

BBRS Official Interpretation No. 2013_03

Date: May 14, 2013

Subject: 8th Edition 780 CMR Base Volume; Fire Service Access Elevator and Lobby Requirements, §3007.4, including §§3007.4.1 to 3007.4.4.

Background/Discussion:

In September 2008 the International Code Council (ICC) approved 23 building and fire code changes based in large part on recommendations from the U.S. Commerce Department's National Institute of Standards and Technology (NIST) resulting from NIST's investigation of the collapses of New York City's World Trade Center (WTC) towers on September 11, 2001. These changes were incorporated into the 2009 edition of the ICC's I-Codes, specifically the International Building Code (IBC) and the International Fire Code (IFC)).

These changes included the requirement for a minimum of one (1) fire service access elevator (FSAE) and associated FSAE lobby in high-rise buildings with an occupied floor more than 120 feet above the lowest level of fire department vehicle access^a (IBC §403.6.1, §3007.4).

Prior to the incorporation of the FSAE into the Code, many U.S. fire departments had adopted operating procedures for fires in tall buildings that incorporate elevator access. In certain countries firefighter elevators are dedicated to this use; however in the U.S. firefighters utilize the passenger elevators that are either still operating or are waiting at the ground floor in Phase I recall.

Typically, the procedure is for the firefighters to use the elevator to transport personnel and equipment to a protected lobby on a floor below the fire floor where they stage for their suppression operations. The firefighters then move up the stairway to the fire floor with hose connected to a standpipe located in the stairway. This is important because once charged with water, the hose becomes very stiff, so the hose is usually looped down the stairs and back up so that it can be advanced onto the fire floor more easily. Working from the stairway also provides a protected area to which the firefighters can retreat in case the fire threatens them. This operating procedure highlights the importance and interrelationship of the FSAE elevator, lobbies, associated stairway and standpipe.

According to the 2009 IBC Commentary (copy attached) and consistent with the reasoning associated with the original code change proposal G63-06/07 (copy attached) "the requirements of §3007 are intended to provide a reasonable degree of safety for firefighters operating the FSAE to a location of staging firefighters and equipment. In a typical situation the staging area will be set up one or two floors below the fire."

The 2009 IBC Commentary also states: "A FSAE may be an elevator typically used for freight, service elevator, or one of the passenger elevators for general public use."

The FSAE is required to open into a FSAE lobby that complies with §§ 3007.4.1 – 3007.4.4. The IBC Commentary states that the FSAE lobby provides "a reasonable degree of safety for firefighters operating the fire service access elevator and a location for staging firefighters and equipment one or two floors below the fire."

Note a: MA amendment to 403.6.1 revises this section to read – In buildings more than 70 feet in height above grade plane, a minimum of one fire service access elevator shall be provided in accordance with Section 3007

It is important to recognize that the FSAE provisions in the IBC are NOT intended to fully replicate the firefighting stair and firefighting lift provisions in certain codes adopted in other countries (e.g., The Building Regulations, 2000; Fire Safety [Approved Document B]; Volume 2 – Buildings Other Than Dwellinghouses 2006 Edition (England & Wales) and BS 9999 (2008): Code of Practice for Fire Safety in the Design, Management and Use of Buildings). There are numerous differences between the FSAE provisions in the IBC and the firefighting stair and lift provisions adopted by other countries.

QUESTION 1: Are FSAE lobbies required to be dedicated for firefighter use only?

ANSWER 1: No. A building's freight, service, or passenger elevator(s) is permitted to serve as a FSAE and the associated lobbies are permitted to be used as a freight, service, and/or passenger lobbies, which then serve as FSAE lobbies in a fire emergency.

(NOTE: The code intends that the FSAE lobbies be maintained free of storage and furniture (IFC §607.3 – copy attached)).

QUESTION 2: Are there restrictions on the types (uses) of rooms/spaces that open into a FSAE lobby?

ANSWER 2: No. There are no restrictions placed on the types or rooms/spaces or occupancies that communicate directly with a FSAE lobby. The walls that enclose a FSAE lobby, and separate it from adjacent rooms/spaces, are required to be 1-hour fire rated smoke barriers and each doorway is required to be ¾-hour fire rated, smoke and draft assembly meeting the requirements of §715.4.3.1 with the UL 1784 test conducted without the artificial bottom seat.

QUESTION 3: Are the number of doorways into an FSAE lobby limited in size or number?

ANSWER 3: No. There are no prescriptive limits placed on the number of doors (doorways) leading into (or out of) a FSAE lobby. Each doorway (all doorways) is required to be protected with a ¾-hour fire rated, smoke and draft assembly meeting the requirements of §715.4.3.1 with the UL 1784 test conducted without the artificial bottom seat.

QUESTION 4: Is a FSAE lobby permitted to form a part of the means of egress and general circulation route(s) on a story.

ANSWER 4: Yes.

QUESTION 5: Where a high-rise building includes a basement level(s) [story / stories], is a FSAE required to serve the basement level(s).

ANSWER 5: Yes. An FSAE is required to serve every story (floor) of a building, including basement stories.

QUESTION 6: Is a single FSAE required to serve all stories of a building?

ANSWER 6: No. The use of multiple, separate FSAEs is permitted in the same building as long as the FSAEs have access by the fire department from their response level of access to the building. For example, it is not necessary for stories (floors) above and below the street floor to be served by the same FSAE, as long as the FSAE access by the fire department is on the same story (floor) as the fire department response access point to each of the FSAEs.