

Office Uniformity Minutes February and March 2008

February and March 2008

Discussion: meetings were held and discussions revolved around the new storm water management ordinance and enforcement by engineering and building inspection staff.

March 13th, 2008

Discussion: reviewed safety glazing regarding the recent contractors training held March 7th at the fire-hall. R308.4 #6 including exception #4 was the focus of discussion.

Interpretation of some language is being requested by ICC staff.

Discussion: walking surface around tub/whirlpool installations requires safety glass within 60 inches.

A standard was discussed to determine at what point inspectors would determine the space around tub installations standing surfaces. 10 inches is the minimum tread width at stairs thus 10 inches is reasonable to assume space for standing. Raised ledges that have less than 7-3/4 inch rises and 10-inches or more of width should be considered additional standing surfaces.

Discussion: attempted to define the difference between a landing and a floor and discussed the various examples at top of stairs and at bottom of stairs and at exterior doors.

March 19th, 2008

Discussion: attic access hatches in garage ceilings. IRC R309.1 & R309.2

ICC's opinion is that access panels and openings should be equal protection to the ceiling membrane. No hinges or latching device is needed or required in the current edition of the International Building Code.

Building inspection staff will stop requiring the latches and closures/hinges etc. on access hatches. The design of the hatch will stay the same as previously depicted.

(See attached policy and drawing below). {Revised 3/25/2008}



ATTIC ACCESS IN GARAGE: POLICY AND INTERPRETATION

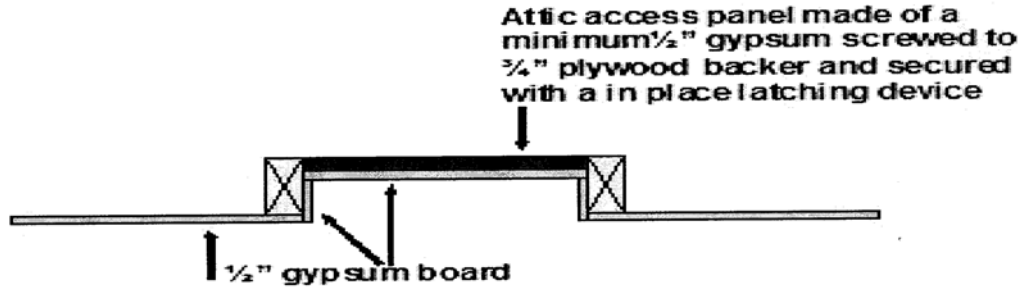
R309.1 Opening protection. ... Other openings between the garage and residence shall be equipped with solid wood doors not less than 1-3/8 inches in thickness, solid or honeycomb core steel doors not less than 1-3/8 inches thick, or 20-minute fire-rated doors.

R309.2 Separation required. The garage shall be separated from the residence and its attic area by not less than 1/2-inch gypsum board applied to the garage side.

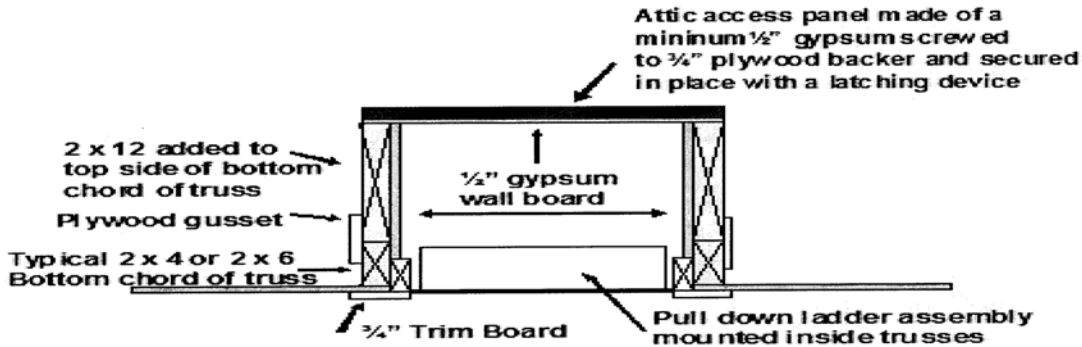
Interpretation: This includes the horizontal attic access located in the ceiling of garages when the ceiling is used as the fire separation and a common attic is shared by both occupancies. This requirement means that the attic access must be; constructed of 1/2" gypsum board: A framed access 3/4" plywood or of 1/2" gypsum walls, and the access door with 1/2" gypsum board on the garage side. Hinged, with self-closing hardware or positioned so that the opening swing remains less than 90 degrees vertical and a latch to secure the door in place.

If a Folding Stairway is installed, a framed enclosure shall be constructed above and around the folding stair rough opening. Minimum 1/2" gypsum board shall be installed on the garage side of the enclosure. A framed 1 1/2" or 3/4" plywood access door with 1/2" gypsum board on the garage side shall be equipped with hinge and latching device. The door shall be positioned to self-close (less than 90 degrees opening). Edges around the stairway gypsum covering shall be tight to the surrounding ceiling.

ATTIC ACCESS IN GARAGE



ATTIC ACCESS IN GARAGE



Pull down garage attic ladder installation requirements to maintain fire resistive separation

Discussion: egress windows; egress window installations will be required in basement alterations or finished basements when determined to be a change of use or significant remodel/alterations. Basements that were legally finished under a previous building code edition or prior to building code adoption (1972) may remain. Documentation must be found in the city's address file/retained plans or other reliable documentation may be presented for consideration by the building official. (See attached Interpretation: ICC/2006 IRC section R310.1 issued 9/6/2007).

INTERNATIONAL RESIDENTIAL CODE

CHAPTER 3
BUILDING PLANNING

SECTION R310.1
IRC Interpretation No. 16-07
2006 Edition
Issued: 09-06-2007
RE_06_16_07

R310.1 Emergency escape and rescue required. Basements and every sleeping room shall have at least one operable emergency escape and rescue opening. Such opening shall open directly into a public street, public alley, yard or court. Where basements contain one or more sleeping rooms, emergency egress and rescue openings shall be required in each sleeping room, but shall not be required in adjoining areas of the basement. Where emergency escape and rescue openings are provided they shall have a sill height of not more than 44 inches (1118 mm) above the floor. Where a door opening having a threshold below the adjacent ground elevation serves as an emergency escape and rescue opening and is provided with a bulkhead enclosure, the bulkhead enclosure shall comply with Section R310.3. The net clear opening dimensions required by this section shall be obtained by the normal operation of the emergency escape and rescue opening from the inside. Emergency escape and rescue openings with a finished sill height below the adjacent ground elevation shall be provided with a window well in accordance with Section R310.2. Emergency escape and rescue openings shall open directly into a public way, or to a yard or court that opens to a public way.

Exception: Basements used only to house mechanical equipment and not exceeding total floor area of 200 square feet (18.58 m²).

REFERENCED SECTIONS:

R101.2 Scope. The provisions of the *International Residential Code for One- and Two-family Dwellings* shall apply to the construction, alteration, movement, enlargement, replacement, repair, equipment, use and occupancy, location, removal and demolition of detached one- and two-family dwellings and townhouses not more than three stories above-grade in height with a separate means of egress and their accessory structures.

R102.7 Existing structures. The legal occupancy of any structure existing on the date of adoption of this code shall be permitted to continue without change, except as is specifically covered in this code, the *International Property Maintenance Code* or the *International Fire Code*, or as is deemed necessary by the building official for the general safety and welfare of the occupants and the public.

R102.7.1 Additions, alterations or repairs. Additions, alterations or repairs to any structure shall conform to the requirements for a new structure without requiring the existing structure to comply with all of the requirements of this code, unless otherwise stated. Additions, alterations or repairs shall not cause an existing structure to become unsafe or adversely affect the performance of the building.



Q: In question are existing detached one- and two-family dwellings and townhouses containing basements without emergency escape and rescue openings. The dwellings in question were legally constructed and occupied prior to jurisdictional adoption and enforcement of the *International Residential Code*.

Do the technical provisions for emergency escape and rescue openings, as provided in Section R310.1 of the *International Residential Code*, apply to additions and alterations to change an existing non-habitable basement to habitable space in a legally occupied dwelling that is subject to the provisions of the *International Residential Code* at the time the additions and alterations are made to the existing dwelling?

A: Yes. Additions and alterations to existing dwellings must be made to comply with the technical provisions of the appropriate codes being enforced at the time the work is done. The provisions in Section R310.1 of the *International Residential Code* require basements and sleeping rooms to be provided with emergency escape and rescue openings. When the construction of additions and alterations change the use of the existing basement, emergency escape and rescue openings must be provided; regardless of the requirements in place when the dwelling was originally constructed.

The provisions of the *International Residential Code*, as defined in Section R101.2, apply to all aspects of construction for detached one-and two-family dwellings, multiple single-family dwellings defined as townhouses and all structures accessory to the dwellings and townhouses. The provisions address all aspects of constructing, altering, repairing,

INTERNATIONAL RESIDENTIAL CODE

maintaining, using, occupying, enlarging, locating, removing or demolishing any one-family dwelling, two-family dwelling, townhouse or accessory structure. The code regulates any and all activities that modify the dwellings as well as any structures that are incidental to the main dwelling and are located on the same lot.

Existing dwellings that are legally occupied, per Section R102.7, at the time the *International Residential Code* is adopted, and remain unchanged, are not subject retrospectively to the provisions of the code. However, in accordance with the provisions in Section R102.7.1, any new construction, additions, alterations or repairs made to the existing dwelling after the adoption of the *International Residential Code* are required to conform to the requirements of the code for new construction.

Although new construction, additions, alterations or repairs made to the existing dwelling must comply with provisions for new construction, those portions of the existing dwelling not affected are not required to comply with all of the provisions for new construction. However, new construction shall not create an unsafe condition in the existing dwelling. Changing a non-habitable basement to an occupied space without emergency escape and rescue openings creates an unsafe condition that is in conflict with the provisions of the code intended to insure a safe and usable living environment for the occupants of the dwelling.

Discussion: connector solutions for rim joist to plate connections, 2006 IRC.

A four page handout from USP will be posted on the web page for viewing. (see Attached).

CONNECTOR SOLUTIONS TO MEET THE PRESCRIPTIVE LOADS OF 2006 IRC TABLE R404.1(1)

The 2006 edition of the *International Residential Code (IRC)* contains several new provisions regarding the connection between the top of a concrete or masonry foundation wall and the floor system. Specifically Table R404.1(1) of the 2006 IRC was added which specifies prescriptive support requirements based on calculated horizontal soil load reactions at the top of the wall. The magnitude of these reactions, and subsequent connector requirements, are functions of the foundation wall height, unbalanced backfill height, and soil type.

Based on the soil loads contained in Table R404.1(1), USP developed two new products to meet the requirements of the code. The products, the LJC-TZ and LJO-TZ series, are designed to be more economical and install easier than the code prescribed connectors. They are also designed to satisfy the fastener spacing and end distance requirements of engineered wood floor joists. Many of the connectors listed in Table R404.1(1), as well as other connectors available, do not meet the Joist Manufacturers requirements for this application.

Soil Type
The soil pressure against a foundation wall varies depending on the soil type, height of the foundation wall, and backfill height. The two letter symbol representing the different soil classes on Table R404.1(1) are part of the Unified Soil Classification System (USCS) used to describe the texture and grain size of a soil. The first letter typically describes the type of soil and the second letter describes the soil properties.

The table below shows the descriptions for the different Unified Soil Classification System symbols given in the International Building Code. In the code each of these soil classification two letter symbols is assigned an active and passive pressure values which translates into the force the soil will impose on the foundation wall. Generally, well draining sand and gravel soils will impose less force on a foundation wall compared to clayey type soils which don't drain as well. If there is uncertainty regarding the soil classification at a particular site, the building official or a qualified geotechnical engineer should be consulted.

| First Letter Type of Soil | Unified Soil Classification | Description of Unified Soil |
|---------------------------|-----------------------------|--|
| G | GW | Well graded, clean gravel, gravel and sand |
| GM | GM | Medium sand, clean sand and gravel |
| GC | GC | Coarse sand, clean sand and gravel |
| SW | SW | Well graded, clean sand, sand and gravel |
| SM | SM | Medium sand, clean sand and gravel |
| SC | SC | Coarse sand, clean sand and gravel |
| SP | SP | Very clean sand with gravel |
| MP | MP | Medium sand with gravel |
| ML | ML | Medium sand and clay |
| CL | CL | Clay with sand, gravel and clay |
| CH | CH | Clay with sand and gravel |
| SH | SH | Hard clay with sand |
| SC | SC | Clay with sand and gravel |
| SH | SH | Hard clay with sand |
| ML | ML | Medium sand with clay |
| CL | CL | Clay with sand and gravel |
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