

Statement of

International Code Council (ICC)

On

**“The Investigation of the World Trade Center Collapse:
Findings, Recommendations and Next Steps”**

**Submitted for the record of the hearing before the
Committee on Science
U.S. House of Representatives
May 1, 2002**

**Sara C. Yerkes
Government Relations Director
May 14, 2002**

The International Code Council (ICC) appreciates the opportunity to submit this written statement into the record of the hearing on “The Investigation of the World Trade Center Collapse: Findings, Recommendations and Next Steps,” held on May 1, 2002 by the House Science Committee.

Comments on the proposed legislation “National Construction Safety Team Act” will be submitted under separate cover to all members of the House Science Committee.

Comments on Findings and Recommendations

The engineers who studied the progressive collapse of the World Trade Center reported that the force of the airplanes as they impacted the towers was not sufficient to cause the towers to collapse. The towers were robust and the fact that they withstood such a tremendous impact was impressive. The American Society of Civil Engineers (ASCE) states in its testimony that “. . . the ability of the two towers to withstand aircraft impacts without immediate collapse was a direct function of their design and construction characteristics . . .” Even if the towers were not able to resist the combination of the structural damage and the fires ignited by the huge load of jet fuel, it was the ability of the towers to withstand the impact for as long as they did that enabled so many people to evacuate. This is a credit to the building codes and design practices currently used in the United States.

Teams of engineers and professors are studying what other countries are already implementing. Some countries in Asia are using features that provide redundant structural and firefighting protections such as reinforced concrete cores with dedicated refuge floors every 15 levels. Refuge floors are not furnished and are fireproof to provide safe harbor to people during an evacuation. And, The Tall Buildings and Urban Habitat (TBUH) has been testing ideas for emergency evacuation. According to an article written by Mary Lou Luif, Senior Staff Editor of BOCA International, Inc., some of the concepts under review include skybridges to adjacent buildings, rooftop helipads, and additional stairwells.

The FEMA/ASCE Performance Study Team recommends that further study be done into the collapse of the buildings, which could potentially lead to revisions in both building codes and design practices.

Although the codes can require more concrete, more flexible piping systems, thicker fire walls, or even provide built-in redundancy so that if one system

fails another will withstand, the question arises whether the codes would ever be able to protect buildings against malicious scenarios such as acts of terrorism or war. The code development community has begun deliberating and considering all of the options available, cautiously analyzing the technical, economical, and human factors associated with the feasibility of strengthening buildings.

ICC Support

ICC supports the National Institute of Standards and Technology (NIST) response plan and looks forward to working closely with that agency.

ICC is a unique organization with expertise in all aspects of building design and construction. Our staff of 360 and 45,000 members includes all engineering disciplines, architects, code officials, building, plumbing, mechanical and fire inspectors, elected officials, builders, building owners and managers, advocates for the disabled community, and many others. In addition to the vast knowledge brought forth by these individuals, the ICC statutory members share nearly 200 years of collective experience in developing the model codes used throughout the U.S.

There are more than 16,000 code officials working in communities throughout the U.S. ICC estimates code officials conduct nearly 43,000 site inspections to new and existing facilities each day. The U.S. has the most effective system of building inspections and code enforcement in the world.

ICC is the developer of the International Codes™ used throughout the U.S., and is the organization that represents the state and local government code officials who enforce these building codes. As such, ICC is disappointed that code officials have been noticeably left out of the process as hearings are being held and legislation is being considered on homeland building security that may impact building codes.

Ultimately it is organizations such as ICC that will address how emerging public policies must be incorporated into the codes, implemented by the jurisdictions and enforced at the state and local level. In the words of FEMA, “. . . code officials are the first line of defense.” ICC urges Congress to include code officials in its deliberations on all matters pertaining to building safety.

Code Development in the United States

Construction in the U.S. is a sophisticated process governed by codes and standards that regulate building, plumbing, gas, mechanical, electrical, energy, fire, accessibility and other specialized aspects of construction. The code development process is a dynamic process involving constant interaction between the private and public sectors of the construction industry, Federal, state and local governments.

The code development process in the U.S. is a private sector activity. ICC is a fully self-supporting nonprofit organization. The revenues used to develop and publish the codes are generated from its member organizations.

The code development process used to develop the International Codes is known as a governmental consensus process. It is an open, inclusive, and balanced consensus process with built-in safeguards to prevent domination by any single interest.

Model construction codes are developed to be adopted by reference into Federal, state or local laws. They are developed in the same manner as local governments are required to develop laws. It is a transparent and open process. There must be a guarantee of fairness in the process, of no conflicts of interest, and with no vested economic interest in the outcome of the final vote. The code officials represent local government agencies and their interest is the safety and well being of the public. The process incorporates a number of checks and balances to ensure the final documents are of the highest quality and reflect the latest technology.

This system of code development has ensured the citizens of the U.S. the highest level of building safety in the world as witnessed by the performance of the World Trade Center.

Participants in the process include code officials, other government regulatory agencies, academia, building owners, insurance companies, builders, manufacturers, testing laboratories and others. Participation in the ICC code development process is encouraged and is open to all groups and individuals.

Enforcement of Building Regulations

The enforcement of building regulations in the U.S. is the role of state and local government. This enforcement authority is derived from the 10th

Amendment of the U.S. Constitution, which gives states the right to legislate for the protection of the public health, safety, and welfare.

The family of International Codes developed by ICC includes building, fuel gas, energy conservation, fire, mechanical, plumbing, property maintenance, private sewage disposal, residential construction, zoning, urban-wildland interface, existing buildings, and a performance code. When a community adopts the International Codes it also benefits from the expertise of hundreds of technical staff, as well as established services that support the codes such as training and certification programs.

In a study conducted by the Federal Trade Commission (FTC) in 1988, approximately 97% of cities, counties and states that have adopted and are enforcing building and safety codes are using documents developed by the statutory members of ICC. For more information on the International Codes adoptions by state or local jurisdictions, please visit the ICC website at www.intlcode.org.

The International Codes unified system provides substantial benefits to stakeholders who can now work with a consistent set of requirements throughout the United States. A unified system enhances economic development through the utilization of state-of-the-art technology in materials research, design and construction practices. A streamlined building regulatory system through a single family of codes brings consistency and compatibility to multiple layers of requirements existing at all levels of government. One system permits manufacturers to put their efforts into research and development, thus advancing innovation through performance based provisions that require consistent and predictable levels of building performance and safety.

OMB A-119 and PL 104-113

In 1996 the House Science Committee had the wisdom to pass the National Technology Transfer and Advancement Act (NTTAA), PL 104-113. PL 104-113 codified the OMB Circular A-119, Federal Participation in the Development and Use of Voluntary Consensus Standards and in Conformity Assessment. The law directs Federal agencies to move toward using voluntary standards rather than agency-unique standards and encourages the participation and interaction with private-sector voluntary standards bodies. NIST serves as chair of the Interagency Committee on Standards Policy (ICSP).

ICC supports this government policy. For many years the standards developing organizations have been encouraging Federal agencies to increase their participation in the private sector voluntary standards development processes. It is a logical, efficient, and cost effective way for the Federal government to establish standards that serve national needs.

In summary, ICC is committed to a safe and strong built environment. The code development process serves the public best as a private sector activity, leaving the enforcement of the building and safety codes under the jurisdiction of state and local governments.

ICC respectfully makes the following recommendations to the House Science Committee:

- 1) Include the building code community in homeland security and building safety deliberations;
- 2) Continue supporting the national, private-sector development of codes and standards; and
- 3) Encourage all Federal agencies with a stake in building construction and safety to get involved in the code development process.

Thank you again for the opportunity to submit this statement. ICC would be pleased to provide additional information or to respond in more detail to any questions from the Committee.

I may be reached at 703-931-4533, ext 12 or by email: yerkes@intlcode.org