

Building Codes in Michigan

By Martin Van Berlo, Building Official – Emmet County

This is the second in a series of articles to help educate the public on Building Codes and their use in the built environment around us. Through the proper use and application of building codes, the citizens of our community can rest assured that construction around them will meet the minimum standards necessary to safeguard the public safety, health and general welfare. Building codes address affordability, structural strength, means of egress, stability, sanitation, light and ventilation, energy conservation and safety to life and property from fire and other hazards attributed to the built environment. They also provide safety to fire fighters and emergency responders during emergency operations.

Building Codes have existed in one form or another for many centuries. Historical sources attribute the first building regulations to King Hammurabi of Babylon in 1758 BC. Building codes and regulations came about in response to major natural events that nearly devastated whole empires, cities and regions with fire, storm and earthquakes taking a toll on manmade structures and buildings.

In Michigan, the history on the use of codes is very limited. The more urban areas took the lead in the adoption of some form of building code regulation. More rural areas lagged behind. With multiple codes in use around the country, each local jurisdiction had a choice in which code it adopted and enforced. As a result, code enforcement varied by locale. Construction codes used in Michigan have included the “Uniform Building Code,” the “CABO Code” – used for residential construction, and the popular “BOCA Code.” Persons familiar with state-approved factory-manufactured homes are likely familiar with the term “BOCA Home.” While still heard today, the term “BOCA Home” references a building code not used in Michigan since the year 2000.

Three widely known United States legacy code organizations combined in the mid-1990s to form the International Code Council, ICC. Subsequently, Michigan created and introduced the first “Michigan Family of Codes” in 2001, based on the ICC codes. To keep abreast of national code changes, Michigan updates its codes about every three years.

So, “Why do we need building codes anyway?” With scattered use of codes across Michigan, the state legislators felt a need to control construction practices throughout the state. They also felt that construction should meet a code of minimum structural and safety standards. Thus, in 1972, the Michigan Legislature proposed Public Act 230, also known as the Stille-Derossett-Hale Single State Construction Code Act. It passed into law and became effective January 1, 1973.

PA 230 requires all of Michigan have building code regulations enforced, and offers the option of state or local enforcement, should a local government unit wish to assume that responsibility. While PA 230 has undergone a number of amendments and revisions over the years, its basic idea remains the same; to have a building code applicable throughout Michigan to standardize construction methods and requirements.

One important change made to PA 230 is that any local governmental unit enforcing building codes within Michigan must use the “Michigan Codes” and only the version approved by the state legislature under the guidance of the Bureau of Construction Codes. PA 230 does not allow local modification of the codes.

In other words, a local government authority cannot choose to delete, amend, revise, ignore, add to, change, exempt certain persons from, or modify the codes. This language assures continuity across all of the codes and their enforcement. Local units of government must enforce the State of Michigan Codes or relinquish local code enforcement to the State.

Emmet County has enforced the codes locally since the mid-1970s. Late in 1974, the Emmet County Building Inspection program began. The program started with a building code official and an office administrator, covering building inspections in various areas of the county where there was no local code enforcement. Early on, Emmet County, along with many rural areas around Michigan, used state inspection services for electrical, mechanical and plumbing installations. Eventually, local government officials saw the value of local inspection services and added inspectors for all trades.

As construction activity increased over the years, so did the number of inspectors in the Emmet County Building Department. The year 2005 saw the largest number—14—of department employees. As the economy changed and construction slowed, the number of staff decreased as well. By 2011, the number of inspectors on staff dropped to three covering the four inspection trades. Since 2011, staff numbers have slowly increased to keep up with the rate of construction in the county. The Emmet County Building Inspection Department currently has a full-time staff of 11 people, including nine inspection staff.

The Emmet County Building Department operated for many years as a self-funded department; nearly self-funded for some years. In other words, county taxpayers do not fund the program. Funding comes mainly from those using the department’s services via construction permit fees. The fee amount depends on the scope of work. In years where permit revenue fell short, the County Board

of Commissioners supported the program with minimal general fund aid to cover department expenses and keep inspection services local.

While the code intends equal enforcement throughout the state, there are some geographic variances in the application of some code sections. For example, the code sections addressing protection from termite damage apply to the lower part of Michigan, but not all of the state.

The code addresses differences in snow load design criteria based on the construction site location. Snow load design criteria range from 20 pounds per square foot in southern Michigan to 100 psf in the northern tip of the Upper Peninsula. Snow load design criteria affect framing members with higher snow loads requiring heavier framing members to support the load. Heavier snow load design criteria also result in larger footings and stronger foundation requirements.

Likewise, the energy portion of the code dealing with insulation requirements has different zones. The southern part of Michigan is in Zone 5A. Zone 6A applies to the upper half of the Lower Peninsula and center third of the Upper Peninsula. Zone 7 applies to the eastern and western thirds of the Upper Peninsula.

In addition to this variance in code application, some code sections are not clear and leave room for interpretation by the official having code jurisdiction. The official must read the code, interpret it and determine if the interpretation and application align with the code's intent.

Other laws work in conjunction with PA 230 of 1972. Public Act 299 of 1980, the "Occupational Code," and Public Act 407 of 2016, the "Skilled Trades Act," both regulate construction trades licensing. In conjunction with PA 230, these laws help ensure that construction in Michigan meets the minimum standards of the codes. They also help ensure that the work design, construction and inspection is by persons with the qualifications required by the applicable licensing laws.

So, "Why do we need building codes anyway?" Building codes derive from Michigan law governing construction in the state. The laws create code enforcement continuity and set standards for minimum construction requirements throughout the state. A state mandated requirement since the mid-1970s, use of the codes remains a requirement today just the same as it was following the enactment of PA 230.

The law allows local government authority over building codes, but the codes used must be the State of Michigan Building Codes. Localized code modifications are not allowed. Local government officials cannot change the code, eliminate the code, or ignore the codes.

Local code authority is the most popular form of code enforcement used in the state. Local government officials have recognized the value of having local inspectors available for inspections, project reviews and public education on codes, construction laws and more. Through local code enforcement, local government is better able to control unlicensed persons who may be working in violation of state licensing laws.

Through the proper application of the codes, designers, engineers, architects, builders, contractors, and others involved in construction should be meeting the minimum standards of construction to provide safe and structurally sound buildings for our citizens and those visiting our communities. Ever since King Hammurabi's Code in 1758 BC, safety in the built environment has been the goal of building codes. That goal is to provide us with safe buildings and structures in which to live, congregate, work and play.