

# IBC 10-6

Date: 8-10-2017

Revised 8-24-2017

Revised 9-5-2017

## BCAC exterior exit stairway protection

**Reason:** Clarify which rating of walls around exterior stairway.

**1027.6 Exterior exit stairway and ramp protection.** *Exterior exit stairways* and *ramps* shall be separated from the interior of the building as required in Section 1023.2. Openings shall be limited to those necessary for egress from normally occupied spaces. Where a vertical plane projecting from the edge of an *exterior exit stairway* or *ramp* and landings is exposed by other parts of the building at an angle of less than 180 degrees (3.14 rad), **the exterior wall shall be rated in accordance with Section 1023.7.**

### Exceptions:

1. Separation from the interior of the building is not required for occupancies, other than those in Group R-1 or R-2, in buildings that are not more than two stories above *grade plane* where a *level of exit discharge* serving such occupancies is the first story above *grade plane*.
2. Separation from the interior of the building is not required where the *exterior exit stairway* or *ramp* is served by an *exterior exit ramp* or balcony that connects two remote *exterior exit stairways* or other *approved exits* with a perimeter that is not less than 50 percent open. To be considered open, the opening shall be not less than 50 percent of the height of the enclosing wall, with the top of the openings not less than 7 feet (2134 mm) above the top of the balcony. •
3. Separation from the open-ended *corridor* of the building is not required for *exterior exit stairways* or *ramps*, provided that Items 3.1 through 3.5 are met:
  - 3.1. The building, including open-ended *corridors*, and *stairways* and *ramps*, shall be equipped throughout with an *automatic sprinkler system* in accordance with Section 903.3.1.1 or 903.3.1.2.
  - 3.2. The open-ended *corridors* comply with Section 1020.
  - 3.3. The open-ended *corridors* are connected on each end to an *exterior exit stairway* or *ramp* complying with Section 1027.
  - 3.4. The ~~*exterior walls*~~ and openings adjacent to the *exterior exit stairway* or *ramp* comply with Section ~~1023.7~~ 1023.2.
  - 3.5. At any location in an open-ended *corridor* where a change of direction exceeding 45 degrees (0.79 rad) occurs, a clear opening of not less than 35 square feet (3.3 m<sup>2</sup>) or an *exterior stairway* or *ramp* shall be provided. Where clear openings are provided, they shall be located so as to minimize the accumulation of smoke or toxic gases.
4. In Group R-3 occupancies not more than four stories in height, exterior exit stairways and ramps serving individual dwelling units are not required to be separated from the interior of the building where the exterior exit stairway or ramp discharges directly to grade.

**Reason:** This seems like a very small change, but it will have significant impact. E7-12 AMPC, E153-12 AS, E154-12 AMPC all revised this section intending to clarify what the exterior wall ratings surrounding the exterior stairway. E126-15 AS added exception 4. What is not clear is what would be the rating between the stairway and the building when the exterior stairway is pushed into the building as indicated in the drawing. If the stairway connected more than 4 stories, should the rating between the building and the stairway be 1 hour or two. Current language in Exception 3.4, by the reference to 1023.7 seems to indicate 1 hour.

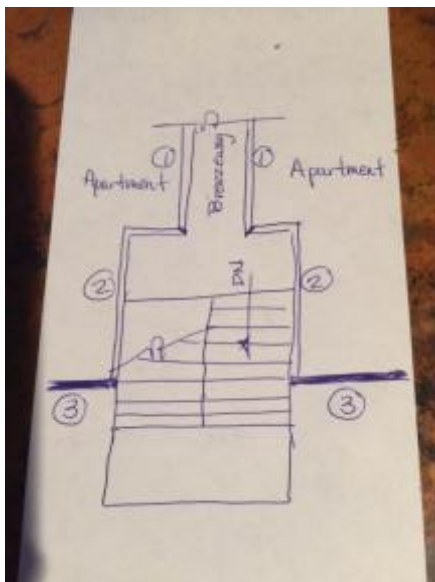
For Figure 1 -

Exception 3.2 - The corridor rating is  $\frac{1}{2}$  hour per Table 1020.1. So that is the wall labeled 1.

Exception 3.4 - The current reference (Section 1023.7) is to exterior walls of interior stairways. To protect the stairways for egress from a fire inside the room seems like it should be the section on construction (Section 1023.2). That is the walls labeled 2. That would require 1 hour for up to three stories, and 2 hours for four stories or more. This also would not allow openings other than doors to face the stairway. In addition to correcting the reference the proposal removes 'exterior'. While the walls are open to weather, there seems to be inconsistent interpretation on if walls on a covered breezeway are interior or exterior.

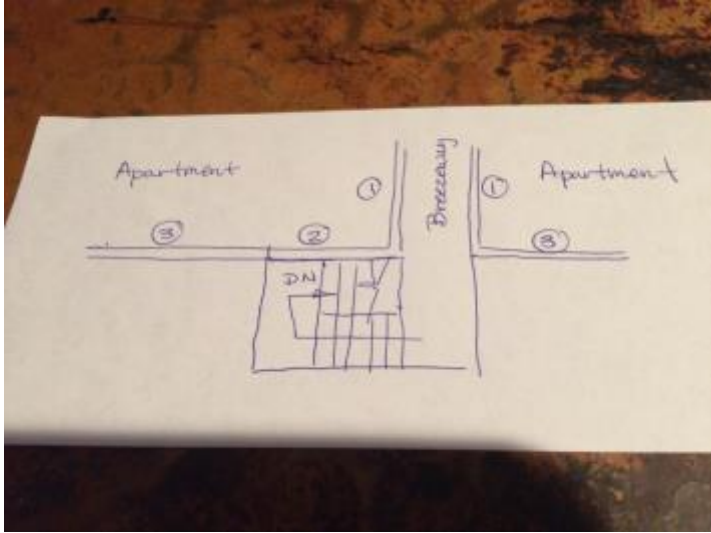
The last sentence of the main text references 1023.7 (That is the wall labeled 3).

Figure 1



Does this still work for exterior stairways totally outside of a building as indicate in figure 2?

Figure 2



Does this still work for exterior stairways totally inside of a building as indicate in figure 3?

Figure 3

