



## Buildings, Communities & Resilience

October 14, 2020

# The Family of Building & Community Solutions



- Codes and Standards
- Personnel Training and Certification
- Product Evaluation
- Accreditation Services
- Codification & Administration Services
- Engineering Support
- Community Resilience Benchmarks
- Third-Party Evaluation Services

# Mitigation is Highly Cost Effective

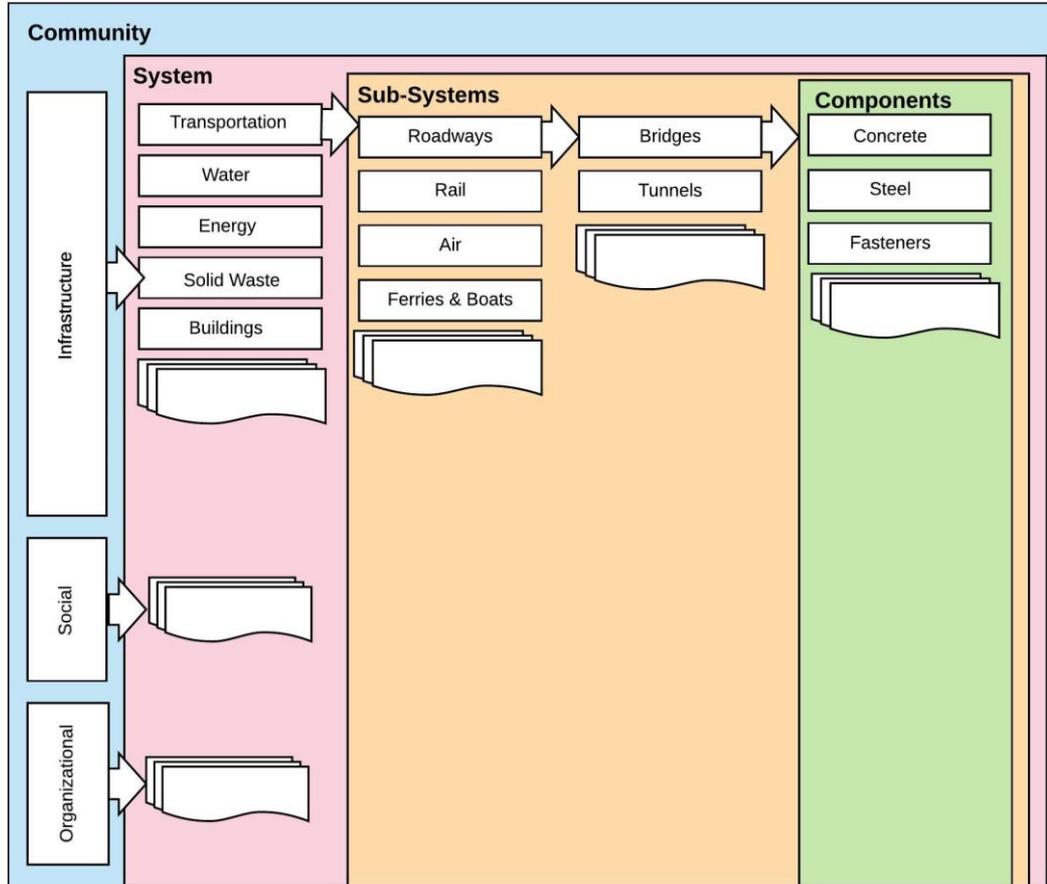


	ADOPT CODE	ABOVE CODE	BUILDING RETROFIT	LIFELINE RETROFIT	FEDERAL GRANTS
<b>Overall Benefit-Cost Ratio</b>	<b>11:1</b>	<b>4:1</b>	<b>4:1</b>	<b>4:1</b>	<b>6:1</b>
<b>Cost (\$ billion)</b>	<b>\$1/year</b>	<b>\$4/year</b>	<b>\$520</b>	<b>\$0.6</b>	<b>\$27</b>
<b>Benefit (\$ billion)</b>	<b>\$13/year</b>	<b>\$16/year</b>	<b>\$2200</b>	<b>\$2.5</b>	<b>\$160</b>
<b>Riverine Flood</b>	<b>6:1</b>	<b>5:1</b>	<b>6:1</b>	<b>8:1</b>	<b>7:1</b>
<b>Hurricane Surge</b>	not applicable	<b>7:1</b>	not applicable	not applicable	not applicable
<b>Wind</b>	<b>10:1</b>	<b>5:1</b>	<b>6:1</b>	<b>7:1</b>	<b>5:1</b>
<b>Earthquake</b>	<b>12:1</b>	<b>4:1</b>	<b>13:1</b>	<b>3:1</b>	<b>3:1</b>
<b>Wildland-Urban Interface Fire</b>	not applicable	<b>4:1</b>	<b>2:1</b>	not applicable	<b>3:1</b>

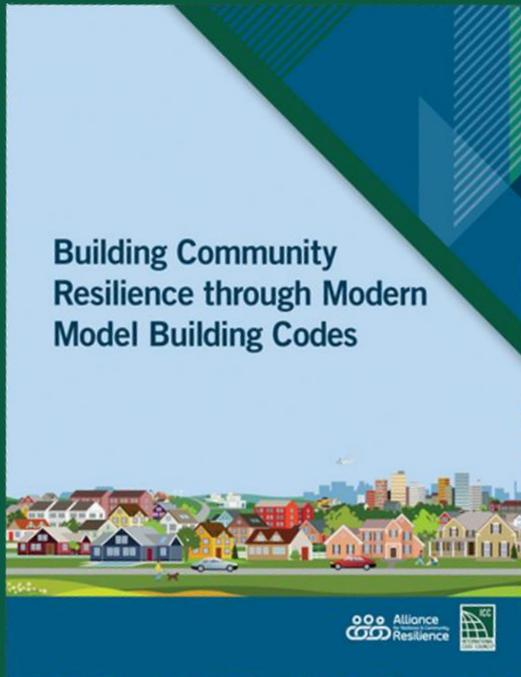
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[www.nibs.org/mitigationsaves](http://www.nibs.org/mitigationsaves)

# Ecosystem of Resilience Standards

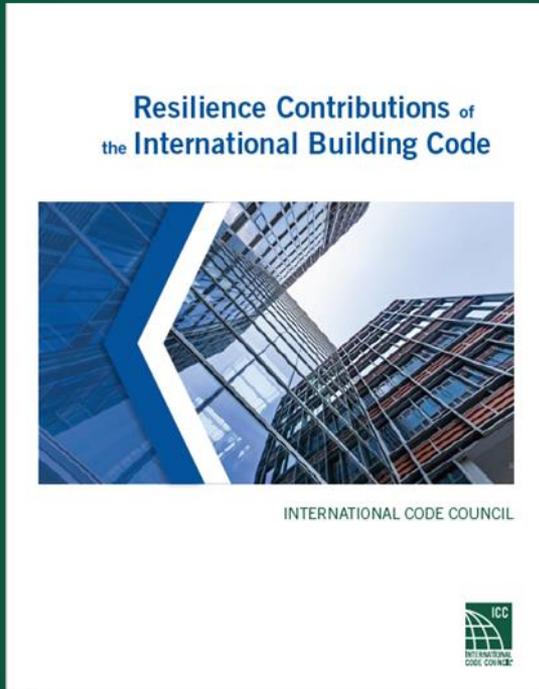


# Building Codes & Resilience



*Resilience in the built environment starts with strong, regularly adopted, and properly administered building codes. However, to attain whole community resilience, communities must look at the resiliency of all interconnected systems and function of the community as well.*

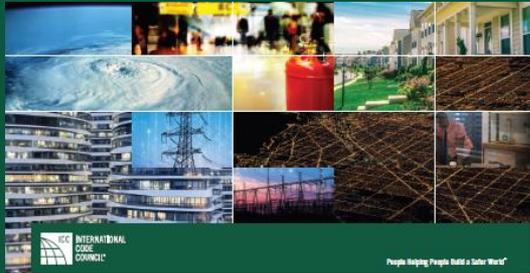
# Building Codes & Resilience



*The scope of the IBC is clearly focused on assuring that a community's building stock supports the resilience of the community.*

*Reducing the impacts on people and property in the fact of multiple shocks and stresses allows communities to survive and ultimately thrive.*

# Building Codes & Resilience



The Important Role of Energy Codes  
in Achieving Resilience

*“Using energy codes to provide enhanced passive survivability provides significant co-benefits. Community and individual resilience is enhanced while building owners and tenants reap energy efficiency related rewards everyday in the form of lower energy bills and greater cost certainty.”*

# The Importance of Community-Level Resilience



Galveston Texas, Post-Ike

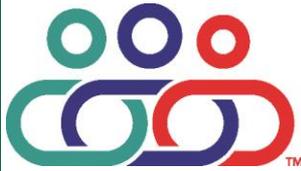


Manhattan, Post-Sandy



Paradise, Post-Camp Fire

# Community Functions



Alliance for  
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# Supporting Resilience Through Benchmarking

## ANCR Housing Benchmark

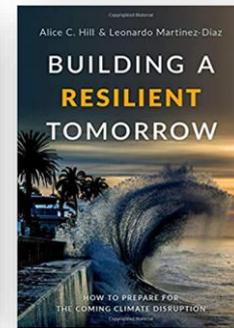
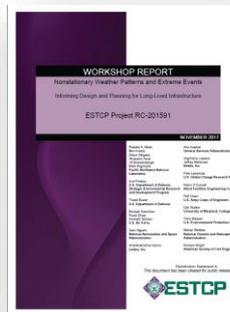
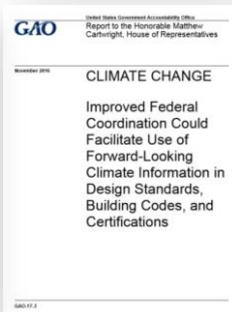
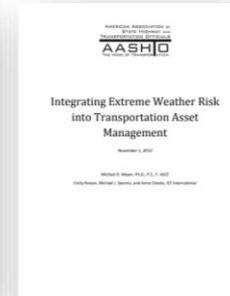
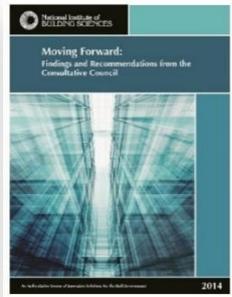
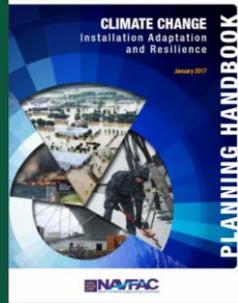
1. Housing Affordability & Availability
2. Housing Affordability: Policies
3. Disaster Preparedness: Communication & Outreach
4. Disaster Preparedness: Emergency & Temporary Shelter
5. Transitional & Post-Disaster Housing
6. Total Cost of Home Ownership/Rental
7. Insurance Coverage
8. Disaster Response/Continuity of Operations Plans (COOPs)
9. Equitable Long-Term Recovery from Disasters

# Supporting Resilience Through Benchmarking

## ANCR Buildings Benchmark

1. Adoption of Building Codes
2. Administration and Enforcement of Building Codes
3. Licensure & Continuing Education or Testing of Contractors
4. Mitigation of Highly Vulnerable Buildings
5. Mitigation and Design of Critical Facilities
6. Resilient Design
7. Disaster Response/Continuity of Operations Plans (COOPs)
8. Standards for Emergency Shelters
9. Financial Resources for Post-Disaster Recovery

# An Essential Resilience Issue: Designing for Future Risk





## Code Council launches global initiative on building resilience

NOVEMBER 22ND, 2019

by ICC

QUICK HITS



The International Code Council launched a new global initiative to bring together experts from the U.S., Australia, Canada and New Zealand to improve building resilience worldwide. This new collaborative forum provides a valuable opportunity for participants to discuss common struggles, and to share knowledge, research, and best practices, as they consider the role of building codes in resilience and durability in the face of increasingly severe weather events.

The Code Council hosted the first roundtable in Newport Beach, California, from October 29-30, 2019. The gathering included building code developers and experts in emergency management, climate science and resilience. The discussion was moderated by Alice Hill, Senior Fellow for Climate Change Policy at the Council on Foreign Relations. The group explored a broad range of issues such as extreme wind, rain, flooding, sea level rise, tidal surge, wildfires and heat stress, and how they create differing approaches to the regulation of buildings and building safety.

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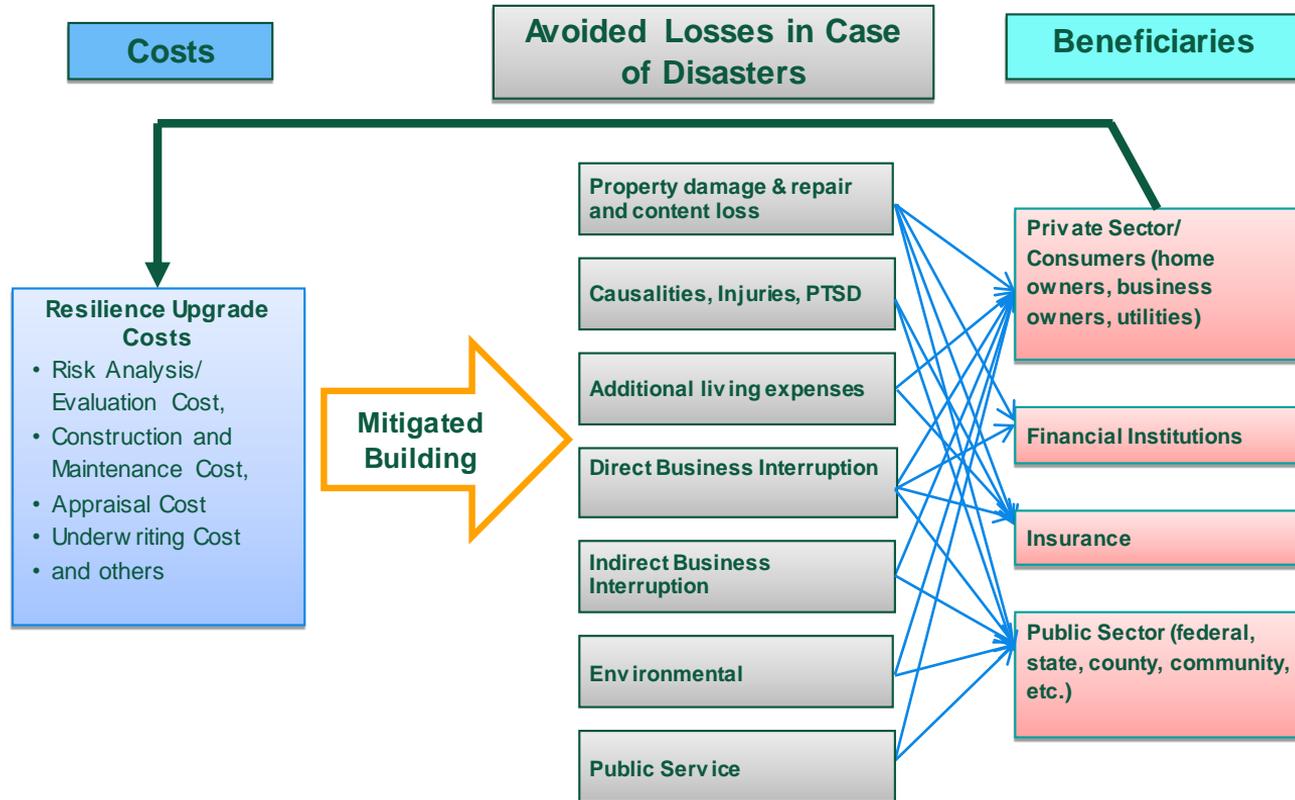
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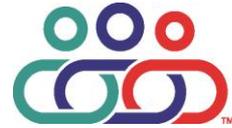
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# Incentivization Strategies (NIBS)



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