevator. Many state housing codes also incorporate these requirements. A very good reference for the FFHAA is the *Fair Housing Act Design Manual*, which can be obtained free of charge at https://www.huduser.gov/portal/publications/PDF/FAIRHOUSING/fairfull.pdf.

State Building Codes

Each state has a separate and distinct code adoption process. In the past, many states adopted one of the three previous model codes, and some states even had their own building codes. The geographic areas for state model-code adoptions corresponded roughly to the areas of influence of the three previous model codes. The BOCA *National Building Code* predominated in the northeastern United States. The *Standard Building Code* was adopted throughout the southeastern United States. The UBC was adopted in most states west of the Mississippi River. Many states allowed local adoption of codes so that in some states, such as Texas, adjacent jurisdictions in the same state had different building codes based on different model codes. Now, the advent of the International Codes has altered this landscape drastically. The "I Codes" are now the basic model codes in essentially every state. However, be aware that most state processes still allow amendments to the IBC, which means that there will likely be state-adopted amendments to the IBC. Make certain you know what code you are working with at the permitting level. Also, as noted, in states or localities that adopt a model code, be sure to verify which edition of the model code has been adopted.

Local Building Codes

Many localities adopt the model-code documents with little modification except for the administrative chapters that relate to the local operations of the building department. Larger cities, such as Los Angeles, New York City, Chicago, and San Francisco, typically adopt much more sweeping revisions to the model codes. The codes for such cities often bear little resemblance to the underlying model codes and in some cases have no basis in them at all. Interpretations, even of the unaltered model code made by big-city building departments, often tend to be very idiosyncratic and nonuniform when compared to smaller jurisdictions that use less modified versions of the model codes. The adoption of the IBC at the state level has generated a review of big-city building codes so that these city codes are moving toward greater conformity with the model codes. For example, San Francisco and Los Angeles previously used a UBC-based state code, which has now been converted to an IBC-based, locally modified state code. This will require a careful analysis of the city-code amendments to ensure conformance with the new model code. This redevelopment of codes has also been occurring in other large cities, such as Dallas and New York, as their states adopt the IBC. Be aware of local modifications and be prepared for varying interpretations of the same code sections among various jurisdictions. Do not proceed too far in the design process based on review of similar designs in another jurisdiction without verifying the code interpretation in the jurisdiction where the project is located. Similarly, although this book offers opinions of what code sections mean, all such opinions are subject to interpretation by local authorities as codes are applied to specific projects.

OTHER CODES AND STANDARDS

Codes are related to "standards" but they each serve different purposes. A building code (e.g., the IBC) establishes a jurisdictional "floor" relative to occupants' health, safety, and welfare. A building standard (e.g., NFPA 13, which addresses fire sprinkler requirements) is a "standard practice" often referred to within the codes. In short, a *code* is what you must do (sprinklers, yes or no, per which standard); a *standard* is a guide on how you do it (sprinkler head flow rates, spacing, etc.). There are thus a number of other codes and standards that the designer must be familiar with. They are mentioned here in brief to remind users of the IBC that other documents must also be consulted during project design.

While building code and accessibility regulations are usually the focus of interest for architectural and structural work, you need to be aware of the existence of other separate codes and standards for such work as electrical, plumbing, mechanical, fire sprinklers, and fire alarms. Each of these may impact the work of design consultants and in turn the work of the architect. Detailed consideration of the requirements in these other codes is beyond the scope of this book.

Among other specialized codes is the *Life Safety Code* (NFPA-101) published by the National Fire Protection Association. This code serves as a basis for the egress provisions in the other model codes. Designers may encounter NFPA-101 when doing federal and hospital work. The NFPA also publishes various other standards that are adopted to accompany the model codes. Primary examples are NFPA-13: Standard for the Installation of Sprinkler Systems, and NFPA-70, which is the National Electrical Code.

The National Fire Protection Association has developed a model building code, NFPA 5000, to rival the IBC. The development of this code is meant to offer an alternative to the "I" codes. The NFPA 5000 has, to date, been adopted in only a few jurisdictions. Some jurisdictions may move to adopt either the International Code family or the NFPA family of codes, or even portions of each. This is yet another reason for designers to verify in detail what model code documents are adopted by the Authorities Having Jurisdiction (AHJ)—a catch-all phrase for all planning, zoning, fire, and building officials having something to say about building—where a project is located.

Fire codes are typically considered maintenance codes. They are intended to provide for public health and safety in the day-to-day operation of a structure. They are also meant to assure that building life-safety systems remain operational in case of emergency. The various model-code agencies have developed model fire codes for these purposes. They are developed with primary input from the fire services and less input from design professionals. Note, however, that fire codes can have an impact on building design. They contain requirements for such elements as fire-truck access roads, locations and spacing of fire extinguishers, as well as requirements for sprinklers and wet or dry standpipes. The fire code may also contain requirements for added fire protection related to the ease or difficulty of fire equipment access to structures or access to fire hydrants or other water sources for firefighting.

Plumbing codes often dictate the number of plumbing fixtures required in various occupancies. Some jurisdictions place this information in the building code, some in the plumbing code, and some in appendices that allow local determination of where these requirements may occur in the codes. The designer must determine which course of legal adoption the local authority has chosen. The determination of the required number of plumbing fixtures is an important design consideration. It is essential to use the adopted tables and not automatically assume those in the model building code apply. A discussion of the use of the fixture counts found in Chapter 29 of the 2021 IBC is found in Chapter 20 of this book.

Code Interactions

The AHJ may not always inform the designer of overlapping jurisdictions or duplication of regulations. Fire departments often do not thoroughly check plan drawings at the time building permit documents are reviewed by the building department. Fire-department plan review deficiencies are often discovered at the time of field inspections by fire officials, usually at a time when additional cost and time are required to fix these deficiencies. The costs of tearing out noncomplying work and replacing it may be considered a designer's error. Whenever starting a project, it is therefore incumbent upon the designer to determine exactly which codes and standards are to be enforced for the project and by which agency. It is also imperative to obtain copies of any revisions or modifications made to model codes by local or state agencies. This must be assured for all AHJs.

The model codes have no force of law unto themselves. Only after adoption by a governmental agency are they enforceable under the police powers of the state. Enforcement powers are delegated by statute to officials at various levels of government. Designers must verify local amendments to model codes to be certain which code provisions apply to specific projects.

There are many different codes that may apply to various aspects of construction projects. Typically, the first question to be asked is whether the project requires a permit. Certain projects, such as interior work for movable furniture or finishes, are usually exempt. Carpeting may be replaced and walls painted without a permit, but moving walls, relocating doors, or doing plumbing and electrical work will require a permit in most jurisdictions.

Traditionally, codes have been written with new construction in mind. In recent years, more and more provisions have been made applicable to alteration, repair, and renovation of existing facilities. One of the emerging trends in code development is the creation of an IEBC. The relocation of IBC Chapter 34, which dealt with existing building provisions, into the IEBC has greatly increased the need to refer to this code for many projects. The reuse of existing buildings is also of concern for accessibility issues. One of the most crucial aspects of remodeling work is to determine to what extent and in what specific parts of your project the building codes and access regulations apply. Most codes are not retroactive. They do not require remedial work apart from remodeling or renovation of a building. However, providing access to spaces like toilets serving altered areas will often require work outside of the area of alteration.

A notable exception to this is the ADA, which requires that renovation be undertaken to provide access for persons with disabilities if access can be readily provided. However, this is a civil-rights law and not a code. As such, it is not enforced by building officials. In existing buildings, it is critical for the designer to determine with the AHJ what the boundaries of the project are to be and to make certain that the AHJ, the designer, and the client understand and agree on the requirements for remedial work to be undertaken in the project area.

Rating Systems

There are also rating systems, the most well known and widespread of which is the *Leadership in Energy and Environmental Design*, or LEED program, developed by the US Green Building Council (USGBC). LEED is not intended to be a code, although some jurisdictions have adopted LEED criteria as code language. Typically, a rating system is a voluntary program based on options selected by the owner and the design team rather than being a set of requirements. Rating systems serve as an ever-being-raised "ceiling" for practice. Rating systems are not addressed in this book.

Standard of Care

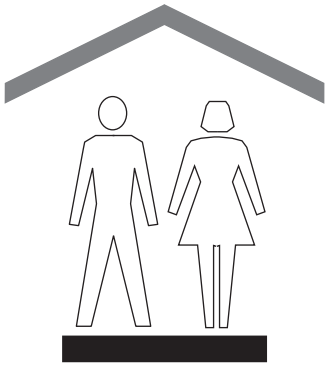
The designer should always remember that codes are legally and ethically considered to be minimum criteria that must be met by the design and construction community. The protection of health, safety, and welfare is the goal of these minimum standards. It is important to also understand that registered design professionals will be held by legal and ethical precedents to a much higher standard than the code minimum.

The so-called "standard of care" is a legal term defining the level of quality of service that a practitioner is expected to meet. This is higher than the minimum standard defined by the code. The code is the level that a practitioner must never go below. Because professional work involves judgment, perfection is not expected of a design professional. The standard of care is defined for an individual designer as being those actions that any other well-informed practitioner would have taken given the same level of knowledge in the same situation. It is a relative measure, not an absolute one.

Life Safety versus Property Protection

The basis for building-code development is to safeguard the health, safety, and welfare of the public. The first and foremost goal of building codes is the protection of human life from the failure of life safety provisions in a building, or from structural collapse. But there is also a strong component of property protection contained in code requirements. Sprinkler provisions can serve both purposes. When buildings are occupied, sprinklers can contain or extinguish a fire, allowing the building occupants to escape. The same sprinkler system can protect an unoccupied structure from loss if a fire occurs when the structure is not occupied.

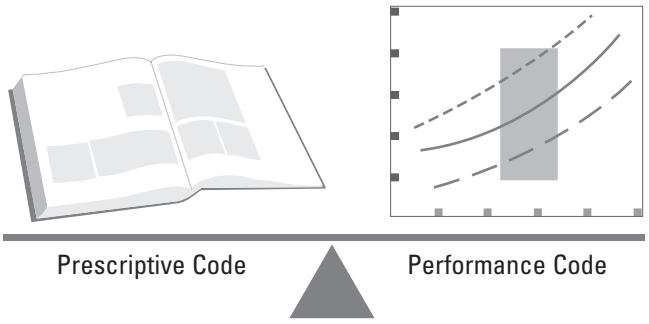
While many systems may perform both life safety and property protection functions, it is essential that code developers keep the issue of life safety versus property protection in mind. For example, security measures to prevent intrusion into a structure may become hazards to life safety. A prime example of this is burglar bars on the exterior of ground-floor windows that can trap inhabitants of the building in an emergency if there is not an interior release to allow occupants to escape while still maintaining the desired security. In no case should property-protection considerations have primacy over life safety.



THE FUTURE FOR CODE DEVELOPMENT

The IBC is a living document. It is subject to regular review and comment cycles. A new code is published at regular intervals, usually every 3 years. This publication cycle gives some measure of certainty for building designers that the code will remain unchanged during the design-and-construction process for a specific project. In general, but especially when a new code is scheduled to go into effect, it is prudent to determine in concert with the AHJ what code the permit documents are to be based on. The code responds to new information, growing by accretion and adaptation. Since the three model-code agencies merged into one organization, detailed changes in the code-development process have evolved and have been refined. We will give only a general description of the code-development process. For a detailed description of the current code development process, see the ICC website.

Any person may propose a code revision. Any designer, material supplier, code official, or interested member of the public who feels they have a better way to describe code requirements or to accommodate new life-safety developments or new technology may prepare revised code language for consideration. Proposed code changes are published for review by all interested parties. They are then categorized based on what section of the code is being revised and assigned to a committee of people experienced in those matters for review and consideration. Committees are typically organized around specific issues, such as means of egress, fire safety, structural requirements, and so forth. Anyone may testify at these committee hearings regarding the merits or demerits of the code change. The committee then votes to make its recommendation to the Public Comment Hearings, which are held in conjunction with the annual ICC business meeting. At the Final Action Hearing, testimony will be heard from all interested parties, both from non-voting industry representatives and building officials who will be able to vote on the proposed changes. After testimony is heard, only the government members of the organization, typically public employees serving as building and fire officials, are allowed to vote on the proposed changes. This is described as the "governmental consensus process" by the ICC. The ICC Code Development Process is conducted using state-of-the-art cloud-based cdpACCESS. For details of code development process go to https://www.iccsafe.org/wp-content/uploads/ICC-CDP-How-It-Works.pdf. For information on cdpACCESS go to https://www.iccsafe.org/cdpaccess/.



Performance versus Prescriptive Codes

There is now an ICC *International Performance Code*. It presents regulations based on desired outcomes rather than prescriptions. It encourages new design methods by allowing a broader parameter for meeting the intent of the International Codes. Where adopted locally, it may be used in place of the regular IBC provisions. We will discuss briefly the distinctions between prescriptive and performance codes.

The IBC, as were the codes that preceded it, is predominately prescriptive in nature, but it does have some performance-based criteria as well. It is developed to mitigate concerns by creating mostly specific and prescribed responses to problems that have been identified. Designers identify the problem to be addressed, such as the height of guardrails, and then they look up the prescribed response in the applicable code section. For example, guardrail heights are prescribed to be 42" (1067) high and are required when adjacent changes in grade exceed 30" (762). The designer follows the prescribed requirements to avoid the problem the code has identified—that is, preventing falls over an edge higher than 30" (762). The code provides a defined solution to an identified problem.

Performance codes, such as the ICC *International Performance Code*, define the problem and allow the designer to devise the solution. The word *performance* in this context refers to the problem definition and to the setting of parameters for deciding if the proposed solution solves the problem adequately. These standards define the problem, but do not define, describe, or predetermine the solution.

The use of performance codes has been increasing in the past few years, due in large part to the development of new modeling techniques for predicting how a building will react under certain fire, earthquake, or other stimuli. Performance codes are used in many countries around the world. Their requirements may be as broad as "the building shall allow all of its prospective occupants to safely leave the building in the event of a fire." Most performance codes in reality have much more tightly defined requirements, but the egress requirement stated above is a good example of the essence of what performance-code requirements can be.

The basic form of modern performance-code language can be described as objective-based. Each code requirement is broken into three sections. We will use fall prevention as our example. Note that provision of guardrails is only one example of many solutions to the performance objective, not the only solution.

- Objective: What is to be accomplished? In this case, the prevention of falls from heights of more than 30" (762).

- Functional Statement: Why do we want to accomplish this? We wish to safeguard building occupants by preventing them from accidentally falling from a height great enough to result in an injury.

- Performance Requirement: How is this to be accomplished? Performance codes could become prescriptive at this juncture, mandating a guardrail. More likely, such a performance standard would require that the barrier be high enough, strong enough, and continuous enough to prevent falls under the objective circumstances. Note that a guardrail meeting current code standards would be deemed to satisfy those requirements, but alternate means and methods could also achieve the same ends. For example, landscaping could prevent access to the grade change, or innovative railing substitutes could be designed to function like automobile airbags to catch falling persons without having a visible rail present in most conditions. Let your imagination provide other alternatives.

Performance codes give designers more freedom to comply with the stated goals. They also require the designer to take on more responsibility for knowing the consequences of their design actions. We anticipate that performance codes will be used in limited ways for innovative projects, but that most typical, repetitive designs will continue to use prescriptive codes for speed, clarity, and assurance of compliance during design review. Also, given the legal climate, designers are often reluctant to take on the responsibility for long-term code compliance for innovative systems.

Alternate Means and Methods

There is a pathway for innovation and new methods built into the IBC. The use of this process is known generically as an Alternate Means and Methods Request, typically referred to as an AMMR. The code sets out the criteria for AMMRs in § 104.2.3 of Chapter 1. The basis of the application of these provisions has three key components.

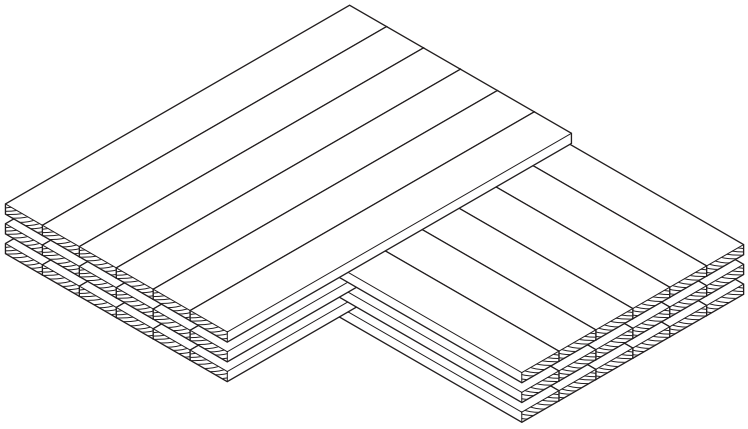
1. The code recognizes that the "intent" of the code language as written may not keep up with construction material innovations and that new methods and materials will be approved where compliance with the performance of an innovative measure can be demonstrated.

2. Key to this process is understanding that the final approval comes from the AHJ after the proponent of the alternative demonstrates that the alternative meets specific criteria:

3.1 The alternative complies with the intent of the provisions of this code.
3.2 The alternative is equal to the basic code for each of the following:

3.2.1. Quality
3.2.2. Strength
3.2.3. Effectiveness
3.2.4. Fire safety
3.2.5. Durability
3.2.6. Safety, other than fire safety

Demonstration of compliance is to be based on backup materials, such as research reports or test reports. Each jurisdiction typically has a form for AMMRs noting the necessary criteria for acceptance. The forms also provide a medium for recording the findings of acceptance of AMMRs in the permit files for each project. It is essential to the success of getting an AMMR approved to engage the AHJ early in the process to determine what backup materials or test data will be required. On the following page is an example form showing the typical range of information that will be required for this process.



A frequent recent AMMR example has been obtaining fire-rating approvals for cross-laminated timber construction. The 2021 IBC caught up with this innovation and AMMRs will likely not be needed under the 2024 IBC for this type of construction.

Request for Alternate Design Materials & Methods of Construction

1. Project Information

Name of Facility:	AHJ File#:	
Project Scope:	AHJ App.#:	
School District:	Increment # *(if applicable)*:	
School District Mailing Address:		
City:	State:	Zip Code:

2. Contact Information

A. Facilities Director:	
Work Email:	Work Phone:
B. Firm Architect/Engineer:	
Work Email:	Work Phone:
C. Architect/Engineer of Record	
Work Email:	Work Phone:

3. Type of Review Requested

☐ Structural ☐ Fire & Life Safety

4. Purpose of Review Request

☐ Use of Alternate Materials ☐ Propose Alternate Design ☐ Alternate Method of Construction

Applicable Code(s) and Edition:

Applicable Code Section(s):

5. Description of Condition *(Add additional pages if necessary.)*

Description of Proposed Alternate

Request for Alternate Design Materials & Methods of Construction

6. Description of Requested Alternate *(Describe the equivalency for each of the following criteria listed in IBC § 104.11. Indicate NA when not applicable.)*

2.1 Quality.	
2.2 Strength.	
2.3 Effectiveness.	
2.4 Fire safety.	
2.5 Durability.	
2.6 Safety, other than fire safety.	

Identification of Supporting Documentation *(List all; attach copies of data.)*

List of supporting tests, research, and other documentation.

For AHJ Use Only

Discipline	Reviewer	Return Date	Accepted Date	Rejected Date
SS				
FLS				
ACS				

AHJ Special Conditions or Restrictions:

Notes: *(Add comments or rationale relating to above.)*

Purpose of the form is to request validation of the request and provide for filing of disposition of the AMMR.

- *This is an example of an AMMR form showing the typical range of information that will be required for demonstrating compliance with the intent of the provisions of the code based on such backup materials as research reports or test reports.*