



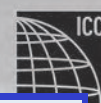
IFC®

2015

INTERNATIONAL CODES®

INTERNATIONAL
Fire Code®

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PREFACE

Introduction

Internationally, code officials recognize the need for a modern, up-to-date fire code addressing conditions hazardous to life and property from fire, explosion, handling or use of hazardous materials and the use and occupancy of buildings and premises. The *International Fire Code*®, in this 2015 edition, is designed to meet these needs through model code regulations that safeguard the public health and safety in all communities, large and small.

This comprehensive fire code establishes minimum regulations for fire prevention and fire protection systems using prescriptive and performance-related provisions. It is founded on broad-based principles that make possible the use of new materials and new system designs. This 2015 edition is fully compatible with all of the *International Codes*® (I-Codes®) published by the International Code Council (ICC)®, including the *International Building Code*®, *International Energy Conservation Code*®, *International Existing Building Code*®, *International Fuel Gas Code*®, *International Green Construction Code*®, *International Mechanical Code*®, *ICC Performance Code*®, *International Plumbing Code*®, *International Private Sewage Disposal Code*®, *International Property Maintenance Code*®, *International Residential Code*®, *International Swimming Pool and Spa Code*™, *International Wildland-Urban Interface Code*® and *International Zoning Code*®.

The *International Fire Code* provisions provide many benefits, among which is the model code development process that offers an international forum for fire safety professionals to discuss performance and prescriptive code requirements. This forum provides an excellent arena to debate proposed revisions. This model code also encourages international consistency in the application of provisions.

Development

The first edition of the *International Fire Code* (2000) was the culmination of an effort initiated in 1997 by a development committee appointed by ICC and consisting of representatives of the three statutory members of the International Code Council: Building Officials and Code Administrators International, Inc. (BOCA), International Conference of Building Officials (ICBO) and Southern Building Code Congress International (SBCCI). The intent was to draft a comprehensive set of fire safety regulations consistent with and inclusive of the scope of the existing model codes. Technical content of the latest model codes promulgated by BOCA, ICBO and SBCCI was utilized as the basis for the development, followed by public hearings in 1998 and 1999 to consider proposed changes. This 2015 edition presents the code as originally issued, with changes reflected in the 2003, 2006, 2009 and 2012 editions and further changes approved through the ICC Code Development Process through 2014. A new edition such as this is promulgated every 3 years.

This code is founded on principles intended to establish provisions consistent with the scope of a fire code that adequately protects public health, safety and welfare; provisions that do not unnecessarily increase construction costs; provisions that do not restrict the use of new materials, products or methods of construction; and provisions that do not give preferential treatment to particular types or classes of materials, products or methods of construction.

Adoption

The International Code Council maintains a copyright in all of its codes and standards. Maintaining copyright allows ICC to fund its mission through sales of books, in both print and electronic formats. The *International Fire Code* is designed for adoption and use by jurisdictions that recognize and acknowledge the ICC's copyright in the code, and further acknowledge the substantial shared value of the public/private partnership for code development between jurisdictions and the ICC.

The ICC also recognizes the need for jurisdictions to make laws available to the public. All ICC codes and ICC standards, along with the laws of many jurisdictions, are available for free in a non-downloadable form on the ICC's website. Jurisdictions should contact the ICC at adoptions@icc-safe.org to learn how to adopt and distribute laws based on the *International Fire Code* in a manner that provides necessary access, while maintaining the ICC's copyright.

Maintenance

The *International Fire Code* is kept up to date through the review of proposed changes submitted by code enforcing officials, industry representatives, design professionals and other interested parties. Proposed changes are carefully considered through an open code development process in which all interested and affected parties may participate.

The contents of this work are subject to change through both the code development cycles and the governmental body that enacts the code into law. For more information regarding the code development process, contact the Codes and Standards Development Department of the International Code Council.

While the development procedure of the *International Fire Code* ensures the highest degree of care, the ICC, its members and those participating in the development of this code do not accept any liability resulting from compliance or noncompliance with the provisions because the ICC does not have the power or authority to police or enforce compliance with the contents of this code. Only the governmental body that enacts the code into law has such authority.

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

In each code development cycle, proposed changes to the code are considered at the Committee Action Hearings by the International Fire Code Development Committee, whose action constitutes a recommendation to the voting membership for final action on the proposed change. Proposed changes to a code section that has a number beginning with a letter(s) in brackets are considered by a different code development committee. For example, proposed changes to code sections that have [BE] in front of them (e.g., [BE] 607.3) are considered by the appropriate International Building Code Development Committee (IBC – Means of Egress) at the code development hearings.

The content of sections in this code that begin with a letter designation is maintained by another code development committee in accordance with the following:

- [A] = Administrative Code Development Committee;
- [BE] = IBC – Means of Egress Code Development Committee;
- [BF] = IBC – Fire Safety Code Development Committee;
- [BG] = IBC – General Code Development Committee;
- [BS] = IBC – Structural Code Development Committee;
- [EB] = International Existing Building Code Development Committee;
- [FG] = International Fuel Gas Code Development Committee;
- [M] = International Mechanical Code Development Committee; and

[P] = International Plumbing Code Development Committee.

For the development of the 2018 edition of the I-Codes, there will be three groups of code development committees and they will meet in separate years. Note that these are tentative groupings.

Group A Codes (Heard in 2015, Code Change Proposals Deadline: January 12, 2015)	Group B Codes (Heard in 2016, Code Change Proposals Deadline: January 11, 2016)	Group C Codes (Heard in 2017, Code Change Proposals Deadline: January 11, 2017)
International Building Code – Fire Safety (Chapters 7, 8, 9, 14, 26) – Means of Egress (Chapters 10, 11, Appendix E) – General (Chapters 2-6, 12, 27-33, Appendices A, B, C, D, K)	Administrative Provisions (Chapter 1 of all codes except IRC and IECC, administrative updates to currently referenced standards, and designated definitions)	International Green Construction Code
International Fuel Gas Code	International Building Code –Structural (Chapters 15-25, Appendices F, G, H, I, J, L, M)	
International Existing Building Code	International Energy Conservation Code	
International Mechanical Code	International Fire Code	
International Plumbing Code	International Residential Code – IRC-Building (Chapters 1-10, Appendices E, F, H, J, K, L, M, O, R, S, T, U)	
International Private Sewage Disposal Code	International Wildland-Urban Interface Code	
International Property Maintenance Code		
International Residential Code – IRC-Mechanical (Chapters 12-24) – IRC-Plumbing (Chapters 25-33, Appendices G, I, N, P)		
International Swimming Pool and Spa Code		
International Zoning Code		

Note: Proposed changes to the ICC *Performance Code* will be heard by the code development committee noted in brackets [] in the text of the code.

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 code development hearings in different years, proposals for this code will be heard by committees in both the 2015 (Group A) and the 2016 (Group B) code development cycles.

For example, Section 907.2.13.1.2 of this code (and the IBC) is designated as the responsibility of the International Mechanical Code Development Committee. This committee will conduct its code development hearings in 2015 to consider code change proposals in its purview, which includes any proposals to Section 907.2.13.1.2.

Note also that the majority of the sections of Chapter 1 of this code are designated as the responsibility of the Administrative Code Development Committee, and that committee is part of the Group B portion of the hearings. This committee will conduct its code development hearings in 2016 to consider most code change proposals for Chapter 1 of this code and proposals for Chapter 1 of all I-Codes except the *International Energy Conservation Code*, the *ICC Performance Code* and the *International Residential Code*. Therefore, any proposals received for the sections of Chapter 1 precluded by the designation [A] will be deferred for consideration in 2016 by the Administrative Code Development Committee.

It is very important that anyone submitting code change proposals understand which code development committee is responsible for the section of the code that is the subject of the code change proposal. For further information on the code development committee responsibilities, please visit the ICC website at www.iccsafe.org/scoping.

Marginal Markings

Solid vertical lines in the margins within the body of the code indicate a technical change from the requirements of the 2012 edition. Deletion indicators in the form of an arrow (➡) are provided in the margin where an entire section, paragraph, exception or table has been deleted or an item in a list of items or a table has been deleted.

A single asterisk [*] placed in the margin indicates that text or a table has been relocated within the code. A double asterisk **[**] placed in the margin indicates that the text or table immediately following it has been relocated there from elsewhere in the code. The following table indicates such relocations in the 2015 edition of the *International Fire Code*.

2012 LOCATION	2015 LOCATION
408.11.3	311.6
408	403
903.3.5.2	914.3.2
908.7	915
1014.3, 1015, 1021	1006
1015.2, 1021.3	1007
1009.3	1019
2311.8	2309.6

Coordination between the International Building and Fire Codes

Because the coordination of technical provisions is one of the benefits of adopting the ICC family of model codes, users will find the ICC codes to be a very flexible set of model documents. To accomplish this flexibility some technical provisions are duplicated in some of the model code documents. While the *International Codes* are provided as a comprehensive set of model codes for the built environment, documents are occasionally adopted as a stand-alone regulation. When one of the model documents is adopted as the basis of a stand-alone code, that code should provide a complete package of requirements with enforcement assigned to the entity for which the adoption is being made.

The model codes can also be adopted as a family of complementary codes. When adopted together there should be no conflict of any of the technical provisions. When multiple model codes are adopted in a jurisdiction it is important for the adopting authority to evaluate the provisions in each code document and determine how and by which agency(ies) they will be enforced. It is important, therefore, to understand that where technical provisions are duplicated in multiple model documents that enforcement duties must be clearly assigned by the local adopting jurisdiction. ICC remains committed to providing state-of-the-art model code documents that, when adopted locally, will reduce the cost to government of code adoption and enforcement and protect the public health, safety and welfare.

Italicized Terms

Selected terms set forth in Chapter 2, Definitions, are italicized where they appear in code text. Such terms are not italicized where the definition set forth in Chapter 2 does not impart the intended meaning in the use of the term. The terms selected have definitions that the user should read carefully to better understand the code.

EFFECTIVE USE OF THE INTERNATIONAL FIRE CODE

The *International Fire Code*® (IFC®) is a model code that regulates minimum fire safety requirements for new and existing buildings, facilities, storage and processes. The IFC addresses fire prevention, fire protection, life safety and safe storage and use of hazardous materials in new and existing buildings, facilities and processes. The IFC provides a total approach of controlling hazards in all buildings and sites, regardless of the hazard being indoors or outdoors.

The IFC is a design document. For example, before one constructs a building, the site must be provided with an adequate water supply for fire-fighting operations and a means of building access for emergency responders in the event of a medical emergency, fire or natural or technological disaster. Depending on the building's occupancy and uses, the IFC regulates the various hazards that may be housed within the building, including refrigeration systems, application of flammable finishes, fueling of motor vehicles, high-piled combustible storage and the storage and use of hazardous materials. The IFC sets forth minimum requirements for these and other hazards and contains requirements for maintaining the life safety of building occupants, the protection of emergency responders, and to limit the damage to a building and its contents as the result of a fire, explosion or unauthorized hazardous material discharge.

Arrangement and Format of the 2015 IFC

Before applying the requirements of the IFC it is beneficial to understand its arrangement and format. The IFC, like other codes published by the International Code Council, is arranged and organized to follow sequential steps that generally occur during a plan review or inspection. In the 2012 edition, the IFC was reorganized into seven parts as illustrated in the tables below. Each part represents a broad subject matter and includes the chapters that logically fit under the subject matter of each part. It is also foreseeable that additional chapters will need to be added in the future as regulations for new processes or operations are developed. Accordingly, the reorganization was designed to accommodate such future chapters by providing reserved (unused) chapters in several of the parts. This will allow the subject matter parts to be conveniently and logically expanded without requiring a major renumbering of the IFC chapters.

ORGANIZATION OF THE IFC	
Parts and Chapters	Subject Matter
Part I – Chapters 1 and 2	Administrative and definitions
Part II – Chapters 3 and 4	General safety provisions
Part III – Chapters 5 through 11	Building and equipment design features
Part III – Chapters 12 through 19	Reserved for future use
Part IV – Chapters 20 through 37	Special occupancies and operations
Part IV – Chapters 38 through 49; 52	Reserved for future use
Part V – Chapters 50, 51 and 53 through 67	Hazardous materials
Part V – Chapters 68 through 79	Reserved for future use
Part VI – Chapter 80	Referenced standards
Part VII – Appendices A through M	Adoptable and informational appendices

The IFC requirements for fire-resistive construction, interior finish, fire protection systems, means of egress and construction safeguards are directly correlated to the chapters containing parallel requirements in the IBC, as follows:

IFC Chapter	Subject
7	Fire and smoke protection features
8	Interior finish, decorative materials and furnishings
9	Fire protection systems
10	Means of egress
33	Fire safety during construction and demolition

The following is a chapter-by-chapter synopsis of the scope and intent of the provisions of the *International Fire Code*:

PART I—ADMINISTRATIVE

Chapter 1 Scope and Administration. This chapter contains provisions for the application, enforcement and administration of subsequent requirements of the code. In addition to establishing the scope of the code, Chapter 1 identifies which buildings and structures come under its purview. Chapter 1 is largely concerned with maintaining “due process of law” in enforcing the regulations contained in the body of the code. Only through careful observation of the administrative provisions can the code official reasonably expect to demonstrate that “equal protection under the law” has been provided.

Chapter 2 Definitions. All terms that are defined in the code are listed alphabetically in Chapter 2. While a defined term may be used in one chapter or another, the meaning provided in Chapter 2 is applicable throughout the code.

Where understanding of a term’s definition is especially key to or necessary for understanding of a particular code provision, the term is shown in *italics* wherever it appears in the code. This is true only for those terms that have a meaning that is unique to the code. In other words, the generally understood meaning of a term or phrase might not be sufficient or consistent with the meaning prescribed by the code; therefore, it is essential that the code-defined meaning be known.

Guidance regarding tense, gender and plurality of defined terms as well as guidance regarding terms not defined in this code are also provided.

PART II—GENERAL SAFETY PROVISIONS

Chapter 3 General Requirements. The open burning, ignition source, vacant building, miscellaneous storage, roof gardens and landscaped roofs, and hazards to fire fighters requirements and precautions, among other general regulations contained in this chapter, are intended to improve premises safety for everyone, including construction workers, tenants, operations and maintenance personnel, and emergency response personnel. As with other chapters of the *International Fire Code*, Section 302 contains a list of terms that are defined in Chapter 2 and are applicable to the chapter contents.

Chapter 4 Emergency Planning and Preparedness. This chapter addresses the human contribution to life safety in buildings when a fire or other emergency occurs. The requirements for continuous training and scheduled fire, evacuation and lockdown drills can be as important as the required periodic inspections and maintenance of built-in fire protection features. The level of preparation by the occupants also improves the emergency responders’ abilities during an emergency. The *International Building Code* (IBC) focuses on built-in fire protection features, such as automatic sprinkler systems, fire-resistance-rated construction and properly designed egress systems, whereas this chapter fully addresses the human element. As with other chapters of the *International Fire Code*, Section 402 contains a list of terms that are defined in Chapter 2 and are applicable to the chapter contents.

PART III—BUILDING AND EQUIPMENT DESIGN FEATURES

Chapter 5 Fire Service Features. The requirements of this chapter apply to all buildings and occupancies and pertain to access roads; access to building openings and roofs; premises identification; key boxes; fire protection water supplies; fire command centers; fire department access to equipment and emergency responder radio coverage in buildings. As with other chapters of the *International Fire Code*, Section 502 contains a list of terms that are defined in Chapter 2 and are applicable to the chapter contents.

Chapter 6 Building Services and Systems. This chapter focuses on building systems and services as they relate to potential safety hazards and when and how they should be installed. This chapter brings together all building system- and service-related issues for convenience and provides a more systematic view of buildings. The following building services and systems are addressed: fuel-fired appliances (Section 603), emergency and standby power systems (Section 604), electrical equipment, wiring and hazards (Section 605), mechanical refrigeration (Section 606), elevator recall and maintenance (Section 607), stationary storage battery systems (Section 608), commercial kitchen hoods (Section 609), commercial kitchen cooking oil storage (610) and hyperbaric facilities (611). As with other chapters of the *International Fire Code*, Section 602 contains a list of terms that are defined in Chapter 2 and are applicable to the chapter contents.

Chapter 7 Fire and Smoke Protection Features. The maintenance of assemblies required to be fire-resistance rated is a key component in a passive fire protection philosophy. Chapter 7 sets forth requirements to maintain required fire-resistance ratings of building elements and limit fire spread. The required maintenance of fire-resistance-rated assemblies and opening protectives is described in Section 703 while Section 704 covers the enclosure requirements for shafts in existing buildings. As with other chapters of the *International Fire Code*, Section 702 contains a list of terms that are defined in Chapter 2 and are applicable to the chapter contents.

Chapter 8 Interior Finish, Decorative Materials and Furnishings. The overall purpose of Chapter 8 is to regulate interior finishes, decorative materials and furnishings in new and existing buildings so that they do not significantly add to or create fire hazards within buildings. The provisions tend to focus on occupancies with specific risk characteristics, such as vulnerability of occupants, density of occupants, lack of familiarity with the building and societal expectations of importance. This chapter is consistent with Chapter 8 of the *International Building Code (IBC)*, which regulates the interior finishes of new buildings. As with other chapters of the *International Fire Code*, Section 802 contains a list of terms that are defined in Chapter 2 and are applicable to the chapter contents.

Chapter 9 Fire Protection Systems. Chapter 9 prescribes the minimum requirements for active systems of fire protection equipment to perform the functions of detecting a fire, alerting the occupants or fire department of a fire emergency, controlling smoke and controlling or extinguishing 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 fire-fighting capabilities and the relative hazard of a specific building or portion thereof. This chapter parallels and is substantially duplicated in Chapter 9 of the *International Building Code*; however, this chapter 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 Chapter 4 of the IBC are duplicated in Chapter 9 of the IFC as a user convenience. As with other chapters of the *International Fire Code*, Section 902 contains a list of terms that are defined in Chapter 2 and are applicable to the chapter contents.

Chapter 10 Means of Egress. The general criteria set forth in Chapter 10 regulating the design of the means of egress are established as the primary method for protection of people in buildings by allowing timely relocation or evacuation of building occupants. Both prescriptive and performance language is utilized in this chapter to provide for a basic approach in the determination of a safe exiting system for all occupancies. It addresses all portions of the 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. Functional and operational characteristics also are specified for the components that will permit their safe use without special knowledge or effort. 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. Sections 1002 through 1030 are duplicated text from Chapter 10 of the IBC; however, the IFC contains an additional Section 1031 on maintenance of the means of egress system in existing buildings. Retroactive minimum means of egress requirements for existing buildings are found in Chapter 11. As with other chapters of the *International Fire Code*, Section 1002 contains a list of terms that are defined in Chapter 2 and are applicable to the chapter contents.

Chapter 11 Construction Requirements for Existing Buildings. Chapter 11 applies to existing buildings constructed prior to the adoption of the code and intends to provide a minimum degree of fire and life safety to persons occupying existing buildings by providing for alterations to such buildings that do not comply with the minimum requirements of the *International Building*