Improving Disaster Mitigation Strategies

JULY 21, 2018 BY JARED O. BLUM  LEAVE A COMMENT

This past January, the National Institute of Building Sciences (NIBS), a non-governmental, non-profit organization, reported that for every dollar spent on mitigation efforts to protect the built environment from the ravages of natural disasters, six dollars could be saved. These findings were part of a follow-up to the widely cited benefit-cost ratio of four to one in a comparable study by NIBS more than a decade ago. For this most recent study, NIBS reviewed the outcomes of 23 years of mitigation grants funded by FEMA, HUD, and the U.S. Economic Development Administration.

On the same day that the NIBS study was released, FEMA released its draft National Mitigation Investment Strategy to provide a “national approach to investments in mitigation activities and risk management across the United States.” According to the FEMA draft, the final investment strategy will be grounded in three fundamental principles: (1) catalyze private and non-profit sector mitigation investments and innovation; (2) improve collaboration between the federal government and state, local, tribal and territorial governments, respecting local expertise in mitigation investing; and (3) make data- and risk-informed decisions that include lifetime costs and risks. The investment strategy’s overarching goal, according to FEMA, is to improve the coordination and effectiveness of “mitigation investments,” defined as risk management actions taken to avoid, reduce, or transfer risks from natural hazards, including severe weather.

FEMA invited comment on its draft report and will publish its final strategy in November. Given the potential impact of this report on the built environment, and the industries that work to incorporate resilient strategies, the EPDM Roofing Association (ERA) submitted feedback to FEMA. ERA represents Johns Manville, Firestone Building Products, and Carlisle SynTec Inc., the three EPDM manufacturing members of the association, whose businesses span the globe. EPDM roofing membranes have been one of the leading commercial roofing materials in the country for the past 40 years, and the companies’ knowledge of the role of roof performance in achieving a building’s resilience is unparalleled.

In our response to FEMA, ERA noted that we appreciate the role that the built environment plays in a comprehensive disaster mitigation strategy. As an organization, ERA has invested time and resources to gather and provide state-of-the-art information about various approaches to creating a resilient built environment. This past year, ERA established a new microsite, EPDMtheresilientroof.com, to provide the roofing industry with a one-stop source for information about resilience. As part of information gathering for this site, ERA staff and members have visited three of the premier research facilities in the country: Oak Ridge National Laboratory, the Insurance Institute for Business and Home Safety (IBHS), and the National Center for Atmospheric Research. These visits were also devoted to gaining a fuller understanding of the intersection between public and private progress in research and development.
At the outset of our response to FEMA, ERA commended FEMA for its issuance of the draft strategy, and supported all the recommended goals as desirable as risk management strategies to be implemented at the private and public sector levels. However, given ERA’s experience with building performance, we also focused our comments on two of the specific recommended strategies in the published draft.

First, ERA responded to the recommendation that “Federal departments and agencies should ensure up-to-date building standards are used for federal building projects and could incentivize state, local, tribal and territorial governments receiving federal aid for building projects to adopt and enforce, at a minimum, the most current version of model building codes.” Commenting on this recommendation, ERA pointed out that a review of hurricane and related weather catastrophic events demonstrates that the better the building quality and the better the building codes, the better the performance of the community. While there has been substantial improvement in many states across the country, adoption and compliance pose significant hurdles for overall performance in disaster events. The urgency of this cannot be overstated. Part of this effort to upgrade the building codes and consequently overall resilience must focus on the quality of materials, installation, and inspection of final construction to ensure compliance by local authorities.

The experiences of the roofing industry in its inspection of many disasters over the years have confirmed that a well-installed, inspected, and well-maintained roof is a linchpin of overall building resilience. ERA believes that federal funding to the states to allow for the kind of technical assistance that enhances code quality and state and local compliance programs necessary to achieve physical and community resilience should be provided.

Additionally, ERA responded specifically to the recommendation that “Public sector entities should focus more on rebuilding better as well as rebuilding quickly following damage caused by natural disasters.” ERA pointed out in its response that this recommendation to achieve rebuilding better buildings quickly following damage caused by natural disasters is among the most important in the report. As FEMA Deputy Director Roy White has pointed out in several presentations focused on resilience, it makes no sense for the agency to fund rebuilding of a destroyed facility to standards that existed when the original building was constructed with the likelihood that it would not be able to withstand another weather event beyond historic norms. Consequently, ERA recommends that FEMA and HUD need to have authority and appropriations to ensure that rebuilding is done with an eye towards future — not historic — climate conditions. This is in recognition that the original basis for many buildings that then are destroyed has been dramatically changed by recently evolving weather patterns. In addition, as the FEMA and NIBS study recently demonstrated, there is a payback to the government of a 6 to 1 ratio for investing in rebuilding to a more resilient standard.

There are many, many elements of the draft strategy that ERA supports; however, we believe the two mentioned above are particularly within our expertise and with which we are very familiar. We look forward to the final mitigation strategy report from FEMA, due to be released in November, and we encourage FEMA to incorporate our recommendations to ensure that the value of investment in resilience be realized to the fullest extent possible.

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