Note: the most recent proposal is a revised comment that begins half way down page #2

To find all IGCC comments and proposals and Public Version 2.0 of the code: click here

GG2-11, Part I
Chapter 1

Proposed Change as Submitted

Proponent: Mike Collignon representing Green Builder® Coalition (mcollignon@greenbuildercoalition.org)

THIS WAS A 9 PART CODE CHANGE. PARTS II, III, IV, V, VI, VII, VIII, and IX WERE WITHDRAWN BY THE PROPONENT.

PART I – CHAPTER 1

Revise as follows:

101.2 Scope. The provisions of this code shall apply to the design, construction, *addition, alteration, change of occupancy,* movement, enlargement, replacement, *repair*, equipment, location, maintenance, removal and demolition of every *building* or *structure* or any appurtenances connected or attached to such *buildings* or *structures* and to the site of which the *building* is located. Occupancy classifications shall be determined in accordance with the *International Building Code*.

This code shall not apply to ~~the following~~:

~~1. Detached one-and two-family dwellings and multiple single-family dwellings (townhouses) not more than three stories above grade plane in height with a separate means of egress.~~

~~2.~~ ~~E~~equipment or systems that are used primarily for industrial or manufacturing processes.

102.4.13 One- and two-family dwellings and townhouses. The provisions of the International Residential Code shall apply to the construction, alteration, movement, enlargement, replacement, repair, equipment, use and occupancy, location, maintenance, removal and demolition of detached one- and two-family dwellings and multiple single-family dwellings (townhouses) not more than three stories above grade plane in height with a separate means of egress and their accessory structures.

105.4.3 Alternative residential compliance. Detached one and two-family dwellings and multiple single-family dwellings (townhouses) not more than three stories in height with a separate means of egress, and Group R-2, R-3 and R-4 occupancies not more than three stories in height, that comply with other alternative residential green construction programs, rating systems or standards that the code official finds are equivalent in application and effectiveness, shall be an alternative to compliance with the requirements of this code. In determining equivalency, the code official shall consider the following subject areas:

1. Energy efficiency
2. Indoor environmental quality
3. Sustainable site planning & management
4. Material and resource efficiency
5. Water efficiency

Reason: Given the myriad of energy-efficient building technologies available, the time has come for the building industry to be responsible by thinking and acting on behalf of future generations. As a building community, we should stop fostering the indifferent and even lazy builder, designer and/or contractor. There is nothing forcing the building industry to modernize their methods. While one can point at the model energy code as a requirement, that only encompasses energy usage. It does not have purview over sustainable materials, site management or indoor air quality. It's time to close up the loopholes, and build, design and remodel to a higher level.
We propose adding residential structures to the IGCC. The striking of point 1 in section 101.2 allows that to happen.
To ease adoption and implementation, we propose that all voluntary national and regional green building programs or rating systems be allowed under the IGCC. A lot of effort and time has gone into the development of such programs or rating systems like Energy Star, LEED-H, NAHBGreen, Earthcraft, and others. While the specific choice of green building program or rating system should be voluntary, a residential structure must be built using one of those programs.
102.4.13
This proposal provides the I-Codes foundation for residential occupancies under the scope of the International Residential Code (IRC), which will now be covered under the scope of the IGCC under the proposed changes here to Sections 102.1 and 105.4.13. This is necessary because the IGCC is an overlay code and the coverage which the IRC provides, including building, plumbing, structural, electrical, etc., is critical to support "green" building practices.

105.4.3
In section 101.2, we proposed adding residential structures under the scope of the IRC to the IGCC. In order to ease adoption and implementation, we further proposed that all existing voluntary national and regional green building programs or rating systems which are applicable to these structures be permitted to be considered as equivalent to compliance with the IGCC, where the code official finds it appropriate. A lot of effort and time has gone into the development of such voluntary national and regional programs and rating systems and standards, including Energy Star, LEED-H, NAHBGreen, ICC-700, Earthcraft, and others. That is not to say that these programs should be approved, only that they could be. These programs change and evolve much like codes do.
This proposal permits a residential structure to be built using any alternative program, rating system or standard that is approved by the code official. However, the code official is *not* required to determine that absolute equivalency of performance in each of these areas is met or surpassed. Equivalency in the context of this proposal is simply meant to suggest that both paths are equally code compliant. The code official is required to consider the 5 subject areas listed in the proposal and determine that each of these areas are addressed to an adequate degree.

Given the myriad of energy-efficient building technologies available, the time has come for the building industry to be responsible by thinking and acting on behalf of future generations. As a building community, we should stop fostering the indifferent and even lazy builder, designer and/or contractor. There is nothing forcing the building industry to modernize their methods. While one can point at the model energy code as a requirement, that only encompasses energy usage. It does not have purview over sustainable materials, site management or indoor air quality. It's time to close up the loopholes, and build, design and remodel to a higher level. Therefore
This proposal addresses IBC Group R-2, R-3 and R-4 occupancies and IRC buildings that are 3 stories or less in height. Group R-1 occupancies were specifically omitted from this section to align with buildings which are under the scope of the Residential chapter of the IECC. Group R-1 occupancies are regulated under the commercial provisions of the IECC, and will be regulated similarly under the IGCC.
In an effort to preserve the core ideals of sustainable development espoused in many of the national and regional programs or systems, and to build upon existing programs that are already working, we propose the addition of section 105.4.3.

101.2-COLLIGNON

Public Hearing Results

PART I
Committee Action: **Disapproved**

Committee Reason: Low-rise residential should be addressed separately. The code already contains requirements for alternative methods and alternative residential paths would only add confusion.

Assembly Action: **None**

Individual Consideration Agenda

This item is on the agenda for individual consideration because public comments were submitted.

Public Comment 1:

Mike Collignon, Green Builder® Coalition, Jeremy Sigmon, U.S. Green Building Council, and R. Christopher Mathis, MC2 Mathis Consulting Company request Approval as Modified by this Public Comment.

Modify the proposal as follows:

101.2 Scope. The provisions of this code shall apply to the design, construction, *addition, alteration, change of occupancy,* movement, enlargement, replacement, *repair*, equipment, location, maintenance, removal and demolition of every *building* or *structure* or any appurtenances connected or attached to such *buildings* or *structures* and to the site of which the *building* is located. Occupancy classifications shall be determined in accordance with the *International Building Code*. This code shall not apply to equipment or systems that are used primarily for industrial or manufacturing processes.

102.4.13 Residential occupancies. The provisions of the International Residential Code shall apply to the construction, alteration, movement, enlargement, replacement, repair, equipment, use and occupancy, location, maintenance, removal and demolition of detached one- and two-family dwellings and multiple single-family dwellings (townhouses) not more than three stories above grade plane in height with a separate means of egress and their accessory structures.

~~**105.4.3 Alternative residential compliance.** Detached one and two-family dwellings and multiple single-family dwellings (townhouses) not more than three stories in height with a separate means of egress, and Group R-2, R-3 and R-4 occupancies not more than three stories in height, that comply with other alternative residential green construction programs, rating systems or standards that the code~~

~~official finds are equivalent in application and effectiveness, shall be approved in lieu of compliance with the requirements of this code. In determining equivalency, the code official shall consider the following subject areas:~~

1. ~~Energy efficiency~~
2. ~~Indoor environmental quality~~
3. ~~Sustainable site planning & management~~
4. ~~Material and resource efficiency~~
5. ~~Water efficiency~~

Add new chapter as follows:

CHAPTER X
SPECIAL DETAILED REQUIREMENTS BASED ON USE AND OCCUPANCY

X01.1 Special residential construction. One- and two family dwellings and townhouses not more than three stories in height with a separate means of egress and their accessory structures shall comply with Sections X01.1.1 through X01.1.6. Compliance with other provisions of this code shall not be required except where other sections are specifically referenced in these sections.

X01.1.1Site development and land use. Building site development and land use shall be in accordance with the following.

1. Where provided, landscape irrigation shall be in accordance with Sections 402.3.3, 402.3.3.1 and 402.3.3.2, except that non-potable water irrigation systems shall be permitted only where allowed by the jurisdiction.
2. Building site construction waste management shall be in accordance with Section 402.3.6.
3. Heat island mitigation shall be in accordance with Section 404.

X01.1.2 Material resource conservation and efficiency. Building material resource conservation and efficiency shall be in accordance with the following:

1. Construction material and waste management shall be in accordance with Section 502.
2. Material selection shall be in accordance with Section 503.
3. Moisture control and material storage and handling shall be in accordance with Section 506.

X01.1.3 Energy conservation, efficiency and atmospheric quality. Energy use and conservation requirements shall comply with the Residential Provisions of the 2012 IECC, or shall comply with Chapter 6 of this code.

X01.1.4 Water resource conservation and efficiency. Building water resource conservation and efficiency shall comply with the following:

1. Fixtures, fittings, equipment and appliances shall comply with Section 704.
2. Where permitted by the jurisdiction, non-potable water, rainwater collection, graywater and reclaimed water systems shall be in accordance with Sections 706, 707, 708 and 709, respectively.

X01.1.5. Indoor environmental quality and comfort. Building indoor environmental quality and comfort shall be in accordance with the following:

1. Construction features, operation and maintenance facilitation shall be in accordance with Section 802.
2. Building HVAC systems shall be in accordance with Section 803.1 and ASHRAE 62.2.
3. Indoor air quality and pollutant control measures shall be in accordance with Section 804.
4. Material emissions and pollution control shall be in accordance with Section 806.

X01.1.6 Commissioning, operation and maintenance. Building commissioning, operation and maintenance shall be in accordance with the following:

1. Energy commissioning shall be in accordance with the residential provisions of the 2012 IECC.
2. Building site waste management shall be in accordance with Section 406.2.
3. Site hardscape shall be in accordance with Section 408.2.
4. Vegetative roofs and terraces shall be in accordance with Section 408.3.2.
5. Construction material and waste management shall be in accordance with Section 502.1.
6. Moisture control preventative measures shall be in accordance with Section 506.3.
7. Non-potable water systems shall be in accordance with Sections 706, 707, 708 and 709.
8. Ventilation shall comply with ASHRAE 62.2.
9. Building operations, maintenance and owner education shall comply with Sections 904.2, 904.3 and 904.4.

Add new standard to Chapter 12 as follows:
ASHRAE
62.2-2007 Ventilation and Acceptable Indoor Air Quality in Low-Rise Residential Buildings

Commenter's Reason: We propose reintroducing residential structures to the scope of the IGCC. The striking of point 1 in section 101.2 allows that to happen and also paves the way for other portions of our comment, which is a collection of existing IGCC code provisions that are commonly accepted as a minimum standard of care for higher-performance low-rise residential structures. These provisions reference existing language in the IGCC that is applicable to and appropriate for low-rise residential buildings.

The time is now long overdue to provide helpful and meaningful guidance for all buildings. Structures have an impact on human and environmental health, but the industry has access to many mainstream technologies and methods that can slow or reverse the cumulative impacts of our built environment. Such actions are an important recognition of our responsibility to future generations.

102.4.13
This proposal provides the I-Codes foundation for residential occupancies under the scope of the International Residential Code (IRC), which will now be covered under the scope of the IGCC under the proposed changes here to Sections 102.1 and 105.4.13. This is necessary because the IGCC is an overlay code and the coverage which the IRC provides, including building, plumbing, structural, electrical, etc., is critical to support "green" building practices.

New Chapter X
We believe there is strong support within both the building and energy efficiency community for code requirements for residential structures that embrace and advance green building technologies, materials and methods. One can easily look at states like North Carolina, Vermont and Oregon to see examples of collaboration in the name of sustainability within the residential building community. While our previous proposal was disapproved in Dallas, it was clear that the Hearing Committee rejected the proposal based on the technical content of certain sections. It was not a philosophical rejection of the scope and coverage of a green construction code to also embrace, guide and govern low-rise residential occupancies. We have addressed the technical concerns in this revised proposal.

To do that, we assembled a volunteer group of industry experts to create a common sense, simple approach to re-introducing residential into the IGCC. With technical support and input from the Southern Nevada Water Authority and code officials in multiple states, we feel this proposal is in line with the philosophies of the public hearing committees in both Chicago and Dallas.

Many jurisdictions are looking to the ICC for guidance on code language that can incorporate a broader set of protections from common risks to human and environmental health in residential structures. Some have had to take the bold step of creating their own guidelines in the absence of such national codes or standards. The IGCC provides that answer for commercial buildings, and this proposal extends achievable and applicable code provisions to low-rise residential buildings.

Analysis: The standard, ASHRAE 62.2, was not reviewed or considered by the IgCC Code Development committee and it was not considered by the hearing attendees at the time of the code development hearings. Section 3.6.3.1 of Council Policy #28, *Code Development,* requires that new standards be introduced in the original code change proposal, therefore, the introduction of a new standard via a public comment is not in accordance with the process required by CP# 28 for adding new standards to the code.

Public Comment 2:

Mike Collignon, Green Builder® Coalition, Jeremy Sigmon, U.S. Green Building Council, and R. Christopher Mathis, MC2 Mathis Consulting Company request Approval as Modified by this Public Comment.

Modify the proposal as follows:

101.2 Scope. The provisions of this code shall apply to the design, construction, *addition, alteration, change of occupancy,* movement, enlargement, replacement, *repair*, equipment, location, maintenance, removal and demolition of every *building* or *structure* or any appurtenances connected or attached to such *buildings* or *structures* and to the site of which the *building* is located. Occupancy classifications shall be determined in accordance with the *International Building Code*.

Exceptions:

1. This code shall not apply to detached one-and two-family dwellings and multiple single-family dwellings (townhouses) not more than three stories above grade plane in height with a separate means of egress except where indicated by the jurisdiction in Table 302.1.
2. This code shall not apply to equipment or systems that are used primarily for industrial or manufacturing processes.

102.4.13 Residential occupancies. The provisions of the International Residential Code shall apply to the construction, alteration, movement, enlargement, replacement, repair, equipment, use and occupancy, location, maintenance, removal and demolition of detached one- and two-family dwellings and multiple single-family dwellings (townhouses) not more than three stories above grade plane in height with a separate means of egress and their accessory structures.

~~**105.4.3 Alternative residential compliance.** Detached one and two-family dwellings and multiple single-family dwellings (townhouses) not more than three stories in height with a separate means of egress, and Group R-2, R-3 and R-4 occupancies not more than three stories in height, that comply with other alternative residential green construction programs, rating systems or standards that the code official finds are equivalent in application and effectiveness, shall be approved in lieu of compliance with the requirements of this code. In determining equivalency, the code official shall consider the following subject areas:~~

1. ~~Energy efficiency~~
2. ~~Indoor environmental quality~~
3. ~~Sustainable site planning & management~~
4. ~~Material and resource efficiency~~
5. ~~Water efficiency~~

TABLE 302.1
REQUIREMENTS DETERMINED BY THE JURISDICTION

Section	Section Title or Description and Directives	Jurisdictional Requirements	
CH X. SPECIAL DETAILED REQUIREMENTS BASED ON USE AND OCCUPANCY			
X01.1	Special residential construction	☐ Yes	☐ No

(Portions of table not shown remain unchanged.)

302.1 Requirements determined by the jurisdiction. The *jurisdiction* shall indicate the following information in Table 302.1 for inclusion in its code adopting ordinance:

1. The jurisdiction shall indicate whether ASHRAE 189.1 is applicable by selecting "Yes" or "No" in the optional compliance path in Table 302.1. Where "Yes" is selected, the administrative provisions of Chapter 1 of this code and the provisions of ASHRAE 189.1 listed in Chapter 12 shall apply and the remainder of this code shall not apply.

2. The *jurisdiction* shall indicate the minimum number of *project electives* that must be incorporated into all projects, as modified by Section 303.2.

3. Where the jurisdiction requires enhanced energy performance for buildings designed on a performance basis, and for buildings greater than 25,000 square feet in *total building floor area*, the jurisdiction shall indicate a *zEPI* of 46 or less in Table 602.1 for each occupancy required to have enhanced energy performance.

4. Where "Yes" or "No" boxes are provided, the *jurisdiction* shall check the box to indicate "Yes" where that section, chapter or appendix is to be enforced as a mandatory requirement in the *jurisdiction*, or "No" where that section, chapter or appendix is *not* to be enforced as a mandatory requirement in the *jurisdiction*.

   4.1 Where "Yes" is selected for Appendix B, the *jurisdiction* shall select a compliance level phase in accordance with Section B103.1 by checking a box in Table 302.1 corresponding to Phase1, 2, 3 or 4. The selection of higher phases requires that all lower phases be selected.

      4.1.1.1 Where Phase 1 is selected, the *jurisdiction* shall indicate the number of months to be used in association with Section B103.2.

      4.1.1.2 Where Phase 2 is selected, the *jurisdiction* shall indicate the number of years and the percentage to be used in association with Section B103.3.

      4.1.1.3 Where Phase 3 is selected, the *jurisdiction* shall indicate the number of years to be used in association with Section B103.4.

      4.1.1.4 Where Phase 4 is selected, the *jurisdiction* shall indicate the number of years and the percentage to be used in association with Section B103.5.

   4.2 Where "Yes" is selected for other jurisdictional requirements in Table 302.1, the provisions of the indicated section shall apply.

Add new chapter as follows:

CHAPTER X
SPECIAL DETAILED REQUIREMENTS BASED ON USE AND OCCUPANCY

X01.1 Special residential construction. Where this chapter is selected for enforcement by the jurisdiction in Table 302.1, one- and two family dwellings and townhouses not more than three stories in height with a separate means of egress and their accessory structures shall comply with Sections X01.1.1 through X01.1.6. Compliance with other provisions of this code shall not be required except where other sections are specifically referenced in these sections.

X01.1.1Site development and land use. Building site development and land use shall be in accordance with the following.

1. Where provided, landscape irrigation shall be in accordance with Sections 402.3.3, 402.3.3.1 and 402.3.3.2, except that non-potable water irrigation systems shall be permitted only where allowed by the jurisdiction.
2. Building site construction waste management shall be in accordance with Section 402.3.6.
3. Heat island mitigation shall be in accordance with Section 404.

X01.1.2 Material resource conservation and efficiency. Building material resource conservation and efficiency shall be in accordance with the following:

1. Construction material and waste management shall be in accordance with Section 502.
2. Material selection shall be in accordance with Section 503.
3. Moisture control and material storage and handling shall be in accordance with Section 506.

X01.1.3 Energy conservation, efficiency and atmospheric quality. Energy use and conservation requirements shall comply with the Residential Provisions of the 2012 IECC, or shall comply with Chapter 6 of this code.

X01.1.4 Water resource conservation and efficiency. Building water resource conservation and efficiency shall comply with the following:

1. Fixtures, fittings, equipment and appliances shall comply with Section 704.
2. Where permitted by the jurisdiction, non-potable water, rainwater collection, graywater and reclaimed water systems shall be in accordance with Sections 706, 707, 708 and 709, respectively.

X01.1.5. Indoor environmental quality and comfort. Building indoor environmental quality and comfort shall be in accordance with the following:

1. Construction features, operation and maintenance facilitation shall be in accordance with Section 802.
2. Building HVAC systems shall be in accordance with Section 803.1 and ASHRAE 62.2.
3. Indoor air quality and pollutant control measures shall be in accordance with Section 804.
4. Material emissions and pollution control shall be in accordance with Section 806.

X01.1.6 Commissioning, operation and maintenance. Building commissioning, operation and maintenance shall be in accordance with the following:

1. Energy commissioning shall be in accordance with the residential provisions of the 2012 IECC.
2. Building site waste management shall be in accordance with Section 406.2.
3. Site hardscape shall be in accordance with Section 408.2.
4. Vegetative roofs and terraces shall be in accordance with Section 408.3.2.
5. Construction material and waste management shall be in accordance with Section 502.1.
6. Moisture control preventative measures shall be in accordance with Section 506.3.
7. Non-potable water systems shall be in accordance with Sections 706, 707, 708 and 709.
8. Ventilation shall comply with ASHRAE 62.2.
9. Building operations, maintenance and owner education shall comply with Sections 904.2, 904.3 and 904.4.

Add new standard to Chapter 12 as follows:
ASHRAE
62.2-2007 Ventilation and Acceptable Indoor Air Quality in Low-Rise Residential Buildings

Commenter's Reason: We believe jurisdictions should have the choice to include residential structures in the scope of the IGCC. The modification of point 1 in section 101.2 allows that to happen and also paves the way for other portions of our comment, which is a collection of existing IGCC code provisions that are commonly accepted as a minimum standard of care for higher-performance low-rise residential structures. These provisions reference existing language in the IGCC that is applicable to and appropriate for low-rise residential buildings.

The time is now long overdue to provide helpful and meaningful guidance for all buildings. Structures have an impact on human and environmental health, but the industry has access to many mainstream technologies and methods that can slow or reverse the cumulative impacts of our built environment. Such actions are an important recognition of our responsibility to future generations.

102.4.13
This proposal provides the I-Codes foundation for residential occupancies under the scope of the International Residential Code (IRC), which will now be covered under the scope of the IGCC under the proposed changes here to Sections 102.1 and 105.4.13. This is necessary because the IGCC is an overlay code and the coverage which the IRC provides, including building, plumbing, structural, electrical, etc., is critical to support "green" building practices.

New Chapter X
We believe there is strong support within both the building and energy efficiency community for code requirements for residential structures that embrace and advance green building technologies, materials and methods. One can easily look at states like North Carolina, Vermont and Oregon to see examples of collaboration in the name of sustainability within the residential building community. While our previous proposal was disapproved in Dallas, it was clear that the Hearing Committee rejected the proposal based on the technical content of certain sections. It was not a philosophical rejection of the scope and coverage of a green construction code to also embrace, guide and govern low-rise residential occupancies. We have addressed the technical concerns in this revised proposal.

To do that, we assembled a volunteer group of industry experts to create a common sense, simple approach to re-introducing residential into the IGCC. With technical support and input from the Southern Nevada Water Authority and code officials in multiple states, we feel this proposal is in line with the philosophies of the public hearing committees in both Chicago and Dallas.

Many jurisdictions are looking to the ICC for guidance on code language that can incorporate a broader set of protections from common risks to human and environmental health in residential structures. Some have had to take the bold step of creating their own guidelines in the absence of such national codes or standards. The IGCC provides that answer for commercial buildings, and this proposal extends achievable and applicable code provisions to low-rise residential buildings.

Analysis: The standard, ASHRAE 62.2, was not reviewed or considered by the IgCC Code Development committee and it was not considered by the hearing attendees at the time of the code development hearings. Section 3.6.3.1 of Council Policy #28, *Code Development,* requires that new standards be introduced in the original code change proposal, therefore, the introduction of a new standard via a public comment is not in accordance with the process required by CP# 28 for adding new standards to the code.