



A matter of Life or Death - a History of Codes

Code expert Marshall Lline provides insight into the historical origins of codes.



Are imposed requirements in the construction industry unreasonable, arbitrary and capricious? Is it true that certain regulations seem to have no relationship to what is done in the “real world”?

There ought to be a law

In a recent bestseller *The Death of Common Sense: How Law is Suffocating America* by Philip Howard, the author provides many examples of regulations going astray. For instance, in 1991, OSHA required brick makers to supply a MSDS form (Material Safety Data Sheets describing the possible harmful effects of a product) with each pallet of bricks.

OSHA reasoned that if a brick is sawed it can release small amounts of the mineral silica. One brickmaker reasoned that “You have more exposure driving down a dusty road with the window open than working with bricks.” After years of fighting, the brick industry finally reversed OSHA’s designation of bricks as a health hazard in 1994.

Why do construction codes exist? Building and fire codes are written to ensure public safety, health and welfare to the extent that people are affected by building construction. For at least 5,000 years, people have exercised some limited controls over the construction and use of buildings and structures.

Your money or your life

In 2000 BC, Hammurabi, founder of the Babylonian empire, wrote the earliest known code of law. Here are some construction code regulations:

- #229: If a builder has built a house for a man and his work is not strong, and if the house he has built falls in and kills the householder, that builder shall be slain.
- #230: If the child of the householder be killed, the child of that builder shall be slain.
- #232: If goods have been destroyed, he shall replace all that has been destroyed; and because the house was not made strong, and it has fallen in, he shall restore the fallen house out of his own material.

A pillar of the community

In Polynesia, an even sterner law required builders to entomb a live slave under each corner post. This was meant to guarantee that the structure would be supported properly, in perpetuity.

In 64 AD, Emperor Nero of the Roman empire had a master plan for a new Rome, which he prepared sometime prior to the fire that destroyed much of the city.

Prior to Nero's coming into power, Rome lavished its wealth and resources on the construction of public edifices, but ignored construction of almost any other controls of any type. As a result, many of these public monstrosities collapsed even before they were completed, killing and maiming workmen by the score. Consequently, it seems probable that Nero deliberately ordered Rome's destruction.

The rebuilding of Rome was accomplished in accordance with sound principles of construction, sanitation and utility. Until the downfall of Rome, construction — public and private — was closely monitored and controlled. In a grotesque sort of way, the burning of Rome may have been the world's first urban renewal program.

London Bridge is falling down

In another example, London was destroyed in the great fire of 1666, which started in a slum near the Tower of London. The city was a crowded, filthy place of low timber-framed warehouses, churches and houses. Most thoroughfares had open drains which carried raw sewage. Families threw garbage into the narrow cobblestone streets. People were dying of the plague at the rate of 1,000 per week.

Although the fire resulted in building codes, it took Parliament two years to enact them.

Unfortunately, during those two years, London was reconstructed almost in the same style that existed prior to the fire. Ironically, it was not until World War II that London suffered a complete "urban renewal program," courtesy of the Nazi Luftwaffe.

U.S. destroyers

Coming closer to home, and in more recent history, 11 major American cities were devastated by fire in the period from 1800-1900.

The Great Chicago Fire started on October 7, 1871, and was blamed on Mrs. O'Leary's cow. Before the fire was extinguished two days later, 17,000 buildings had been destroyed and 250 lives lost. Almost 100,000 persons were homeless. This was the second most costly fire ever to occur in the United States: more than \$2 billion dollars in 1994 dollars.

For years before the Chicago fire, Lloyd's of London Insurance company warned its underwriters of the danger of fire. After the fire, 60 insurance companies went into bankruptcy. Those that survived threatened to leave the city en masse unless adequate laws regulating buildings were enacted.

In 1875, a building code and a fire prevention ordinance were adopted by the City of Chicago. Coincidentally, during this period Underwriters Laboratories and the National Fire Protection Association were founded.

The largest loss from fire in U.S. history came from the San Francisco Fire on April 18, 1906. Fire damage was more than \$5.5 billion in 1994 dollars. “Why are there construction codes?” Just ask your insurance company.

Marshall Klein is the president of Marshall A. Klein & Associates, Inc. in Eldersburg Maryland. His consulting firm specializes in solving fire protection, life safety and building code problems.