



Building Code Basics: Green

Based on the 2012 International Green
Construction Code™



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International Code Council
Peter Kulczyk, LEED AP Homes



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CONTENTS

Preface	ix
About the <i>International Green Construction Code</i>	x
Acknowledgments	x
About the Author	xi
About the International Code Council	xi

PART I: EVOLUTION OF GREEN DESIGN, CONSTRUCTION AND REGULATION **1**

Chapter 1: History and Progress of Green Philosophy	2
Design Considerations	3
History of Green Building Practices	3
Green Building Programs	4
R-2000 Standard	5
Building Research Establishment Environmental Assessment Method	5
Energy Star®	5
Green Star	5
Canada Green Building Council	5
Green Building Initiative	5
Leadership in Energy and Environmental Design	6
ICC-700, <i>National Green Building Standard</i>	6
ASHRAE 189.1, Standard for the Design of High-Performance Green Buildings	6
California Green Building Standards Code	6
International Green Construction Code	7
Chapter 2: Development of the International Green Construction Code	8
Intent to Develop a Green Building Code	9
Launching the International Green Construction Code	9
Release of First Public Version (PV 1.0) of the International Green Construction Code	10
Release of the 2012 International Green Construction Code	10
Future Development of the International Green Construction Code	11

PART II: REGULATION OF GREEN PRACTICES **13**

Chapter 3: Scope and Limitations	14
Building Codes and Green Codes: Scope	15
International Building Code	15
International Energy Conservation Code	16

International Mechanical Code16
 International Residential Code.....16
International Green Construction Code17

Chapter 4: Administration of the International Green Construction Code.18

Code Adoption19
 Adoption of the International Green Construction Code19
 Amending the International Green Construction Code19
 Appendices.....20
Authority of the Code Official.....20
 Alternate Methods and Materials21
Permits21
 Construction Documents23
 Fees24
Inspections24
 Footing and Foundation Inspection24
 Frame Inspection25
 Energy Efficiency Inspections25
 Final Inspection26
Board of Appeals26

Chapter 5 Jurisdictional Requirements and Life-Cycle Assessment27

Jurisdictional Requirements.....28
Whole-Building Life-Cycle Assessment30

PART III: SITE DEVELOPMENT AND INTERIOR ENVIRONMENT 31

Chapter 6: Site Development and Land Use32

Building Site33
 Preservation of Natural Resources.....34
 Erosion Control.....34
 Floodplain34
 Vegetation and Invasive Species.....35
 Building Site Waste Management36
 Infill Sites.....37
 Greenfield Sites.....37
 Brownfield Sites37
Transportation Impact38
 Bicycle Parking and Storage38
 Vehicle Parking38
Heat-Island Mitigation39
 Hardscape39
 Roof Covering40
Site Lighting and Light Pollution.....41
 Exterior Lighting and Uplights.....41

CHAPTER 7: Indoor Environmental Comfort	42
Building and Systems Indoor Air Quality Management	43
Indoor Air Quality Management Plan	43
Building Air-Handling-System Operation and Maintenance	44
Heating, Ventilation, and Air-Conditioning (HVAC) System	44
Ventilation During Construction	44
Air-Conditioning System Filters After Occupancy	45
Interior Environmental Conditions for Occupancy	45
Isolation of Pollutant Sources	46
Specific Equipment Control Measures	46
Fireplaces and Appliances	46
Biomass Appliances	47
Prohibited Materials	47
Material Emissions and Pollutant Control	48
Construction Materials	48
Acoustics	49
Sound Transmission	50
Mechanical and Generator Equipment	50
Daylighting	51
Fenestration	52

PART IV: PROJECT CONSERVATION **53**

CHAPTER 8: Building Material Conservation and Efficiency	54
Construction Material Storage, Handling, and Moisture Control	55
Construction Material Waste Management	55
Recycling Area After Certificate of Occupancy	56
Construction Material Selection	57
Used Materials	58
Recycled Content of Building Materials	60
Bio-Based Materials	61
Indigenous Materials	61
Artificial Lighting	62
Building-Envelope Inspections For Moisture Control	64
Chapter 9: Energy Conservation and Efficiency	65
Building Performance-and Prescriptive-Based Compliance Paths	66
Energy Metering And Monitoring	66
Automated Demand-Response (Auto-Dr) Infrastructure	67
Building Envelope Systems	68
Mechanical Systems	69
Building Service-Water Heating Systems	70
Electrical Power and Lighting	70
Specific Appliances and Equipment	71
Renewable Energy	72
Mechanical Systems Commissioning	73

CHAPTER 10: Water Conservation and Efficiency75

- Fixtures, Equipment, and Appliances76**
 - Fixtures and Flow Rates76
 - Municipal Reclaimed Water76
 - Hot-Water Distribution Systems77
 - Equipment77
- Hydronic Heating and Cooling78**
 - Controls and Zones78
- Water Treatment79**
 - Equipment for Water Treatment79
 - Metering79
 - Nonpotable Water80
 - Rainwater Collection80
 - Gray-Water Recycling Systems81
 - Reclaimed-Water Systems81

PART V: COMMISSIONING 83

CHAPTER 11: Commissioning84

- Commissioning85**
 - Approval by Code Official86
 - Independence of Agency86
 - Commissioning Plan86
- Testing and Reports For Mechanical Systems Commissioning86**

CHAPTER 12: Building Operation89

- Maintenance Documents and Building Record90**

CHAPTER 13: Appendices92

- Purpose and Adoption93**
 - Project Electives93
 - Radon93
 - Ordinances and Enforcement94

Glossary97

Index100



PREFACE

Codes for years have regulated the construction of buildings, with emphasis on fire- and life-safety concerns such as emergency exiting, fire sprinklers, smoke alarm systems, fall protection, and fire-resistance measures, along with structural integrity and the ability of the structure to resist the effects of the environment on the building, such as wind, rain, sun, and snow. In more recent decades, the public has become more aware of the need to reduce the possible negative impact the construction of buildings has on the environment, both locally and worldwide, and also on the occupants that spend time in those commercial and residential buildings. The building and design community has responded with voluntary efforts, including the creation of various green building programs that raise the standards of performance and sustainability for both new structures and existing remodel projects.

The *International Green Construction Code*[™] (IgCC), which this book is based on, was developed by the International Code Council (ICC) with cooperating sponsors: The American Institute of Architects (AIA); ASTM International; the American Society of Heating, Refrigerating, and Air-Conditioning Engineers (ASHRAE); the Illuminating Engineering Society (IES); and the U.S. Green Building Council (USGBC). It is a comprehensive set of requirements for buildings and their sites intended to reduce the negative impact on the natural environment by creating higher performance thresholds in the areas of site preservation, energy-use reduction, water conservation, and construction waste limits, as well as to create a healthier indoor environment, while at the same time meeting or exceeding the minimum requirements of the related International Codes (I-Codes).

Building Code Basics: Green, Based on the International Green Construction Code has been written to provide an easy-to-understand overview of the code. It is an illustrated look at the most common provisions in the IgCC presented and organized in a user-friendly manner, with emphasis on technical accuracy and clear, non-code language. The content is directed to readers who are not currently familiar with green building practices, and also for those who already have a basic understanding of green and sustainable construction practices but a limited knowledge of the requirements contained in the IgCC.

Anyone involved in the design, construction, or regulatory aspects of green and sustainable building construction practices can benefit from this book, including beginning and experienced designers, builders, architects, building inspectors, code officials, green building professionals, students of construction technology or related fields, and municipal planners and administrators.

The content of *Building Code Basics: Green* provides guidance for the reader on the use of alternative or innovative technology in the design of the building. It discusses the administrative provisions that a building department uses to regulate the provisions of the I-Codes and the IgCC. Separate chapters address jurisdictional requirements, site development and land use, material resource conservation and efficiency, energy conservation, water resource conservation, indoor environmental quality

and comfort, building commissioning and operation, and information contained in the appendices of the IgCC.

This book is not intended to cover all provisions of the IgCC or all of the accepted alternative materials and methods of construction of green and sustainable buildings. Focusing in some detail on the most common provisions affords an opportunity to fully understand the basics without exploring every variable and alternative. This is not to say that information not covered is any less important or valid. This book is best used as a companion to the IgCC, which should be referenced for more complete information and specific code references.

Building Code Basics: Green features full-color photographs to assist the reader in visualizing the application of the requirements. Highlights of particularly useful information also aid in understanding the provisions and determining compliance with the requirements. References to the applicable sections of the IgCC are helpful in locating the corresponding topics. A glossary of code and construction terms clarifies the meaning of the technical provisions.

ABOUT THE INTERNATIONAL GREEN CONSTRUCTION CODE

The *International Green Construction Code* (IgCC) is a model code that provides a comprehensive set of minimum requirements intended to safeguard the environment and public health, safety, and general welfare through the establishment of requirements that are intended to reduce the negative impacts on the natural environment and building occupants. It was created with the intent that it could be adopted by government at any level on a mandatory basis, yet be administered by building officials. It was developed with the intent to be consistent and coordinated with the other ICC codes and standards. When adopted, the IgCC is applicable to commercial and residential buildings, structures and sites where such buildings are located, other than certain residential buildings including those those under the scope of the International Residential Code (IRC). ASHRAE 189.1 and ICC 700 are allowed as alternative compliance paths for buildings under their own scope. In addition to mandatory requirements, the IgCC incorporates the concept of optional jurisdictional requirements that can be selected for adoption by a jurisdiction. The IgCC also encourages the use of innovative technology. The IgCC was developed with a broad-based consensus process and it is written in code-intended language compatible with the other I-Codes.

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Building Code Basics: Green is the result of a collaborative effort, and the author is grateful for the contributions of fellow ICC staff members Steve Van Note, Product Development, and Allan Bilka, R.A., Senior Staff Architect.

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ICC-ES Environmental Programs provide manufacturers with independent and comprehensive evaluation and/or certification that their products meet specific sustainability targets for green building codes such as the *International Green Construction Code* (IgCC), the California Green Building Standards Code (CALGreen), and ASHRAE 189.1, including green building ratings systems and standards such as the United States Green Building Council's Leadership in Energy and Environmental Design (LEED), the Green Building Initiative's GBI-01 and the National Association of Home Builder's (NAHB) National Green Building Standard (ICC-700). Prior to his transition to ICC-ES Environmental Programs, Peter developed technical publications and conducted presentations for the Product Development Department of the International Code Council (ICC). Prior to joining the ICC in 2007, Mr. Kulczyk was an Instructor with the State of Minnesota Building Code Division, worked as a municipal building inspector and served in various positions with five residential and commercial builders. Certifications include ICC Building Inspector, ICC Plans Examiner, ICC Green Building-Residential, LEED AP Homes, CALGreen Inspector and State of Minnesota Certified Building Inspector.

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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