

THE REAL VALUE OF RESILIENT CONSTRUCTION

■ Spotlight: Codes



By the numbers—building codes

- Over many decades, codes have moved toward taller, bigger buildings for combustible construction.
- Code requirements for fire ratings are designed to allow occupants adequate time to escape, not necessarily to protect the structure.
- **Code compliance does not guarantee resilient performance.**

How can concrete help?

- Concrete is noncombustible. In the event of fire, the structure does not provide fuel for the fire and may contain it.
- Concrete walls, floors, and roofs are recognized by the International Building Code as providing a good fire rating, usually a 1–2-hour rating for about 3 to 5 inches of concrete.
- Reinforced concrete, which meets or exceeds code minimums without extra effort for design or construction, can resist destructive forces like fire, high winds, and storm surge, imparting resilience to structures made with it.

Concrete for meeting or exceeding code

Many people don't know that building code compliance provides only minimum levels of safety, generally designed to give people enough time to escape in the event of a disaster. Given that codes are intended to keep us safe, **the average person equates code-compliance with resilience. But there can be a big difference between the two.** If the building itself is not resilient, that can result in complete structural loss, loss of material possessions, and community devastation. Resilient construction, alternately, allows occupants adequate time to escape or possible sheltering in place, and may protect the structure so that it can be repaired rather than replaced.