

## Elevator Pit Drains

16 December 2014

The CSA B44-07 Code requires that every pit for an elevator provided with firefighters' service be provided with a sump pump or a drain.

*" 2.2.2.4: Drains and sump pumps, where provided, shall comply with the applicable plumbing code, and they shall be provided with a positive means to prevent water, gases, and odors from entering the hoistway.*

*2.2.2.5: In elevators provided with Firefighters' Emergency Operation, a drain or sump pump shall be provided. The sump pump/drain shall have the capacity to remove a minimum of 11.4 m<sup>3</sup>/h (3,000 gal/h) per elevator.*

*2.2.2.7: In jurisdictions enforcing the NBCC, sump pumps and their control equipment shall not be installed in any elevator pit."*

All new elevators installed under the CSA B44-07 code are provided with firefighter service, hence all pits require a sump pump or a drain.

Water from building sprinkler systems or other sources, such as fire suppression, should not be allowed to accumulate in a pit. If a sump pump is utilized, it must be permanently installed. This provision is intended to assist in maintaining elevator service during a fire emergency. The minimum capacity of a sump pump/drain must be equal to the output from a typical sprinkler head. This may not guarantee a pit free from water but will give firefighters additional time to use the elevator before water in the pit may interfere with the elevator operation.

The possibility of sewer gases entering the hoistway is also to be eliminated, as the sump pump or drain typically discharges into the open air outside the pit and hoistway. In Canada, a sump pump is not permitted to be installed in pits, in order to avoid non-elevator personnel from having to enter the pit to service the pump.

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