RESILIENCE AND CONCRETE MASONRY

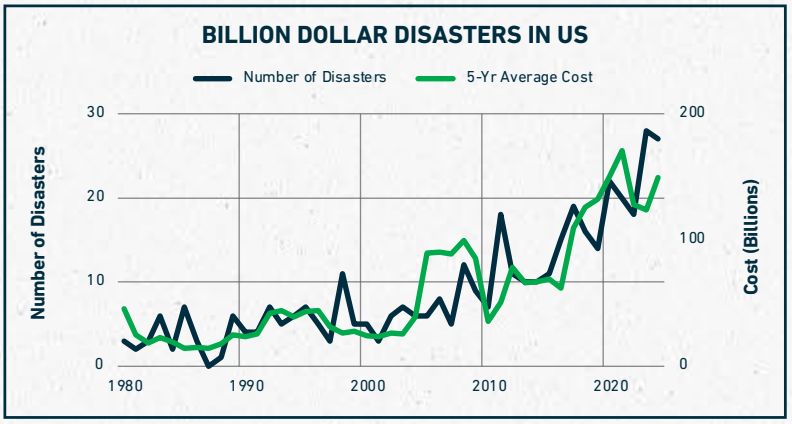
THE BEAUTY OF BLOCK

RESILIENCE IS MORE IMPORTANT THAN EVER

Not only are the frequency and devastation of severe weather events increasing at an alarming rate, but it's become readily apparent that the economic, emotional and environmental toll tied to rebuilding anytime disaster strikes cannot be sustained.

In 2024, the U.S. experienced 27 major weather events, each resulting in losses of $1 billion or more.

National Oceanic and Atmospheric Administration (NOAA)



National Oceanic and Atmospheric Administration (NOAA)

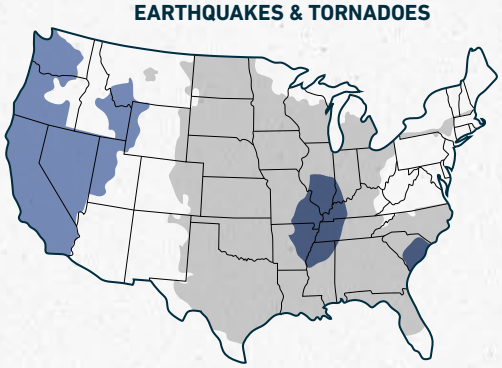
REDEFINING AFFORDABILITY

Redefining affordability means shifting away from building material choices that keep us from living and working in lasting structures. Buildings designed for future use that can withstand extreme events reduce the need for costly rebuilding and repairs. The most cost-effective structures are the ones that last.

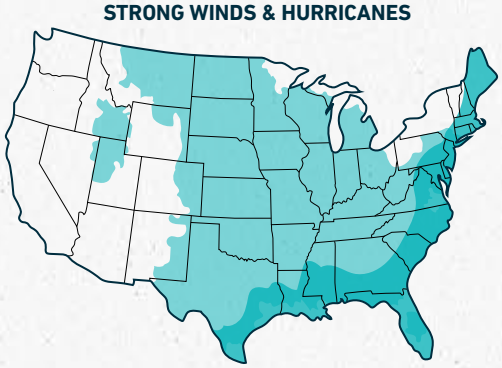
According to a study by the U.S. Chamber of Commerce, $1 invested in disaster resilience saves $13 in long-term costs.

$1 → $13

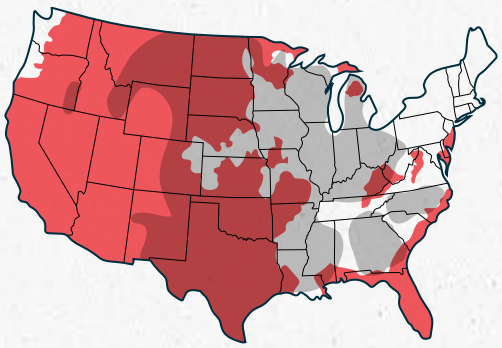
EARTHQUAKES & TORNADOES



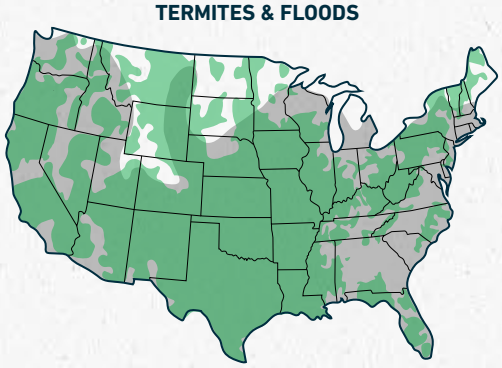
STRONG WINDS & HURRICANES



WILDFIRES & HAIL



TERMITES & FLOODS



*Map information provided by Federal Emergency Management Agency (FEMA) and International Building Code (IBC)

EVERY REGION DEMANDS RESILIENCE

Whether designing for hurricanes along the Eastern Seaboard and Gulf Coast, tornadoes in the Midwest, or wildfires in the West, designers play a critical role in creating buildings that anticipate and withstand climate extremes, ensuring safety, longevity and adaptability.

- **Earthquakes** — High or Moderate Risk
  Tornadoes — High or Moderate Risk
- **Hurricanes** — High or Moderate Risk
  Strong Winds — High or Moderate Risk
- **Wildfires** — High or Moderate Risk
  Hail — High or Moderate Risk
- **Termites** — High or Moderate Risk
  Floods — High or Moderate Risk

"The need for resilient design is urgent. Societies and structures must anticipate weather extremes, economic disruption and resource depletion. Our well-being depends on the cooperative interaction of all elements in our lives: social, economic and environmental."

RELi

RESILIENCE MEANS GOING BEYOND CODE MINIMUMS

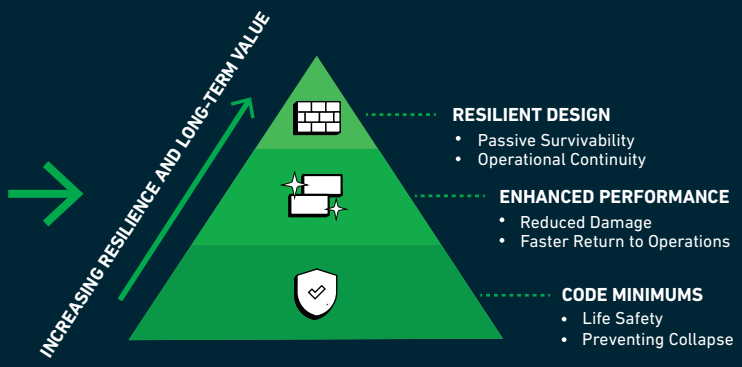
THE BEAUTY OF BLOCK

CONCRETE MASONRY CHECKOFF

THE INTENT OF THE INTERNATIONAL BUILDING CODE (IBC) IS TO ESTABLISH MINIMUM REQUIREMENTS

From Chapter 1 of the 2024 IBC: "The purpose of this code is to establish the minimum requirements to provide a reasonable level of safety, public health and general welfare through structural strength, means of egress, stability, sanitation, light and ventilation, energy conservation, and for providing a reasonable level of **life safety and property protection from the hazards of fire, explosion or dangerous conditions, and to provide a reasonable level of safety to firefighters** and emergency responders during emergency operations."

Building codes set the minimum standard for life safety during disasters but do little to address post-event shelter or operational continuity. As highlighted by the American Institute of Architects (AIA), truly resilient design goes beyond code compliance, incorporating strategies for shelter-in-place, passive survivability, and long-term functionality to ensure buildings remain habitable after a crisis.



RESILIENCE COMES STANDARD WITH CONCRETE MASONRY

CMU construction delivers built-in protection against climate extremes. Its strength and design versatility empower architects to create durable, high-performance structures for any environment.

FIRE - PROOF

NFPA classifies CMU as inherently noncombustible. CMU provides critical fire resistance without reliance upon electrical or water supply systems.

Types of Construction | NFPA

FLOOD RESISTANCE

Water-resistant and durable, CMU retains its structural integrity following short term exposure to water. According to US EPA guidelines for water damage and mold remediation, the treatment of CMU walls normally does not include the need to remove and replace.

Mold Remediation in Schools and Commercial Buildings Guide: Chapter 4 | US EPA

EARTHQUAKE READY

Reinforced concrete masonry walls can easily be designed to meet performance requirements in high-seismic zones.

PEST/TERMITE - PROOF

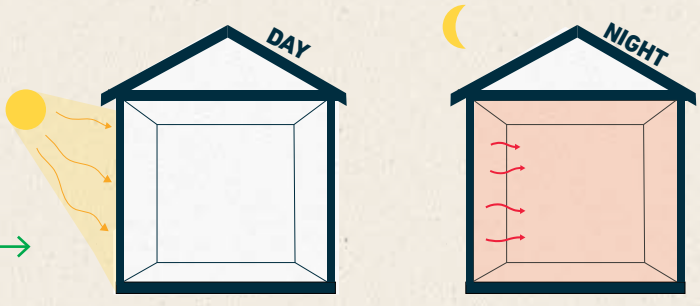
Concrete masonry is resistant to and creates a barrier against pests.

IMPACT RESISTANT

CMU's mass and impact resistance provide superior protection against flown debris. Texas Tech research confirms CMU walls exceed ICC 500 storm shelter standards.

ENERGY EFFICIENT

CMU structures help regulate interior temperatures as a mass wall system, which is essential for post-disaster survivability.



Thermal mass helps to keep occupants comfortable by absorbing heat during the day and releasing it at night, reducing temperature fluctuations and operational energy demand.

Concrete masonry reinforces your commitment to resilient and efficient design, offering a lasting investment that stands the test of time. With its durability, low maintenance and superior protection, CMU reduces life-cycle costs while providing dependable structural integrity in the face of adversity.