



THE UPS AND DOWNS OF ELEVATORS

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In 1852 the first safety elevator was installed in New York City by Elisha Graves Otis as a response to a need to make buildings taller as urban real estate costs soared. The safety feature he invented was an automatic brake that engaged the rail to stop the elevator in the event of a failure of the machinery or the cables suspending the car. The invention of the safety elevator made possible the development of taller and taller buildings. Most of us take for granted that the elevator we enter will transport us safely to our destination without incident. What we don't see behind the scenes is how the design, installation and maintenance of elevators is governed by several important codes defining the safe functioning of these important pieces of mechanical equipment. *What are the different elevator codes that we go by regarding safety?*

The first elevator codes were written in 1922. Experienced elevator personnel write all the elevator codes. The elevator building trade industry is the only one that demands policing action (code enforcement).

All the safety codes for your elevator are applied to your elevator for the last year of either installation or modernization. If an elevator was installed in 1970 the 1970 safety code applies to that elevator. Between that time and today many changes to the code have come about. An elevator that is either modernized today or built today has much more safety equipment applied to it, then in earlier models. In 1970 there were no ADA requirements (American Disability Act). Telephones and better door controllers were a requirement as they are today and did not apply in 1970. This is just an example of the many changes that are regularly added to elevator codes. ASME 17.1, NFPA, International Building Codes, International Electrical, and ADA codes are the applicable codes to all elevators today.

ASME – A17.1 – These codes are written specifically to cover the functional requirements of all types of elevators, escalators and some types of material lifts.

NFPA - Life Safety and Fire Code. - This covers smoke and heat detection devices, fire alarm interconnection along with fire ratings on materials used for the elevator shafts and machine rooms. It also tells you where and how they are to be used.

International Electrical Code – Covers electrical power and controls for the elevator including what types of wire, fuses, conduit, lighting and how they should be installed.

ADA - how we make the elevators operate for the disabled and the requirements for locations of controls and clearances between obstructions.

All codes that are outlined above are the minimum guidelines, each state, municipality and even the federal government may add their own code requirements. Meeting the applicable portions of these codes is a shared responsibility between the elevator manufacturer, installer and building owner. Inspecting for compliance to these codes is the

responsibility of the municipal inspector. However, do not assume that a successful inspection by the municipal inspector, ends the building owner's responsible for code compliance. Having a working knowledge of the maintenance requirements of the code can well serve the condominium manager in situations where money needs to be spent for code compliance. Given the specialized knowledge needed for effective code research, consulting with an architect, or elevator consultant is often a quicker way to determine your vertical transportation maintenance needs.

Arthur H. Goldman, Jr. is the Chairman and Chief Executive Officer of Bayline Lift Technologies. Bayline Lift Technologies is a Lift Management company specializing in assisting architects, engineers, elevator and escalator owners, and maintenance personnel, and the federal government as an independent third party expert in installation, improvement, and code compliance. Learn more about Bayline Lift Management at www.baylinelift.com . 757 583-8900