

Construction Codes & Licensing Division - Plan Review unit

## PLAN REVIEW POLICY

PR-04

Group I-3 Corridor Ratings

8/03, 6/07

### Based on the 2007 Minnesota State Building Code

#### Background:

There is considerable confusion about the required fire-resistance rating of corridors in Group I-3 occupancies. In IBC Section 1017.1 and Table 1017.1 the required rating for a corridor in a sprinkled Group I-3 occupancy is indicated as one-hour, however footnote b refers the user to **IBC Section 408.7 - subdivision of resident housing areas**, for: "...reduction in the fire-resistance rating." Herein lies the problem. IBC Section 408.7 does not directly indicate any reduction to the corridor rating, but instead may mandates smoke-tight construction of cells, dayroom and other common use area based on occupancy condition and travel distance.

Most detention and correctional facilities are licensed by state and federal authorities, which refer to the *NFPA Life Safety Code* as a basis of compliance. Under the 2000 Life Safety Code Section 22.3.8 Special Protection Features - Subdivision of Resident Housing Spaces and Table 22.3.8 we see that virtually identical language, including the title, however the biggest difference is that it is very clear from the table when the fire-resistance rating of the corridor may be reduced. It becomes clear by comparing the two documents that the intent of the IBC was to mirror the Life Safety Code for the requirements, however it was lost in the translation. Requiring a fire-resistance rating in this portion of these facilities places a large financial burden on the owner/operator of the facility, as well as making it difficult to maintain visual security in a space that inmates spend the majority of their time.

**Policy:**

Since clearly the intent of the IBC was to duplicate the requirements of the Life Safety Code for the subdivision of residential housing spaces, NFPA 101 Table 22.3.8 shall be used as a basis for the requirements of IBC Section 408.7.

**Table 22.3.8 Subdivision of Resident Housing Spaces**

Feature	Use Condition			
	II	III	IV	V
Room to room separation	NR	NR	NR	SR
Room face to corridor separation	NR	NR	NR	SR
Room face to common space separation	NR	NR ≤ 50 ft (≤15m) <sup>†</sup> SR > 50 ft (>15m) <sup>†</sup>	NR ≤ 50 ft (≤15m) <sup>†</sup> SR > 50 ft (>15m) <sup>†</sup>	SR
Common space to corridor separation	NR	NR	NR	SR
Total openings in solid room face where room face is required to be smoke resistance or fire rated <sup>‡</sup>	120 in. <sup>2</sup> (0.08 m <sup>2</sup> )	120 in. <sup>2</sup> (0.08 m <sup>2</sup> )	120 in. <sup>2</sup> (0.08 m <sup>2</sup> )	120 in. <sup>2</sup> (0.08 m <sup>2</sup> ), closable from inside, or 120 in. <sup>2</sup> (0.08 m <sup>2</sup> ) with smoke control

NR: No requirement  
SR: Smoke resistant

**Notes:**

1. Door openings in partitions required to be smoke resistant (SR) in accordance with Table 22.3.8 shall be substantial doors of construction that resists the passage of smoke. Latches and door closers shall not be required on cell doors.
2. Under Use Condition II, Use Condition III, or Use Condition IV, a space subdivided by open construction (any combination of grating doors and grating walls or solid walls) shall be permitted to be considered one room if housing not more than 16 persons. The perimeter walls of such space shall be of smoke-resistant construction. Smoke detection shall be provided in such space. Under Use Condition IV, common walls between sleeping areas within the space shall be smoke resistant, and grating doors and fronts shall be permitted to be used. Under Use Condition II and Use Condition III, open dormitories shall be permitted to house more than 16 persons as permitted by other sections of this chapter.
3. Where barriers are required to be smoke resistant (SR), the provisions of 8.2.4 (IBC Sec. 710) shall not apply.

<sup>†</sup> Travel distance through the common space to the exit access corridor.

<sup>‡</sup> "Total openings in solid room face" includes all openings (for example, undercuts, food passes, grilles), the total of which shall not exceed 120 in.<sup>2</sup> (0.08 m<sup>2</sup>). All openings shall be 36 in. (91 cm) or less above the floor.

**Note: To be used in accordance with the attached, "Plan Review Policies"**