

# 2024 International Building Code®

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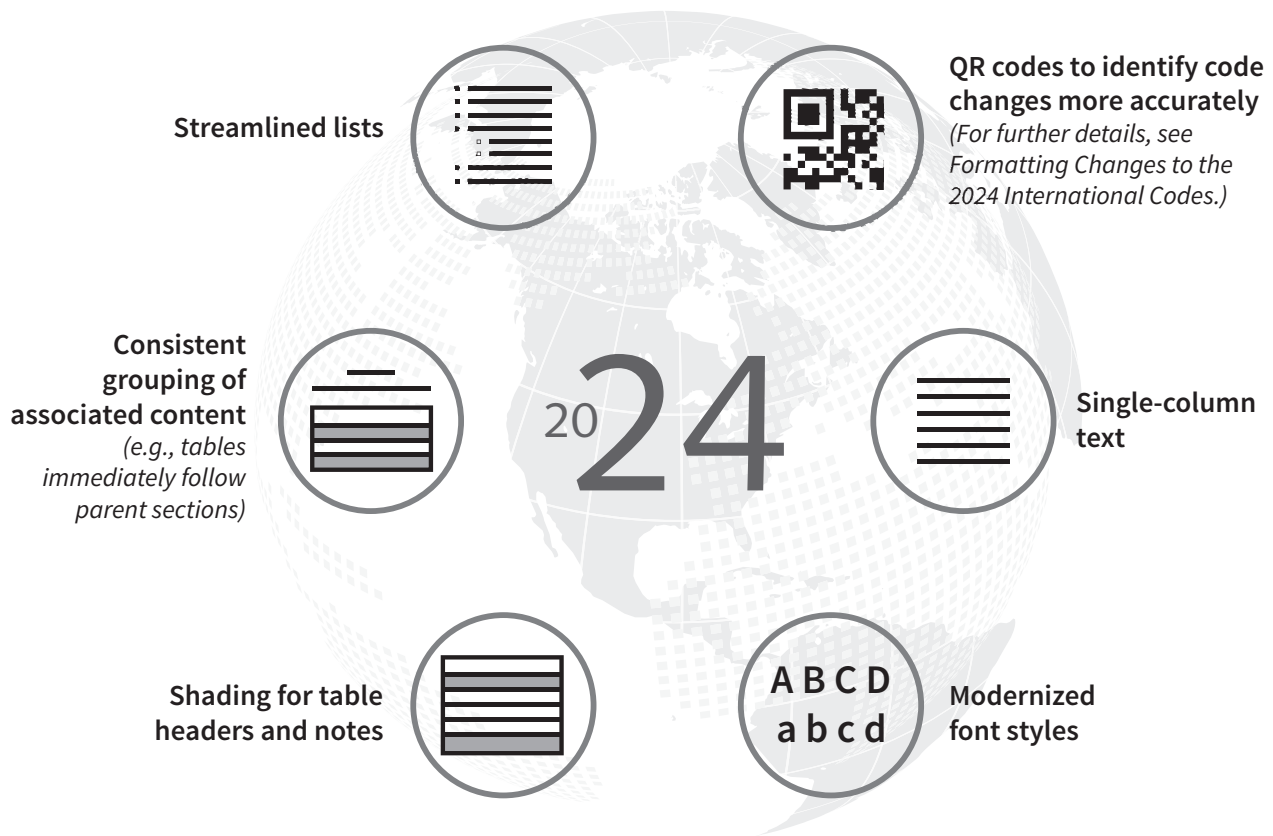
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# NEW DESIGN FOR THE 2024 INTERNATIONAL CODES



The 2024 International Codes® (I-Codes®) have undergone substantial formatting changes as part of the digital transformation strategy of the International Code Council® (ICC®) to improve the user experience. The resulting product better aligns the print and PDF versions of the I-Codes with the ICC's Digital Codes® content.

The changes, promoting a cleaner, more modern look and enhancing readability and sustainability, include:



More information can be found at [iccsafe.org/design-updates](https://iccsafe.org/design-updates).



# PREFACE

## FORMATTING CHANGES TO THE 2024 INTERNATIONAL CODES

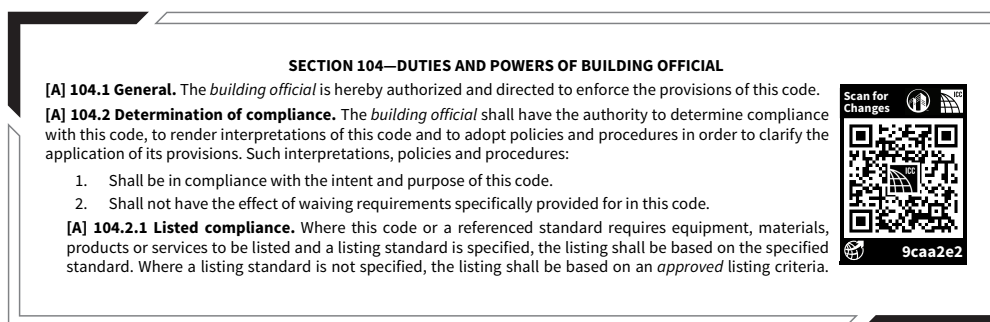
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### Replacement of Marginal Markings with QR Codes

Through 2021, print editions of the I-Codes identified technical changes from prior code cycles with marginal markings [solid vertical lines for new text, deletion arrows (➡), asterisks for relocations (★)]. The 2024 I-Code print editions replace the marginal markings with QR codes to identify code changes more precisely.

A QR code is placed at the beginning of any section that has undergone technical revision. If there is no QR code, there are no technical changes to that section.

In the following example from the 2024 International Building Code® (IBC®), a QR code indicates there are changes to Section 104 from the 2021 IBC. Note that the change may occur in the main section or in one or more subsections of the main section.



To see the code changes, the user need only scan the QR code with a smart device. If scanning a QR code is not an option, changes can be accessed by entering the 7-digit code beneath the QR code at the end of the following URL: [qr.iccsafe.org/](https://qr.iccsafe.org/) (in the above example, “[qr.iccsafe.org/9caa2e2](https://qr.iccsafe.org/9caa2e2)”). Those viewing the code book via PDF can click on the QR code.

All methods take the user to the appropriate section on ICC’s Digital Codes website, where technical changes from the prior cycle can be viewed. Digital Codes Premium subscribers who are logged in will be automatically directed to the Premium view. All other users will be directed to the Digital Codes Basic free view. Both views show new code language in blue text along with deletion arrows for deleted text and relocation markers for relocated text.

Digital Codes Premium offers additional ways to enhance code compliance research, including revision histories, commentary by code experts and an advanced search function. A full list of features can be found at [codes.iccsafe.org/premium-features](https://codes.iccsafe.org/premium-features).

### ACCESSING ADDITIONAL FEATURES VIA REGISTRATION OF BOOK

Beginning with the 2024 *International Mechanical Code*® (IMC®) and the 2024 *International Plumbing Code*® (IPC®), users will be able to validate the authenticity of their book and register it with the ICC to receive incentives. Digital Codes Premium ([codes.iccsafe.org](https://codes.iccsafe.org)) provides advanced features and exclusive content to enhance code compliance. To validate and register, the user will tap the ICC tag (pictured here and located on the front cover) with a near-field communication (NFC) compatible device. Visit [iccsafe.org/nfc](https://iccsafe.org/nfc) for more information and troubleshooting tips regarding NFC tag technology.



### ABOUT THE I-CODES

The 2024 I-Codes, published by the ICC, are 15 fully compatible titles intended to establish provisions that adequately protect public health, safety and welfare; that do not unnecessarily increase construction costs; that do not restrict the use of new materials, products or methods of construction; and that do not give preferential treatment to particular types or classes of materials, products or methods of construction.

The I-Codes are updated on a 3-year cycle to allow for new construction methods and technologies to be incorporated into the codes. Alternative materials, designs and methods not specifically addressed in the I-Code can be approved by the building official where the proposed materials, designs or methods comply with the intent of the provisions of the code.

The I-Codes are used as the basis of laws and regulations in communities across the US and in other countries. They are also used in a variety of nonregulatory settings, including:

- Voluntary compliance programs.
- The insurance industry.
- Certification and credentialing for building design, construction and safety professionals.

- Certification of building and construction-related products.
- Facilities management.
- “Best practices” benchmarks for designers and builders.
- College, university and professional school textbooks and curricula.
- Reference works related to building design and construction.

### Code Development Process

The code development process regularly provides an international forum for building professionals to discuss requirements for building design, construction methods, safety, performance, technological advances and new products. Proposed changes to the I-Codes, submitted by code enforcement officials, industry representatives, design professionals and other interested parties are deliberated through an open code development process in which all interested and affected parties may participate.

Openness, transparency, balance, due process and consensus are the guiding principles of both the ICC Code Development Process and OMB Circular A-119, which governs the federal government’s use of private-sector standards. The ICC process is open to anyone without cost. Remote participation is available through *cdpAccess*<sup>®</sup>, the ICC’s cloud-based app.

In order to ensure that organizations with a direct and material interest in the codes have a voice in the process, the ICC has developed partnerships with key industry segments that support the ICC’s important public safety mission. Some code development committee members were nominated by the following industry partners and approved by the ICC Board:

- American Gas Association (AGA)
- American Institute of Architects (AIA)
- American Society of Plumbing Engineers (ASPE)
- International Association of Fire Chiefs (IAFC)
- National Association of Home Builders (NAHB)
- National Association of State Fire Marshals (NASFM)
- National Council of Structural Engineers Association (NCSEA)
- National Multifamily Housing Council (NMHC)
- Plumbing Heating and Cooling Contractors (PHCC)
- Pool and Hot Tub Alliance (PHTA), formerly The Association of Pool and Spa Professionals (APSP)

Code development committees evaluate and make recommendations regarding proposed changes to the codes. Their recommendations are then subject to public comment and council-wide votes. The ICC’s governmental members—public safety officials who have no financial or business interest in the outcome—cast the final votes on proposed changes.

The I-Codes are subject to change through future code development cycles and by any governmental entity that enacts the code into law. For more information regarding the code development process, contact the Codes and Standards Development Department of the ICC at [iccsafe.org/products-and-services/i-codes/code-development/](https://iccsafe.org/products-and-services/i-codes/code-development/).

While the I-Code development procedure is thorough and comprehensive, the ICC, its members and those participating in the development of the codes expressly disclaim any liability resulting from the publication or use of the I-Codes, or from compliance or noncompliance with their provisions. NO WARRANTY OF ANY KIND, IMPLIED, EXPRESSED OR STATUTORY, IS GIVEN WITH RESPECT TO THE I-CODES. The ICC does not have the power or authority to police or enforce compliance with the contents of the I-Codes.

### Code Development Committee Responsibilities (Letter Designations in Front of Section Numbers)

In each cycle, proposed changes are considered by the Code Development Committee assigned to a specific code or subject matter. Committee Action Hearings result in recommendations regarding a proposal to the voting membership. Where changes to a code section are not considered by that code’s own committee, the code section is preceded by a bracketed letter designation identifying a different committee. Bracketed letter designations for the I-Code committees are:

- [A] = Administrative Code Development Committee
- [BE] = IBC—Egress Code Development Committee
- [BF] = IBC—Fire Safety Code Development Committee
- [BG] = IBC—General Code Development Committee
- [BS] = IBC—Structural Code Development Committee
- [E] = Developed under the ICC’s Standard Development Process
- [EB] = International Existing Building Code Development Committee
- [F] = International Fire Code Development Committee
- [FG] = International Fuel Gas Code Development Committee
- [M] = International Mechanical Code Development Committee

[P] = International Plumbing Code Development Committee

[SP] = International Swimming Pool and Spa Code Development Committee

For the development of the 2027 edition of the I-Codes, the ICC Board of Directors approved a standing motion from the Board Committee on the Long-Term Code Development Process to revise the code development cycle to incorporate two committee action hearings for each code group. This change expands the current process from two independent 1-year cycles to a single continuous 3-year cycle. There will be two groups of code development committees and they will meet in separate years. The current groups will be reworked. With the energy provisions of the *International Energy Conservation Code*® (IECC®) and Chapter 11 of the *International Residential Code*® (IRC®) now moved to the Code Council's Standards Development Process, the reduced volume of code changes will be distributed between Groups A and B.

Code change proposals submitted for code sections that have a letter designation in front of them will be heard by the respective committee responsible for such code sections. Because different committees hold Committee Action Hearings in different years, proposals for most codes will be heard by committees in both the 2024 (Group A) and the 2025 (Group B) code development cycles. It is very important that anyone submitting code change proposals understands which code development committee is responsible for the section of the code that is the subject of the code change proposal.

Please visit the ICC website at [iccsafe.org/products-and-services/i-codes/code-development/current-code-development-cycle](https://iccsafe.org/products-and-services/i-codes/code-development/current-code-development-cycle) for further information on the Code Development Committee responsibilities as it becomes available.

### Coordination of the I-Codes

The coordination of technical provisions allows the I-Codes to be used as a complete set of complementary documents. Individual codes can also be used in subsets or as stand-alone documents. Some technical provisions that are relevant to more than one subject area are duplicated in multiple model codes.

### Italicized Terms

Words and terms defined in Chapter 2, Definitions, are italicized where they appear in code text and the Chapter 2 definitions apply. Although care has been taken to ensure applicable terms are italicized, there may be instances where a defined term has not been italicized or where a term is italicized but the definition found in Chapter 2 is not applicable. For example, Chapter 2 of the IBC contains a definition for "*Listed*" that is applicable to equipment, products and services. The term "listed" is also used in the IBC to refer to a list of items within the code or within a referenced document. For the latter, the Chapter 2 definition would not be applicable.

### Adoption of International Code Council Codes and Standards

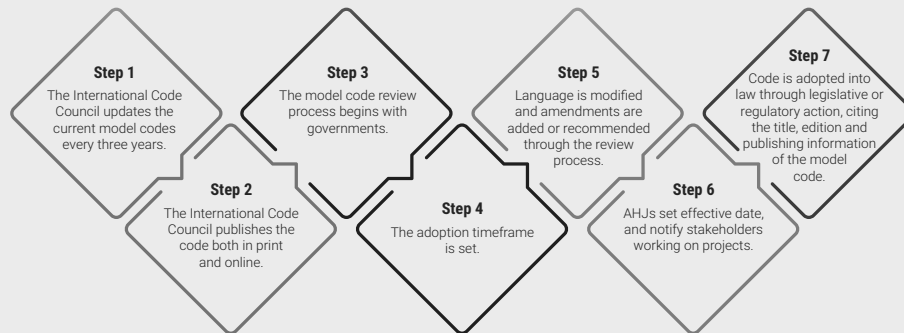
The International Code Council maintains a copyright in all of its codes and standards. Maintaining copyright allows the Code Council to fund its mission through sales of books in both print and digital formats. The Code Council welcomes incorporation by reference of its codes and standards by jurisdictions that recognize and acknowledge the Code Council's copyright in the codes and standards, and further acknowledge the substantial shared value of the public/private partnership for code development between jurisdictions and the Code Council. By making its codes and standards available for incorporation by reference, the Code Council does not waive its copyright in its codes and standards.

The Code Council's codes and standards may only be adopted by incorporation by reference in an ordinance passed by the governing body of the jurisdiction. "Incorporation by reference" means that in the adopting ordinance, the governing body cites only the title, edition, relevant sections or subsections (where applicable), and publishing information of the model code or standard, and the actual text of the model code or standard is not included in the ordinance (see graphic, "Adoption of International Code Council Codes and Standards"). The Code Council does not consent to the reproduction of the text of its codes or standards in any ordinance. If the governing body enacts any changes, only the text of those changes or amendments may be included in the ordinance.



## ADOPTION OF INTERNATIONAL CODE COUNCIL CODES AND STANDARDS INCORPORATED BY REFERENCE

**What does “incorporate by reference” mean?** If a governmental agency or authority having jurisdiction (AHJ) over code adoption wishes to adopt a model code for legislative or regulatory purposes, it will enact an ordinance, regulation or law to incorporate by reference (IBR) the relevant code. The actual text of the model code is not included in the law, but the enacting law will include the full text of any changes or amendments enacted by the legislative body of the AHJ.



23-2259

The Code Council also recognizes the need for jurisdictions to make laws accessible to the public. Accordingly, all I-Codes and I-Standards, along with the laws of many jurisdictions, are available to view for free at [codes.iccsafe.org/codes/i-codes](http://codes.iccsafe.org/codes/i-codes). These documents may also be purchased, in both digital and print versions, at [shop.iccsafe.org](http://shop.iccsafe.org).

To facilitate adoption, some I-Code sections contain blanks for fill-in information that needs to be supplied by the adopting jurisdiction as part of the adoption legislation. For example, the IBC contains:

Section 101.1. Insert: [NAME OF JURISDICTION]

Section 103.1. Insert: [NAME OF DEPARTMENT]

Section 1612.3. Insert: [NAME OF JURISDICTION, DATE OF ISSUANCE]

For further information or assistance with adoption, including a sample ordinance, jurisdictions should contact the Code Council at [incorporation@iccsafe.org](mailto:incorporation@iccsafe.org).

For a list of frequently asked questions (FAQs) addressing a range of foundational topics about the adoption of model codes by jurisdictions and to learn more about the Code Council’s code adoption resources, scan the QR code or visit [iccsafe.org/code-adoption-resources](http://iccsafe.org/code-adoption-resources).



### INTRODUCTION TO THE INTERNATIONAL BUILDING CODE

The *International Building Code* establishes minimum requirements for building systems using prescriptive and performance-related provisions. It is founded on broad-based principles that make possible the use of new materials and new building designs.

The IBC is a model code that provides minimum requirements to safeguard the public health, safety and general welfare of the occupants of new and existing buildings and structures. It addresses structural strength, means of egress, sanitation, adequate lighting and ventilation, accessibility, energy conservation and life safety in regard to new and existing buildings, facilities and systems.

The IBC applies to all occupancies, including one- and two-family dwellings and townhouses that are not within the scope of the *IRC*. The *IRC* is referenced for coverage of detached one- and two-family dwellings and townhouses as defined in the exception to Section 101.2 and the definition for “Townhouse” in Chapter 2. The *IRC* can also be used for the construction of live/work units (as defined in Section 508.5) and small bed and breakfast-style hotels where there are five or fewer guest rooms and the hotel is owner-occupied. The IBC applies to all types of buildings and structures unless exempted. Work exempted from permits is listed in Section 105.2.

**ARRANGEMENT AND FORMAT OF THE 2024 IBC**

The format of the IBC allows each chapter to be devoted to a particular subject. The following table shows how the IBC is divided. The subsequent tables show IBC requirements that are correlated with other I-Codes. The chapter synopses detail the scope and intent of the provisions of the IBC.

CHAPTER TOPICS	
CHAPTERS	SUBJECTS
1, 2	Administration and Definitions
3	Use and Occupancy Classifications
4, 31	Special Requirements for Specific Occupancies or Elements
5–6	Height and Area Limitations Based on Type of Construction
7–9	Fire Resistance and Protection Requirements
10	Requirements for Evacuation
11	Specific Requirements to Allow Use and Access to a Building for Persons with Disabilities
12, 27–30	Building Systems, Such as Lighting, HVAC, Plumbing Fixtures, Elevators
13	Energy Use
14–26	Structural Components—Performance and Stability
32	Encroachment Outside of Property Lines
33	Safeguards during Construction
35	Referenced Standards
Appendices A–P	Appendices

**INTERNATIONAL FIRE CODE CORRELATED TOPICS**

The IBC requirements for hazardous materials, fire-resistance-rated construction, interior finish, fire protection systems, means of egress, emergency and standby power, and temporary structures are directly correlated with the requirements of the *International Fire Code*® (IFC®). The following table shows chapters/sections of the IBC that are correlated with the IFC:

IBC/IFC CORRELATED TOPICS		
IBC CHAPTER/SECTION	IFC CHAPTER/SECTION	SUBJECT
Sections 307, 414, 415	Chapters 50–67	Hazardous materials and Group H requirements
Chapter 7	Chapter 7	Fire-resistance-rated construction (fire and smoke protection features in the IFC)
Chapter 8	Chapter 8	Interior finish, decorative materials and furnishings
Chapter 9	Chapter 9	Fire protection systems
Chapter 10	Chapter 10	Means of egress
Chapter 27	Section 604	Standby and emergency power
Section 3103	Chapter 31	Temporary structures

**INTERNATIONAL MECHANICAL CODE CORRELATED TOPICS**

The IBC requirements for smoke control systems, and smoke and fire dampers are directly correlated to the requirements of the IMC. IBC Chapter 28 is a reference to the *IMC* and the *International Fuel Gas Code*® (IFGC®) for chimneys, fireplaces and barbecues, and all aspects of mechanical systems. The following table shows chapters/sections of the IBC that are correlated with the *IMC*:

IBC/IMC CORRELATED TOPICS		
IBC CHAPTER/SECTION	IMC CHAPTER/SECTION	SUBJECT
Section 717	Section 607	Smoke and fire dampers
Section 909	Section 513	Smoke control

**INTERNATIONAL PLUMBING CODE CORRELATED TOPICS**

The IBC requirements for plumbing fixtures and toilet rooms are directly correlated to the requirements of the IPC. The following table shows chapters/sections of the IBC that are correlated with the IPC:

IBC/IPC CORRELATED TOPICS		
IBC CHAPTER/SECTION	IPC CHAPTER/SECTION	SUBJECT
Chapter 29	Chapters 3 and 4	Plumbing fixtures and facilities

**Chapter 1 Scope and Administration.**

Chapter 1 establishes the limits of applicability of the code and describes how the code is to be applied and enforced. The provisions of Chapter 1 establish the authority and duties of the code official appointed by the authority having jurisdiction and also establish the rights and privileges of the design professional, contractor and property owner.

**Chapter 2 Definitions.**

Chapter 2 is the repository of the definitions of terms used in the body of the code. The user of the code should be familiar with and consult this chapter because the definitions are essential to the correct interpretation of the code and because the user may not be aware that a term is defined.

**Chapter 3 Occupancy Classification and Use.**

Chapter 3 provides for the classification of buildings, structures and parts thereof based on the purpose for which they are used. Section 302 identifies the groups into which all buildings, structures and parts thereof must be classified. Sections 303 through 312 identify the occupancy characteristics of each group classification. In some sections, specific group classifications having requirements in common are collectively organized such that one term applies to all. For example, Groups A-1, A-2, A-3, A-4 and A-5 are individual groups for assembly-type buildings. The general term "Group A," however, includes each of these individual groups. Other groups include Business (B), Educational (E), Factory (F-1, F-2), High Hazard (H-1, H-2, H-3, H-4, H-5), Institutional (I-1, I-2, I-3, I-4), Mercantile (M), Residential (R-1, R-2, R-3, R-4), Storage (S-1, S-2) and Utility (U). In some occupancies, the smaller number means a higher hazard, but that is not always the case.

Defining the use of the buildings is very important as it sets the tone for the remaining chapters of the code. Occupancy works with the height, area and construction type requirements in Chapters 5 and 6, to determine "equivalent risk." The determination of equivalent risk involves three interdependent considerations: (1) the level of fire hazard associated with the specific occupancy of the facility; (2) the reduction of fire hazard based on the fuel load by limiting the floor area and the height of the building; and (3) the level of overall fire resistance provided by the type of construction. The greater the potential fire hazards indicated as a function of the group, the lesser the height and area allowances for a particular construction type.

Occupancy classification also plays a key part in the appropriate protection measures. As such, threshold requirements for fire protection and means of egress systems are based on occupancy classification (see Chapters 9 and 10). Other sections of the code also contain requirements respective to the classification of building groups. For example, Section 706 specifies requirements for fire wall fire-resistance ratings that are tied to the occupancy classification of a building and Section 803.11 contains interior finish requirements that are dependent upon the occupancy classification. The use of the space, rather than the occupancy of the building, is utilized for determining occupant loading (Section 1004) and live loading (Section 1607).

**Chapter 4 Special Detailed Requirements Based on Occupancy and Use.**

Chapter 4 contains the requirements for protecting special uses and occupancies which are supplemental to the remainder of the code. For example, the height and area limitations established in Chapter 5 apply to all special occupancies unless Chapter 4 contains height and area limitations. In this case, the limitations in Chapter 4 supersede those in other sections. An example of this is the height and area limitations for open parking garages given in Section 406.5.4, which supersede the limitations given in Sections 504 and 506.

In some instances, it may not be necessary to apply the provisions of Chapter 4. For example, if a covered mall building complies with the provisions of the code for Group M, Section 402 does not apply; however, other sections that address a use, process or operation must be applied to that specific occupancy, such as stages and platforms, special amusement buildings and hazardous materials (Sections 410, 411 and 414).

The chapter includes requirements for buildings and conditions that apply to one or more groups, such as high-rise buildings, underground buildings or atriums. Special uses may also imply specific occupancies and operations, such as for Group H, hazardous materials, and uses with associated combustibility hazards, which are coordinated with the IFC. Unique consideration is taken for special use areas, such as covered mall buildings, motor-vehicle-related occupancies, special amusement buildings and aircraft-related occupancies. Special facilities within other occupancies are considered, such as stages and platforms, motion picture projection rooms, children’s play structures and storm shelters. Finally, in order that the overall package of protection features can be easily understood, unique considerations for specific occupancies are addressed: Groups I-1, I-2, I-3, R-1, R-2, R-3 and R-4 and ambulatory care facilities.



**Chapter 5 General Building Heights and Areas.**

Chapter 5 contains the provisions that regulate the minimum type of construction for area limits and height limits based on the occupancy of the building. Height and area increases are permitted based on open frontage for fire department access, separation and the type of sprinkler protection provided (Sections 503 through 506, 510). Provisions include the protection and/or separation of incidental uses (Table 509.1), accessory occupancies (Section 508.2) and mixed uses in the same building (Sections 506.2.2, 508.3, 508.4 and 510). Unlimited area buildings are permitted in certain occupancies when they meet special provisions (Section 507). Live/work units are provided for in Section 508.5.

Tables 504.3, 504.4 and 506.2 are the keystones in setting thresholds for building size based on the building's use and the materials with which it is constructed. Respective to each group classification, the greater the fire-resistance rating of structural elements, as represented by the type of construction, the greater the floor area and height allowances. The greater the potential fire hazards indicated as a function of the group, the lesser the height and area allowances for a particular construction type.

**Chapter 6 Types of Construction.**

The interdependence of fire safety considerations can be seen by looking at Tables 601 and 705.5, which show the fire-resistance ratings of the principal structural elements comprising a building in relation to the five classifications for types of construction. Type I construction generally requires the highest fire-resistance ratings for structural elements, whereas Type V construction generally requires the least amount of fire-resistance-rated structural elements. The greater the potential fire hazards indicated as a function of the group, the lesser the height and area allowances for a particular construction type. Section 603 includes a list of combustible elements that can be part of a noncombustible building (Types I and II construction).

**Chapter 7 Fire and Smoke Protection Features.**

Chapter 7 provisions present the fundamental concepts of fire performance that all buildings are expected to achieve in some form. This chapter identifies the acceptable materials, techniques and methods by which proposed construction can be designed and evaluated against to determine a building's ability to limit the impact of fire.

**Chapter 8 Interior Finishes.**

Chapter 8 contains the performance requirements for controlling fire growth within buildings by restricting interior finish and decorative materials. The provisions of Chapter 8 require materials used as interior finishes and decorations to meet certain flame-spread index or flame-propagation criteria based on the relative fire hazard associated with the occupancy.

**Chapter 9 Fire Protection and Life Safety Systems.**

Chapter 9 prescribes the minimum requirements for active systems of fire protection equipment to perform the following functions: detect a fire, alert the occupants or fire department of a fire emergency, and control smoke and control or extinguish the fire. Generally, the requirements are based on the occupancy, the height and the area of the building, because these are the factors that most affect firefighting capabilities and the relative hazard of a specific building or portion thereof. This chapter parallels and is substantially duplicated in Chapter 9 of the IFC; however, the IFC Chapter 9 also contains periodic testing criteria that are not contained in the IBC. In addition, the special fire protection system requirements based on use and occupancy found in IBC Chapter 4 are duplicated in IFC Chapter 9 as a user convenience.

**Chapter 10 Means of Egress.**

The criteria in Chapter 10 regulating the design of the means of egress system are established as the primary method for protection of occupants by allowing timely relocation or evacuation. Both prescriptive and performance language is utilized for determination of a safe exiting system. It addresses all portions of the means of egress system (i.e., exit access, exits and exit discharge) and includes design requirements as well as provisions regulating individual components. The requirements detail the size, arrangement, number and protection of means of egress components. The means of egress protection requirements work in coordination with other sections of the code, such as protection of vertical openings (see Chapter 7), interior finish (see Chapter 8), fire suppression and detection systems (see Chapter 9) and numerous others, all having an impact on life safety. Chapter 10 of the IBC is duplicated in Chapter 10 of the IFC; however, the IFC contains one additional section on the maintenance of the means of egress system in existing buildings.

**Chapter 11 Accessibility.**

Chapter 11 contains provisions for accessibility of buildings and their associated sites and facilities for people with physical disabilities. The fundamental philosophy of the code is that everything is required to be accessible (see Section 1103.1). The code's scoping requirements then address the conditions under which accessibility is not required in terms of exceptions to this general mandate. While the IBC contains scoping provisions for accessibility (e.g., what, where and how many), ICC A117.1, *Accessible and Usable Buildings and Facilities*, is the referenced standard for the technical provisions (e.g., how).

There are many accessibility issues that not only benefit people with disabilities but also provide a tangible benefit to people without disabilities. This type of requirement can be set forth in the code as generally applicable without necessarily identifying it

specifically as an accessibility-related issue. Such a requirement would then be considered as having been "mainstreamed." For example, visible alarms are located in Chapter 9 and accessible means of egress and ramp requirements are addressed in Chapter 10.

The IRC references Chapter 11 for accessibility provisions; therefore, this chapter may be applicable to housing covered under the IRC.

### **Chapter 12 Interior Environment.**

Chapter 12 provides minimum standards for the interior environment of a building. The standards address the minimum sizes of spaces, as well as minimums for temperature, light and ventilation. Concerns for sound transmission and acoustics are addressed. Finally, the chapter provides minimum standards for toilet and bathroom construction.

### **Chapter 13 Energy Efficiency.**

Chapter 13 provides minimum design requirements that will promote efficient utilization of energy in buildings. The requirements are directed toward the design of building envelopes with adequate thermal resistance and low air leakage, and toward the design and selection of mechanical, water heating, electrical and illumination systems that promote effective use of depletable energy resources. For the specifics of these criteria, Chapter 13 requires design and construction in compliance with the IECC.

### **Chapter 14 Exterior Walls.**

Chapter 14 addresses requirements for exterior walls of buildings. Minimum standards for wall covering materials, installation of wall coverings and the ability of the wall to provide weather protection are provided.

### **Chapter 15 Roof Assemblies and Rooftop Structures.**

Chapter 15 provides standards for both roof assemblies and structures that sit on top of the roofs of buildings. The criteria address roof construction and covering, including the weather-protective barrier at the roof and, in most circumstances, a fire-resistant barrier.

### **Chapter 16 Structural Design.**

Chapter 16 prescribes minimum structural loading requirements for use in the design and construction of buildings and structural components. The chapter references and relies on many nationally recognized design standards, including the American Society of Civil Engineers' *Minimum Design Loads for Buildings and Other Structures* (ASCE 7).

### **Chapter 17 Special Inspections and Tests.**

Chapter 17 provides a variety of procedures and criteria for testing materials and assemblies, labeling materials and assemblies and special inspection of structural assemblies. This chapter expands on the inspections of Chapter 1 by requiring special inspection where indicated and, in some cases, structural observation.

### **Chapter 18 Soils and Foundations.**

Chapter 18 provides criteria for geotechnical and structural considerations in the selection, design and installation of foundation systems to support the loads from the structure above.

### **Chapter 19 Concrete.**

Chapter 19 provides minimum accepted practices for the design and construction of buildings and structural components using concrete, both plain and reinforced. This chapter relies primarily on the reference to American Concrete Institute (ACI) 318, *Building Code Requirements for Structural Concrete*.

### **Chapter 20 Aluminum.**

Chapter 20 contains standards for the use of aluminum in building construction. This chapter references national standards from the Aluminum Association (AA) for use of aluminum in building construction, AA ASM 35, *Aluminum Sheet Metal Work in Building Construction*, and AA ADM, *Aluminum Design Manual*.

### **Chapter 21 Masonry.**

Chapter 21 provides comprehensive and practical requirements for masonry construction.

### **Chapter 22 Steel.**

Chapter 22 provides the requirements necessary for the design and construction of structural steel (including composite construction), cold-formed steel, steel joists, steel cable structures and steel storage racks. Chapter 22 requires that the design and use of steel materials be in accordance with the specifications and standards of the American Institute of Steel Construction, the American Iron and Steel Institute, the Steel Joist Institute and the American Society of Civil Engineers.

**Chapter 23 Wood.**

Chapter 23 provides minimum requirements for the design of buildings and structures that use wood and wood-based products.

**Chapter 24 Glass and Glazing.**

Chapter 24 establishes regulations for glass and glazing that, when installed in buildings and structures, are subjected to wind, snow and dead loads.

**Chapter 25 Gypsum Board, Gypsum Panel Products and Plaster.**

Chapter 25 contains the provisions and referenced standards that regulate the design, construction and quality of gypsum board, gypsum panel products and plaster and reinforced gypsum concrete.

**Chapter 26 Plastic.**

Chapter 26 addresses the use of plastics in building construction and components. This chapter provides standards addressing foam plastic insulation, foam plastics used as interior finish and trim, and other plastic veneers used on the inside or outside of a building.

**Chapter 27 Electrical.**

Since electrical systems and components are an integral part of almost all structures, Chapter 27 references the National Electrical Code (NEC). In addition, Section 2702 addresses emergency and standby power requirements and references where they are required. Such systems must comply with the IFC and referenced standards.

**Chapter 28 Mechanical Systems.**

Nearly all buildings will include mechanical systems. Chapter 28 provides references to the IMC and the IFGC for the design and installation of mechanical systems. In addition, Chapter 21 of this code is referenced for masonry chimneys, fireplaces and barbecues.

**Chapter 29 Plumbing Systems.**

Chapter 29 regulates the minimum number of plumbing fixtures that must be provided for every type of building. This chapter also regulates the location of the required fixtures in various types of buildings. The regulations in this chapter come directly from Chapters 3 and 4 of the IPC.

**Chapter 30 Elevators and Conveying Systems.**

Chapter 30 provides standards for the installation of elevators into buildings, including requirements for elevator shafts and lobbies. Referenced standards provide the requirements for the elevator system and mechanisms. Special provisions are indicated for fire service access elevators and for the optional choice of occupant evacuation elevators in high rise buildings (see Section 403).

**Chapter 31 Special Construction.**

Chapter 31 contains a collection of regulations for a variety of unique structures and architectural features. Pedestrian walkways and tunnels connecting two buildings are addressed in Section 3104. Safeguards for swimming pool safety are addressed by a reference to the *International Swimming Pool and Spa Code*® (ISPSA®) in Section 3109. Standards for temporary structures, including permit requirements, are provided in Section 3103. Structures as varied as awnings, marquees, signs, telecommunication and broadcast towers and automatic vehicular gates are also addressed (see Sections 3105 through 3108 and 3110). Unique types of buildings, such as membrane structures, greenhouses, relocatable buildings and intermodal shipping containers (Sections 3102, 3112, 3113 and 3114) are also addressed in this chapter.

**Chapter 32 Encroachments into the Public Right-of-Way.**

Buildings and structures may be designed to extend over a property line and into the public right-of-way. Local regulations outside of the building code usually set limits to such encroachments, and such regulations take precedence over the provisions of this chapter. Chapter 32 establishes parameters for such encroachments, not only at grade but also above and below grade. Pedestrian walkways must also comply with Chapter 31.

**Chapter 33 Safeguards During Construction.**

Chapter 33 provides safety requirements for the job site during construction and demolition of buildings and structures. In addition, it provides requirements intended to protect the public from injury and adjoining property from damage.

**Chapter 34 Reserved.**

**Chapter 35 Referenced Standards.**

Chapter 35 lists all of the product and installation standards and codes that are referenced throughout Chapters 1 through 33 and includes identification of the promulgators and the section numbers in which the standards and codes are referenced. As stated in

Section 102.4, these standards and codes become an enforceable part of the code (to the prescribed extent of the reference) as if printed in the body of the code.

#### **Appendix A Employee Qualifications.**

Effective administration and enforcement of the family of International Codes depends on the training and expertise of the personnel employed by the jurisdiction and their knowledge of the codes. Section 103 of the code establishes the Department of Building Safety and calls for the appointment of a building official and deputies, such as plans examiners and inspectors. Appendix A provides standards for experience, training and certification for the building official and the other staff mentioned in Chapter 1.

#### **Appendix B Board of Appeals.**

Appendix B contains the provisions for appeal and the establishment of a board of appeals. The provisions include the application for an appeal, the makeup of the board of appeals and the conduct of the appeal process.

#### **Appendix C Group U—Agricultural Buildings.**

Appendix C provides special consideration for the construction of agricultural buildings reflective of their specific usage and limited occupant load. The provisions of this appendix allow reasonable heights and areas commensurate with the risk of agricultural buildings.

#### **Appendix D Fire Districts.**

Appendix D establishes a framework by which a jurisdiction can establish a portion of a jurisdiction as a fire district where limiting the potential spread of fire is a key consideration. Fire district standards restrict certain occupancies within the district, as well as setting higher minimum construction standards.

#### **Appendix E Supplementary Accessibility Requirements.**

The Architectural and Transportation Barriers Compliance Board (U.S. Access Board) has revised and updated its accessibility guidelines for buildings and facilities covered by the Americans with Disabilities Act (ADA) and the Architectural Barriers Act (ABA). Appendix E includes scoping requirements contained in the *2010 ADA Standards for Accessible Design* that are not in Chapter 11 and not otherwise mentioned or mainstreamed throughout the code. Items in this appendix address subjects not typically addressed in building codes (for example, communication features in transient lodging and transportation facilities).

#### **Appendix F Rodentproofing**

The provisions of Appendix F are minimum mechanical methods to prevent the entry of rodents into a building.

#### **Appendix G Flood-Resistant Construction.**

Appendix G is intended to fulfill the flood-plain management and administrative requirements of the National Flood Insurance Program (NFIP) that are not included in the code. Communities that adopt the IBC and Appendix G will meet the minimum requirements of NFIP as set forth in Title 44 of the Code of Federal Regulations.

#### **Appendix H Signs.**

Appendix H gathers in one place the various code standards that regulate the construction and protection of outdoor signs.

#### **Appendix I Patio Covers.**

Appendix I provides standards applicable to the construction and use of patio covers. It is limited in application to patio covers accessory to dwelling units. Covers of patios and other outdoor areas associated with restaurants, mercantile buildings, offices, nursing homes or other nondwelling occupancies would be subject to standards in the main code and not this appendix.

#### **Appendix J Grading.**

Appendix J provides standards for the grading of properties. This appendix also provides standards for administration and enforcement of a grading program including permit and inspection requirements.

#### **Appendix K Administrative Provisions.**

Appendix K primarily provides administrative mechanisms for enforcing NFPA 70—the National Electrical Code (NEC). The provisions in this appendix are compatible with administrative provisions in Chapter 1 of the IBC and the other I-Codes. Section K110 also contains technical provisions that are unique to this appendix and are in addition to technical standards of NFPA 70.

#### **Appendix L Earthquake Recording Instrumentation.**

The purpose of Appendix L is to foster the collection of ground motion data, particularly from strong-motion earthquakes. When this ground motion data is synthesized, it may be useful in developing future improvements to the earthquake provisions of the IBC.

**Appendix M Tsunami-Generated Flood Hazards.**

Addressing a tsunami risk for all types of construction in a tsunami hazard zone through building code requirements would typically not be cost effective, making tsunami-resistant construction impractical at an individual building level. However, Appendix M does allow the adoption and enforcement of requirements for tsunami hazard zones that regulate the presence of high-risk or high-hazard structures.

**Appendix N Replicable Buildings.**

Appendix N provides jurisdictions with a means of incorporating replicable building requirements contained in the ICC G1-2010, *Guideline for Replicable Buildings*, into their building code adoption process. The intent is to streamline the plan review process at the local level by removing redundant reviews.

**Appendix O Performance-Based Application.**

Appendix O provides an optional design, review and approval framework for use by the building official. It extracts relevant administrative provisions from the *International Code Council Performance Code® for Buildings and Facilities* (ICCPC®) into a more concise, usable appendix format for a jurisdiction confronted with such a need.

**Appendix P Sleeping Lofts.**

*Appendix P* provides allowances for, and limitations on, spaces intended to be used as sleeping lofts, while differentiating these spaces from mezzanines and other habitable spaces.

**RELOCATION OF TEXT OR TABLES**

The following table indicates relocation of sections and tables in the 2024 edition of the IBC from the 2021 edition.

RELOCATIONS	
2024 LOCATION	2021 LOCATION
104.2.3	104.11
104.2.3.5	104.11.2
104.2.3.6	104.11.1
104.2.4	104.10
104.2.4.1	104.10.1
104.4	104.6
705.1	705.9
705.11	705.1
1110.6	E105.2
1110.6.1	E105.2.1
1110.6.2	E105.2.2
1110.15	1110.12.2
1110.15.1	1110.12.2.1
1112.6	E107.2
1402.3.1	1403.14
1403.9	1403.10
1404.5	1404.17
1404.5.1	2603.11
1404.5.2	2603.12
1404.5.2.1	2603.12.1
Table 1404.5.2.1	Table 2603.12.1
1404.5.2.2	2603.12.2
Table 1404.5.2.2	Table 2603.12.2
1404.5.3	2603.13
1404.5.3.1	2603.13.1
Table 1404.5.3.1	Table 2603.13.1
1404.5.3.2	2603.13.2

<b>RELOCATIONS—continued</b>	
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1607.10	1607.17
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