



Building Code Essentials

Based on the 2015 International Building Code®

International Code Council
Steve Thomas, CBO

Building Code Essentials, 2015 edition
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Preface

Construction of buildings has progressed over the centuries from stone buildings to the steel and concrete monuments to the industrial revolution and technology today. People have an expectation that when they enter a building, it has been constructed in such a manner that if an emergency situation occurs in the building, they will be protected. As new building practices improve and new building technologies are developed, the complexity of the buildings has increased. As these complexities increase, building regulations must keep up with the technology. The codes adopted by governmental agencies should not prohibit or limit the use of new materials or technologies. However, buildings must be constructed to be safe for the occupants. Therefore, the building code has had to keep up with the complex building practices and has become a complex document in itself. The codes and standards used to regulate the construction of buildings can overwhelm the casual user of the code. Navigating the complex and detailed provisions of the code can be daunting. Not all of the provisions apply to every building.

This text, *Building Code Essentials*, has been written to provide an easy-to-read overview of the *International Building Code*® (IBC). It is an illustrated look at the most common code provisions. This text provides an overall understanding of the provisions of the building code. It is presented in a user-friendly manner with emphasis on the technical accuracy and clear noncode language. This book targets readers who have a basic understanding of architecture and construction but a limited knowledge of the code requirements.

Anyone who is involved in the design, construction or regulatory aspects of building construction can gain from this book. People with all levels of experience can profit from the information provided. The user will be able to use this document for learning the fundamental provisions and intents of the building code. The most common and most used provisions of the 2015 *International Building Code* have been addressed.

The information in *Building Code Essentials* has been organized by the different purposes of the code. It discusses the administrative provision that building departments use to enforce the provisions of the building code. The provisions used to design the overall building use, construction, size, and specific occupancy requirements are covered in the building planning portion of the code. The fire safety topics include the use of passive and active fire protection. The discussion of life safety issues includes the methods used in the design and construction to ensure that occupants are provided with a safe means of evacuating a building in an emergency. It also provides the provisions that allow people with physical disabilities to access buildings. Health safety provisions regarding weather protection and interior environment have been provided. Finally, the structural provisions of the code have been put into easy-to-understand language.

This book is not intended to cover all of the provisions of the building code or all of the acceptable materials and methods of construction. This is not to say that the information *not* included in this book is not important. This book should be used with the 2015 *International Building Code*, which should be referenced for more details and information. This book only provides a basic understanding of a very complex document and referenced standards.

Building Code Essentials includes full-color photos and illustrations to help the reader understand the provisions and application of the building code requirements. It provides examples, simplified tables, and highlights to explain the fundamental requirements of the *International Building Code* and to gain compliance with its regulations. References to the applicable sections or standards have been provided to assist the reader in locating more detailed and complete information in the code. A glossary of code and construction terms clarifies the meaning of the technical provisions.

ABOUT THE INTERNATIONAL BUILDING CODE

The IBC covers all buildings except detached one- and two-family dwellings and townhouses not more than three stories in height. This comprehensive code features time-tested safety concepts; structural, fire and life safety provisions covering means of egress; interior finish requirements; comprehensive roof provisions; seismic engineering provisions; innovative construction technology; occupancy classifications; and the latest industry standards in material design. It is founded on broad-based principles that make possible the use of new materials and new building designs.

The IBC is one of the codes in the family of International Codes published by the International Code Council® (ICC). All of these codes are maintained and updated through an open code-development process and are available internationally for adoption by the governing authority to provide consistent enforceable regulation for the built environment.

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The author would like to dedicate this book to Perry (Pete) Tyree, PE. Pete mentored me as a young building official and taught me how to interpret and use the codes in a reasonable and fair way. He served as president of the International Conference of Building Officials (ICBO) in 1972 while serving as the building official for the Pikes Peak Regional Building Department in Colorado Springs, Colorado, for 18 years. He has continued to support the ideals and importance of the model code concept ever since. It is because of Pete Tyree that I have been able to get where I am now and have experienced the success I have enjoyed. He provided the guidance and support that I needed to become the code official and code consultant that I have become. Thank you, Pete!

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Mr. Thomas has over 30 years experience in building code plan review, inspection, and administration. He is currently the president of Colorado Code Consulting, LLC. He served as the Building Official for the City of Glendale, Colorado, for 18 years. Starting a building code consulting firm in 1999, his firm provides building department services for governmental agencies, code consulting services for architectural clients and building code education across the country. Mr. Thomas served on ICBO Code Development Committees and the ICBO Chairman's Advisory Committee for Small Jurisdictions. He currently serves the Chair of the ICC Means of Egress Code Development Committee. Mr. Thomas received his bachelor of science in business administration degree from the University of Phoenix. Mr. Thomas is a Certified Building Official and holds seven other ICC certifications.

ABOUT THE INTERNATIONAL CODE COUNCIL

The International Code Council® (ICC®) is a member-focused association dedicated to helping the building safety community and construction industry provide safe, sustainable and affordable construction through the development of codes and standards used in the design, build and compliance process. Most U.S. communities and many global markets choose the International Codes®. ICC Evaluation Service (ICC-ES), a subsidiary of the International Code Council, has been the industry leader in performing technical evaluations for code compliance fostering safe and sustainable design and construction.

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