INCLUDES

C ANSI/ASHRAE/USGBC/IES Standard 189.1-2011 Design of High-Performance Green Buildings

REFERENCES

ICC 700-2012 National Green Building Standard[®] for residential construction



INTERNATIONAL Green Construction Code[®]

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2015 International Green Construction Code®

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PREFACE

Introduction

Internationally, code officials recognize the need for a modern, up-to-date code governing the impact of buildings and structures on the environment. This first edition, the 2012 edition, of the *International Green Construction Code*[®] (IgCC[®]), is designed to meet this need through model code regulations that contain clear and specific requirements with provisions that promote safe and sustainable construction in an integrated fashion with the ICC Family of Codes.

This comprehensive green code establishes minimum regulations for building systems and site considerations using prescriptive and performance-related provisions. It is intended to be an overlay code to be used with, and is fully compatible with, all of the *International Codes*[®] (I-Codes[®]) published by the International Code Council (ICC)[®], including the *International Building Code*[®], *International Energy Conservation Code*[®], *International Existing Building Code*[®], *International Fire Code*[®], *International Fuel Gas Code*[®], *International Mechanical Code*[®], *ICC Performance Code*[®], *International Plumbing Code*[®], *International Private Sewage Disposal Code*[®], *International Property Maintenance Code*[®], *International Residential Code*[®], *International Swimming Pool and Spa Code*[®], *International Wildland-Urban Interface Code*[®] and *International Zoning Code*[®].

The International Green Construction Code[®] provisions provide many benefits, among which is the model code development process that 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.

This code has been developed in collaboration with the following Cooperating Sponsors: The American Institute of Architects (AIA); ASTM International; ASHRAE; the U.S. Green Building Council (USGBC); and the Illuminating Engineering Society (IES). ICC wishes to thank these Cooperating Sponsors for recognizing the need for the development of a comprehensive set of green regulations that are enforceable, usable and adoptable.

Development

The first edition of the International Green Construction Code (2012) was the culmination of an effort that started in 2010 with the drafting of Public Version 1.0 (PV 1.0) by the Sustainable Building Technology Committee (SBTC) established by the ICC Board of Directors. Following that, Public Version 2.0 was created, based upon public comments submitted to PV 1.0 and approved by the IgCC Public Comment Committee. Following the issuance of PV 2.0, a full cycle of code development in accordance with ICC's Code Development Procedures was held in 2011. This included the submission of code change proposals followed by a Code Development Hearing, the submission of public comments and a Final Action Hearing. This 2015 edition presents the code as originally issued, with changes approved through the ICC Code Development Process in 2013. This was the first code to have been developed through the new cdpACCESSTM system. This system allowed stakeholders to collaborate on potential code changes and ultimately was used to submit code changes online via the system. A new edition of the code is promulgated every three years.

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

Adoption

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

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

Maintenance

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

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

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

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

In each code development cycle, proposed changes to this code are considered at the Committee Action Hearing by the International Green Construction Code Development Committee, whose action constitutes a recommendation to the voting membership for final action on the proposed change. Proposed changes to a code section that has a number beginning with a letter in brackets are considered by a different code development committee. For example, proposed changes to code sections that have [BG] in front of them (e.g., [BG] 309.1) are considered by the IBC — General Code Development Committee at the Committee Action Hearing.

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

- [A] = Administrative Code Development Committee;
- [BE] = IBC Means of Egress Code Development Committee;
- [BG] = IBC General Code Development Committee;
- [BS] = IBC Structural Code Development Committee;
- [E] = International Energy Conservation Code Development Committee;
- [F] = International Fire Code Development Committee;
- [M] = International Mechanical Code Development Committee.;
- [P] = International Plumbing Code Development Committee.

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

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

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

Code change proposals submitted for code sections that have a letter designation in front of them will be heard by the respective committee responsible for such code sections. Because different committees hold code development hearings in different years, proposals for this code will be heard by committees in both the 2015 (Group A) and the 2016 (Group B) code development cycles.

For example, every section of Chapter 1 of this code is designated as the responsibility of the Administrative Code Development Committee, and that committee is part of the Group B code hearings. This committee will conduct its code development hearings in 2016 to consider all code change proposals for Chapter 1 of this code and proposals for Chapter 1 of all I-Codes except the *International Energy Conservation Code*, the ICC *Performance Code* and the *International Residential Code*. Therefore, any proposals received for Chapter 1 of this code will be deferred for consideration in 2016 by the Administrative Code Development Committee.

Another example is Section 202 of this code, definition of "Dwelling unit," which is designated as the responsibility of the IBC—General Code Development Committee. This committee will conduct its code development hearings in 2015 to consider code change proposals in its purview, which includes any proposals to the definition of "Dwelling unit."

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

Marginal Markings

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

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

2015 LOCATION	2012 LOCATION
Section 505.3	Section 303.1
Section 701.2	Section 705.1
Section 701.2.1	Section 705.1.1
Table 701.2.1	Table 705.1.1
Section 902.1	Section 903.1
Table 902.1	Table 903.1
Section 902.1.1	Section 902.1
Section 902.1.1.2	Section 902.1.1
Section 902.1.1.3	Section 902.1.2
Section 902.1.1.4	Section 902.1.3
Sections 902.4/902.4.1	Section 903.1.1
Section 902.5	Section 903.1.2
Section 902.7	Section 904.2
Sections 903.1/903.2	Section 904.3

Italicized Terms

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

Effective Use of the International Green Construction Code

The International Green Construction Code[®] (IgCC[®]) is a model code that provides minimum requirements to safeguard the environment, public health, safety and general welfare through the establishment of requirements that are intended to reduce the negative impacts and increase the positive impacts of the built environment on the natural environment and building occupants. The IgCC is fully compatible with the ICC family of codes, including the International Building Code[®] (IBC[®]), the International Code Council Performance Code[®] (ICCPC[®]), the International Energy Conservation Code[®] (IECC[®]), the International Existing Building Code[®] (IEBC[®]), the International Fire Code[®] (IFC[®]), the International Fuel Gas Code[®] (IFGC[®]), the International Mechanical Code[®] (IMC[®]), the International Plumbing Code[®] (IPC[®]), the International Private Sewage Disposal Code[®] (IPSDC[®]), the International Swimming Pool and Spa Code[®] (ISPSC[®]), the International Wildland-Urban Interface Code[®] (IWUIC[®]), and the International Zoning Code[®] (IZC[®]).

The IgCC addresses natural resource, material, water and energy conservation, as well as indoor environmental quality and comfort, building commissioning, operations and maintenance for new and existing buildings, building sites and building materials, components, equipment and systems. The code will be promulgated on a 3-year cycle to allow for new construction methods and technologies to be incorporated into the code. Innovative approaches and alternative materials, designs, and methods not specifically addressed in the code can be approved by the code official where the proposed innovative approaches or materials, designs or methods comply with the intent of the provisions of the code (see Section 105.4).

The IgCC applies to all occupancies other than temporary structures approved under Section 3103 of the *International Building Code*, except that application to the following is subject to jurisdictional choices in Table 302.1: one- and two-family dwellings and townhouses that are within the scope of the *International Residential Code*; Group R-3 occupancies; and Group R-2 and R-4 residential occupancies that are four stories or less in height.

Arrangement and Format of the 2015 IgCC

Before applying the requirements of the IgCC, it is beneficial to understand its arrangement and format.

Chapters	Subjects
1-2	Administration and definitions
3	Jurisdictional requirements
4	Site development and land use
5	Material resource conservation and efficiency
6	Energy conservation, efficiency and CO ₂ e emission reduction
7	Water resource conservation, quality and efficiency
8	Indoor environmental quality and comfort
9	Commissioning, inspections, operation and maintenance
10	Existing buildings
11	Existing building site development
12	Referenced standards
Appendix A	Project electives
Appendix B	Post-occupancy commissioning reporting

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

Chapter 1 Scope and Administration. Chapter 1 of the IgCC establishes the limits of applicability of the code and describes the manner in which the code is to be applied and enforced. Chapter 1 is divided into two parts: Part 1 – Scope and Application (Sections 101 and 102); and Part 2 – Administration and Enforcement (Sections 103 – 109).

Section 101 identifies which buildings and structures come under its purview and Section 102 references other ICC codes as applicable. Section 103 establishes the duties and powers of the code official, requires that compliance and enforcement be part of the enforcement of other ICC codes listed in Section 102.4, and grants authority to the code official to make inspections. Section 105 provides guidance to the code official in the approval of materials, methods of construction, designs, systems and innovative approaches where they are not specifically prescribed in the IgCC. As the IgCC is an overlay code, Section 106, in conjunction with Section 101.2, requires that permits be issued under other ICC codes.

The provisions of Chapter 1 also establish the rights and privileges of the design professional, contractor and property owner.

It is important to note that by reference to Section 301.1.1, Section 101.3 allows ASHRAE 189.1, *Standard for the Design of High-Performance Green Buildings*, to be used. In addition, Exception 1 to Section 101.3 notes that the code is not applicable to low-rise residential structures unless the jurisdiction selects ICC 700 in Table 302.1 for application to various types of residential buildings and occupancies. Further, ICC 700 is noted in Section 101.3.1 as being a "deemed to comply document" for mid- and high-rise R-2 and R-4 occupancies.

The green building code is intended to be adopted as a legally enforceable document and it cannot be effective without adequate provisions for its administration and enforcement.

Chapter 2 Definitions. All terms that are defined in the code are listed alphabetically in Chapter 2. Terms are defined in Chapter 2. Codes are technical documents and every word, term and punctuation mark can impact the meaning of the code text and the intended results. The code often uses terms that have a unique meaning in the code and that code meaning can differ substantially from the ordinarily understood meaning of the term as used outside of the code. Where understanding of a term's definition is especially key to or necessary for understanding a particular code provision, the term is shown in *italics* wherever it appears in the code. However, 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.

Definitions are deemed to be of prime importance in establishing the meaning and intent of the code text that uses code-defined terms. The user of the code should be familiar with and consult this chapter because the definitions are essential to the correct interpretation of the code and because the user may not be aware that a term is defined in a manner that is not commonly understood.

Chapter 3 Jurisdictional Requirements. As indicated earlier, Section 301.1.1 allows ASHRAE 189.1, *Standard for the Design of High-Performance Green Buildings*, to be used. Similarly, ICC 700 may be applicable to specific types of residential construction in accordance with the decisions made by the jurisdiction in the portions of Table 302.1 related to Section 101.3.

The jurisdictional requirements contained in Section 302 are formatted to afford jurisdictions the flexibility to adapt the code in a manner that is best suited to meet their unique environmental and regional goals and needs. The section numbers and optional enhanced performance features listed in Table 302.1 do not become enforceable unless they are specifically selected in the table by the jurisdiction and the appropriate "Yes" box is checked or otherwise specifically indicated in the jurisdiction's adopting ordinance. Those provisions selected by the jurisdiction in Table 302.1 become enforceable for all buildings constructed in the jurisdiction. The text of all section numbers listed in Table 302.1 also contains a reference to Table 302.1, reinforcing the fact that they are not enforceable unless they are specifically adopted. Furthermore, the sample ordinance provided in the IgCC references Table 302.1 and requires that the jurisdiction indicate those provisions from the list that it intends to enforce.

Jurisdictions must take great care when making their choices in Table 302.1. While various requirements listed in Table 302.1 may be environmentally beneficial in many jurisdictions, some may be inappropriate in other jurisdictions. If these practices were appropriate for all jurisdictions, they would have been included in the baseline requirements of the IgCC, not in Table 302.1.

Where jurisdictions find the concept of jurisdictional requirements to be unnecessary, they are able to opt out by simply checking the "No" boxes for all provisions listed in Table 302.1. Because relatively few of the code's provisions are listed in Table 302.1, even where jurisdictions do not choose any of the provisions or enhanced performance options listed in Table 302.1, the IgCC remains a strong and effective green and sustainable building tool. That said, many jurisdictions will appreciate the flexibility that the jurisdictional requirements provide in their efforts to address specific green and sustainable building concerns. Where jurisdictions begin to specifically adopt more of the items listed in Table 302.1 in future years, they will also appreciate the opportunities that the IgCC provides to grow and to produce a more sustainable built environment with each future adoption of the IgCC.

Chapter 4 Site Development and Land Use. Chapter 4 is intended to minimize the negative environmental impacts on and protect, restore and enhance the natural features and environmental quality of building sites.

Section 401.2 requires predesign site inventory and assessment. Where indicated by the jurisdiction in Table 302.1, Section 402 limits building construction near surface water, in conservation and flood hazard areas and on greenfield sites, park land or agricultural land. Section 403 requires stormwater management. Section 404 limits potable water uses related to landscape irrigation and outdoor fountains. Section 405 addresses vegetation, soil and water quality protection.

Section 406 requires that a plan be developed to ensure that least 75 percent of land-clearing debris and excavated soils is diverted from disposal.

Section 407.1 requires that at least one walkway or bicycle path connect building entrances to streets or other paths. Buildings with a total floor area of over 10,000 square feet (929 m²) must also provide changing and shower facilities. Bicycle parking and storage requirements are contained in Sections 407.3 through 407.3.2 and Table 407.3.

Where indicated by the jurisdiction in Table 302.1, and where the total building floor area is greater than 10,000 square feet (929 m²), preferred parking is required by Section 407.4 for high-occupancy and low-emission, hybrid and electric vehicles. These requirements, however, do not take precedence over the accessible parking requirements of the *International Building Code*.

Section 408 mitigates heat island effects through requirements related to site hardscape materials, shading and roof surfaces and coverings. Where indicated to be enforceable in the jurisdiction in Table 302.1, light pollution from building sites must be controlled in accordance with Section 409.

Chapter 5 Material Resource Conservation and Efficiency. Chapter 5 addresses material resource conservation and efficiency by means of provisions related to material selection, recycling, reuse, renewability, toxicity and durability, including resistance to damage caused by moisture.

Section 502 addresses material storage and handling during the construction phase. Section 503 requires that a construction material and waste management plan be prepared and allows the jurisdiction to increase the percentage of waste that must be recycled in Table 302.1. Section 504 requires areas be designed and constructed to facilitate the recycling of waste generated post-certificate of occupancy.

Section 503 requires a construction waste management plan.

Section 504 requires recycling areas for waste that is generated by the building occupants after issuance of the Certificate of Occupancy.

Section 505 requirements are related to material selection and properties. Section 505.1 requires that building materials conform to Section 505.2, 505.3 or 505.4.

Section 505.2 requires that at least 55 percent of constructed materials selected for each project be any combination of the following material types: used, recycled, recyclable, bio-based, or indigenous.