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PREFACE

Introduction

Internationally, code officials recognize the need for a modern, up-to-date code addressing repair, alteration, addition or change of occupancy in existing buildings. The *International Existing Building Code*®, in this 2009 edition, is designed to meet this need through model code regulations that safeguard the public health and safety in all communities, large and small.

This comprehensive existing building code establishes minimum regulations for existing buildings using prescriptive and performance-related provisions. It is founded on broad-based principles intended to encourage the use and reuse of existing buildings while requiring reasonable upgrades and improvements. This 2009 edition is fully compatible with all the *International Codes*® (I-Codes®) published by the International Code Council (ICC)®, including the *International Building Code*®, *International Energy Conservation Code*®, *International Fire Code*®, *International Fuel Gas Code*®, *International Mechanical Code*®, *ICC Performance Code*® for Buildings and Facilities®, *International Plumbing Code*®, *International Private Sewage Disposal Code*®, *International Property Maintenance Code*®, *International Residential Code*®, *International Wildland-Urban Interface Code*™ and *International Zoning Code*®.

The *International Existing Building Code* provisions provide many benefits, including the model code development process, which offers an international forum for building 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 Existing Building Code* (2003) was the culmination of an effort initiated in 2000 by a development committee appointed by the ICC and consisting of representatives of the three statutory members of the International Code Council at that time, including: 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 regulations for existing buildings 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 as well as other rehabilitation codes was utilized as the basis for the development, followed by a public forum in 2001 and the publication of the 2001 Final Draft. This 2009 edition presents the code as originally issued in 2003 with the changes reflected in the 2006 edition, and with further changes approved through the ICC code development process through 2008. A new edition such as this is promulgated every three years.

This code is founded on principles intended to encourage the use and reuse of existing buildings that adequately protect 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 Existing Building Code* is available for adoption and use by jurisdictions internationally. Its use within a governmental jurisdiction is intended to be accomplished through adoption by reference in accordance with proceedings establishing the jurisdiction's laws. At the time of adoption, jurisdictions should insert the appropriate information in provisions requiring specific local information, such as the name of the adopting jurisdiction. These locations are shown in bracketed words in small capital letters in the code and in the sample ordinance. The sample adoption ordinance on page ix addresses several key elements of a code adoption ordinance, including the information required for insertion into the code text.

Maintenance

The *International Existing Building Code* is kept up to date through the review of proposed changes submitted by code enforcement 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 both through the code development cycles and the governmental body that enacts the code into law. For more information regarding the code development process, contact the Code and Standard Development Department of the International Code Council.

While the development procedure of the *International Existing Building Code* assures the highest degree of care, ICC, its members, and those participating in the development of this code do not accept any liability resulting from compliance or noncompliance with these provisions, because 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.

Letter Designations in Front of Section Numbers

In each code development cycle, proposed changes to this code are considered at the Code Development Hearings by the International Existing Building Code Development Committee, whose action constitutes a recommendation to the voting membership for final action on the proposed changes. Proposed changes to a code section having a number beginning with a letter in brackets are considered by a different code development committee. For example, proposed changes to code sections that are preceded by the letter [F] (e.g., [F] 1404.2), are considered by the International Fire Code Development Committee 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:

- [B] = International Building Code Development Committee;
- [F] = International Fire Code Development Committee;
- [P] = International Plumbing Code Development Committee;
- [FG] = International Fuel Gas Code Development Committee;
- [EC] = International Energy Conservation Code Development Committee; and
- [M] = International Mechanical Code Development Committee.

Marginal Markings

Solid vertical lines in the margins within the body of the code indicate a technical change from the requirements of the 2006 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.

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 which the user should read carefully to facilitate better understanding of the code.

Effective Use of the International Existing Building Code

The *International Existing Building Code* is a model code in the *International Code* family of codes intended to provide alternative approaches to remodeling, repair or alteration of existing buildings. A large number of existing buildings and structures do not comply with the current building code requirements for new construction. Although many of these buildings are potentially salvageable, rehabilitation is often cost-prohibitive because compliance with all the requirements for new construction could require extensive changes that go well beyond the value of the building or the original scope of the rehabilitation. At the same time, it is necessary to regulate construction in existing buildings that undergo additions, alterations, renovations, extensive repairs or change of occupancy. Such activity represents an opportunity to ensure that new construction complies with the current building codes and that existing conditions are maintained, at a minimum, to their current level of compliance or are improved as required to meet basic safety levels. To accomplish this objective, and to make the rehabilitation process easier, this code allows for options for controlled departure from full compliance with the *International Codes* dealing with new construction, while maintaining basic levels for fire prevention, structural and life safety features of the rehabilitated building.

This code provides three main options for a designer in dealing with rehabilitation of existing buildings. These are laid out in Section 101.5 of this code:

OPTION 1: Work for alteration, repair, change of occupancy, addition or relocation of all existing buildings shall be done in accordance with the Prescriptive Compliance Method given in Chapter 3. It should be noted that this same method is provided in Chapter 34 of the *International Building Code*.

OPTION 2: Work for alteration, repair, change of occupancy, addition or relocation of all existing buildings shall be done in accordance with the Work Area Compliance Method given in Chapters 4 through 12.

OPTION 3: Work for alteration, repair, change of occupancy, addition or relocation of all existing buildings shall be done in accordance with the Performance Compliance Method given in Chapter 13. It should be noted that this option is also provided in Chapter 34 of the *International Building Code*.

Under limited circumstances, a building alteration can be made to comply with the laws under which the building was originally built, as long as there has been no substantial structural damage and there will be limited structural alteration.

Arrangement and Format of the 2009 IEBC

Before applying the requirements of the IEBC it is beneficial to understand its arrangement and format. The IEBC, like other codes published by ICC, is arranged and organized to follow logical steps that generally occur during a plan review or inspection. The IEBC is divided as follows:

Chapters	Subjects
1–2	Administrative Requirements and Definitions
3	Prescriptive Compliance Method for Existing Buildings
4–12	Work Area Compliance Method for Existing Buildings
13	Performance Compliance Method for Existing Buildings
14	Construction Safeguard
15	Referenced Standards
Appendix A	Guidelines for Seismic Retrofit of Existing Buildings
Appendix B	Supplementary Accessibility Requirements for Existing Buildings
Resource A	Information on Fire Resistance of Archaic Materials and Assemblies

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

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 is also provided.

Chapter 3 Prescriptive Compliance Method. This chapter provides one of the three main options of compliance available in the IEBC for buildings and structures undergoing repair, alteration, addition or change in occupancy. This chapter duplicates the provisions that are predominantly in Chapter 34 of the IBC—Sections 3403 through 3411. There are also provisions from the other I-Codes dealing with system installations (Electrical, Energy, Fuel Gas, Mechanical and Plumbing) which have been duplicated in the IEBC as well.

Chapter 4 Classification of Work. This chapter provides an overview of the Work Area Method available as an option for rehabilitation of a building. The chapter defines the different classifications of alterations and provides general requirements for repairs, change of occupancy, additions, historic buildings and relocated buildings. Detailed requirements for all of these are given in subsequent Chapters 5 through 12.

Chapter 5 Repairs. Chapter 5 governs the repair of existing buildings. The provisions define conditions under which repairs may be made using materials and methods like those of the original construction or the extent to which repairs must comply with requirements for new buildings.

Chapter 6 Alterations—Level 1. This chapter provides the technical requirements for those existing buildings that undergo Level 1 alterations as described in Section 403, which includes replacement or covering of existing materials, elements, equipment or fixtures using new materials for the same purpose. This chapter, similar to other chapters of this code, covers all building-related subjects, such as structural, mechanical, plumbing, electrical and accessibility as well as the fire and life safety issues when the alterations are classified as Level 1. The purpose of this chapter is to provide detailed requirements and provisions to identify the required improvements in the existing building elements, building spaces and building structural system. This chapter is distinguished from Chapters 7 and 8 by only involving replacement of building components with new components. In contrast, Level 2 alterations involve more space reconfiguration and Level 3 alterations involve more extensive space reconfiguration, exceeding 50 percent of the building area.

Chapter 7 Alterations—Level 2. Like Chapter 6, the purpose of this chapter is to provide detailed requirements and provisions to identify the required improvements in the existing building elements, building spaces and building structural system. This chapter is distinguished from Chapters 6 and 8 by involving space reconfiguration that could be up to and including 50 percent of the area of the building. In contrast, Level 1 alterations (Chapter 6) do not involve space reconfiguration and Level 3 alterations (Chapter 8) involve extensive space reconfiguration that exceeds 50 percent of the building area. Depending on the nature of alteration work, its location within the building and whether it encompasses one or more tenants, improvements and upgrades could be required for the open floor penetrations, sprinkler system or the installation of additional means of egress such as stairs or fire escapes.

Chapter 8 Alterations—Level 3. This chapter provides the technical requirements for those existing buildings that undergo Level 3 alterations. The purpose of this chapter is to provide detailed requirements and provisions to identify the required improvements in the existing building elements, building spaces and building structural system. This chapter is distinguished from Chapters 6 and 7 by involving alterations that cover 50 percent of the aggregate area of the building. In contrast, Level 1 alterations do not involve space reconfiguration and Level 2 alterations involve extensive space reconfiguration that does not exceed 50 percent of the building area. Depending on the nature of alteration work, its location within the building and whether it encompasses one or more tenants, improvements and upgrades could be required for the open floor penetrations, sprinkler system or the installation of additional means of egress such as stairs or fire escapes. At times and under certain situations, this chapter also intends to improve the safety of certain building features beyond the work area and in other parts of the building where no alteration work might be taking place.

Chapter 9 Change of Occupancy. The purpose of this chapter is to provide regulations for the circumstances when an existing building is subject to a change in occupancy or a change in occupancy classification. A change of occupancy is not to be confused with a change of occupancy classification. The *International Building Code*® (IBC®) defines different occupancy classifications in Chapter 3, and special occupancy requirements in Chapter 4. Within specific occupancy classifications there can be many different types of actual activities that can take place. For instance, a Group A-3 occupancy classification deals with a wide variation of different types of activities, including bowling alleys and courtrooms, indoor tennis courts and dance halls. When a facility changes use from, for example, a bowling alley to a dance hall, the occupancy classification remains A-3, but the different uses could lead to drastically different code requirements. Therefore, this chapter deals with the special circumstances that are associated with a change in the use of a building within the same occupancy classification as well as a change of occupancy classification.

Chapter 10 Additions. Chapter 10 provides the requirements for additions, which correlate to the code requirements for new construction. There are, however, some exceptions that are specifically stated within this chapter. An "Addition" is defined in Chapter 2.

as “an extension or increase in the floor area, number of stories or height of a building or structure.” Chapter 10 contains the minimum requirements for an addition that is not separated from the existing building by a fire wall.

Chapter 11 Historic Buildings. This chapter provides some exceptions from code requirements when the building in question has historic value. The most important criterion for application of this chapter is that the building must be essentially accredited as being of historic significance by a state or local authority after careful review of the historical value of the building. Most, if not all, states have such authorities, as do many local jurisdictions. The agencies with such authority can be located at the state or local government level or through the local chapter of the American Institute of Architects (AIA). Other considerations include the structural condition of the building (i.e., is the building structurally sound), its proposed use, its impact on life safety and how the intent of the code, if not the letter, will be achieved.

Chapter 12 Relocated or Moved Buildings. Chapter 12 is applicable to any building that is moved or relocated.

Chapter 13 Performance Compliance Methods. This chapter, a duplicate of IBC Section 3412, Compliance Alternatives, allows for existing buildings to be evaluated so as to show that alterations, while not meeting new construction requirements, will improve the current existing situation. Provisions are based on a numerical scoring system involving 18 various safety parameters and the degree of code compliance for each issue.

Chapter 14 Construction Safeguards. The building construction process involves a number of known and unanticipated hazards. Chapter 14 establishes specific regulations in order to minimize the risk to the public and adjacent property. Some construction failures have resulted during the initial stages of grading, excavation and demolition. During these early stages, poorly designed and installed sheeting and shoring have resulted in ditch and embankment cave-ins. Also, inadequate underpinning of adjoining existing structures or careless removal of existing structures has produced construction failures.

Chapter 15 Referenced Standards. The code contains numerous references to standards that are used to regulate materials and methods of construction. Chapter 15 contains a comprehensive list of all standards that are referenced in the code, including the appendices. The standards are part of the code to the extent of the reference to the standard. Compliance with the referenced standard is necessary for compliance with this code. By providing specifically adopted standards, the construction and installation requirements necessary for compliance with the code can be readily determined. The basis for code compliance is, therefore, established and available on an equal basis to the building code official, contractor, designer and owner.

Chapter 15 is organized in a manner that makes it easy to locate specific standards. It lists all of the referenced standards, alphabetically, by acronym of the promulgating agency of the standard. Each agency’s standards are then listed in either alphabetical or numeric order based upon the standard identification. The list also contains the title of the standard; the edition (date) of the standard referenced; any addenda included as part of the ICC adoption; and the section or sections of this code that reference the standard.

Appendix A Guidelines for the Seismic Retrofit of Existing Buildings. Appendix A provides guidelines for upgrading the seismic resistance capacity of different types of existing buildings. It is organized into separate chapters which deal with buildings of different types, including unreinforced masonry buildings, reinforced concrete and reinforced masonry wall buildings, and light-frame wood buildings.

Appendix B Supplementary Accessibility Requirements for Existing Buildings and Facilities. Chapter 11 of the *International Building Code*® (IBC®) contains provisions that set forth requirements for accessibility to buildings and their associated sites and facilities for people with physical disabilities. Sections 406, 506, 606, 706, 806, 905, 1004, 1005 and 1308 in the code address accessibility provisions and alternatives permitted in existing buildings. Appendix B was added to address accessibility in construction for items that are not typically enforceable through the traditional building code enforcement process.

Resource A Guidelines on Fire Ratings of Archaic Materials and Assemblies. In the process of repair and alteration of existing buildings, based on the nature and the extent of the work, the IEBC might require certain upgrades in the fire-resistance rating of building elements, at which time it becomes critical for the designers and the code officials to be able to determine the fire-resistance rating of the existing building elements as part of the overall evaluation for the assessment of the need for improvements. This resource document provides a guideline for such an evaluation for fire-resistance rating of archaic materials that is not typically found in the modern model building codes.

ORDINANCE

The *International Codes* are designed and promulgated to be adopted by reference by ordinance. Jurisdictions wishing to adopt the 2009 *International Existing Building Code* as an enforceable performance-based regulation governing structures and premises should ensure that certain factual information is included in the adopting ordinance at the time adoption is being considered by the appropriate governmental body. The following sample adoption ordinance addresses several key elements of a code adoption ordinance, including the information required for insertion into the code text.

SAMPLE ORDINANCE FOR ADOPTION OF THE *INTERNATIONAL EXISTING BUILDING CODE* ORDINANCE NO. _____

An ordinance of the [JURISDICTION] adopting the 2009 edition of the *International Existing Building Code*, regulating and governing the repair, alteration, change of occupancy, addition and relocation of existing buildings, including historic buildings, in the [JURISDICTION]; providing for the issuance of permits and collection of fees therefor; repealing Ordinance No. _____ of the [JURISDICTION] and all other ordinances and parts of the ordinances in conflict therewith.

The [GOVERNING BODY] of the [JURISDICTION] does ordain as follows:

Section 1. That a certain document, three (3) copies of which are on file in the office of the [TITLE OF JURISDICTION'S KEEPER OF RECORDS] of [NAME OF JURISDICTION], being marked and designated as the *International Existing Building Code*, 2009 edition, including Appendix Chapters [FILL IN THE APPENDIX CHAPTERS BEING ADOPTED] (see *International Existing Building Code* Section 101.7, 2009 edition), as published by the International Code Council, be and is hereby adopted as the Existing Building Code of the [JURISDICTION], in the State of [STATE NAME] for regulating and governing the repair, alteration, change of occupancy, addition and relocation of existing buildings, including historic buildings, as herein provided; providing for the issuance of permits and collection of fees therefor; and each and all of the regulations, provisions, penalties, conditions and terms of said Existing Building Code on file in the office of the [JURISDICTION] are hereby referred to, adopted, and made a part hereof, as if fully set out in this ordinance, with the additions, insertions, deletions and changes, if any, prescribed in Section 2 of this ordinance.

Section 2. The following sections are hereby revised:

Section 101.1 Insert: [NAME OF JURISDICTION]

Section 1301.2 Insert: [DATE IN ONE LOCATION]

Section 3. That Ordinance No. _____ of [JURISDICTION] entitled [FILL IN HERE THE COMPLETE TITLE OF THE ORDINANCE OR ORDINANCES IN EFFECT AT THE PRESENT TIME SO THAT THEY WILL BE REPEALED BY DEFINITE MENTION] and all other ordinances or parts of ordinances in conflict herewith are hereby repealed.

Section 4. That if any section, subsection, sentence, clause or phrase of this ordinance is, for any reason, held to be unconstitutional, such decision shall not affect the validity of the remaining portions of this ordinance. The [GOVERNING BODY] hereby declares that it would have passed this ordinance, and each section, subsection, clause or phrase thereof, irrespective of the fact that any one or more sections, subsections, sentences, clauses and phrases be declared unconstitutional.

Section 5. That nothing in this ordinance or in the Existing Building Code hereby adopted shall be construed to affect any suit or proceeding impending in any court, or any rights acquired, or liability incurred, or any cause or causes of action acquired or existing, under any act or ordinance hereby repealed as cited in Section 3 of this ordinance; nor shall any just or legal right or remedy of any character be lost, impaired or affected by this ordinance.

Section 6. That the [JURISDICTION'S KEEPER OF RECORDS] is hereby ordered and directed to cause this ordinance to be published. (An additional provision may be required to direct the number of times the ordinance is to be published and to specify that it is to be in a newspaper in general circulation. Posting may also be required.)

Section 7. That this ordinance and the rules, regulations, provisions, requirements, orders and matters established and adopted hereby shall take effect and be in full force and effect [TIME PERIOD] from and after the date of its final passage and adoption.



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CHAPTER 1

SCOPE AND ADMINISTRATION

PART 1—SCOPE AND APPLICATION

SECTION 101 GENERAL

101.1 Title. These regulations shall be known as the *Existing Building Code* of [NAME OF JURISDICTION], hereinafter referred to as “this code.”

101.2 Scope. The provisions of the *International Existing Building Code* shall apply to the *repair, alteration, change of occupancy, addition* and relocation of *existing buildings*.

101.3 Intent. The intent of this code is to provide flexibility to permit the use of alternative approaches to achieve compliance with minimum requirements to safeguard the public health, safety and welfare insofar as they are affected by the *repair, alteration, change of occupancy, addition* and relocation of *existing buildings*.

101.4 Applicability. This code shall apply to the *repair, alteration, change of occupancy, addition* and relocation of all *existing buildings*, regardless of occupancy, subject to the criteria of Sections 101.4.1 and 101.4.2.

101.4.1 Buildings not previously occupied. A building or portion of a building that has not been previously occupied or used for its intended purpose in accordance with the laws in existence at the time of its completion shall comply with the provisions of the *International Building Code* or *International Residential Code*, as applicable, for new construction or with any current permit for such occupancy.

101.4.2 Buildings previously occupied. The legal occupancy of any building existing on the date of adoption of this code shall be permitted to continue without change, except as is specifically covered in this code, the *International Fire Code*, or the *International Property Maintenance Code*, or as is deemed necessary by the *code official* for the general safety and welfare of the occupants and the public.

101.5 Compliance methods. The *repair, alteration, change of occupancy, addition* or relocation of all *existing buildings* shall comply with one of the methods listed in Sections 101.5.1 through 101.5.3 as selected by the applicant. Application of a method shall be the sole basis for assessing the compliance of work performed under a single permit unless otherwise approved by the *code official*. Sections 101.5.1 through 101.5.3 shall not be applied in combination with each other. Where this code requires consideration of the seismic-force-resisting system of an *existing building* subject to *repair, alteration, change of occupancy, addition* or relocation of *existing buildings*, the seismic evaluation and design shall be based on Section 101.5.4 regardless of which compliance method is used.

Exception: Subject to the approval of the *code official*, *alterations* complying with the laws in existence at the time the building or the affected portion of the building was built shall be considered in compliance with the provisions of this code unless the building is undergoing more than a limited structural *alteration* as defined in Section 807.4.3. New structural members added as part of the *alteration* shall comply with the *International Building Code*. *Alterations of existing buildings in flood hazard areas* shall comply with Section 601.3.

101.5.1 Prescriptive compliance method. *Repairs, alterations, additions* and changes of occupancy complying with Chapter 3 of this code in buildings complying with the *International Fire Code* shall be considered in compliance with the provisions of this code.

101.5.2 Work area compliance method. *Repairs, alterations, additions*, changes in occupancy and relocated buildings complying with the applicable requirements of Chapters 4 through 12 of this code shall be considered in compliance with the provisions of this code.

101.5.3 Performance compliance method. *Repairs, alterations, additions*, changes in occupancy and relocated buildings complying with Chapter 13 of this code shall be considered in compliance with the provisions of this code.

101.5.4 Evaluation and design procedures. The seismic evaluation and design shall be based on the procedures specified in the *International Building Code*, ASCE 31 or ASCE 41. The procedures contained in Appendix A of this code shall be permitted to be used as specified in Section 101.5.4.2.

101.5.4.1 Compliance with IBC level seismic forces. Where compliance with the seismic design provisions of the *International Building Code* is required, the procedures shall be in accordance with one of the following:

1. The *International Building Code* using 100 percent of the prescribed forces. The values of R , Ω_o and C_d used for analysis in accordance with Chapter 16 of the *International Building Code* shall be those specified for structural systems classified as “Ordinary” in accordance with Table 12.2-1 of ASCE 7, unless it can be demonstrated that the structural system satisfies the proportioning and detailing requirements for systems classified as “Detailed,” “Intermediate” or “Special.”
2. Compliance with ASCE 41 using both the BSE-1 and BSE-2 earthquake hazard levels and the corresponding performance levels shown in Table 101.5.4.1.

TABLE 101.5.4.1
PERFORMANCE CRITERIA FOR IBC LEVEL SEISMIC FORCES

OCCUPANCY CATEGORY (Based on IBC Table 1604.5)	PERFORMANCE LEVEL FOR USE WITH ASCE 41 BSE-1 EARTHQUAKE HAZARD LEVEL	PERFORMANCE LEVEL FOR USE WITH ASCE 41 BSE-2 EARTHQUAKE HAZARD LEVEL
I	Life safety (LS)	Collapse prevention (CP)
II	Life safety (LS)	Collapse prevention (CP)
III	Note a	Note a
IV	Immediate occupancy (IO)	Life safety (LS)

a. Acceptable criteria for Occupancy Category III shall be taken as 80 percent of the acceptance criteria specified for Occupancy Category IV performance levels.

101.5.4.2 Compliance with reduced IBC level seismic forces. Where seismic evaluation and design is permitted to meet reduced *International Building Code* seismic force levels, the procedures used shall be in accordance with one of the following:

1. The *International Building Code* using 75 percent of the prescribed forces. Values of R , Ω_o and C_d used for analysis shall be as specified in Section 101.5.4.1 of this code.
2. Structures or portions of structures that comply with the requirements of the applicable chapter in Appendix A as specified in Items 2.1 through 2.5 shall be deemed to comply with this section.
 - 2.1. The seismic evaluation and design of unreinforced masonry bearing wall buildings in Occupancy Category I or II are permitted to be based on the procedures specified in Appendix Chapter A1.
 - 2.2. Seismic evaluation and design of the wall anchorage system in reinforced concrete and reinforced masonry wall buildings with flexible diaphragms in Occupancy Category I or II are permitted to be based on the procedures specified in Chapter A2.
 - 2.3. Seismic evaluation and design of cripple walls and sill plate anchorage in residential buildings of light-frame wood construction in Occupancy Category I or II are permitted to be based on the procedures specified in Chapter A3.
 - 2.4. Seismic evaluation and design of soft, weak, or open-front wall conditions in multiunit residential buildings of wood construction in Occupancy Category I or II are permitted to be based on the procedures specified in Chapter A4.
 - 2.5. Seismic evaluation and design of concrete buildings and concrete with masonry infill buildings in all occupancy categories are

permitted to be based on the procedures specified in Chapter A5.

3. Compliance with ASCE 31 based on the applicable performance level as shown in Table 101.5.4.2. It shall be permitted to use the BSE-1 earthquake hazard level as defined in ASCE 41 and subject to the limitations in Item 4 below.
4. Compliance with ASCE 41 using the BSE-1 Earthquake Hazard Level and the performance level shown in Table 101.5.4.2. The design spectral response acceleration parameters S_{XS} and S_{XI} specified in ASCE 41 shall not be taken less than 75 percent of the respective design spectral response acceleration parameters S_{DS} and S_{DI} defined by the *International Building Code*.

TABLE 101.5.4.2
PERFORMANCE CRITERIA FOR REDUCED IBC LEVEL SEISMIC FORCES

OCCUPANCY CATEGORY (Based on IBC Table 1604.5)	PERFORMANCE LEVEL FOR USE WITH ASCE 31	PERFORMANCE LEVEL FOR USE WITH ASCE 41 BSE-1 EARTHQUAKE HAZARD LEVEL
I	Life safety (LS)	Life safety (LS)
II	Life safety (LS)	Life safety (LS)
III	Notes a, b	Note a
IV	Immediate occupancy (IO)	Immediate occupancy (IO)

- a. Acceptable criteria for Occupancy Category III shall be taken as 80 percent of the acceptance criteria specified for Occupancy Category IV performance levels.
- b. For Occupancy Category III, the ASCE 31 screening phase checklists shall be based on the life safety performance level.

101.6 Safeguards during construction. All construction work covered in this code, including any related demolition, shall comply with the requirements of Chapter 14.

101.7 Appendices. The *code official* is authorized to require rehabilitation and retrofit of buildings, structures or individual structural members in accordance with the appendices of this code if such appendices have been individually adopted.

101.8 Correction of violations of other codes. *Repairs or alterations* mandated by any property, housing, or fire safety maintenance code or mandated by any licensing rule or ordinance adopted pursuant to law shall conform only to the requirements of that code, rule, or ordinance and shall not be required to conform to this code unless the code requiring such *repair or alteration* so provides.

SECTION 102 APPLICABILITY

102.1 General. Where there is a conflict between a general requirement and a specific requirement, the specific requirement shall be applicable. Where in any specific case different sections of this code specify different materials, methods of construction or other requirements, the most restrictive shall govern.

102.2 Other laws. The provisions of this code shall not be deemed to nullify any provisions of local, state, or federal law.

102.3 Application of references. References to chapter or section numbers or to provisions not specifically identified by number shall be construed to refer to such chapter, section, or provision of this code.

102.4 Referenced codes and standards. The codes and standards referenced in this code shall be considered part of the requirements of this code to the prescribed extent of each such reference. Where differences occur between provisions of this code and referenced codes and standards, the provisions of this code shall govern.

Exception: Where enforcement of a code provision would violate the conditions of the listing of the equipment or appliance, the conditions of the listing shall govern.

102.5 Partial invalidity. In the event that any part or provision of this code is held to be illegal or void, this shall not have the effect of making void or illegal any of the other parts or provisions.

PART 2—ADMINISTRATION AND ENFORCEMENT

SECTION 103

DEPARTMENT OF BUILDING SAFETY

103.1 Creation of enforcement agency. The Department of Building Safety is hereby created, and the official in charge thereof shall be known as the *code official*.

103.2 Appointment. The *code official* shall be appointed by the chief appointing authority of the jurisdiction.

103.3 Deputies. In accordance with the prescribed procedures of this jurisdiction and with the concurrence of the appointing authority, the *code official* shall have the authority to appoint a deputy *code official*, the related technical officers, inspectors, plan examiners, and other employees. Such employees shall have powers as delegated by the *code official*.

SECTION 104

DUTIES AND POWERS OF CODE OFFICIAL

104.1 General. The *code official* is hereby authorized and directed to enforce the provisions of this code. The *code official* shall have the authority to render interpretations of this code and to adopt policies and procedures in order to clarify the application of its provisions. Such interpretations, policies, and procedures shall be in compliance with the intent and purpose of this code. Such policies and procedures shall not have the effect of waiving requirements specifically provided for in this code.

104.2 Applications and permits. The *code official* shall receive applications, review construction documents, and issue permits for the *repair, alteration, addition, demolition, change of occupancy*, and relocation of buildings; inspect the premises for which such permits have been issued; and enforce compliance with the provisions of this code.

104.2.1 Preliminary meeting. When requested by the permit applicant or the *code official*, the *code official* shall meet with the permit applicant prior to the application for a construction permit to discuss plans for the proposed work or *change of occupancy* in order to establish the specific applicability of the provisions of this code.

Exception: *Repairs and Level 1 alterations.*

104.2.1.1 Building evaluation. The *code official* is authorized to require an *existing building* to be investigated and evaluated by a registered design professional based on the circumstances agreed upon at the preliminary meeting. The design professional shall notify the *code official* if any potential nonconformance with the provisions of this code is identified.

104.3 Notices and orders. The *code official* shall issue all necessary notices or orders to ensure compliance with this code.

104.4 Inspections. The *code official* shall make all of the required inspections, or the *code official* shall have the authority to accept reports of inspection by approved agencies or individuals. Reports of such inspections shall be in writing and be certified by a responsible officer of such approved agency or by the responsible individual. The *code official* is authorized to engage such expert opinion as deemed necessary to report upon unusual technical issues that arise, subject to the approval of the appointing authority.

104.5 Identification. The *code official* shall carry proper identification when inspecting structures or premises in the performance of duties under this code.

104.6 Right of entry. Where it is necessary to make an inspection to enforce the provisions of this code, or where the *code official* has reasonable cause to believe that there exists in a structure or upon a premises a condition which is contrary to or in violation of this code which makes the structure or premises unsafe, *dangerous*, or hazardous, the *code official* is authorized to enter the structure or premises at reasonable times to inspect or to perform the duties imposed by this code, provided that if such structure or premises be occupied that credentials be presented to the occupant and entry requested. If such structure or premises be unoccupied, the *code official* shall first make a reasonable effort to locate the owner or other person having charge or control of the structure or premises and request entry. If entry is refused, the *code official* shall have recourse to the remedies provided by law to secure entry.

104.7 Department records. The *code official* shall keep official records of applications received, permits and certificates issued, fees collected, reports of inspections, and notices and orders issued. Such records shall be retained in the official records for the period required for retention of public records.

104.8 Liability. The *code official*, member of the Board of Appeals, or employee charged with the enforcement of this code, while acting for the jurisdiction in good faith and without malice in the discharge of the duties required by this code or other pertinent law or ordinance, shall not thereby be rendered liable personally and is hereby relieved from personal liability for any damage accruing to persons or property as a result of any act or by reason of an act or omission in the discharge of official duties. Any suit instituted against an officer or

employee because of an act performed by that officer or employee in the lawful discharge of duties and under the provisions of this code shall be defended by legal representative of the jurisdiction until the final termination of the proceedings. The *code official* or any subordinate shall not be liable for cost in any action, suit, or proceeding that is instituted in pursuance of the provisions of this code.

104.9 Approved materials and equipment. Materials, equipment, and devices approved by the *code official* shall be constructed and installed in accordance with such approval.

104.9.1 Used materials and equipment. The use of used materials that meet the requirements of this code for new materials is permitted. Used equipment and devices shall be permitted to be reused subject to the approval of the *code official*.

104.10 Modifications. Wherever there are practical difficulties involved in carrying out the provisions of this code, the code official shall have the authority to grant modifications for individual cases upon application of the owner or owner's representative, provided the code official shall first find that special individual reason makes the strict letter of this code impractical and the modification is in compliance with the intent and purpose of this code, and that such modification does not lessen health, accessibility, life and fire safety, or structural requirements. The details of action granting modifications shall be recorded and entered in the files of the Department of Building Safety.

104.10.1 Flood hazard areas. For *existing buildings* located in *flood hazard areas* for which *repairs, alterations* and *additions* constitute *substantial improvement*, the code official shall not grant modifications to provisions related to flood resistance unless a determination is made that:

1. The applicant has presented good and sufficient cause that the unique characteristics of the size, configuration or topography of the site render compliance with the flood-resistant construction provisions inappropriate.
2. Failure to grant the modification would result in exceptional hardship.
3. The granting of the modification will not result in increased flood heights, additional threats to public safety, extraordinary public expense nor create nuisances, cause fraud on or victimization of the public or conflict with existing laws or ordinances.
4. The modification is the minimum necessary to afford relief, considering the flood hazard.
5. A written notice will be provided to the applicant specifying, if applicable, the difference between the design flood elevation and the elevation to which the building is to be built, stating that the cost of flood insurance will be commensurate with the increased risk resulting from the reduced floor elevation and that construction below the design flood elevation increases risks to life and property.

104.11 Alternative materials, design and methods of construction, and equipment. The provisions of this code are not

intended to prevent the installation of any material or to prohibit any design or method of construction not specifically prescribed by this code, provided that any such alternative has been approved. An alternative material, design, or method of construction shall be approved where the code official finds that the proposed design is satisfactory and complies with the intent of the provisions of this code, and that the material, method, or work offered is, for the purpose intended, at least the equivalent of that prescribed in this code in quality, strength, effectiveness, fire resistance, durability, and safety.

104.11.1 Research reports. Supporting data, where necessary to assist in the approval of materials or assemblies not specifically provided for in this code, shall consist of valid research reports from approved sources.

SECTION 105 PERMITS

105.1 Required. Any owner or authorized agent who intends to *repair*, add to, alter, relocate, demolish, or change the occupancy of a building or to *repair*, install, add, alter, remove, convert, or replace any electrical, gas, mechanical, or plumbing system, the installation of which is regulated by this code, or to cause any such work to be done, shall first make application to the *code official* and obtain the required permit.

105.1.1 Annual permit. In lieu of an individual permit for each *alteration* to an already approved electrical, gas, mechanical, or plumbing installation, the *code official* is authorized to issue an annual permit upon application therefor to any person, firm, or corporation regularly employing one or more qualified trade persons in the building, structure, or on the premises owned or operated by the applicant for the permit.

105.1.2 Annual permit records. The person to whom an annual permit is issued shall keep a detailed record of *alterations* made under such annual permit. The *code official* shall have access to such records at all times, or such records shall be filed with the *code official* as designated.

105.2 Work exempt from permit. Exemptions from permit requirements of this code shall not be deemed to grant authorization for any work to be done in any manner in violation of the provisions of this code or any other laws or ordinances of this jurisdiction. Permits shall not be required for the following:

Building:

1. Sidewalks and driveways not more than 30 inches (762 mm) above grade and not over any basement or story below and that are not part of an accessible route.
2. Painting, papering, tiling, carpeting, cabinets, counter tops, and similar finish work.
3. Temporary motion picture, television, and theater stage sets and scenery.
4. Shade cloth structures constructed for nursery or agricultural purposes, and not including service systems.
5. Window awnings supported by an exterior wall of Group R-3 or Group U occupancies.

6. Movable cases, counters, and partitions not over 69 inches (1753 mm) in height.

Electrical:

Repairs and maintenance: Minor *repair* work, including the replacement of lamps or the connection of approved portable electrical equipment to approved permanently installed receptacles.

Radio and television transmitting stations: The provisions of this code shall not apply to electrical equipment used for radio and television transmissions, but do apply to equipment and wiring for power supply, the installations of towers, and antennas.

Temporary testing systems: A permit shall not be required for the installation of any temporary system required for the testing or servicing of electrical equipment or apparatus.

Gas:

1. Portable heating appliance.
2. Replacement of any minor part that does not alter approval of equipment or make such equipment unsafe.

Mechanical:

1. Portable heating appliance.
2. Portable ventilation equipment.
3. Portable cooling unit.
4. Steam, hot, or chilled water piping within any heating or cooling equipment regulated by this code.
5. Replacement of any part that does not alter its approval or make it unsafe.
6. Portable evaporative cooler.
7. Self-contained refrigeration system containing 10 pounds (4.54 kg) or less of refrigerant and actuated by motors of 1 horsepower (746 W) or less.

Plumbing:

1. The stopping of leaks in drains, water, soil, waste, or vent pipe; provided, however, that if any concealed trap, drainpipe, water, soil, waste, or vent pipe becomes defective and it becomes necessary to remove and replace the same with new material, such work shall be considered as new work, and a permit shall be obtained and inspection made as provided in this code.
2. The clearing of stoppages or the repairing of leaks in pipes, valves, or fixtures, and the removal and reinstallation of water closets, provided such *repairs* do not involve or require the replacement or rearrangement of valves, pipes, or fixtures.

105.2.1 Emergency repairs. Where equipment replacements and *repairs* must be performed in an emergency situation, the permit application shall be submitted within the next working business day to the *code official*.

105.2.2 Repairs. Application or notice to the *code official* is not required for ordinary *repairs* to structures and items listed in Section 105.2. Such *repairs* shall not include the cutting away of any wall, partition, or portion thereof, the removal or cutting of any structural beam or load-bearing support, or the removal or change of any required means of egress or rearrangement of parts of a structure affecting the egress requirements; nor shall ordinary *repairs* include *addition* to, *alteration* of, replacement, or relocation of any standpipe, water supply, sewer, drainage, drain leader, gas, soil, waste, vent, or similar piping, electric wiring, or mechanical or other work affecting public health or general safety.

105.2.3 Public service agencies. A permit shall not be required for the installation, *alteration*, or *repair* of generation, transmission, distribution, or metering or other related equipment that is under the ownership and control of public service agencies by established right.

105.3 Application for permit. To obtain a permit, the applicant shall first file an application therefor in writing on a form furnished by the Department of Building Safety for that purpose. Such application shall:

1. Identify and describe the work in accordance with Chapter 3 to be covered by the permit for which application is made.
2. Describe the land on which the proposed work is to be done by legal description, street address, or similar description that will readily identify and definitely locate the proposed building or work.
3. Indicate the use and occupancy for which the proposed work is intended.
4. Be accompanied by construction documents and other information as required in Section 106.3.
5. State the valuation of the proposed work.
6. Be signed by the applicant or the applicant's authorized agent.
7. Give such other data and information as required by the *code official*.

105.3.1 Action on application. The *code official* shall examine or cause to be examined applications for permits and amendments thereto within a reasonable time after filing. If the application or the construction documents do not conform to the requirements of pertinent laws, the *code official* shall reject such application in writing, stating the reasons therefor. If the *code official* is satisfied that the proposed work conforms to the requirements of this code and laws and ordinances applicable thereto, the *code official* shall issue a permit therefor as soon as practicable.

105.3.2 Time limitation of application. An application for a permit for any proposed work shall be deemed to have been abandoned 180 days after the date of filing, unless such application has been pursued in good faith or a permit has been issued; except that the *code official* is authorized to grant one or more extensions of time for additional periods not exceeding 90 days each. The extension shall be requested in writing and justified if able cause demonstrated.

105.4 Validity of permit. The issuance or granting of a permit shall not be construed to be a permit for, or an approval of, any violation of any of the provisions of this code or of any other ordinance of the jurisdiction. Permits presuming to give authority to violate or cancel the provisions of this code or other ordinances of the jurisdiction shall not be valid. The issuance of a permit based on construction documents and other data shall not prevent the *code official* from requiring the correction of errors in the construction documents and other data. The *code official* is also authorized to prevent occupancy or use of a structure where in violation of this code or of any other ordinances of this jurisdiction.

105.5 Expiration. Every permit issued shall become invalid unless the work on the site authorized by such permit is commenced within 180 days after its issuance, or if the work authorized on the site by such permit is suspended or abandoned for a period of 180 days after the time the work is commenced. The *code official* is authorized to grant, in writing, one or more extensions of time for periods not more than 180 days each. The extension shall be requested in writing and justifiable cause demonstrated.

105.6 Suspension or revocation. The *code official* is authorized to suspend or revoke a permit issued under the provisions of this code wherever the permit is issued in error or on the basis of incorrect, inaccurate, or incomplete information or in violation of any ordinance or regulation or any of the provisions of this code.

105.7 Placement of permit. The building permit or copy shall be kept on the site of the work until the completion of the project.

SECTION 106 CONSTRUCTION DOCUMENTS

106.1 General. Submittal documents consisting of construction documents, special inspection and structural observation programs, investigation and evaluation reports, and other data shall be submitted in one or more sets with each application for a permit. The construction documents shall be prepared by a registered design professional where required by the statutes of the jurisdiction in which the project is to be constructed. Where special conditions exist, the *code official* is authorized to require additional construction documents to be prepared by a registered design professional.

Exception: The *code official* is authorized to waive the submission of construction documents and other data not required to be prepared by a registered design professional if it is found that the nature of the work applied for is such that reviewing of construction documents is not necessary to obtain compliance with this code.

106.2 Construction documents. Construction documents shall be in accordance with Sections 106.2.1 through 106.2.5.

106.2.1 Construction documents. Construction documents shall be dimensioned and drawn upon suitable material. Electronic media documents are permitted to be submitted when approved by the *code official*. Construction documents shall be of sufficient clarity to indicate the location, nature and extent of the work proposed and show in

detail that it will conform to the provisions of this code and relevant laws, ordinances, rules and regulations, as determined by the *code official*. The work areas shall be shown.

106.2.2 Fire protection system(s) shop drawings. Shop drawings for the fire protection system(s) shall be submitted to indicate conformance with this code and the construction documents and shall be approved prior to the start of system installation. Shop drawings shall contain all information as required by the referenced installation standards in Chapter 9 of the *International Building Code*.

106.2.3 Means of egress. The construction documents for *Alterations—Level 2*, *Alterations—Level 3*, *additions* and changes of occupancy shall show in sufficient detail the location, construction, size and character of all portions of the means of egress in compliance with the provisions of this code. The construction documents shall designate the number of occupants to be accommodated in every *work area* of every floor and in all affected rooms and spaces.

106.2.4 Exterior wall envelope. Construction documents for all work affecting the exterior wall envelope shall describe the exterior wall envelope in sufficient detail to determine compliance with this code. The construction documents shall provide details of the exterior wall envelope as required, including windows, doors, flashing, intersections with dissimilar materials, corners, end details, control joints, intersections at roof, eaves, or parapets, means of drainage, water-resistive membrane, and details around openings.

The construction documents shall include manufacturer's installation instructions that provide supporting documentation that the proposed penetration and opening details described in the construction documents maintain the wind and weather resistance of the exterior wall envelope. The supporting documentation shall fully describe the exterior wall system which was tested, where applicable, as well as the test procedure used.

106.2.5 Site plan. The construction documents submitted with the application for permit shall be accompanied by a site plan showing to scale the size and location of new construction and existing structures on the site, distances from lot lines, the established street grades, and the proposed finished grades; and it shall be drawn in accordance with an accurate boundary line survey. In the case of demolition, the site plan shall show construction to be demolished and the location and size of existing structures and construction that are to remain on the site or plot. The *code official* is authorized to waive or modify the requirement for a site plan when the application for permit is for *alteration*, *repair* or *change of occupancy*.

106.3 Examination of documents. The *code official* shall examine or cause to be examined the submittal documents and shall ascertain by such examinations whether the construction or occupancy indicated and described is in accordance with the requirements of this code and other pertinent laws or ordinances.

106.3.1 Approval of construction documents. When the *code official* issues a permit, the construction documents shall be approved in writing or by stamp.

Code Compliance.” One set of construction documents so reviewed shall be retained by the *code official*. The other set shall be returned to the applicant, shall be kept at the site of work, and shall be open to inspection by the *code official* or a duly authorized representative.

106.3.2 Previous approval. This code shall not require changes in the construction documents, construction or designated occupancy of a structure for which a lawful permit has been issued and the construction of which has been pursued in good faith within 180 days after the effective date of this code and has not been abandoned.

106.3.3 Phased approval. The *code official* is authorized to issue a permit for the construction of foundations or any other part of a building before the construction documents for the whole building or structure have been submitted, provided that adequate information and detailed statements have been filed complying with pertinent requirements of this code. The holder of such permit for the foundation or other parts of a building shall proceed at the holder’s own risk with the building operation and without assurance that a permit for the entire structure will be granted.

106.3.4 Deferred submittals. For the purposes of this section, deferred submittals are defined as those portions of the design that are not submitted at the time of the application and that are to be submitted to the *code official* within a specified period.

Deferral of any submittal items shall have the prior approval of the *code official*. The registered design professional in responsible charge shall list the deferred submittals on the construction documents for review by the *code official*.

Submittal documents for deferred submittal items shall be submitted to the registered design professional in responsible charge who shall review them and forward them to the *code official* with a notation indicating that the deferred submittal documents have been reviewed and that they have been found to be in general conformance to the design of the building. The deferred submittal items shall not be installed until their deferred submittal documents have been approved by the *code official*.

106.4 Amended construction documents. Work shall be installed in accordance with the reviewed construction documents, and any changes made during construction that are not in compliance with the approved construction documents shall be resubmitted for approval as an amended set of construction documents.

106.5 Retention of construction documents. One set of approved construction documents shall be retained by the *code official* for a period of not less than the period required for retention of public records.

106.6 Design professional in responsible charge. When it is required that documents be prepared by a registered design professional, the *code official* shall be authorized to require the owner to engage and designate on the building permit application a registered design professional who shall act as the registered design professional in responsible charge. If the circumstances require, the owner shall designate a substitute

registered design professional in responsible charge who shall perform the duties required of the original registered design professional in responsible charge. The *code official* shall be notified in writing by the owner if the registered design professional in responsible charge is changed or is unable to continue to perform the duties. The registered design professional in responsible charge shall be responsible for reviewing and coordinating submittal documents prepared by others, including phased and deferred submittal items, for compatibility with the design of the building. Where structural observation is required, the inspection program shall name the individual or firms who are to perform structural observation and describe the stages of construction at which structural observation is to occur.

SECTION 107 TEMPORARY STRUCTURES AND USES

107.1 General. The *code official* is authorized to issue a permit for temporary uses. Such permits shall be limited as to time of service but shall not be permitted for more than 180 days. The *code official* is authorized to grant extensions for demonstrated cause.

107.2 Conformance. Temporary uses shall conform to the structural strength, fire safety, means of egress, accessibility, light, ventilation and sanitary requirements of this code as necessary to ensure the public health, safety and general welfare.

107.3 Temporary power. The *code official* is authorized to give permission to temporarily supply and use power in part of an electric installation before such installation has been fully completed and the final certificate of completion has been issued. The part covered by the temporary certificate shall comply with the requirements specified for temporary lighting, heat or power in NFPA 70.

107.4 Termination of approval. The *code official* is authorized to terminate such permit for a temporary use and to order the temporary use to be discontinued.

SECTION 108 FEES

108.1 Payment of fees. A permit shall not be valid until the fees prescribed by law have been paid. Nor shall an amendment to a permit be released until the additional fee, if any, has been paid.

108.2 Schedule of permit fees. On buildings, electrical, gas, mechanical, and plumbing systems or *alterations* requiring a permit, a fee for each permit shall be paid as required in accordance with the schedule as established by the applicable governing authority.

108.3 Building permit valuations. The applicant for a permit shall provide an estimated permit value at time of application. Permit valuations shall include total value of work including materials and labor for which the permit is being issued, such as electrical, gas, mechanical, plumbing equipment, and permanent systems. If, in the opinion of the *code official*, the valuation is underestimated on the application, the permit shall be denied unless the applicant can show detailed estimates to meet

the approval of the *code official*. Final building permit valuation shall be set by the *code official*.

108.4 Work commencing before permit issuance. Any person who commences any work before obtaining the necessary permits shall be subject to an additional fee established by the *code official* that shall be in addition to the required permit fees.

108.5 Related fees. The payment of the fee for the construction, *alteration*, removal, or demolition of work done in connection to or concurrently with the work authorized by a building permit shall not relieve the applicant or holder of the permit from the payment of other fees that are prescribed by law.

108.6 Refunds. The *code official* is authorized to establish a refund policy.

SECTION 109 INSPECTIONS

109.1 General. Construction or work for which a permit is required shall be subject to inspection by the *code official*, and such construction or work shall remain accessible and exposed for inspection purposes until approved. Approval as a result of an inspection shall not be construed to be an approval of a violation of the provisions of this code or of other ordinances of the jurisdiction. Inspections presuming to give authority to violate or cancel the provisions of this code or of other ordinances of the jurisdiction shall not be valid. It shall be the duty of the permit applicant to cause the work to remain accessible and exposed for inspection purposes. Neither the *code official* nor the jurisdiction shall be liable for expense entailed in the removal or replacement of any material required to allow inspection.

109.2 Preliminary inspection. Before issuing a permit, the *code official* is authorized to examine or cause to be examined buildings and sites for which an application has been filed.

109.3 Required inspections. The *code official*, upon notification, shall make the inspections set forth in Sections 109.3.1 through 109.3.9.

109.3.1 Footing or foundation inspection. Footing and foundation inspections shall be made after excavations for footings are complete and any required reinforcing steel is in place. For concrete foundations, any required forms shall be in place prior to inspection. Materials for the foundation shall be on the job, except where concrete is ready-mixed in accordance with ASTM C 94, the concrete need not be on the job.

109.3.2 Concrete slab or under-floor inspection. Concrete slab and under-floor inspections shall be made after in-slab or under-floor reinforcing steel and building service equipment, conduit, piping accessories, and other ancillary equipment items are in place but before any concrete is placed or floor sheathing installed, including the sub floor.

109.3.3 Lowest floor elevation. For *additions* and *substantial improvements* to existing buildings in flood hazard areas, upon placement of the lowest floor, including basement, and prior to further vertical construction, the elevation

documentation required in the *International Building Code* shall be submitted to the *code official*.

109.3.4 Frame inspection. Framing inspections shall be made after the roof deck or sheathing, all framing, fire blocking, and bracing are in place and pipes, chimneys, and vents to be concealed are complete and the rough electrical, plumbing, heating wires, pipes, and ducts are approved.

109.3.5 Lath or gypsum board inspection. Lath and gypsum board inspections shall be made after lathing and gypsum board, interior and exterior, is in place but before any plastering is applied or before gypsum board joints and fasteners are taped and finished.

Exception: Gypsum board that is not part of a fire-resistance-rated assembly or a shear assembly.

109.3.6 Fire and smoke-resistant penetrations. Protection of joints and penetrations in fire-resistance-rated assemblies, smoke barriers and smoke partitions shall not be concealed from view until inspected and approved.

109.3.7 Other inspections. In addition to the inspections specified above, the *code official* is authorized to make or require other inspections of any construction work to ascertain compliance with the provisions of this code and other laws that are enforced by the Department of Building Safety.

109.3.8 Special inspections. Special inspections shall be required in accordance with the *International Building Code*.

109.3.9 Final inspection. The final inspection shall be made after all work required by the building permit is completed.

109.4 Inspection agencies. The *code official* is authorized to accept reports of approved inspection agencies, provided such agencies satisfy the requirements as to qualifications and reliability.

109.5 Inspection requests. It shall be the duty of the holder of the building permit or their duly authorized agent to notify the *code official* when work is ready for inspection. It shall be the duty of the permit holder to provide access to and means for any inspections of such work that are required by this code.

109.6 Approval required. Work shall not be done beyond the point indicated in each successive inspection without first obtaining the approval of the *code official*. The *code official*, upon notification, shall make the requested inspections and shall either indicate the portion of the construction that is satisfactory as completed or shall notify the permit holder or an agent of the permit holder wherein the same fails to comply with this code. Any portions that do not comply shall be corrected and such portion shall not be covered or concealed until authorized by the *code official*.

SECTION 110 CERTIFICATE OF OCCUPANCY

110.1 Altered area use and occupancy classification change. No altered area of a building and no relocated building shall be used or occupied, and no change in the existing occu-

pancy classification of a building or portion thereof shall be made until the code official has issued a certificate of occupancy therefor as provided herein. Issuance of a certificate of occupancy shall not be construed as an approval of a violation of the provisions of this code or of other ordinances of the jurisdiction.

110.2 Certificate issued. After the *code official* inspects the building and finds no violations of the provisions of this code or other laws that are enforced by the Department of Building Safety, the *code official* shall issue a certificate of occupancy that shall contain the following:

1. The building permit number.
2. The address of the structure.
3. The name and address of the owner.
4. A description of that portion of the structure for which the certificate is issued.
5. A statement that the described portion of the structure has been inspected for compliance with the requirements of this code for the occupancy and division of occupancy and the use for which the proposed occupancy is classified.
6. The name of the *code official*.
7. The edition of the code under which the permit was issued.
8. The use and occupancy in accordance with the provisions of the *International Building Code*.
9. The type of construction as defined in the *International Building Code*.
10. The design occupant load and any impact the *alteration* has on the design occupant load of the area not within the scope of the work.
11. If fire protection systems are provided, whether the fire protection systems are required.
12. Any special stipulations and conditions of the building permit.

110.3 Temporary occupancy. The *code official* is authorized to issue a temporary certificate of occupancy before the completion of the entire work covered by the permit, provided that such portion or portions shall be occupied safely. The *code official* shall set a time period during which the temporary certificate of occupancy is valid.

110.4 Revocation. The *code official* is authorized to, in writing, suspend or revoke a certificate of occupancy or completion issued under the provisions of this code wherever the certificate is issued in error or on the basis of incorrect information supplied, or where it is determined that the building or structure or portion thereof is in violation of any ordinance or regulation or any of the provisions of this code.

SECTION 111 SERVICE UTILITIES

111.1 Connection of service utilities. No person shall make connections from a utility, source of energy, fuel, or power to

any building or system that is regulated by this code for which a permit is required, until approved by the *code official*.

111.2 Temporary connection. The *code official* shall have the authority to authorize the temporary connection of the building or system to the utility source of energy, fuel, or power.

111.3 Authority to disconnect service utilities. The *code official* shall have the authority to authorize disconnection of utility service to the building, structure or system regulated by this code and the referenced codes and standards in case of emergency where necessary to eliminate an immediate hazard to life or property or when such utility connection has been made without the approval required by Section 111.1 or 111.2. The code official shall notify the serving utility and, wherever possible, the owner and occupant of the building, structure or service system of the decision to disconnect prior to taking such action. If not notified prior to disconnecting, the owner or occupant of the building, structure or service system shall be notified in writing, as soon as practical thereafter.

SECTION 112 BOARD OF APPEALS

112.1 General. In order to hear and decide appeals of orders, decisions, or determinations made by the code official relative to the application and interpretation of this code, there shall be and is hereby created a board of appeals. The board of appeals shall be appointed by the governing body and shall hold office at its pleasure. The board shall adopt rules of procedure for conducting its business.

112.2 Limitations on authority. An application for appeal shall be based on a claim that the true intent of this code or the rules legally adopted thereunder have been incorrectly interpreted, the provisions of this code do not fully apply, or an equally good or better form of construction is proposed. The board shall have no authority to waive requirements of this code.

112.3 Qualifications. The board of appeals shall consist of members who are qualified by experience and training to pass on matters pertaining to building construction and are not employees of the jurisdiction.

SECTION 113 VIOLATIONS

113.1 Unlawful acts. It shall be unlawful for any person, firm, or corporation to *repair*, alter, extend, add, move, remove, demolish, or change the occupancy of any building or equipment regulated by this code or cause same to be done in conflict with or in violation of any of the provisions of this code.

113.2 Notice of violation. The *code official* is authorized to serve a notice of violation or order on the person responsible for the *repair*, *alteration*, extension, *addition*, moving, removal, demolition, or change in the occupancy of a building in violation of the provisions of this code or in violation of a permit or certificate issued under the provisions of this code. Such order shall direct the discontinuance of the illegal action or condition and the abatement of the violation.

113.3 Prosecution of violation. If the notice of violation is not complied with promptly, the *code official* is authorized to request the legal counsel of the jurisdiction to institute the appropriate proceeding at law or in equity to restrain, correct, or abate such violation or to require the removal or termination of the unlawful occupancy of the building or structure in violation of the provisions of this code or of the order or direction made pursuant thereto.

113.4 Violation penalties. Any person who violates a provision of this code or fails to comply with any of the requirements thereof or who *repairs* or alters or changes the occupancy of a building or structure in violation of the approved construction documents or directive of the *code official* or of a permit or certificate issued under the provisions of this code shall be subject to penalties as prescribed by law.

SECTION 114 STOP WORK ORDER

114.1 Authority. Whenever the *code official* finds any work regulated by this code being performed in a manner contrary to the provisions of this code or in a *dangerous* or unsafe manner, the *code official* is authorized to issue a stop work order.

114.2 Issuance. The stop work order shall be in writing and shall be given to the owner of the property involved or to the owner's agent, or to the person doing the work. Upon issuance of a stop work order, the cited work shall immediately cease. The stop work order shall state the reason for the order and the conditions under which the cited work will be permitted to resume.

114.3 Unlawful continuance. Any person who shall continue any work after having been served with a stop work order, except such work as that person is directed to perform to remove a violation or unsafe condition, shall be subject to penalties as prescribed by law.

SECTION 115 UNSAFE BUILDINGS AND EQUIPMENT

115.1 Conditions. Buildings, structures or equipment that are or hereafter become unsafe, shall be taken down, removed or made safe as the *code official* deems necessary and as provided for in this code.

115.2 Record. The *code official* shall cause a report to be filed on an unsafe condition. The report shall state the occupancy of the structure and the nature of the unsafe condition.

115.3 Notice. If an unsafe condition is found, the *code official* shall serve on the owner, agent, or person in control of the structure a written notice that describes the condition deemed unsafe and specifies the required *repairs* or improvements to be made to abate the unsafe condition, or that requires the unsafe building to be demolished within a stipulated time. Such notice shall require the person thus notified to declare immediately to the *code official* acceptance or rejection of the terms of the order.

115.4 Method of service. Such notice shall be deemed properly served if a copy thereof is delivered to the owner person-

ally; sent by certified or registered mail addressed to the owner at the last known address with the return receipt requested; or delivered in any other manner as prescribed by local law. If the certified or registered letter is returned showing that the letter was not delivered, a copy thereof shall be posted in a conspicuous place in or about the structure affected by such notice. Service of such notice in the foregoing manner upon the owner's agent or upon the person responsible for the structure shall constitute service of notice upon the owner.

115.5 Restoration. The building or equipment determined to be unsafe by the *code official* is permitted to be restored to a safe condition. To the extent that *repairs*, *alterations*, or *additions* are made or a *change of occupancy* occurs during the restoration of the building, such *repairs*, *alterations*, *additions*, or *change of occupancy* shall comply with the requirements of this code.

SECTION 116 EMERGENCY MEASURES

116.1 Imminent danger. When, in the opinion of the *code official*, there is imminent danger of failure or collapse of a building that endangers life, or when any building or part of a building has fallen and life is endangered by the occupation of the building, or when there is actual or potential danger to the building occupants or those in the proximity of any structure because of explosives, explosive fumes or vapors, or the presence of toxic fumes, gases, or materials, or operation of defective or *dangerous* equipment, the *code official* is hereby authorized and empowered to order and require the occupants to vacate the premises forthwith. The *code official* shall cause to be posted at each entrance to such structure a notice reading as follows: "This Structure Is Unsafe and Its Occupancy Has Been Prohibited by the *Code Official*." It shall be unlawful for any person to enter such structure except for the purpose of securing the structure, making the required *repairs*, removing the hazardous condition, or of demolishing the same.

116.2 Temporary safeguards. Notwithstanding other provisions of this code, whenever, in the opinion of the *code official*, there is imminent danger due to an unsafe condition, the *code official* shall order the necessary work to be done, including the boarding up of openings, to render such structure temporarily safe whether or not the legal procedure herein described has been instituted; and shall cause such other action to be taken as the *code official* deems necessary to meet such emergency.

116.3 Closing streets. When necessary for public safety, the *code official* shall temporarily close structures and close or order the authority having jurisdiction to close sidewalks, streets, public ways, and places adjacent to unsafe structures, and prohibit the same from being utilized.

116.4 Emergency repairs. For the purposes of this section, the *code official* shall employ the necessary labor and materials to perform the required work as expeditiously as possible.

116.5 Costs of emergency repairs. Costs incurred in the performance of emergency work shall be paid by the jurisdiction. The legal counsel of the jurisdiction shall institute appropriate action against the owner of the premises where the unsafe structure is or was located for the recovery of such costs.

116.6 Hearing. Any person ordered to take emergency measures shall comply with such order forthwith. Any affected person shall thereafter, upon petition directed to the appeals board, be afforded a hearing as described in this code.

SECTION 117 DEMOLITION

117.1 General. The *code official* shall order the owner of any premises upon which is located any structure that in the *code official's* judgment is so old, dilapidated, or has become so out of *repair* as to be *dangerous*, unsafe, insanitary, or otherwise unfit for human habitation or occupancy, and such that it is unreasonable to *repair* the structure, to demolish and remove such structure; or if such structure is capable of being made safe by *repairs*, to *repair* and make safe and sanitary or to demolish and remove at the owner's option; or where there has been a cessation of normal construction of any structure for a period of more than two years, to demolish and remove such structure.

117.2 Notices and orders. All notices and orders shall comply with Section 113.

117.3 Failure to comply. If the owner of a premises fails to comply with a demolition order within the time prescribed, the *code official* shall cause the structure to be demolished and removed, either through an available public agency or by contract or arrangement with private persons, and the cost of such demolition and removal shall be charged against the real estate upon which the structure is located and shall be a lien upon such real estate.

117.4 Salvage materials. When any structure has been ordered demolished and removed, the governing body or other designated officer under said contract or arrangement aforesaid shall have the right to sell the salvage and valuable materials at the highest price obtainable. The net proceeds of such sale, after deducting the expenses of such demolition and removal, shall be promptly remitted with a report of such sale or transaction, including the items of expense and the amounts deducted, for the person who is entitled thereto, subject to any order of a court. If such a surplus does not remain to be turned over, the report shall so state.

CHAPTER 2

DEFINITIONS

SECTION 201 GENERAL

201.1 Scope. Unless otherwise expressly stated, the following words and terms shall, for the purposes of this code, have the meanings shown in this chapter.

201.2 Interchangeability. Words used in the present tense include the future; words stated in the masculine gender include the feminine and neuter; the singular number includes the plural and the plural, the singular.

201.3 Terms defined in other codes. Where terms are not defined in this code and are defined in the other *International Codes*, such terms shall have the meanings ascribed to them in those codes.

201.4 Terms not defined. Where terms are not defined through the methods authorized by this chapter, such terms shall have ordinarily accepted meanings such as the context implies.

SECTION 202 GENERAL DEFINITIONS

ADDITION. An extension or increase in floor area, number of stories, or height of a building or structure.

ALTERATION. Any construction or renovation to an existing structure other than a *repair* or *addition*. Alterations are classified as Level 1, Level 2, and Level 3.

CHANGE OF OCCUPANCY. A change in the purpose or level of activity within a building that involves a change in application of the requirements of this code.

CODE OFFICIAL. The officer or other designated authority charged with the administration and enforcement of this code.

DANGEROUS. Any building, structure or portion thereof that meets any of the conditions described below shall be deemed *dangerous*:

1. The building or structure has collapsed, partially collapsed, moved off its foundation or lacks the support of ground necessary to support it.
2. There exists a significant risk of collapse, detachment or dislodgment of any portion, member, appurtenance or ornamentation of the building or structure under service loads.

EQUIPMENT OR FIXTURE. Any plumbing, heating, electrical, ventilating, air conditioning, refrigerating, and fire protection equipment, and elevators, dumb waiters, escalators, boilers, pressure vessels and other mechanical facilities or installations that are related to building services. Equipment or fixture shall not include manufacturing, production, or process equipment, but shall include connections from building service to process equipment.

EXISTING BUILDING. A building erected prior to the date of adoption of the appropriate code, or one for which a legal building permit has been issued.

[B] FLOOD HAZARD AREA. The greater of the following two areas:

1. The area within a flood plain subject to a 1-percent or greater chance of flooding in any year.
2. The area designated as a *flood hazard area* on a community's flood hazard map, or otherwise legally designated.

HISTORIC BUILDING. Any building or structure that is listed in the State or National Register of Historic Places; designated as a historic property under local or state designation law or survey; certified as a contributing resource within a National Register listed or locally designated historic district; or with an opinion or certification that the property is eligible to be listed on the National or State Register of Historic Places either individually or as a contributing building to a historic district by the State Historic Preservation Officer or the Keeper of the National Register of Historic Places.

LOAD BEARING ELEMENT. Any column, girder, beam, joist, truss, rafter, wall, floor or roof sheathing that supports any vertical load in *addition* to its own weight or any lateral load.

NONCOMBUSTIBLE MATERIAL. A material that, under the conditions anticipated, will not ignite or burn when subjected to fire or heat. Materials that pass ASTM E 136 are considered noncombustible materials.

PRIMARY FUNCTION. A *primary function* is a major activity for which the facility is intended. Areas that contain a *primary function* include, but are not limited to, the customer services lobby of a bank, the dining area of a cafeteria, the meeting rooms in a conference center, as well as offices and other work areas in which the activities of the public accommodation or other private entity using the facility are carried out. Mechanical rooms, boiler rooms, supply storage rooms, employee lounges or locker rooms, janitorial closets, entrances, corridors and restrooms are not areas containing a *primary function*.

REGISTERED DESIGN PROFESSIONAL IN RESPONSIBLE CHARGE. A registered design professional engaged by the owner to review and coordinate certain aspects of the project, as determined by the *code official*, for compatibility with the design of the building or structure, including submittal documents prepared by others, deferred submittal documents and phased submittal documents.

REHABILITATION. Any work, as described by the categories of work defined herein, undertaken in an *existing building*.

REHABILITATION, SEISMIC. Work conducted to improve the seismic lateral force resistance of an *existing building*.

REPAIR. The restoration to good or sound condition of any part of an *existing building* for the purpose of its maintenance.

SEISMIC LOADING. The forces prescribed herein, related to the response of the structure to earthquake motions, to be used in the analysis and design of the structure and its components.

[B]SUBSTANTIAL DAMAGE. For the purpose of determining compliance with the flood provisions of this code, damage of any origin sustained by a structure whereby the cost of restoring the structure to its before-damaged condition would equal or exceed 50 percent of the market value of the structure before the damage occurred.

SUBSTANTIAL IMPROVEMENT. For the purpose of determining compliance with the flood provisions of this code, any *repair, alteration, addition*, or improvement of a building or structure, the cost of which equals or exceeds 50 percent of the market value of the structure, before the improvement or *repair* is started. If the structure has sustained *substantial damage*, any repairs are considered *substantial improvement* regardless of the actual *repair* work performed. The term does not, however, include either:

1. Any project for improvement of a building required to correct existing health, sanitary, or safety code violations identified by the *code official* and that is the minimum necessary to assure safe living conditions, or
2. Any *alteration* of a historic structure, provided that the *alteration* will not preclude the structure's continued designation as a historic structure.

SUBSTANTIAL STRUCTURAL DAMAGE. A condition where:

1. In any story, the vertical elements of the lateral-force-resisting system have suffered damage such that the lateral load-carrying capacity of the structure in any horizontal direction has been reduced by more than 20 percent from its predamaged condition; or
2. The capacity of any vertical gravity load-carrying component, or any group of such components, that supports more than 30 percent of the total area of the structure's floor(s) and roof(s) has been reduced more than 20 percent from its predamaged condition and the remaining capacity of such affected elements, with respect to all dead and live loads, is less than 75 percent of that required by the *International Building Code* for new buildings of similar structure, purpose and location.

TECHNICALLY INFEASIBLE. An *alteration* of a building or a facility that has little likelihood of being accomplished because the existing structural conditions require the removal or *alteration* of a load-bearing member that is an essential part of the structural frame or because other existing physical or site constraints prohibit modification or *addition* of elements, spaces, or features that are in full and strict compliance with the minimum requirements for new construction and that are necessary to provide accessibility.

UNSAFE. Buildings, structures or equipment that are unsanitary, or that are deficient due to inadequate means of egress facilities, inadequate light and ventilation, or that constitute a

fire hazard, or in which the structure or individual structural members meet the definition of "*Dangerous*," or that are otherwise *dangerous* to human life or the public welfare, or that involve illegal or improper occupancy or inadequate maintenance shall be deemed unsafe. A vacant structure that is not secured against entry shall be deemed unsafe.

WORK AREA. That portion or portions of a building consisting of all reconfigured spaces as indicated on the construction documents. Work area excludes other portions of the building where incidental work entailed by the intended work must be performed and portions of the building where work not initially intended by the owner is specifically required by this code.

CHAPTER 3

PRESCRIPTIVE COMPLIANCE METHOD

[B] SECTION 301 GENERAL

301.1 Scope. The provisions of this chapter shall control the *alteration, repair, addition and change of occupancy* of existing structures, including historic and moved structures as referenced in Section 101.5.1.

Exception: Existing bleachers, grandstands and folding and telescopic seating shall comply with ICC 300-02.

301.1.1 Compliance with other methods. Alterations, repairs, *additions* and changes of occupancy to existing structures shall comply with the provisions of this chapter or with one of the methods provided in Section 101.5.

301.2 Building materials. Building materials shall comply with the requirements of this section.

301.2.1 Existing materials. Materials already in use in a building in conformance with requirements or approvals in effect at the time of their erection or installation shall be permitted to remain in use unless determined by the *code official* to be *dangerous* to life, health or safety. Where such conditions are determined to be *dangerous* to life, health or safety, they shall be mitigated or made safe.

301.2.2 New and replacement materials. Except as otherwise required or permitted by this code, materials permitted by the applicable code for new construction shall be used. Like materials shall be permitted for repairs and alterations, provided no hazard to life, health or property is created. Hazardous materials shall not be used where the code for new construction would not permit their use in buildings of similar occupancy, purpose and location.

[B] SECTION 302 ADDITIONS

302.1 General. *Additions* to any building or structure shall comply with the requirements of the *International Building Code* for new construction. Alterations to the *existing building* or structure shall be made to ensure that the *existing building* or structure together with the *addition* are no less conforming with the provisions of this code than the *existing building* or structure was prior to the *addition*. An *existing building* together with its *additions* shall comply with the height and area provisions of Chapter 5 of the *International Building Code*.

302.2 Flood hazard areas. For buildings and structures in flood hazard areas established in Section 1612.3 of the *International Building Code*, any *addition* that constitutes *substantial improvement* of the existing structure, as defined in Section 1612.2 of the *International Building Code*, shall comply with the flood design requirements for new construction, and all aspects of the existing structure shall be brought into compliance with the requirements for new construction for flood design.

For buildings and structures in flood hazard areas established in Section 1612.3 of the *International Building Code*, any *additions* that do not constitute *substantial improvement* or *substantial damage* of the existing structure, as defined in Section 1612.2 of the *International Building Code*, are not required to comply with the flood design requirements for new construction.

302.3 Existing structural elements carrying gravity load.

Any existing gravity load-carrying structural element for which an *addition* and its related alterations cause an increase in design gravity load of more than 5 percent shall be strengthened, supplemented, replaced or otherwise altered as needed to carry the increased load required by this code for new structures. Any existing gravity load-carrying structural element whose gravity load-carrying capacity is decreased shall be considered an altered element subject to the requirements of Section 303.3. Any existing element that will form part of the lateral load path for any part of the *addition* shall be considered an existing lateral load-carrying structural element subject to the requirements of Section 302.4.

302.3.1 Design live load. Where the *addition* does not result in increased design live load, existing gravity load-carrying structural elements shall be permitted to be evaluated and designed for live loads approved prior to the *addition*. If the approved live load is less than that required by Section 1607 of the *International Building Code*, the area designed for the nonconforming live load shall be posted with placards of approved design indicating the approved live load. Where the *addition* does result in increased design live load, the live load required by Section 1607 of the *International Building Code* shall be used.

302.4 Existing structural elements carrying lateral load.

Where the *addition* is structurally independent of the existing structure, existing lateral load-carrying structural elements shall be permitted to remain unaltered. Where the *addition* is not structurally independent of the existing structure, the existing structure and its *addition* acting together as a single structure shall be shown to meet the requirements of Sections 1609 and 1613 of the *International Building Code*.

Exception: Any existing lateral load-carrying structural element whose demand-capacity ratio with the *addition* considered is no more than 10 percent greater than its demand-capacity ratio with the *addition* ignored shall be permitted to remain unaltered. For purposes of calculating demand-capacity ratios, the demand shall consider applicable load combinations with design lateral loads or forces in accordance with Sections 1609 and 1613 of the *International Building Code*. For purposes of this exception, comparisons of demand-capacity ratios and calculation of design lateral loads, forces and capacities shall account for the cumulative effects of *additions* and alterations since original construction.

302.4.1 Seismic. Seismic requirements for alterations shall be in accordance with this section. Where the existing seismic force-resisting system is a type that can be designated ordinary, values of R , Ω_o and C_d for the existing seismic force-resisting system shall be those specified by this code for an ordinary system unless it is demonstrated that the existing system will provide performance equivalent to that of a detailed intermediate or special system.

[B] SECTION 303 ALTERATIONS

303.1 General. Except as provided by Section 301.2 or this section, alterations to any building or structure shall comply with the requirements of the code for new construction. Alterations shall be such that the *existing building* or structure is no less conforming with the provisions of this code than the *existing building* or structure was prior to the *alteration*.

Exceptions:

1. An existing stairway shall not be required to comply with the requirements of Section 1009 of the *International Building Code* where the existing space and construction does not allow a reduction in pitch or slope.
2. Handrails otherwise required to comply with Section 1009.12 of the *International Building Code* shall not be required to comply with the requirements of Section 1012.6 of the *International Building Code* regarding full extension of the handrails where such extensions would be hazardous due to plan configuration.

303.2 Flood hazard areas. For buildings and structures in flood hazard areas established in Section 1612.3 of the *International Building Code*, any *alteration* that constitutes *substantial improvement* of the existing structure, as defined in Section 1612.2 of the *International Building Code*, shall comply with the flood design requirements for new construction, and all aspects of the existing structure shall be brought into compliance with the requirements for new construction for flood design.

For buildings and structures in flood hazard areas established in Section 1612.3 of the *International Building Code*, any alterations that do not constitute *substantial improvement* or *substantial damage* of the existing structure, as defined in Section 1612.2 of the *International Building Code*, are not required to comply with the flood design requirements for new construction.

303.3 Existing structural elements carrying gravity load. Any existing gravity load-carrying structural element for which an *alteration* causes an increase in design gravity load of more than 5 percent shall be strengthened, supplemented, replaced or otherwise altered as needed to carry the increased gravity load required by this code for new structures. Any existing gravity load-carrying structural element whose gravity load-carrying capacity is decreased as part of the *alteration* shall be shown to have the capacity to resist the applicable design gravity loads required by this code for new structures.

303.3.1 Design live load. Where the *alteration* does not result in increased design live load, existing gravity load-carrying structural elements shall be permitted to be evaluated and designed for live loads approved prior to the *alteration*. If the approved live load is less than that required by Section 1607 of the *International Building Code*, the area designed for the nonconforming live load shall be posted with placards of approved design indicating the approved live load. Where the *alteration* does result in increased design live load, the live load required by Section 1607 of the *International Building Code* shall be used.

303.4 Existing structural elements carrying lateral load. Except as permitted by Section 303.5, with the *alteration* increases design lateral loads in accordance with Section 1609 of the *International Building Code* or 1613 of the *International Building Code*, or where the *alteration* results in a structural irregularity as defined in ASCE 7, or where the *alteration* decreases the capacity of any existing lateral load-carrying structural element, the structure of the altered building or structure shall be shown to meet the requirements of Sections 1609 and 1613 of the *International Building Code*.

Exception: Any existing lateral load-carrying structural element whose demand-capacity ratio with the *alteration* considered is no more than 10 percent greater than its demand-capacity ratio with the *alteration* ignored shall be permitted to remain unaltered. For purposes of calculating demand-capacity ratios, the demand shall consider applicable load combinations with design lateral loads or forces in accordance with Sections 1609 and 1613 of the *International Building Code*. For purposes of this exception, comparisons of demand-capacity ratios and calculation of design lateral loads, forces and capacities shall account for the cumulative effects of *additions* and alterations since original construction.

303.4.1 Seismic. Seismic requirements for alterations shall be in accordance with this section. Where the existing seismic force-resisting system is a type that can be designated ordinary, values of R , Ω_o and C_d for the existing seismic force-resisting system shall be those specified by this code for an ordinary system unless it is demonstrated that the existing system will provide performance equivalent to that of a detailed intermediate or special system.

303.5 Voluntary seismic improvements. Alterations to existing structural elements or *additions* of new structural elements that are not otherwise required by this chapter and are initiated for the purpose of improving the performance of the seismic-force-resisting system of an existing structure or the performance of seismic bracing or anchorage of existing nonstructural elements shall be permitted, provided that an engineering analysis is submitted demonstrating all of the following:

1. The altered structure and the altered nonstructural elements are no less conforming with the provisions of this code with respect to earthquake design than they were prior to the *alteration*.
2. New structural elements are detailed and connected to the existing structural elements as required by Chapter 16 of the *International Building Code*.

3. New or relocated nonstructural elements are detailed and connected to existing or new structural elements as required by Chapter 16 of the *International Building Code*.
4. The alterations do not create a structural irregularity as defined in ASCE 7 or make an existing structural irregularity more severe.

303.6 Means of egress capacity factors. Alterations to any *existing building* or structure shall not be subject to the egress width factors in Section 1005.1 of the *International Building Code* for new construction in determining the minimum egress widths or the minimum number of exits in an *existing building* or structure. The minimum egress widths for the components of the means of egress shall be based on the means of egress width factors in the building code under which the building was constructed, and shall be considered as complying means of egress for any *alteration* if, in the opinion of the *code official*, they do not constitute a distinct hazard to life.

[B] SECTION 304 REPAIRS

304.1 General. Buildings and structures, and parts thereof, shall be repaired in conformance with Section 301.2. Work on nondamaged components that is necessary for the required *repair* of damaged components shall be considered part of the *repair* and shall not be subject to the requirements for alterations in this chapter. Routine maintenance required by Section 301.2, ordinary repairs exempt from permit in accordance with Section 105.2, and abatement of wear due to normal service conditions shall not be subject to the requirements for repairs in this section.

304.1.1 Dangerous conditions. Regardless of the extent of structural or nonstructural damage, the *code official* shall have the authority to require the elimination of conditions deemed *dangerous*.

304.2 Substantial structural damage to vertical elements of the lateral-force-resisting system. A building that has sustained *substantial structural damage* to the vertical elements of its lateral-force-resisting system shall be evaluated and repaired in accordance with the applicable provisions of Sections 304.2.1 through 304.2.3.

304.2.1 Evaluation. The building shall be evaluated by a registered design professional, and the evaluation findings shall be submitted to the *code official*. The evaluation shall establish whether the damaged building, if repaired to its pre-damage state, would comply with the provisions of this code for wind and earthquake loads. Evaluation for earthquake loads shall be required if the *substantial structural damage* was caused by or related to earthquake effects or if the building is in Seismic Design Category C, D, E or F.

Wind loads for this evaluation shall be those prescribed in Section 1609 of the *International Building Code*. Earthquake loads for this evaluation, if required, shall be permitted to be 75 percent of those prescribed in Section 1613 of the *International Building Code*. Values of R , W_0 and C_d for the existing seismic force-resisting system shall be those specified by this code for an ordinary system unless it is

demonstrated that the existing system will provide performance equivalent to that of an intermediate or special system.

304.2.2 Extent of repair for compliant buildings. If the evaluation establishes compliance of the pre-damage building in accordance with Section 304.2.1, then repairs shall be permitted that restore the building to its pre-damage state using materials and strengths that existed prior to the damage.

304.2.3 Extent of repair for noncompliant buildings. If the evaluation does not establish compliance of the pre-damage building in accordance with Section 304.2.1, then the building shall be rehabilitated to comply with applicable provisions of this code for load combinations, including wind or seismic loads. The wind loads for the *repair* shall be as required by the building code in effect at the time of original construction, unless the damage was caused by wind, in which case the wind loads shall be as required by the building code in effect at the time of original construction or as required by this code, whichever are greater. Earthquake loads for this rehabilitation design shall be those required for the design of the pre-damage building, but not less than 75 percent of those prescribed in Section 1613 of the *International Building Code*. New structural members and connections required by this rehabilitation design shall comply with the detailing provisions of this code for new buildings of similar structure, purpose and location.

304.3 Substantial structural damage to gravity load-carrying components. Gravity load-carrying components that have sustained *substantial structural damage* shall be rehabilitated to comply with the applicable provisions of this code for dead and live loads. Snow loads shall be considered if the *substantial structural damage* was caused by or related to snow load effects. Existing gravity load-carrying structural elements shall be permitted to be designed for live loads approved prior to the damage. Nondamaged gravity load-carrying components that receive dead, live or snow loads from rehabilitated components shall also be rehabilitated or shown to have the capacity to carry the design loads of the rehabilitation design. New structural members and connections required by this rehabilitation design shall comply with the detailing provisions of this code for new buildings of similar structure, purpose and location.

304.3.1 Lateral force-resisting elements. Regardless of the level of damage to vertical elements of the lateral force-resisting system, if *substantial structural damage* to gravity load-carrying components was caused primarily by wind or earthquake effects, then the building shall be evaluated in accordance with Section 304.2.1 and, if noncompliant, rehabilitated in accordance with Section 304.2.3.

304.4 Less than substantial structural damage. For damage less than *substantial structural damage*, repairs shall be allowed that restore the building to its pre-damage state using materials and strengths that existed prior to the damage. New structural members and connections used for this *repair* shall comply with the detailing provisions of this code for new buildings of similar structure, purpose and location.

304.5 Flood hazard areas. For buildings and structures in flood hazard areas established in Section 1612.3 of the *International Building Code*,

tional Building Code, any repair that constitutes *substantial improvement* of the existing structure, as defined in Section 1612.2 of the *International Building Code*, shall comply with the flood design requirements for new construction, and all aspects of the existing structure shall be brought into compliance with the requirements for new construction for flood design.

For buildings and structures in flood hazard areas established in Section 1612.3 of the *International Building Code*, any repairs that do not constitute *substantial improvement* or *substantial damage* of the existing structure, as defined in Section 1612.2 of the *International Building Code*, are not required to comply with the flood design requirements for new construction.

SECTION 305 FIRE ESCAPES

305.1 Where permitted. Fire escapes shall be permitted only as provided for in Sections 305.1.1 through 305.1.4.

305.1.1 New buildings. Fire escapes shall not constitute any part of the required means of egress in new buildings.

305.1.2 Existing fire escapes. Existing fire escapes shall continue to be accepted as a component in the means of egress in existing buildings only.

305.1.3 New fire escapes. New fire escapes for existing buildings shall be permitted only where exterior stairs cannot be utilized due to lot lines limiting stair size or due to the sidewalks, alleys or roads at grade level. New fire escapes shall not incorporate ladders or access by windows.

305.1.4 Limitations. Fire escapes shall comply with this section and shall not constitute more than 50 percent of the required number of exits nor more than 50 percent of the required exit capacity.

305.2 Location. Where located on the front of the building and where projecting beyond the building line, the lowest landing shall not be less than 7 feet (2134 mm) or more than 12 feet (3658 mm) above grade, and shall be equipped with a counter-balanced stairway to the street. In alleyways and thoroughfares less than 30 feet (9144 mm) wide, the clearance under the lowest landing shall not be less than 12 feet (3658 mm).

305.3 Construction. The fire escape shall be designed to support a live load of 100 pounds per square foot (4788 Pa) and shall be constructed of steel or other approved noncombustible materials. Fire escapes constructed of wood not less than nominal 2 inches (51 mm) thick are permitted on buildings of Type 5 construction. Walkways and railings located over or supported by combustible roofs in buildings of Type 3 and 4 construction are permitted to be of wood not less than nominal 2 inches (51 mm) thick.

305.4 Dimensions. Stairs shall be at least 22 inches (559 mm) wide with risers not more than, and treads not less than, 8 inches (203 mm) and landings at the foot of stairs not less than 40 inches (1016 mm) wide by 36 inches (914 mm) long, located not more than 8 inches (203 mm) below the door.

305.5 Opening protectives. Doors and windows along the fire escape shall be protected with $\frac{3}{4}$ -hour opening protectives.

SECTION 306 GLASS REPLACEMENT

306.1 Conformance. The installation or replacement of glass shall be as required for new installations.

SECTION 307 CHANGE OF OCCUPANCY

[B] 307.1 Conformance. No change shall be made in the use or occupancy of any building that would place the building in a different division of the same group of occupancy or in a different group of occupancies, unless such building is made to comply with the requirements of this code for such division or group of occupancy. Subject to the approval of the building official, the use or occupancy of existing buildings shall be permitted to be changed and the building is allowed to be occupied for purposes in other groups without conforming to all the requirements of this code for those groups, provided the new or proposed use is less hazardous, based on life and fire risk, than the existing use.

[B] 307.2 Certificate of occupancy. A certificate of occupancy shall be issued where it has been determined that the requirements for the new occupancy classification have been met.

[B] 307.3 Stairways. Existing stairways in an existing structure shall not be required to comply with the requirements of a new stairway as outlined in Section 1009 of the *International Building Code* where the existing space and construction will not allow a reduction in pitch or slope.

[B] 307.4 Structural. When a *change of occupancy* results in a structure being reclassified to a higher occupancy category, the structure shall conform to the seismic requirements for a new structure of the higher occupancy category. Where the existing seismic force-resisting system is a type that can be designated ordinary, values of R , Ω_0 and C_d for the existing seismic force-resisting system shall be those specified by this code for an ordinary system unless it is demonstrated that the existing system will provide performance equivalent to that of a detailed, intermediate or special system.

Exceptions:

1. Specific seismic detailing requirements of this code or Section 1613 of the *International Building Code* for a new structure shall not be required to be met where it can be shown that the level of performance and seismic safety is equivalent to that of a new structure. Such analysis shall consider the regularity, over strength, redundancy and ductility of the structure within the context of the existing and retrofit (if any) detailing provided.
2. When a change of use results in a structure being reclassified from Occupancy Category I or II to Occupancy Category III and the structure is located in a seismic map area where $S_{DS} < 0.31$, compliance with

the seismic requirements of this code and Section 1613 of the *International Building Code* is not required.

[EC] 307.5 Energy. Buildings undergoing a change in occupancy that would result in an increase in demand for either fossil fuel or electrical energy shall comply with the *International Energy Conservation Code*.

307.6 Electrical. It shall be unlawful to make a change in the occupancy of a structure that will subject the structure to the special provisions of the *International Building Code* related to electrical installations applicable to the new occupancy without approval. The *code official* shall certify that the structure meets the intent of the provisions of law governing building construction for the proposed new occupancy and that such *change of occupancy* does not result in any hazard to the public health, safety or welfare.

[FG] 307.7 Fuel gas. It shall be unlawful to make a change in the occupancy of a structure that will subject the structure to the special provisions of the *International Fuel Gas Code* applicable to the new occupancy without approval. The *code official* shall certify that the structure meets the intent of the provisions of law governing building construction for the proposed new occupancy and that such *change of occupancy* does not result in any hazard to the public health, safety or welfare.

[M] 307.8 Mechanical. It shall be unlawful to make a change in the occupancy of a structure that will subject the structure to the special provisions of the *International Mechanical Code* applicable to the new occupancy without approval. The *code official* shall certify that the structure meets the intent of the provisions of law governing building construction for the proposed new occupancy and that such *change of occupancy* does not result in any hazard to the public health, safety or welfare.

[P] 307.9 Plumbing. It shall be unlawful to make a change in the occupancy of a structure that will subject the structure to the special provisions of the *International Plumbing Code* applicable to the new occupancy without approval. The *code official* shall certify that the structure meets the intent of the provisions of law governing building construction for the proposed new occupancy and that such *change of occupancy* does not result in any hazard to the public health, safety or welfare.

[B] SECTION 308 HISTORIC BUILDINGS

308.1 Historic buildings. The provisions of this code relating to the construction, *repair*, *alteration*, *addition*, restoration and movement of structures, and *change of occupancy* shall not be mandatory for historic buildings where such buildings are judged by the building official to not constitute a distinct life safety hazard.

308.2 Flood hazard areas. Within flood hazard areas established in accordance with Section 1612.3 of the *International Building Code*, where the work proposed constitutes *substantial improvement* as defined in Section 1612.2 of the *International Building Code*, the building shall be brought into

conformance with Section 1612 of the *International Building Code*.

Exception: Historic buildings that are:

1. Listed or preliminarily determined to be eligible for listing in the National Register of Historic Places;
2. Determined by the Secretary of the U.S. Department of Interior as contributing to the historical significance of a registered historic district or a district preliminarily determined to qualify as an historic district; or
3. Designated as historic under a state or local historic preservation program that is approved by the Department of Interior.

[B] SECTION 309 MOVED STRUCTURES

309.1 Conformance. Structures moved into or within the jurisdiction shall comply with the provisions of this code for new structures.

[B] SECTION 310 ACCESSIBILITY FOR EXISTING BUILDINGS

310.1 Scope. The provisions of Sections 310.1 through 310.9 apply to maintenance, *change of occupancy*, *additions* and alterations to existing buildings, including those identified as historic buildings.

Exception: Type B dwelling or sleeping units required by Section 1107 of the *International Building Code* are not required to be provided in existing buildings and facilities being altered or undergoing a *change of occupancy*.

310.2 Maintenance of facilities. A building, facility or element that is constructed or altered to be accessible shall be maintained accessible during occupancy.

310.3 Extent of application. An *alteration* of an existing element, space or area of a building or facility shall not impose a requirement for greater accessibility than that which would be required for new construction.

Alterations shall not reduce or have the effect of reducing accessibility of a building, portion of a building or facility.

310.4 Change of occupancy. Existing buildings that undergo a change of group or occupancy shall comply with this section.

310.4.1 Partial change in occupancy. Where a portion of the building is changed to a new occupancy classification, any alterations shall comply with Sections 310.6, 310.7 and 310.8.

310.4.2 Complete change of occupancy. Where an entire building undergoes a *change of occupancy*, it shall comply with Section 310.4.1 and shall have all of the following accessible features:

1. At least one accessible building entrance.

2. At least one accessible route from an accessible building entrance to *primary function* areas.
3. Signage complying with Section 1110 of the *International Building Code*.
4. Accessible parking, where parking is being provided.
5. At least one accessible passenger loading zone, when loading zones are provided.
6. At least one accessible route connecting accessible parking and accessible passenger loading zones to an accessible entrance.

Where it is *technically infeasible* to comply with the new construction standards for any of these requirements for a change of group or occupancy, the above items shall conform to the requirements to the maximum extent technically feasible.

310.5 Additions. Provisions for new construction shall apply to *additions*. An *addition* that affects the accessibility to, or contains an area of, a *primary function* shall comply with the requirements in Section 310.7.

310.6 Alterations. A building, facility or element that is altered shall comply with the applicable provisions in Chapter 11 of the *International Building Code* and ICC A117.1, unless *technically infeasible*. Where compliance with this section is *technically infeasible*, the *alteration* shall provide access to the maximum extent technically feasible.

Exceptions:

1. The altered element or space is not required to be on an accessible route, unless required by Section 310.7.
2. Accessible means of egress required by Chapter 10 of the *International Building Code* are not required to be provided in existing buildings and facilities.
3. The *alteration* to Type A individually owned dwelling units within a Group R-2 occupancy shall meet the provision for a Type B dwelling unit and shall comply with the applicable provisions in Chapter 11 of the *International Building Code* and ICC A117.1.

310.7 Alterations affecting an area containing a primary function. Where an *alteration* affects the accessibility to, or contains an area of, a *primary function*, the route to the *primary function* area shall be accessible. The accessible route to the *primary function* area shall include toilet facilities or drinking fountains serving the area of *primary function*.

Exceptions:

1. The costs of providing the accessible route are not required to exceed 20 percent of the costs of the alterations affecting the area of *primary function*.
2. This provision does not apply to alterations limited solely to windows, hardware, operating controls, electrical outlets and signs.
3. This provision does not apply to alterations limited solely to mechanical systems, electrical systems, installation or *alteration* of fire protection systems and abatement of hazardous materials.

4. This provision does not apply to alterations undertaken for the primary purpose of increasing the accessibility of an *existing building*, facility or element.

310.8 Scoping for alterations. The provisions of Sections 310.8.1 through 310.8.12 shall apply to alterations to existing buildings and facilities.

310.8.1 Entrances. Accessible entrances shall be provided in accordance with Section 1105 of the *International Building Code*.

Exception: Where an *alteration* includes alterations to an entrance, and the building or facility has an accessible entrance, the altered entrance is not required to be accessible, unless required by Section 310.7. Signs complying with Section 1110 of the *International Building Code* shall be provided.

310.8.2 Elevators. Altered elements of existing elevators shall comply with ASME A17.1 and ICC A117.1. Such elements shall also be altered in elevators programmed to respond to the same hall call control as the altered elevator.

310.8.3 Platform lifts. Platform (wheelchair) lifts complying with ICC A117.1 and installed in accordance with ASME A18.1 shall be permitted as a component of an accessible route.

310.8.4 Stairs and escalators in existing buildings. In *alterations*, *change of occupancy* or *additions* where an escalator or stair is added where none existed previously and major structural modifications are necessary for installation, an accessible route shall be provided between the levels served by the escalator or stairs in accordance with Sections 1104.4 and 1104.5 of the *International Building Code*.

310.8.5 Ramps. Where steeper slopes than allowed by Section 1010.2 of the *International Building Code* are necessitated by space limitations, the slope of ramps in or providing access to existing buildings or facilities shall comply with Table 310.8.5.

**TABLE 310.8.5
RAMPS**

SLOPE	MAXIMUM RISE
Steeper than 1:10 but not steeper than 1:8	3 inches
Steeper than 1:12 but not steeper than 1:10	6 inches

For SI: 1 inch = 25.4 mm.

310.8.6 Performance areas. Where it is *technically infeasible* to alter performance areas to be on an accessible route, at least one of each type of performance area shall be made accessible.

310.8.7 Accessible dwelling or sleeping units. Where Group I-1, I-2, I-3, R-1, R-2 or R-4 dwelling or sleeping units are being altered or added, the requirements of Section 1107 of the *International Building Code* for Accessible units apply only to the quantity of spaces being altered or added.

310.8.8 Type A dwelling or sleeping units. Where more than 20 Group R-2 dwelling or sleeping units are being added, the requirements of Section 1107 of the *International Building Code* for Type A units apply only to the quantity of spaces being altered or added.

tional Building Code for Type A units apply only to the quantity of the spaces being added.

310.8.9 Type B dwelling or sleeping units. Where four or more Group I-1, I-2, R-1, R-2, R-3 or R-4 dwelling or sleeping units are being added, the requirements Section 1107 of the *International Building Code* for Type B units apply only to the quantity of the spaces being added.

310.8.10 Jury boxes and witness stands. In alterations, accessible wheelchair spaces are not required to be located within the defined area of raised jury boxes or witness stands and shall be permitted to be located outside these spaces where the ramp or lift access restricts or projects into the means of egress.

310.8.11 Toilet rooms. Where it is *technically infeasible* to alter existing toilet and bathing facilities to be accessible, an accessible family or assisted-use toilet or bathing facility constructed in accordance with Section 1109.2.1 of the *International Building Code* is permitted. The family or assisted-use facility shall be located on the same floor and in the same area as the existing facilities.

310.8.12 Dressing, fitting and locker rooms. Where it is *technically infeasible* to provide accessible dressing, fitting or locker rooms at the same location as similar types of rooms, one accessible room on the same level shall be provided. Where separate-sex facilities are provided, accessible rooms for each sex shall be provided. Separate-sex facilities are not required where only unisex rooms are provided.

310.8.13 Fuel dispensers. Operable parts of replacement fuel dispensers shall be permitted to be 54 inches (1370 mm) maximum, measuring from the surface of the vehicular way where fuel dispensers are installed on existing curbs.

310.8.14 Thresholds. The maximum height of thresholds at doorways shall be $\frac{3}{4}$ inch (19.1 mm). Such thresholds shall have beveled edges on each side.

310.9 Historic buildings. These provisions shall apply to buildings and facilities designated as historic structures that undergo alterations or a *change of occupancy*, unless *technically infeasible*. Where compliance with the requirements for accessible routes, entrances or toilet facilities would threaten or destroy the historic significance of the building or facility, as determined by the applicable governing authority, the alternative requirements of Sections 310.9.1 through 310.9.4 for that element shall be permitted.

310.9.1 Site arrival points. At least one accessible route from a site arrival point to an accessible entrance shall be provided.

310.9.2 Multilevel buildings and facilities. An accessible route from an accessible entrance to public spaces on the level of the accessible entrance shall be provided.

310.9.3 Entrances. At least one main entrance shall be accessible.

Exceptions:

1. If a main entrance cannot be made accessible, an accessible nonpublic entrance that is unlocked while the building is occupied shall be provided; or
2. If a main entrance cannot be made accessible, a locked accessible entrance with a notification system or remote monitoring shall be provided.

Signs complying with Section 1110 of the *International Building Code* shall be provided at the primary entrance and the accessible entrance.

310.9.4 Toilet and bathing facilities. Where toilet rooms are provided, at least one accessible family or assisted-use toilet room complying with Section 1109.2.1 of the *International Building Code* shall be provided.

CHAPTER 4

CLASSIFICATION OF WORK

SECTION 401 GENERAL

401.1 Scope. The provisions of this chapter shall be used in conjunction with Chapters 5 through 12 and shall apply to the *alteration, repair, addition and change of occupancy* of existing structures, including historic and moved structures, as referenced in Section 101.5.2. The work performed on an *existing building* shall be classified in accordance with this chapter.

401.1.1 Compliance with other alternatives. *Alterations, repairs, additions* and changes of occupancy to existing structures shall comply with the provisions of Chapters 4 through 12 or with one of the alternatives provided in Section 101.5.

401.2 Work area. The *work area*, as defined in Chapter 2, shall be identified on the construction documents.

401.3 Occupancy and use. When determining the appropriate application of the referenced sections of this code, the occupancy and use of a building shall be determined in accordance with Chapter 3 of the *International Building Code*.

SECTION 402 REPAIRS

402.1 Scope. *Repairs*, as defined in Chapter 2, include the patching or restoration or replacement of damaged materials, elements, equipment or fixtures for the purpose of maintaining such components in good or sound condition with respect to existing loads or performance requirements.

402.2 Application. *Repairs* shall comply with the provisions of Chapter 5.

402.3 Related work. Work on nondamaged components that is necessary for the required *repair* of damaged components shall be considered part of the *repair* and shall not be subject to the provisions of Chapter 6, 7, 8, 9 or 10.

SECTION 403 ALTERATION—LEVEL 1

403.1 Scope. Level 1 alterations include the removal and replacement or the covering of existing materials, elements, equipment, or fixtures using new materials, elements, equipment, or fixtures that serve the same purpose.

403.2 Application. Level 1 *alterations* shall comply with the provisions of Chapter 6.

SECTION 404 ALTERATION—LEVEL 2

404.1 Scope. Level 2 *alterations* include the reconfiguration of space, the *addition* or elimination of any door or window, the

reconfiguration or extension of any system, or the installation of any additional equipment.

404.2 Application. Level 2 alterations shall comply with the provisions of Chapter 6 for Level 1 *alterations* as well as the provisions of Chapter 7.

SECTION 405 ALTERATION—LEVEL 3

405.1 Scope. Level 3 *alterations* apply where the *work area* exceeds 50 percent of the aggregate area of the building.

405.2 Application. Level 3 alterations shall comply with the provisions of Chapters 6 and 7 for Level 1 and 2 *alterations*, respectively, as well as the provisions of Chapter 8.

SECTION 406 CHANGE OF OCCUPANCY

406.1 Scope. *Change of occupancy* provisions apply where the activity is classified as a *change of occupancy* as defined in Chapter 2.

406.2 Application. Changes of occupancy shall comply with the provisions of Chapter 9.

SECTION 407 ADDITIONS

407.1 Scope. Provisions for *additions* shall apply where work is classified as an *addition* as defined in Chapter 2.

407.2 Application. *Additions* to existing buildings shall comply with the provisions of Chapter 10.

SECTION 408 HISTORIC BUILDINGS

408.1 Scope. Historic buildings provisions shall apply to buildings classified as historic as defined in Chapter 2.

408.2 Application. Except as specifically provided for in Chapter 11, historic buildings shall comply with applicable provisions of this code for the type of work being performed.

SECTION 409 RELOCATED BUILDINGS

409.1 Scope. Relocated buildings provisions shall apply to relocated or moved buildings.

409.2 Application. Relocated buildings shall comply with the provisions of Chapter 12.

CHAPTER 5 REPAIRS

SECTION 501 GENERAL

501.1 Scope. Repairs as described in Section 402 shall comply with the requirements of this chapter. Repairs to historic buildings shall comply with this chapter, except as modified in Chapter 11.

501.2 Conformance. The work shall not make the building less conforming than it was before the *repair* was undertaken.

501.3 Flood hazard areas. In flood hazard areas, repairs that constitute *substantial improvement* shall require that the building comply with Section 1612 of the *International Building Code*.

SECTION 502 BUILDING ELEMENTS AND MATERIALS

502.1 Existing building materials. Materials already in use in a building in conformance with requirements or approvals in effect at the time of their erection or installation shall be permitted to remain in use unless determined by the *code official* to render the building or structure unsafe or *dangerous* as defined in Chapter 2.

502.2 New and replacement materials. Except as otherwise required or permitted by this code, materials permitted by the applicable code for new construction shall be used. Like materials shall be permitted for repairs and alterations, provided no *dangerous* or *unsafe* condition, as defined in Chapter 2, is created. Hazardous materials, such as asbestos and lead-based paint, shall not be used where the code for new construction would not permit their use in buildings of similar occupancy, purpose and location.

502.3 Glazing in hazardous locations. Replacement glazing in hazardous locations shall comply with the safety glazing requirements of the *International Building Code* or *International Residential Code* as applicable.

Exception: Glass block walls, louvered windows, and jalousies repaired with like materials.

SECTION 503 FIRE PROTECTION

503.1 General. Repairs shall be done in a manner that maintains the level of fire protection provided.

SECTION 504 MEANS OF EGRESS

504.1 General. Repairs shall be done in a manner that maintains the level of protection provided for the means of egress.

SECTION 505 ACCESSIBILITY

505.1 General. Repairs shall be done in a manner that maintains the level of accessibility provided.

SECTION 506 STRUCTURAL

506.1 General. Structural repairs shall be in compliance with this section and Section 501.2. Regardless of the extent of structural or nonstructural damage, *dangerous* conditions shall be eliminated. Regardless of the scope of *repair*, new structural members and connections used for *repair* or rehabilitation shall comply with the detailing provisions of the *International Building Code* for new buildings of similar structure, purpose and location.

506.2 Repairs to damaged buildings. Repairs to damaged buildings shall comply with this section.

506.2.1 Repairs for less than substantial structural damage. For damage less than *substantial structural damage*, the damaged elements shall be permitted to be restored to their predamage condition.

506.2.2 Repairs for substantial structural damage to vertical elements of the lateral-force-resisting system. A building that has sustained *substantial structural damage* to the vertical elements of its lateral-force-resisting system shall be evaluated in accordance with Section 506.2.2.1, and either repaired in accordance with Section 506.2.2.2 or repaired and rehabilitated in accordance with Section 506.2.2.3 depending on the results of the evaluation.

506.2.2.1 Evaluation. The building shall be evaluated by a registered design professional, and the evaluation findings shall be submitted to the *code official*. The evaluation shall establish whether the damaged building, if repaired to its predamaged state, would comply with the provisions of the *International Building Code*, except that the seismic design criteria shall be the reduced IBC level seismic forces specified in Section 101.5.4.2.

506.2.2.2 Extent of repair for compliant buildings. If the evaluation establishes that the building in its predamage condition complies with the provisions of Section 506.2.2.1, then the damaged elements shall be permitted to be restored to their predamage condition.

506.2.2.3 Extent of repair for noncompliant buildings. If the evaluation does not establish that the building in its predamage condition complies with the provisions of Section 506.2.2.1, then the building shall be rehabilitated to comply with the provisions of this section. The wind load for the *repair* and rehabilitation shall be those required by the building code in effect at the time of original construction, unless the damage was caused by wind, in which case the wind loads shall be in accordance

with the *International Building Code*. The seismic loads for this rehabilitation design shall be those required by the building code in effect at the time of original construction, but not less than the reduced-level seismic forces specified in Section 101.5.4.2.

506.2.3 Substantial structural damage to gravity load-carrying components. Gravity load-carrying components that have sustained *substantial structural damage* shall be rehabilitated to comply with the applicable provisions for dead and live loads in the *International Building Code*. Snow loads shall be considered if the *substantial structural damage* was caused by or related to snow load effects. Undamaged gravity load-carrying components that receive dead, live or snow loads from rehabilitated components shall also be rehabilitated if required to comply with the design loads of the rehabilitation design.

506.2.3.1 Lateral-force-resisting elements. Regardless of the level of damage to gravity elements of the lateral-force-resisting system, if substantial structural damage gravity load-carrying components was caused primarily by wind or seismic effects, then the building shall be evaluated in accordance with Section 506.2.2.1 and, if noncompliant, rehabilitated in accordance with Section 506.2.2.3.

506.2.4 Flood hazard areas. In flood hazard areas, buildings that have sustained *substantial damage* shall be brought into compliance with Section 1612 of the *International Building Code*.

SECTION 507 ELECTRICAL

507.1 Material. Existing electrical wiring and equipment undergoing *repair* shall be allowed to be repaired or replaced with like material.

507.1.1 Receptacles. Replacement of electrical receptacles shall comply with the applicable requirements of Section 406.3(D) of NFPA 70.

507.1.2 Plug fuses. Plug fuses of the Edison-base type shall be used for replacements only where there is no evidence of over fusing or tampering per applicable requirements of Section 240.51(B) of NFPA 70.

507.1.3 Nongrounding-type receptacles. For replacement of nongrounding-type receptacles with grounding-type receptacles and for branch circuits that do not have an equipment grounding conductor in the branch circuitry, the grounding conductor of a grounding-type receptacle outlet shall be permitted to be grounded to any accessible point on the grounding electrode system or to any accessible point on the grounding electrode conductor in accordance with Section 250.130(C) of NFPA 70.

507.1.4 Group I-2 receptacles. Non-“hospital grade” receptacles in patient bed locations of Group I-2 shall be replaced with “hospital grade” receptacles, as required by NFPA 99 and Article 517 of NFPA 70.

507.1.5 Grounding of appliances. Frames of electric ranges, wall-mounted ovens, counter-mounted cooking

units, clothes dryers and outlet or junction boxes that are part of the existing branch circuit for these appliances shall be permitted to be grounded to the grounded circuit conductor in accordance with Section 250.140 of NFPA 70.

SECTION 508 MECHANICAL

508.1 General. Existing mechanical systems undergoing *repair* shall not make the building less conforming than it was before the *repair* was undertaken.

508.2 Mechanical draft systems for manually fired appliances and fireplaces. A mechanical draft system shall be permitted to be used with manually fired appliances and fireplaces where such a system complies with all of the following requirements:

1. The mechanical draft device shall be listed and installed in accordance with the manufacturer’s installation instructions.
2. A device shall be installed that produces visible and audible warning upon failure of the mechanical draft device or loss of electrical power at any time that the mechanical draft device is turned on. This device shall be equipped with a battery backup if it receives power from the building wiring.
3. A smoke detector shall be installed in the room with the appliance or fireplace. This device shall be equipped with a battery backup if it receives power from the building wiring.

SECTION 509 PLUMBING

509.1 Materials. Plumbing materials and supplies shall not be used for repairs that are prohibited in the *International Plumbing Code*.

509.2 Water closet replacement. The maximum water consumption flow rates and quantities for all replaced water closets shall be 1.6 gallons (6 L) per flushing cycle.

Exception: Blowout-design water closets [3.5 gallons (13 L) per flushing cycle].

CHAPTER 6

ALTERATIONS—LEVEL 1

SECTION 601 GENERAL

601.1 Scope. Level 1 alterations as described in Section 403 shall comply with the requirements of this chapter. Level 1 alterations to historic buildings shall comply with this chapter, except as modified in Chapter 11.

601.2 Conformance. An *existing building* or portion thereof shall not be altered such that the building becomes less safe than its existing condition.

Exception: Where the current level of safety or sanitation is proposed to be reduced, the portion altered shall conform to the requirements of the *International Building Code*.

601.3 Flood hazard areas. In flood hazard areas, alterations that constitute *substantial improvement* shall require that the building comply with Section 1612 of the *International Building Code*.

SECTION 602 BUILDING ELEMENTS AND MATERIALS

602.1 Interior finishes. All newly installed interior wall and ceiling finishes shall comply with Chapter 8 of the *International Building Code*.

602.2 Interior floor finish. New interior floor finish, including new carpeting used as an interior floor finish material, shall comply with Section 804 of the *International Building Code*.

602.3 Interior trim. All newly installed interior trim materials shall comply with Section 806 of the *International Building Code*.

602.4 Materials and methods. All new work shall comply with materials and methods requirements in the *International Building Code*, *International Energy Conservation Code*, *International Mechanical Code*, and *International Plumbing Code*, as applicable, that specify material standards, detail of installation and connection, joints, penetrations, and continuity of any element, component, or system in the building.

[FG] 602.4.1 International Fuel Gas Code. The following sections of the *International Fuel Gas Code* shall constitute the fuel gas materials and methods requirements for Level 1 alterations.

1. All of Chapter 3, entitled “General Regulations,” except Sections 303.7 and 306.
2. All of Chapter 4, entitled “Gas Piping Installations,” except Sections 401.8 and 402.3.

- 2.1. Sections 401.8 and 402.3 shall apply when the work being performed increases the load on the system such that the existing pipe does not meet the size required by code. Existing systems that are modified shall not require resizing as long as the load on the system is

not increased and the system length is not increased even if the altered system does not meet code minimums.

3. All of Chapter 5, entitled “Chimneys and Vents.”
4. All of Chapter 6, entitled “Specific Appliances.”

SECTION 603 FIRE PROTECTION

603.1 General. Alterations shall be done in a manner that maintains the level of fire protection provided.

SECTION 604 MEANS OF EGRESS

604.1 General. Repairs shall be done in a manner that maintains the level of protection provided for the means of egress.

SECTION 605 ACCESSIBILITY

605.1 General. A building, facility or element that is altered shall comply with the applicable provisions in Sections 605.1.1 through 605.1.14, Chapter 11 of the *International Building Code* and ICC A117.1 unless it is *technically infeasible*. Where compliance with this section is *technically infeasible*, the *alteration* shall provide access to the maximum extent that is technically feasible.

A building, facility or element that is constructed or altered to be accessible shall be maintained accessible during occupancy.

Exceptions:

1. The altered element or space is not required to be on an accessible route unless required by Section 605.2.
2. Accessible means of egress required by Chapter 10 of the *International Building Code* are not required to be provided in existing buildings and facilities.
3. Type B dwelling or sleeping units required by Section 1107 of the *International Building Code* are not required to be provided in existing buildings and facilities.
4. The *alteration* to Type A individually owned dwelling units within a Group R-2 occupancy shall meet the provisions for Type B dwelling units and shall comply with the applicable provisions in Chapter 11 of the *International Building Code* and ICC A117.1.

605.1.1 Entrances. Where an *alteration* includes alterations to an entrance, and the building or facility has an accessible entrance on an accessible route, the altered entrance is not required to be accessible unless required by

Section 605.2. Signs complying with Section 1110 of the *International Building Code* shall be provided.

605.1.2 Elevators. Altered elements of existing elevators shall comply with ASME A17.1 and ICC A117.1. Such elements shall also be altered in elevators programmed to respond to the same hall call control as the altered elevator.

605.1.3 Platform lifts. Platform (wheelchair) lifts complying with ICC A117.1 and installed in accordance with ASME A18.1 shall be permitted as a component of an accessible route.

605.1.4 Ramps. Where steeper slopes than allowed by Section 1010.2 of the *International Building Code* are necessitated by space limitations, the slope of ramps in or providing access to existing buildings or facilities shall comply with Table 605.1.4.

**TABLE 605.1.4
RAMPS**

SLOPE	MAXIMUM RISE
Steeper than 1:10 but not steeper than 1:8	3 inches
Steeper than 1:12 but not steeper than 1:10	6 inches

For SI: 1 inch = 25.4 mm.

605.1.5 Dining areas. An accessible route to raised or sunken dining areas or to outdoor seating areas is not required provided that the same services and decor are provided in an accessible space usable by any occupant and not restricted to use by people with a disability.

605.1.6 Performance areas. Where it is *technically infeasible* to alter performance areas to be on an accessible route, at least one of each type of performance area shall be made accessible.

605.1.7 Jury boxes and witness stands. In alterations, accessible wheelchair spaces are not required to be located within the defined area of raised jury boxes or witness stands and shall be permitted to be located outside these spaces where ramp or lift access poses a hazard by restricting or projecting into a required means of egress.

605.1.8 Accessible dwelling or sleeping units. Where Group I-1, I-2, I-3, R-1, R-2 or R-4 dwelling or sleeping units are being altered, the requirements of Section 1107 of the *International Building Code* for accessible units and Chapter 9 of the *International Building Code* for visible alarms apply only to the quantity of the spaces being altered.

605.1.9 Type A dwelling or sleeping units. Where more than 20 Group R-2 dwelling or sleeping units are being altered, the requirements of Section 1107 of the *International Building Code* for Type A units and Chapter 9 of the *International Building Code* for visible alarms apply only to the quantity of the spaces being altered.

605.1.10 Toilet rooms. Where it is *technically infeasible* to alter existing toilet and bathing facilities to be accessible, an accessible family or assisted-use toilet or bathing facility constructed in accordance with Section 1109.2.1 of the *International Building Code* is permitted. The family or

assisted-use facility shall be located on the same floor and in the same area as the existing facilities.

605.1.11 Dressing, fitting and locker rooms. Where it is *technically infeasible* to provide accessible dressing, fitting, or locker rooms at the same location as similar types of rooms, one accessible room on the same level shall be provided. Where separate sex facilities are provided, accessible rooms for each sex shall be provided. Separate sex facilities are not required where only unisex rooms are provided.

605.1.12 Fuel dispensers. Operable parts of replacement fuel dispensers shall be permitted to be 54 inches (1370 mm) maximum measured from the surface of the vehicular way where fuel dispensers are installed on existing curbs.

605.1.13 Thresholds. The maximum height of thresholds at doorways shall be $\frac{3}{4}$ inch (19.1 mm). Such thresholds shall have beveled edges on each side.

605.1.14 Extent of application. An *alteration* of an existing element, space, or area of a building or facility shall not impose a requirement for greater accessibility than that which would be required for new construction. Alterations shall not reduce or have the effect of reducing accessibility of a building, portion of a building, or facility.

605.2 Alterations affecting an area containing a primary function. Where an *alteration* affects the accessibility to a, or contains an area of, *primary function*, the route to the *primary function* area shall be accessible. The accessible route to the *primary function* area shall include toilet facilities or drinking fountains serving the area of *primary function*.

Exceptions:

1. The costs of providing the accessible route are not required to exceed 20 percent of the costs of the alterations affecting the area of *primary function*.
2. This provision does not apply to alterations limited solely to windows, hardware, operating controls, electrical outlets and signs.
3. This provision does not apply to alterations limited solely to mechanical systems, electrical systems, installation or *alteration* of fire protection systems and abatement of hazardous materials.
4. This provision does not apply to alterations undertaken for the primary purpose of increasing the accessibility of an *existing building*, facility or element.

SECTION 606 STRUCTURAL

606.1 General. Where alteration work includes replacement of equipment that is supported by the building or where a reroofing permit is required, the provisions of this section shall apply.

606.2 Addition or replacement of roofing or replacement of equipment. Where addition or replacement of roofing or replacement of equipment results in additional dead loads, structural components supporting such reproofing or equip-

ment shall comply with the gravity load requirements of the *International Building Code*.

Exceptions:

1. Structural elements where the additional dead load from the roofing or equipment is not increased by more than 5 percent.
2. Buildings constructed in accordance with the *International Residential Code* or the conventional light-frame construction methods of the *International Building Code* and where the additional dead load from the roofing or equipment is not increased by more than 5 percent.
3. Addition of a second layer of roof covering weighing 3 pounds per square foot (0.1437 kN/m²) or less over an existing, single layer of roof covering.

606.2.1 Wall anchors for concrete and masonry buildings. Where a permit is issued for reroofing more than 25 percent of the roof area of a building assigned to Seismic Design Category D, E or F with a structural system consisting of concrete or reinforced masonry walls with a flexible roof diaphragm or unreinforced masonry walls with any type of roof diaphragms, the work shall include installation of wall anchors at the roof line to resist the reduced *International Building Code* level seismic forces as specified in Section 101.5.4.2 of this code and design procedures of Section 101.5.4, unless an evaluation demonstrates compliance of existing wall anchorage.

606.3 Additional requirements for reroof permits. The requirements of this section shall apply to *alteration* work requiring reroof permits.

606.3.1 Bracing for unreinforced masonry bearing wall parapets. Where a permit is issued for reroofing for more than 25 percent of the roof area of a building assigned to Seismic Design Category D, E or F that has parapets constructed of unreinforced masonry, the work shall include installation of parapet bracing to resist the reduced *International Building Code* level seismic forces as specified in Section 101.5.4.2 of this code, unless an evaluation demonstrates compliance of such items.

606.3.2 Roof diaphragms resisting wind loads in high-wind regions. Where roofing materials are removed from more than 50 percent of the roof diaphragm of a building or section of a building located where the basic wind speed is greater than 90 mph or in a special wind region, as defined in Section 1609 of the *International Building Code*, roof diaphragms and connections that are part of the main wind-force resisting system shall be evaluated for the wind loads specified in the *International Building Code*, including wind uplift. If the diaphragms and connections in their current condition do not comply with those wind provisions, they shall be replaced or strengthened in accordance with the loads specified in the *International Building Code*.

SECTION 607 ENERGY CONSERVATION

607.1 Minimum requirements. Level 1 alterations to existing buildings or structures are permitted without requiring the entire building or structure to comply with the energy requirements of the *International Energy Conservation Code* or *International Residential Code*. The alterations shall conform to the energy requirements of the *International Energy Conservation Code* or *International Residential Code* as they relate to new construction only.

CHAPTER 7

ALTERATIONS—LEVEL 2

SECTION 701 GENERAL

701.1 Scope. Level 2 *alterations* as described in Section 404 shall comply with the requirements of this chapter.

Exception: Buildings in which the reconfiguration is exclusively the result of compliance with the accessibility requirements of Section 605.2 shall be permitted to comply with Chapter 6.

701.2 Alteration Level 1 compliance. In addition to the requirements of this chapter, all work shall comply with the requirements of Chapter 6.

701.3 Compliance. All new construction elements, components, systems, and spaces shall comply with the requirements of the *International Building Code*.

Exceptions:

1. Windows may be added without requiring compliance with the light and ventilation requirements of the *International Building Code*.
2. Newly installed electrical equipment shall comply with the requirements of Section 708.
3. The length of dead-end corridors in newly constructed spaces shall only be required to comply with the provisions of Section 705.6.
4. The minimum ceiling height of the newly created habitable and occupiable spaces and corridors shall be 7 feet (2134 mm).

SECTION 702 SPECIAL USE AND OCCUPANCY

702.1 General. *Alteration* of buildings classified as special use and occupancy as described in the *International Building Code* shall comply with the requirements of Section 701.1 and the scoping provisions of Chapter 1 where applicable.

SECTION 703 BUILDING ELEMENTS AND MATERIALS

703.1 Scope. The requirements of this section are limited to work areas in which Level 2 *alterations* are being performed, and shall apply beyond the *work area* where specified.

703.2 Vertical openings. Existing vertical openings shall comply with the provisions of Sections 703.2.1, 703.2.2, and 703.2.3.

703.2.1 Existing vertical openings. All existing interior vertical openings connecting two or more floors shall be enclosed with approved assemblies having a fire-resistance

rating of not less than 1 hour with approved opening protectives.

Exceptions:

1. Where vertical opening enclosure is not required by the *International Building Code* or the *International Fire Code*.
2. Interior vertical openings other than stairways may be blocked at the floor and ceiling of the *work area* by installation of not less than 2 inches (51 mm) of solid wood or equivalent construction.
3. The enclosure shall not be required where:
 - 3.1. Connecting the main floor and mezzanines; or
 - 3.2. All of the following conditions are met:
 - 3.2.1. The communicating area has a low hazard occupancy or has a moderate hazard occupancy that is protected throughout by an automatic sprinkler system.
 - 3.2.2. The lowest or next to the lowest level is a street floor.
 - 3.2.3. The entire area is open and unobstructed in a manner such that it may be assumed that a fire in any part of the interconnected spaces will be readily obvious to all of the occupants.
 - 3.2.4. Exit capacity is sufficient to provide egress simultaneously for all the occupants of all levels by considering all areas to be a single floor area for the determination of required exit capacity.
 - 3.2.5. Each floor level, considered separately, has at least one half of its individual required exit capacity provided by an exit or exits leading directly out of that level without having to traverse another communicating floor level or be exposed to the smoke or fire spreading from another communicating floor level.
4. In Group A occupancies, a minimum 30-minute enclosure shall be provided to protect all vertical openings not exceeding three stories.
5. In Group B occupancies, a minimum 30-minute enclosure shall be provided to protect all vertical openings not exceeding three stories. This enclosure shall be provided to protect all vertical openings not exceeding three stories.

sure, or the enclosure specified in Section 703.2.1, shall not be required in the following locations:

- 5.1. Buildings not exceeding 3,000 square feet (279 m²) per floor.
- 5.2. Buildings protected throughout by an approved automatic fire sprinkler system.
6. In Group E occupancies, the enclosure shall not be required for vertical openings not exceeding three stories when the building is protected throughout by an approved automatic fire sprinkler system.
7. In Group F occupancies, the enclosure shall not be required in the following locations:
 - 7.1. Vertical openings not exceeding three stories.
 - 7.2. Special purpose occupancies where necessary for manufacturing operations and direct access is provided to at least one protected stairway.
 - 7.3. Buildings protected throughout by an approved automatic sprinkler system.
8. In Group H occupancies, the enclosure shall not be required for vertical openings not exceeding three stories where necessary for manufacturing operations and every floor level has direct access to at least two remote enclosed stairways or other approved exits.
9. In Group M occupancies, a minimum 30-minute enclosure shall be provided to protect all vertical openings not exceeding three stories. This enclosure, or the enclosure specified in Section 703.2.1, shall not be required in the following locations:
 - 9.1. Openings connecting only two floor levels.
 - 9.2. Occupancies protected throughout by an approved automatic sprinkler system.
10. In Group R-1 occupancies, the enclosure shall not be required for vertical openings not exceeding three stories in the following locations:
 - 10.1. Buildings protected throughout by an approved automatic sprinkler system.
 - 10.2. Buildings with less than 25 dwelling units or sleeping units where every sleeping room above the second floor is provided with direct access to a fire escape or other approved second exit by means of an approved exterior door or window having a sill height of not greater than 44 inches (1118 mm) and where:
 - 10.2.1. Any exit access corridor exceeding 8 feet (2438 mm) in length that serves two

means of egress, one of which is an unprotected vertical opening, shall have at least one of the means of egress separated from the vertical opening by a 1-hour fire barrier; and

- 10.2.2. The building is protected throughout by an automatic fire alarm system, installed and supervised in accordance with the *International Building Code*.
11. In Group R-2 occupancies, a minimum 30-minute enclosure shall be provided to protect all vertical openings not exceeding three stories. This enclosure, or the enclosure specified in Section 703.2.1, shall not be required in the following locations:
 - 11.1. Vertical openings not exceeding two stories with not more than four dwelling units per floor.
 - 11.2. Buildings protected throughout by an approved automatic sprinkler system.
 - 11.3. Buildings with not more than four dwelling units per floor where every sleeping room above the second floor is provided with direct access to a fire escape or other approved second exit by means of an approved exterior door or window having a sill height of not greater than 44 inches (1118 mm) and the building is protected throughout by an automatic fire alarm system complying with Section 704.4.
12. One- and two-family dwellings.
13. Group S occupancies where connecting not more than two floor levels or where connecting not more than three floor levels and the structure is equipped throughout with an approved automatic sprinkler system.
14. Group S occupancies where vertical opening protection is not required for open parking garages and ramps.

703.2.2 Supplemental shaft and floor opening enclosure requirements. Where the *work area* on any floor exceeds 50 percent of that floor area, the enclosure requirements of Section 703.2 shall apply to vertical openings other than stairways throughout the floor.

Exception: Vertical openings located in tenant spaces that are entirely outside the *work area*.

703.2.3 Supplemental stairway enclosure requirements. Where the *work area* on any floor exceeds 50 percent of that floor area, stairways that are part of the means of egress serving the *work area* shall, at a minimum, be enclosed with

smoke-tight construction on the highest *work area* floor and all floors below.

Exception: Where stairway enclosure is not required by the *International Building Code* or the *International Fire Code*.

703.3 Smoke barriers. Smoke barriers in Group I-2 occupancies shall be installed where required by Sections 703.3.1 and 703.3.2.

703.3.1 Compartmentation. Where the *work area* is on a story used for sleeping rooms for more than 30 patients, the story shall be divided into not less than two compartments by smoke barrier walls complying with Section 703.3.2 such that each compartment does not exceed 22,500 square feet (2093 m²), and the travel distance from any point to reach a door in the required smoke barrier shall not exceed 200 feet (60 960 mm).

Exception: Where neither the length nor the width of the smoke compartment exceeds 150 feet (45 720 mm), the travel distance to reach the smoke barrier door shall not be limited.

703.3.2 Fire-resistance rating. The smoke barriers shall be fire-resistance rated for 30 minutes and constructed in accordance with the *International Building Code*.

703.4 Interior finish. The interior finish of walls and ceilings in exits and corridors in any *work area* shall comply with the requirements of the *International Building Code*.

Exception: Existing interior finish materials that do not comply with the interior finish requirements of the *International Building Code* shall be permitted to be treated with an approved fire-retardant coating in accordance with the manufacturer's instructions to achieve the required rating.

703.4.1 Supplemental interior finish requirements. Where the *work area* on any floor exceeds 50 percent of the floor area, Section 703.4 shall also apply to the interior finish in exits and corridors serving the *work area* throughout the floor.

Exception: Interior finish within tenant spaces that are entirely outside the *work area*.

703.5 Guards. The requirements of Sections 703.5.1 and 703.5.2 shall apply in all *work areas*.

703.5.1 Minimum requirement. Every portion of a floor, such as a balcony or a loading dock, that is more than 30 inches (762 mm) above the floor or grade below and is not provided with guards, or those in which the existing guards are judged to be in danger of collapsing, shall be provided with guards.

703.5.2 Design. Where there are no guards or where existing guards must be replaced, the guards shall be designed and installed in accordance with the *International Building Code*.

SECTION 704 FIRE PROTECTION

704.1 Scope. The requirements of this section shall be limited to work areas in which Level 2 alterations are being performed, and where specified they shall apply throughout the floor on which the work areas are located or otherwise beyond the *work area*.

704.1.1 Corridor ratings. Where an approved automatic sprinkler system is installed throughout the story, the required fire-resistance rating for any corridor located on the story shall be permitted to be reduced in accordance with the *International Building Code*. In order to be considered for a corridor rating reduction, such system shall provide coverage for the stairwell landings serving the floor and the intermediate landings immediately below.

704.2 Automatic sprinkler systems. Automatic sprinkler systems shall be provided in accordance with the requirements of Sections 704.2.1 through 704.2.5. Installation requirements shall be in accordance with the *International Building Code*.

704.2.1 High-rise buildings. In high-rise buildings, work areas that have exits or corridors shared by more than one tenant or that have exits or corridors serving an occupant load greater than 30 shall be provided with automatic sprinkler protection in the entire *work area* where the *work area* is located on a floor that has a sufficient sprinkler water supply system from an existing standpipe or a sprinkler riser serving that floor.

704.2.1.1 Supplemental automatic sprinkler system requirements. Where the *work area* on any floor exceeds 50 percent of that floor area, Section 704.2.1 shall apply to the entire floor on which the *work area* is located.

Exception: Tenant spaces that are entirely outside the *work area*.

704.2.2 Groups A, B, E, F-1, H, I, M, R-1, R-2, R-4, S-1 and S-2. In buildings with occupancies in Groups A, B, E, F-1, H, I, M, R-1, R-2, R-4, S-1 and S-2, work areas that have exits or corridors shared by more than one tenant or that have exits or corridors serving an occupant load greater than 30 shall be provided with automatic sprinkler protection where all of the following conditions occur:

1. The *work area* is required to be provided with automatic sprinkler protection in accordance with the *International Building Code* as applicable to new construction;
2. The *work area* exceeds 50 percent of the floor area; and
3. The building has sufficient municipal water supply for design of a fire sprinkler system available to the floor without installation of a new fire pump.

704.2.2.1 Mixed uses. In work areas containing mixed uses, one or more of which requires automatic sprinkler protection in accordance with Section 704.2.2, such protection shall not be required throughout the *work area*.

provided that the uses requiring such protection are separated from those not requiring protection by fire-resistance-rated construction having a minimum 2-hour rating for Group H and a minimum 1-hour rating for all other occupancy groups.

704.2.3 Windowless stories. Work located in a windowless story, as determined in accordance with the *International Building Code*, shall be sprinklered where the *work area* is required to be sprinklered under the provisions of the *International Building Code* for newly constructed buildings and the building has a sufficient municipal water supply without installation of a new fire pump.

704.2.4 Other required suppression systems. In buildings and areas listed in Table 903.2.11.6 of the *International Building Code*, *work areas* that have exits or corridors shared by more than one tenant or that have exits or corridors serving an occupant load greater than 30 shall be provided with sprinkler protection under the following conditions:

1. The *work area* is required to be provided with automatic sprinkler protection in accordance with the *International Building Code* applicable to new construction; and
2. The building has sufficient municipal water supply for design of a fire sprinkler system available to the floor without installation of a new fire pump.

704.2.5 Supervision. Fire sprinkler systems required by this section shall be supervised by one of the following methods:

1. Approved central station system in accordance with NFPA 72;
2. Approved proprietary system in accordance with NFPA 72;
3. Approved remote station system of the jurisdiction in accordance with NFPA 72; or
4. When approved by the *code official*, approved local alarm service that will cause the sounding of an alarm in accordance with NFPA 72.

Exception: Supervision is not required for the following:

1. Underground gate valve with roadway boxes.
2. Halogenated extinguishing systems.
3. Carbon dioxide extinguishing systems.
4. Dry and wet chemical extinguishing systems.
5. Automatic sprinkler systems installed in accordance with NFPA 13R where a common supply main is used to supply both domestic and automatic sprinkler systems and a separate shutoff valve for the automatic sprinkler system is not provided.

704.3 Standpipes. Where the *work area* includes exits or corridors shared by more than one tenant and is located more than 50 feet (15 240 mm) above or below the lowest level of fire department access, a standpipe system shall be provided.

Standpipes shall have an approved fire department connection with hose connections at each floor level above or below the lowest level of fire department access. Standpipe systems shall be installed in accordance with the *International Building Code*.

Exceptions:

1. No pump shall be required provided that the standpipes are capable of accepting delivery by fire department apparatus of a minimum of 250 gallons per minute (gpm) at 65 pounds per square inch (psi) (946 L/m at 448KPa) to the topmost floor in buildings equipped throughout with an automatic sprinkler system or a minimum of 500 gpm at 65 psi (1892 L/m at 448KPa) to the topmost floor in all other buildings. Where the standpipe terminates below the topmost floor, the standpipe shall be designed to meet (gpm/psi) (L/m/KPa) requirements of this exception for possible future extension of the standpipe.
2. The interconnection of multiple standpipe risers shall not be required.

704.4 Fire alarm and detection. An approved fire alarm system shall be installed in accordance with Sections 704.4.1 through 704.4.3. Where automatic sprinkler protection is provided in accordance with Section 704.2 and is connected to the building fire alarm system, automatic heat detection shall not be required.

An approved automatic fire detection system shall be installed in accordance with the provisions of this code and NFPA 72. Devices, combinations of devices, appliances, and equipment shall be approved. The automatic fire detectors shall be smoke detectors, except that an approved alternative type of detector shall be installed in spaces such as boiler rooms, where products of combustion are present during normal operation in sufficient quantity to actuate a smoke detector.

704.4.1 Occupancy requirements. A fire alarm system shall be installed in accordance with Sections 704.4.1.1 through 704.4.1.7. Existing alarm-notification appliances shall be automatically activated throughout the building. Where the building is not equipped with a fire alarm system, alarm-notification appliances within the *work area* shall be provided and automatically activated.

Exceptions:

1. Occupancies with an existing, previously approved fire alarm system.
2. Where selective notification is permitted, alarm-notification appliances shall be automatically activated in the areas selected.

704.4.1.1 Group E. A fire alarm system shall be installed in *work areas* of Group E occupancies as required by the *International Fire Code* for existing Group E occupancies.

704.4.1.2 Group I-1. A fire alarm system shall be installed in *work areas* of Group I-1 residential care/assisted living facilities as required by the *International Fire Code* for existing Group I-1 occupancies.

704.4.1.3 Group I-2. A fire alarm system shall be installed in *work areas* of Group I-2 occupancies as required by the *International Fire Code* for existing Group I-2 occupancies.

704.4.1.4 Group I-3. A fire alarm system shall be installed in *work areas* of Group I-3 occupancies as required by the *International Fire Code* for existing Group I-3 occupancies.

704.4.1.5 Group R-1. A fire alarm system shall be installed in Group R-1 occupancies as required by the *International Fire Code* for existing Group R-1 occupancies.

704.4.1.6 Group R-2. A fire alarm system shall be installed in *work areas* of Group R-2 apartment buildings as required by the *International Fire Code* for existing Group R-2 occupancies.

704.4.1.7 Group R-4. A fire alarm system shall be installed in *work areas* of Group R-4 residential care/assisted living facilities as required by the *International Fire Code* for existing Group R-4 occupancies.

704.4.2 Supplemental fire alarm system requirements. Where the *work area* on any floor exceeds 50 percent of that floor area, Section 704.4.1 shall apply throughout the floor.

Exception: Alarm-initiating and notification appliances shall not be required to be installed in tenant spaces outside of the *work area*.

704.4.3 Smoke alarms. Individual sleeping units and individual dwelling units in any *work area* in Group R-1, R-2, R-3, R-4, and I-1 occupancies shall be provided with smoke alarms in accordance with the *International Fire Code*.

Exception: Interconnection of smoke alarms outside of the rehabilitation *work area* shall not be required.

SECTION 705 MEANS OF EGRESS

705.1 Scope. The requirements of this section shall be limited to work areas that include exits or corridors shared by more than one tenant within the *work area* in which Level 2 alterations are being performed, and where specified they shall apply throughout the floor on which the work areas are located or otherwise beyond the *work area*.

705.2 General. The means of egress shall comply with the requirements of this section.

Exceptions:

1. Where the *work area* and the means of egress serving it complies with NFPA 101.
2. Means of egress conforming to the requirements of the building code under which the building was constructed shall be considered compliant means of egress if, in the opinion of the *code official*, they do not constitute a distinct hazard to life.

705.3 Number of exits. The number of exits shall be in accordance with Sections 705.3.1 through 705.3.3.

705.3.1 Minimum number. Every story utilized for human occupancy on which there is a *work area* that includes exits or corridors shared by more than one tenant within the *work area* shall be provided with the minimum number of exits based on the occupancy and the occupant load in accordance with the *International Building Code*. In addition, the exits shall comply with Sections 705.3.1.1 and 705.3.1.2.

705.3.1.1 Single-exit buildings. Only one exit is required from buildings and spaces of the following occupancies:

1. In Group A, B, E, F, M, U and S occupancies, a single exit is permitted in the story at the level of exit discharge when the occupant load of the story does not exceed 50 and the exit access travel distance does not exceed 75 feet (22 860 mm).
2. Group B, F-2, and S-2 occupancies not more than two stories in height that are not greater than 3,500 square feet per floor (326 m²), when the exit access travel distance does not exceed 75 feet (22 860 mm). The minimum fire-resistance rating of the exit enclosure and of the opening protection shall be 1 hour.
3. Open parking structures where vehicles are mechanically parked.
4. In community residences for the developmentally disabled, the maximum occupant load excluding staff is 12.
5. Groups R-1 and R-2 not more than two stories in height, when there are not more than four dwelling units per floor and the exit access travel distance does not exceed 50 feet (15 240 mm). The minimum fire-resistance rating of the exit enclosure and of the opening protection shall be 1 hour.
6. In multilevel dwelling units in buildings of occupancy Group R-1 or R-2, an exit shall not be required from every level of the dwelling unit provided that one of the following conditions is met:
 - 6.1. The travel distance within the dwelling unit does not exceed 75 feet (22 860 mm); or
 - 6.2. The building is not more than three stories in height and all third-floor space is part of one or more dwelling units located in part on the second floor; and no habitable room within any such dwelling unit shall have a travel distance that exceeds 50 feet (15 240 mm) from the outside of the habitable room entrance door to the inside of the entrance door to the dwelling unit.
7. In Group R-2, H-4, H-5 and I occupancies and in rooming houses and child care centers, a single exit is permitted in a one-story building with a maximum occupant load of 10 and the exit access

travel distance does not exceed 75 feet (22 860 mm).

8. In buildings of Group R-2 occupancy that are equipped throughout with an automatic fire sprinkler system, a single exit shall be permitted from a basement or story below grade if every dwelling unit on that floor is equipped with an approved window providing a clear opening of at least 5 square feet (0.47 m²) in area, a minimum net clear opening of 24 inches (610 mm) in height and 20 inches (508 mm) in width, and a sill height of not more than 44 inches (1118 mm) above the finished floor.
9. In buildings of Group R-2 occupancy of any height with not more than four dwelling units per floor; with a smokeproof enclosure or outside stair as an exit; and with such exit located within 20 feet (6096 mm) of travel to the entrance doors to all dwelling units served thereby.
10. In buildings of Group R-3 occupancy equipped throughout with an automatic fire sprinkler system, only one exit shall be required from basements or stories below grade.

705.3.1.2 Fire escapes required. When more than one exit is required, an existing or newly constructed fire escape complying with Section 705.3.1.2.1 shall be accepted as providing one of the required means of egress.

705.3.1.2.1 Fire escape access and details. Fire escapes shall comply with all of the following requirements:

1. Occupants shall have unobstructed access to the fire escape without having to pass through a room subject to locking.
2. Access to a new fire escape shall be through a door, except that windows shall be permitted to provide access from single dwelling units or sleeping units in Group R-1, R-2 and I-1 occupancies or to provide access from spaces having a maximum occupant load of 10 in other occupancy classifications.
 - 2.1. The window shall have a minimum net clear opening of 5.7 square feet (0.53 m²) or 5 square feet (0.46 m²) where located at grade.
 - 2.2. The minimum net clear opening height shall be 24 inches (610 mm) and net clear opening width shall be 20 inches (508 mm).
 - 2.3. The bottom of the clear opening shall not be greater than 44 inches (1118 mm) above the floor.
 - 2.4. The operation of the window shall comply with the operational constraints of the *International Building Code*.

3. Newly constructed fire escapes shall be permitted only where exterior stairs cannot be utilized because of lot lines limiting the stair size or because of the sidewalks, alleys, or roads at grade level.
4. Openings within 10 feet (3048 mm) of fire escape stairs shall be protected by fire assemblies having minimum $\frac{3}{4}$ -hour fire-resistance ratings.

Exception: Opening protection shall not be required in buildings equipped throughout with an approved automatic sprinkler system.

5. In all buildings of Group E occupancy, up to and including the 12th grade, buildings of Group I occupancy, rooming houses and childcare centers, ladders of any type are prohibited on fire escapes used as a required means of egress.

705.3.1.2.2 Construction. The fire escape shall be designed to support a live load of 100 pounds per square foot (4788 Pa) and shall be constructed of steel or other approved noncombustible materials. Fire escapes constructed of wood not less than nominal 2 inches (51 mm) thick are permitted on buildings of Type V construction. Walkways and railings located over or supported by combustible roofs in buildings of Types III and IV construction are permitted to be of wood not less than nominal 2 inches (51 mm) thick.

705.3.1.2.3 Dimensions. Stairs shall be at least 22 inches (559 mm) wide with risers not more than, and treads not less than, 8 inches (203 mm). Landings at the foot of stairs shall not be less than 40 inches (1016 mm) wide by 36 inches (914 mm) long and located not more than 8 inches (203 mm) below the door.

705.3.2 Mezzanines. Mezzanines in the *work area* and with an occupant load of more than 50 or in which the travel distance to an exit exceeds 75 feet (22 860 mm) shall have access to at least two independent means of egress.

Exception: Two independent means of egress are not required where the travel distance to an exit does not exceed 100 feet (30 480 mm) and the building is protected throughout with an automatic sprinkler system.

705.3.3 Main entrance—Group A. All buildings of Group A with an occupant load of 300 or more shall be provided with a main entrance capable of serving as the main exit with an egress capacity of at least one half of the total occupant load. The remaining exits shall be capable of providing one half of the total required exit capacity.

Exception: Where there is no well-defined main exit or where multiple main exits are provided, exits shall be permitted to be distributed around the perimeter of the building provided that the total width of egress is not less than 100 percent of the required width.

705.4 Egress doorways. Egress doorways in any *work area* shall comply with Sections 705.4.1 through 705.4.5.