

# 2006 INTERNATIONAL RESIDENTIAL CODE

Code Change No: **RB33-06/07**

Original Proposal

Sections: R301.1.1, Chapter 43; IBC 2301.2, Chapter 35

**THIS PROPOSAL IS ON THE AGENDA OF THE IRC BUILDING/ENERGY AND THE IBC STRUCTURAL CODE DEVELOPMENT COMMITTEES. SEE THE TENTATIVE HEARING ORDERS FOR THESE COMMITTEES.**

**Proponent:** Rob Pickett, Rob Pickett & Associates, LLC, representing ICC IS-LOG Standards Committee

## PART I – IRC

### 1. Revise as follows:

**301.1.1 Alternative provisions.** As an alternative to the requirements in Section R301.1 the following standards are permitted subject to the limitations of this code and the limitations therein. Where engineered design is used in conjunction with these standards the design shall comply with the *International Building Code*.

1. American Forest & Paper Association (AF&PA), Wood Frame Construction Manual (WFCM).
2. American Iron and Steel Institute (AISI), Standard for Cold-Formed Steel Framing – Prescriptive Method for One- and Two-family Dwellings (COFS-PM).
3. ICC-400.

### 2. Add standard to Chapter 43 as follows:

#### International Code Council (ICC)

ICC-400 IS-LOG Standard for the Design and Construction of Log Structures

## PART II – IBC

### 1. Revise as follows:

**2301.2 General design requirements.** The design of structural elements or systems, constructed partially or wholly of wood or wood-based products, shall be in accordance with one of the following methods:

1. Allowable stress design in accordance with Sections 2304, 2305 and 2306.
2. Load and resistance factor design in accordance with Sections 2304, 2305 and 2307.
3. Conventional light-frame construction in accordance with Sections 2304 and 2308.

**Exception:** Buildings designed in accordance with the provisions of the AF&PA WFCM shall be deemed to meet the requirements of the provisions of Section 2308.

4. The design and construction of log structures shall be in accordance with the provisions of the ICC-400.

### 2. Add standard to Chapter 35 as follows:

#### International Code Council (ICC)

ICC-400 IS-LOG Standard for the Design and Construction of Log Structures

**Reason:** Currently the IBC and IRC do not provide any guidelines or list a standard for the construction of log structures. The ICC-400 IS-LOG Standard for the Design and Construction of Log Structures represents those industry standards and guidelines.

**CODE CHANGES RESOURCE COLLECTION – INTERNATIONAL BUILDING CODE**

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**Cost Impact:** The cost of construction will be that incurred to build properly with quality products, connectors and methods as compared to the utilization of any material with no proper methodology used in the structures development.

**Analysis:** The proposed standard has not been reviewed for compliance with Section 3.6 of the ICC Code Development process. Staff will review it and post the results at the ICC website prior to the code change hearings.

**Public Hearing Results**

**PART I — IRC**

**Committee Action:**

**Approved as Submitted**

**Committee Reason:** This new standard, ICC-400 Standard for the Design and Construction of Log Structures, gives the code official an important tool for inspection and understanding log construction.

**Assembly Action:**

**None**

**PART II – IBC STRUCTURAL**

**Committee Action:**

**Disapproved**

**Committee Reason:** The committee's disapproval is based on the status of the proposed referenced standard. If the standard is completed the proponent is encouraged to submit a public comment on this proposal. The standard was developed under the ANSI process and is desperately needed.

**Assembly Action:**

**None**

**Public Comments**

*Individual Consideration Agenda*

**This item is on the agenda for individual consideration because a public comment was submitted for Part II.**

*Public Comment:*

**Rob Pickett, Chair/Robert Savignau, Vice Chair, ICC IS-LOG Standards Committee request Approval as Submitted for Part II.**

**Commenter's Reason:** At the time of the Public Hearings in Orlando, Florida the IBC Structural committee and the IRC B/E committee was furnished with draft copies of the completed log standard. The document had not been approved by ANSI for publication that time but the language was complete. Since that time the document has been submitted to ANSI and has received approval for publication as an American National Standard. The ICC Standard for Design and Construction of Log Structures is now published and available for purchase. We urge the membership to follow the actions of the IRC B/E committee and support the reference of this important tool in the IBC.

**Final Hearing Results**

**RB33-06/07, Part I                      AS**  
**RB33-06/07, Part II                     AS**

## Code Change No: **RB314-06/07**

### Original Proposal

#### Appendix G105.2; IBC 3109.4.1.7

**Proponent:** Gene Boecker, Code Consultants, Inc.

**THIS PROPOSAL IS ON THE AGENDA OF THE IRC BUILDING/ENERGY AND THE IBC GENERAL CODE DEVELOPMENT COMMITTEES. SEE THE TENTATIVE HEARING ORDERS FOR THESE COMMITTEES.**

#### PART I – IRC

#### Revise as follows:

**AG105.2 Outdoor swimming pool.** An outdoor swimming pool, including an in-ground, above-ground or on-ground pool, hot tub or spa shall be surrounded by a barrier which shall comply with the following:

1. The top of the barrier shall be at least 48 inches (1219 mm) above grade measured on the side of the barrier which faces away from the swimming pool. The maximum vertical clearance between grade and the bottom of the barrier shall be 2 inches (51 mm) measured on the side of the barrier which faces away from the swimming pool. Where the top of the pool structure is above grade, such as an above-ground pool, the barrier may be at ground level, such as the pool structure, or mounted on top of the pool structure. Where the barrier is mounted on top of the pool structure, the maximum vertical clearance between the top of the pool structure and the bottom of the barrier shall be 4 inches (102 mm).
2. Openings in the barrier shall not allow passage of a 4-inch-diameter (102 mm) sphere.
3. Solid barriers which do not have openings, such as a masonry or stone wall, shall not contain indentations or protrusions except for normal construction tolerances and tooled masonry joints.
4. Where the barrier is composed of horizontal and vertical members and the distance between the tops of the horizontal members is less than 45 inches (1143 mm), the horizontal members shall be located on the swimming pool side of the fence. Spacing between vertical members shall not exceed 13/4 inches (44 mm) in width. Where there are decorative cutouts within vertical members, spacing within the cutouts shall not exceed 13/4 inches (44 mm) in width.
5. Where the barrier is composed of horizontal and vertical members and the distance between the tops of the horizontal members is 45 inches (1143 mm) or more, spacing between vertical members shall not exceed 4 inches (102 mm). Where there are decorative cutouts within vertical members, spacing within the cutouts shall not exceed 13/4 inches (44 mm) in width.
6. Maximum mesh size for chain link fences shall be a 2 1/4-inch (57 mm) square unless the fence has slats fastened at the top or the bottom which reduce the openings to not more than 13/4 inches (44 mm).
7. Where the barrier is composed of diagonal members, such as a lattice fence, the maximum opening formed by the diagonal members shall not be more than 13/4 inches (44 mm).
8. Access doors or gates shall comply with the requirements of Section AG105.2, Items 1 through 7, and shall be equipped to accommodate a locking device. Pedestrian access doors or gates shall open outward away from the pool and shall be self-closing and have a self-latching device. Doors or gates other than pedestrian access doors or gates shall have a self-latching device. Where the release mechanism of the self-latching device is located less than 54 inches (1372 mm) from the bottom of the door or gate, the release mechanism and openings shall comply with the following:
  - 8.1. The release mechanism shall be located on the pool side of the door or gate at least 3 inches (76 mm) below the top of the door or gate; and
  - 8.2. The door or gate and barrier shall have no opening larger than 1/2 inch (13 mm) within 18 inches (457 mm) of the release mechanism.
9. Where a wall of a dwelling serves as part of the barrier, one of the following conditions shall be met:
  - 9.1. The pool shall be equipped with a powered safety cover in compliance with ASTM F 1346; or
  - 9.2. Doors with direct access to the pool through that wall shall be equipped with an alarm which produces an audible warning when the door and/or its screen, if present, are opened. The alarm shall be listed in accordance with UL 2017. The audible alarm shall activate within 7 seconds and sound continuously for a minimum of 30 seconds after the door and/or its screen, if present, are opened and be capable of being heard throughout the house during normal household activities.

The alarm shall automatically reset under all conditions. The alarm system shall be equipped with a manual means, such as touch pad or switch, to temporarily deactivate the alarm for a single opening. Deactivation shall last for not more than 15 seconds. The deactivation switch(es) shall be located at least 54 inches (1372 mm) above the threshold of the door; or

- 9.3. Other means of protection, such as self-closing doors with self-latching devices, which are approved by the governing body, shall be acceptable so long as the degree of protection afforded is not less than the protection afforded by Item 9.1 or 9.2 described above.
- 10. Where an above-ground pool structure is used as a barrier or where the barrier is mounted on top of the pool structure, and the means of access is a ladder or steps:
  - 10.1. The ladder or steps shall be capable of being secured, locked or removed to prevent access; or
  - 10.2. The ladder or steps shall be surrounded by a barrier which meets the requirements of Section AG105.2, Items 1 through 9. When the ladder or steps are secured, locked or removed, any opening created shall not allow the passage of a 4-inch-diameter (102 mm) sphere.

**PART II – IBC**

**Revise as follows:**

**3109.4.1.7 Gates.** Access doors or gates shall comply with the requirements of Sections 3109.4.1.1 through 3109.4.1.6 and shall be equipped to accommodate a locking device. Pedestrian access doors or gates shall open outward away from the pool and shall be self-closing and have a self-latching device. Doors or gates other than pedestrian access door or gates shall have a self-latching device. Release mechanisms shall be in accordance with Sections 1008.1.8 and 1109.13. Where the release mechanism of the self-latching device is located less than 54 inches (1372 mm) from the bottom of the door or gate, the release mechanism shall be located on the pool side of the door or gate at least 3 inches (76 mm) below the top of the door or gate, and the door or gate and barrier shall have no opening greater than 0.5 inch (12.7 mm) within 18 inches (457 mm) of the release mechanism.

**Reason:** Coordination among requirements for doors and gates that provide protection of swimming pools.

Commonly, in the case where a pool is accessed from an interior space, a door is used instead of a gate. This change adds a cross correlation that acknowledges that the pool access can be other than a gate but that the hardware must still be at 54 inches. Pools are required to be protected by enclosures. Clarifying the need to install hardware at the proper height for its function is necessary in the code.

**Cost Impact:** The code change proposal will not increase the cost of construction.

**Public Hearing Results**

**PART I - IRC**

**Committee Action:**

**Disapproved**

**Committee Reason:** Item 8 would be overly restrictive on an existing building for sliding glass doors or in swinging doors and could require extensive structural modification when an alarm device might suffice.

**Assembly Action:**

**None**

**PART II - IBC**

**Committee Action:**

**Approved as Submitted**

**Committee Reason:** This proposal was approved based upon the fact that doors instead of or in addition to gates are often used in conjunction with barriers for pools.

**Assembly Action:**

**None**

**Final Hearing Results**

<b>RB314-06/07, Part I</b>	<b>D</b>
<b>RB314-06/07, Part II</b>	<b>AS</b>

## Code Change No: **RB315-06/07**

### Original Proposal

#### Appendix G105.2; IBC 3109.4.1.8

**Proponent:** Bob Eugene, Underwriters Laboratories, Inc.

**THIS PROPOSAL IS ON THE AGENDA OF THE IRC BUILDING/ENERGY AND THE IBC GENERAL CODE DEVELOPMENT COMMITTEES. SEE THE TENTATIVE HEARING ORDERS FOR THESE COMMITTEES.**

#### **PART I – IRC**

#### **Revise as follows:**

**AG105.2 Outdoor swimming pool.** An outdoor swimming pool, including an in-ground, above-ground or on-ground pool, hot tub or spa shall be surrounded by a barrier which shall comply with the following:

1. The top of the barrier shall be at least 48 inches (1219 mm) above grade measured on the side of the barrier which faces away from the swimming pool. The maximum vertical clearance between grade and the bottom of the barrier shall be 2 inches (51 mm) measured on the side of the barrier which faces away from the swimming pool. Where the top of the pool structure is above grade, such as an above-ground pool, the barrier may be at ground level, such as the pool structure, or mounted on top of the pool structure. Where the barrier is mounted on top of the pool structure, the maximum vertical clearance between the top of the pool structure and the bottom of the barrier shall be 4 inches (102 mm).
2. Openings in the barrier shall not allow passage of a 4-inch-diameter (102 mm) sphere.
3. Solid barriers which do not have openings, such as a masonry or stone wall, shall not contain indentations or protrusions except for normal construction tolerances and tooled masonry joints.
4. Where the barrier is composed of horizontal and vertical members and the distance between the tops of the horizontal members is less than 45 inches (1143 mm), the horizontal members shall be located on the swimming pool side of the fence. Spacing between vertical members shall not exceed 13/4 inches (44 mm) in width. Where there are decorative cutouts within vertical members, spacing within the cutouts shall not exceed 13/4 inches (44 mm) in width.
5. Where the barrier is composed of horizontal and vertical members and the distance between the tops of the horizontal members is 45 inches (1143 mm) or more, spacing between vertical members shall not exceed 4 inches (102 mm). Where there are decorative cutouts within vertical members, spacing within the cutouts shall not exceed 13/4 inches (44 mm) in width.
6. Maximum mesh size for chain link fences shall be a 2 1/4-inch (57 mm) square unless the fence has slats fastened at the top or the bottom which reduce the openings to not more than 13/4 inches (44 mm).
7. Where the barrier is composed of diagonal members, such as a lattice fence, the maximum opening formed by the diagonal members shall not be more than 13/4 inches (44 mm).
8. Access gates shall comply with the requirements of Section AG105.2, Items 1 through 7, and shall be equipped to accommodate a locking device. Pedestrian access gates shall open outward away from the pool and shall be self-closing and have a self-latching device. Gates other than pedestrian access gates shall have a self-latching device. Where the release mechanism of the self-latching device is located less than 54 inches (1372 mm) from the bottom of the gate, the release mechanism and openings shall comply with the following:
  - 8.1. The release mechanism shall be located on the pool side of the gate at least 3 inches (76 mm) below the top of the gate; and
  - 8.2. The gate and barrier shall have no opening larger than 1/2 inch (13 mm) within 18 inches (457 mm) of the release mechanism.
9. Where a wall of a dwelling serves as part of the barrier, one of the following conditions shall be met:
  - 9.1. The pool shall be equipped with a powered safety cover in compliance with ASTM F 1346; or
  - 9.2. Doors with direct access to the pool through that wall shall be equipped with an alarm which produces an audible warning when the door and/or its screen, if present, are opened. The alarm shall be listed and labeled in accordance with UL 2017. ~~The audible alarm shall activate within 7 seconds and sound continuously for a minimum of 30 seconds after the door and/or its screen, if present, are opened and~~

~~be capable of being heard throughout the house during normal household activities. The alarm shall automatically reset under all conditions. The alarm system shall be equipped with a manual means, such as touch pad or switch, to temporarily deactivate the alarm for a single opening. Deactivation shall last for not more than 15 seconds. The deactivation switch(es) shall be located at least 54 inches (1372 mm) above the threshold of the door.~~

~~9.3. Other means of protection, such as self-closing doors with self-latching devices, which are approved by the governing body, shall be acceptable so long as the degree of protection afforded is not less than the protection afforded by Item 9.1 or 9.2 described above.~~

10. Where an above-ground pool structure is used as a barrier or where the barrier is mounted on top of the pool structure and the means of access is a ladder or steps:
  - 10.1. The ladder or steps shall be capable of being secured, locked or removed to prevent access; or
  - 10.2. The ladder or steps shall be surrounded by a barrier which meets the requirements of Section AG105.2, Items 1 through 9. When the ladder or steps are secured, locked or removed, any opening created shall not allow the passage of a 4-inch-diameter (102 mm) sphere.

**PART II – IBC**

**Revise as follows:**

**3109.4.1.8 Dwelling wall as a barrier.** Where a wall of a dwelling serves as part of the barrier, one of the following shall apply:

1. Doors with direct access to the pool through that wall shall be equipped with an alarm that produces an audible warning when the door and/or its screen, if present, are opened. The alarm shall be listed and labeled in accordance with UL 2017. ~~The audible alarm shall activate within 7 seconds and sound continuously for a minimum of 30 seconds after the door and/or its screen, if present, are opened and be capable of being heard throughout the house during normal household activities. The alarm shall automatically reset under all conditions. The alarm shall be equipped with a manual means, such as touchpad or switch, to temporarily deactivate the alarm for a single opening. Such deactivation shall last for not more than 15 seconds.~~ In dwellings not required to be Accessible, Type A or Type B units, the deactivation switch shall be located 54 inches (1372 mm) or more above the threshold of the door. In dwellings required to be Accessible, Type A or Type B units, the deactivation switch(es) shall be located at 54 inches (1372 mm) maximum and 48 inches minimum above the threshold of the door.
2. The pool shall be equipped with a power safety cover that complies with ASTM F 1346.
3. ~~Other means of protection, such as self-closing doors with self-latching devices, which are approved by the administrative authority, shall be accepted so long as the degree of protection afforded is not less than the protection afforded by Section 3109.4.1.8, Item 1 or 2.~~

**Reason:** To delete unnecessary text.

UL 2017 is the ANSI standard that addresses “pool alarms”, also known as residential water-hazard entrance alarm equipment. UL 2017 establishes a definitive performance test and audible level criteria for the alarm. The third option is already available through alternate materials and methods in Section 104.11.

UL 2017 covers Residential Water Hazard entrance alarms. Residential Water Hazard entrance alarms are devices or systems intended to be installed on gates, doors, or access barriers surrounding residential swimming pools, spas, or hot tubs for the purpose of sounding an audible alarm due to unauthorized entry into these areas. UL 2017 includes the requirement identified in the code as well as an operation test, an audibility test and a static discharge test. There are several pool alarms that are currently listed and available in the marketplace. The third option is already available through alternate materials and methods in Section 104.11.

**Bibliography:** UL 2017

**Cost Impact:** The code change proposal will not increase the cost of construction.

**Public Hearing Results**

**PART I C IRC**

**Committee Action:**

**Approved as Modified**

**Modify the proposal as follows:**

9.3. Other means of protection, such as self-closing doors with self-latching devices, which are approved by the governing body, shall be acceptable so long as the degree of protection afforded is not less than the protection afforded by Item 9.1 or 9.2 described above.

(Portions of proposal not shown remain unchanged)

**Committee Reason:** This change removes the 7 second delay since it is now covered in UL 2017. The modification retains subsection 9.3 in order to allow an alternate and to be consistent with the IBC General action on Part II.

**Assembly Action:** **None**

**PART II C IBC**

**Committee Action:** **Approved as Modified**

**Modify the proposal as follows:**

- 3. Other means of protection, such as self-closing doors with self-latching devices, which are approved by the administrative authority, shall be accepted so long as the degree of protection afforded is not less than the protection afforded by Section 3109.4.1.8, Item 1 or 2.

(Portions of proposal not shown remain unchanged)

**Committee Reason:** The committee supported deleting the redundant language within the code which is currently contained in UL 2017. The proposal was modified to retain item 3 as it provides a specific method for compliance instead of relying on Section 104.11 for this allowance.

**Assembly Action:** **None**

<b>Final Hearing Results</b>
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RB315-06/07, Part I	AM
RB315-06/07, Part II	AM

