

February 21, 2023

Marion M. McFadden,
Principal Deputy Assistant Secretary for Community Planning and Development
Department of Housing and Urban Development
451 7th Street SW,
Washington, DC 20410-0500

Via Regulations.gov

Re: Request for Information for HUD’s Community Development Block Grant Disaster Recovery (CDBG–DR) Rules, Waivers, and Alternative Requirements (Docket # HUD-2022-0083)

Dear Ms. McFadden,

In response to the HUD’s Request for Information (RFI) on CDBG-DR, Questions 8(a) and 8(b), the International Code Council writes to voice its strong support for HUD’s requiring that CDBG-DR projects adhere to I-Codes and Standards enumerated in the RFI.¹ These construction requirements are regularly updated through consensus-based processes to keep pace with changing technology, building science, and improved understanding of life safety risks. HUD’s implementing them through CDBG-DR would promote a strong, long-term, and more uniform and equitable recovery.

The International Code Council (ICC) is a nonprofit organization, with more than 60,000 members, that is dedicated to helping communities and the building industry provide safe, resilient, and sustainable construction through the development and use of model codes and standards (I-Codes and Standards) used in design, construction, and compliance processes. Most U.S. states and communities, federal agencies, and many global markets choose the I-Codes to set the standards for regulating construction, building safety, and major renovations, plumbing and sanitation, fire prevention, and energy conservation in the built environment. The Code Council appreciates the opportunity to submit the following comments on the HUD’s CDBG-DR RFI in the above captioned matter.

I. Response to RFI Question 8(a): HUD Should Require CDBG-DR Construction Adhere to the I-Codes to Promote Resilience, Equity, and Long-Term Recovery

Although the federal government invests billions of dollars in infrastructure annually and, as discussed further below, requires current codes and standards for its own portfolio, the Federal

¹ This includes the International Building Code (IBC), International Existing Building Code (IEBC), International Residential Code (IRC), International Wildland-Urban Interface Code (IWUIC), International Plumbing Code (IPC), International Mechanical Code (IMC), International Fuel Gas Code (IFGC), International Fire Code (IFC), ICC 500-14, ICC/NSSA Standard on the Design and Construction of Storm Shelters, and ICC 600-14 Standard for Residential Construction in High-wind Regions.

Emergency Management Agency (FEMA) is the only federal entity that currently requires that federally assisted projects adhere to up-to-date building codes and standards. FEMA has done so to “increase the resilience of communities after a disaster,” “protect lives and property,” and to “reduc[e] the need for future Federal disaster recovery funding and other assistance.”²

CDBG-DR has included green construction requirements and flood mitigation measures that go above current codes/standards in certain instances.³ But these considerations don’t speak to other hazards like wildfires, hurricanes, earthquakes, or tornadoes. Moreover, the flood mitigation provisions do not capture other important flood provisions for coastal areas within current codes, like prohibitions on slab on fill and perimeter wall/crawl space foundation types and requirements for vented breakaway walls.

While we welcome the Department’s requirement that CDBG-DR action plans explain how the grantee will “support adoption and enforcement of modern and/or resilient codes” and “how mitigation measures and strategies to reduce hazard risks, including climate-related risks, will be integrated into rebuilding activities,” this language is non-binding to CDBG-DR-assisted construction and subject to interpretation.⁴ That’s why requiring current codes within CDBG-DR’s “Green and resilient building standard for new construction and reconstruction of housing” requirements is so critical.

Absent minimum requirements, CDBG-DR assisted infrastructure will be built to outdated codes and standards in many parts of the country. Per FEMA, roughly 50-percent of communities facing wind/seismic risk have not adopted modern building codes to help mitigate these hazards.⁵ Significant swaths of the country have not adopted codes to mitigate wildfire risk. For instance, of the 13 western states with the greatest wildfire risk, as identified by Verisk’s Fireline Wildfire Risk Analysis, only four have adopted wildfire mitigation codes statewide. First-ever tornado resilience measures will not be adopted in earnest for some time. And, in recent years, 30-percent of new construction has taken place in communities with either no codes or codes that have not been updated in decades. Given the heterogeneity in the adoption of codes and standards across our country, if CDBG-DR does not require the latest codes, its investments in many parts of the country will lock avoidable risk into buildings with decades-long lifespans.

We know we can expect more frequent and more intense disasters in the future and that some people will face a more difficult recovery than others.⁶ Research shows that disasters hit low- and moderate-income families the hardest.⁷ Disasters strike with both a physical and a financial

² FEMA, [Recovery Interim Policy](#) FP-104-009-11, Version 2.1 (Dec. 2019).

³ HUD, Allocations for Community Development Block Grant Disaster Recovery and Implementation of the CDBG-DR Consolidated Waivers and Alternative Requirements Notice, 88 Fed. Reg. 3,198 (Jan. 2023).

⁴ *See id.* [Some view](#) any construction to post-2000 era building codes as sufficiently resilient.

⁵ FEMA, [Resistant Code Adoption Statistics](#), Nationwide Building Code Adoption Tracking (Jan. 2023).

⁶ FEMA, *Protecting Communities and Saving Money: [The Case for Adopting Building Codes](#)* (Nov. 2020).

⁷ SAMHSA, [Greater Impact: How Disasters Affect People of Low Socioeconomic Status](#), Disaster Technical Assistance Center Supplemental Research Bulletin (July 2017).

shock, and only about 4 in 10 Americans can afford to cover an unanticipated \$1,000 expense.⁸ That’s about one-third of the average FEMA-verified (not actual) losses post-Hurricane Harvey.⁹

FEMA projects that if all future construction adhered to current codes, the nation would avoid more than \$600 billion in cumulative losses from floods, hurricanes, and earthquakes by 2060.¹⁰ The National Institute of Building Sciences (NIBS) estimates that building to modern building codes saves \$11 for every \$1 invested through earthquake, flood, and wind mitigation benefits, while retrofitting 2.5 million homes in the wildland urban interface to wildfire codes could provide a nationwide benefit-cost ratio as high as \$8:1.¹¹ These benefits represent avoided casualties, property damage, business interruptions, first responder and annual homeownership costs, and are enjoyed by all building stakeholders—from governments, developers, titleholders, and lenders, to tenants and communities. Better built buildings minimize repair and displacement costs and economic impacts following disasters¹² and reduce the risk of loss.¹³

In recent years, the federal government has increasingly moved towards ensuring federally assisted infrastructure adheres to modern construction standards. Such an approach was advanced during the prior Administration within the federal government’s National Mitigation Investment Strategy—developed by the Mitigation Federal Leadership Group of which HUD is a member—and continued by the current Administration through the National Initiative to Advance Building Codes (NIABC).¹⁴ ¹⁵ The NIABC’s goal is “to ensure that building activities receiving federal funding or financing will meet or exceed the latest building codes.” In the NAIBC, HUD specifically committed to require “increased resilience” through prior CDBG-DR allocations and, more broadly, “resilient construction in HUD-assisted housing wherever feasible.”

Schools, hospitals, housing, childcare facilities, and other public buildings and amenities are all pillars of our communities and especially important in meeting the needs of vulnerable populations. Many of these buildings frequently serve communities as emergency shelters, which requires these facilities perform optimally and be well maintained. Ensuring they are constructed to modern codes and standards protects the people who use and occupy these structures as well as the federal government’s own investment; is consistent with White House, HUD, and FEMA

⁸ <https://www.bankrate.com/banking/savings/financial-security-january-2021/>

⁹ <https://texashousers.net/2018/02/21/to-achieve-an-equitable-recovery-we-propose-a-fairer-way-to-determine-needs-of-hurricane-harvey-survivors/>

¹⁰ FEMA, *Protecting Communities and Saving Money: The Case for Adopting Building Codes* (Nov. 2020).

¹¹ NIBS, *Natural Hazard Mitigation Saves: 2019 Report* (Dec. 2019).

¹² *Id.*

¹³ *Id.* See also ASFP’s [Comments](#) in Response to FR-6187-N-01, White House Council on Eliminating Barriers to Affordable Housing Request for Information (Docket HUD-2019-0092).

¹⁴ Mitigation Framework Leadership Group, *National Mitigation Investment Strategy* (Aug. 2019).

¹⁵ [Press Release](#), The White House, FACT SHEET: Biden-Harris Administration Launches Initiative to Modernize Building Codes, Improve Climate Resilience, and Reduce Energy Costs (June 1, 2022).

policy; follows the federal government’s requirements for its own buildings; and enjoys widespread support from across the political spectrum.¹⁶

II. Response to RFI Questions 8(a) and 8(b): Requiring CDBG-DR Construction Meet the I-Codes Would Not Appreciably Increase CDBG-DR Funded Construction Costs

Contemporary research continues to find that modern model building codes have no appreciable implications for housing affordability—in fact, no peer-reviewed research has found otherwise. Any impact from codes would primarily affect construction costs. One study considering the role of government regulation on home prices found that construction costs, including labor and materials, were flat from 1980 to 2013.¹⁷ The International Code Council was formed in 1994, the I-Codes were adopted across the country in the early 2000s, and several significant advancements to better mitigate structures against natural hazards were integrated into these codes during the period studied. None of these code activities meaningfully impacted construction costs.

Several additional contemporary analyses reached similar conclusions. After Moore, Oklahoma experienced its third violent tornado in 14 years, the city significantly strengthened its building codes. The Moore Association of Home Builders estimated a \$1-\$2/sqft resulting increase in the cost of construction. Yet, researchers found that the change to a stronger building code had no effect on the price per square foot or home sales.¹⁸ The most detailed benefit-cost analysis of seismic code adoption to date modeled six buildings in Memphis, Tennessee and compared the costs of adhering to the seismic provisions of the 2012 edition of model building codes as opposed to late 1990s-era codes. The study found that adopting the 2012 codes, for the apartment building studied, would add less than 1-percent to the construction cost (and less to the purchase price, since construction cost typically amounts to between one-third and two-thirds of purchase price), reducing annualized loss—in terms of repair cost, collapse probability, and fatalities—by approximately 50-percent.¹⁹

According to the Association of State Floodplain Managers (ASFPM), the insurance savings from meeting current codes’ flood mitigation requirements can reduce homeowners’ net monthly mortgage and flood insurance costs by at least five-percent.²⁰ The principal investigator for the NIBS report found that improvements to model building codes’ resilience over the nearly 30-

¹⁶ Bipartisan CDBG-DR authorizing legislation previously cleared the U.S. House on the suspension calendar 290 to 118. See Reforming Disaster Recovery Act of 2019, H.R. 3702, 116th Cong. (2019).

¹⁷ Gyourko, J. & Molloy, R., *Regulation and Housing Supply*, Handbook of Regional and Urban Economics, Volume 5B Chapter 19 (2015).

¹⁸ Simmons, K. & Kovacs, P., *Real Estate Market Response to Enhanced Building Codes in Moore, OK*, Investigative Journal of Risk Reduction (Mar. 2018).

¹⁹ NEHRP Consultants Joint Venture, *Cost Analyses and Benefit Studies for Earthquake-Resistant Construction in Memphis, Tennessee*, NIST GCR 14-917-26 (2013).

²⁰ ASFPM’s Comments in Response to FR-6187-N-01, White House Council on Eliminating Barriers to Affordable Housing Request for Information (Docket HUD-2019-0092).

year period studied only increased a home's purchase price by around a half a percentage point in earthquake country or in an area affected by riverine flood.²¹

The cost effectiveness of modern codes is due in no small part to the active participation in the code development process of stakeholders representing development and property management interests. Building owners and managers, home builders, architects, design professionals, building trades, the fire service, plumbing and sanitation professionals, manufacturers, and others representing the housing industry devote considerable time and effort towards ensuring code updates are practical and cost effective.

III. Response to RFI Questions 8(a) and 8(b): Requiring CDBG-DR Construction Meet the I-Codes Aligns Federal Recovery Standards, Promoting Efficiencies

HUD requiring resilient codes would align its disaster recovery and mitigation construction standards with FEMA's pre- and post-disaster risk mitigation and reconstruction programs, including but not limited to BRIC²² and Public Assistance (PA),²³ as well as the Agency's Building Codes Strategy.²⁴ Practitioners have been successfully implementing several of these requirements through FEMA's CDBG-DR analog, PA, for the better part of a decade.

HUD's applying the RFI's enumerated codes and standards would also track with longstanding requirements for federal buildings, adopted by the General Services Administration (GSA),²⁵ the Department of Defense (DOD),²⁶ and Department of Veterans Affairs (VA).²⁷

Federal agencies adopt I-Codes and Standards because they are national "voluntary consensus standards" under Office of Management and Budget (OMB) Circular A-119 and the National Technology Transfer Advancement Act (NTTAA), meaning they are developed in an open forum—with a balance of interests represented and due process—that, ultimately, ensures a consensus outcome. All I-Codes are updated every three years. The NTTAA, supplemented by OMB Circular A-119, directs federal agencies to use voluntary consensus standards wherever possible in their procurement and regulatory activities in lieu of expending public resources developing government unique standards. The OMB Circular "directs agencies to use standards developed or adopted by voluntary consensus standards bodies rather than government-unique standards, except where inconsistent with applicable law or otherwise impractical."

In response to RFI Question 8(b), we further note that implementing enhanced construction standards consistently across like programs would help the federal government reduce

²¹ Porter, K., *Resilience-related building-code changes don't affect affordability*, SPA Risk LLC Working Paper Series 2019-01 (2019).

²² FEMA's BRIC program [requires](#) adherence to current editions of the IBC and IRC.

²³ FEMA's Public Assistance program [requires](#) adherence to current editions of all the I-Codes and Standards listed in HUD's RFI, including the IBC, IRC, IWUIC, IPC, IMC, IFGC, IFC, ICC 500-14, and ICC 600-14.

²⁴ FEMA's [Building Codes Strategy](#) lists all of the I-Codes and Standards included in HUD's RFI.

²⁵ GSA's [P100 publication](#) requires adherence to all the I-Codes listed in HUD's RFI.

²⁶ DOD's [Uniform Facilities Criteria](#) requires the IBC, IRC, IEBC, IMC, and IPC.

²⁷ VA requires the IBC and IPC.

complexity and increase programmatic efficiency, while at the same time easing implementation and strengthening practices for government program staff as well as contractors, architects, and engineers in the field.

IV. Response to RFI Questions 8(a) and 8(b): HUD’s Listed Resilient Construction Standards Should Capture Codes that are Recognized as Resilient, National, and Coordinated

The RFI Question 8(a) lists eight codes and two standards that, when coupled with HUD’s already adopted “Green and resilient building standard for new construction and reconstruction of housing” can address all aspects of energy efficiency, life safety, and building resilience. As noted above, these codes and standards are already required in several FEMA programs as well as for federal buildings. The I-Codes listed in the RFI are the most widely adopted codes in the United States. The IBC is adopted or in use in 50 states, the IRC in 49, IEBC in 44, IFC in 41, IFGC in 42, IMC in 47, IPC in 37, and IWUIC in 19.

Given the breadth of their use and acceptance and demonstrated hazard mitigation benefits, we strongly encourage HUD to adopt the I-Codes and Standards listed in the RFI. To provide flexibility for practitioners in the field, and in recognition that some states or localities where CDBG-DR work is to occur may have adopted alternative or homegrown codes, HUD could consider utilizing language consistent with FEMA’s approach in PA, which provides that alternative codes or standards can be used so long as the applicant demonstrates that the adopted codes are “equivalent or more stringent,” or where use of the delineated codes is “technically infeasible.”²⁸ With this flexibility, the RFI’s referenced I-Codes and Standards can address all possible considerations without HUD’s creating an unnecessarily lengthy, and potentially conflicting, list of code and standards requirements that could lead to confusion or, worse, a lack of compliance in the field.

a. HUD Should Ensure All Listed Codes have been Recognized as Resilient

If HUD does require resilient codes for CDBG-DR following the RFI, and seeks to broaden its list of delineated codes and standards, ICC strongly encourages HUD to ensure that the codes and standards it references track those already required by other federal agencies (*i.e.*, DOD, GSA, FEMA), with FEMA’s PA program being the most comprehensive and similar post-disaster recovery program. The codes and standards in FEMA’s PA program have been thoroughly vetted by FEMA to ensure hazard resistance. Should HUD consider referencing additional codes or standards, it should ensure that they have been analyzed by FEMA or another federal agency with equivalent building science expertise to be as or more resilient than the codes HUD listed in the RFI.

We respectfully disagree with comments contending that all codes and standards approved as *American National Standards* by the American National Standards Institute should be required

²⁸ FEMA, Recovery Interim Policy [FP-104-009-11, Version 2.1](#) (Dec. 2019).

for CDBG-DR. A code’s resilience turns on more than the process through which it was developed; the end product, the code’s ultimate substance, matters considerably.

b. HUD’s Listed Codes Should be Recognized as National Codes

FEMA’s PA program requires the codes it references be “national” codes or adopted “nationwide.”²⁹ To illustrate, the IPC is the most widely adopted plumbing code across the country, currently adopted in 37 states, the District of Columbia, Puerto Rico, and Guam. Approximately 75-percent of the U.S. population, live in areas that have adopted the IPC. The IMC is the most widely adopted mechanical code across the country. It is currently adopted in 47 states, the District of Columbia, New York City, Guam, Puerto Rico and the U.S. Virgin Islands. Approximately 87-percent of the U.S. population live in areas that have adopted the IMC. GSA, DOD, and FEMA require the IPC and IMC while VA requires the IPC. These codes are the nationally adopted codes for the subject matter they address.

The purpose behind FEMA policy’s addressing “national” codes is: “to define the framework and requirements for consistent and appropriate implementation of consensus-based design, construction and maintenance codes, specifications and standards.”³⁰ FEMA’s policy seeks to raise the bar for building resiliency uniformly. Greater use of consistent, more resilient construction codes advances hazard resistance but also eases implementation for federal, state, and local governments. Greater consistency promotes market efficiency and cost savings.

Hundreds of construction codes and standards have been developed in the United States. FEMA policy has winnowed these considerably to promote consistency and ease implementation. HUD expanding its referenced codes and standards for resilience to include every code or standard adopted anywhere in the U.S. would be inconsistent with FEMA’s approach, risks complicating and hindering implementation, and encouraging balkanization of construction requirements.

c. HUD Should Consider Code Correlation in Determining Resilient Codes

States and the federal government rely on the I-Codes and Standards, including the IPC and IMC, because they are cost effective and ensure safety, resilience, and sustainability. The International Codes, including the IPC and IMC, provide a coherent system of construction standards through extensive cross-referencing and correlation between codes. Looking solely at the list of Consensus-Based I-Codes listed in FEMA’s PA Policy, the IPC contains 102 total cross references with the other 8 codes; the IMC contains 381 total cross references with the other 8 codes. These cross-references at the simplest level refer to terms used throughout the codes and increase in importance to include life safety issues related to:

- The allowable use of combustible materials;
- The design and installation of roof drainage systems;

²⁹ *Id.*

³⁰ *Id. (emphasis added)*

- The minimum number of required plumbing fixtures;
- Fire protection and life safety systems; and
- Means of egress.

Requiring a series of codes that do not correlate fosters inconsistencies in approaches that can risk implementation challenges, confusion, and a lack of necessary coordination during construction. As noted above, the IPC and IMC correlate with nationally adopted core codes like the IBC and IRC. The alternatives to the IPC and IMC do not.

Thank you for the opportunity to provide comments. If you have any questions concerning the Code Council's recommendations, please do not hesitate to me.

Sincerely,

Gabe Maser
Senior Vice President, Government Relations
International Code Council