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# Development of the Joint Model Plumbing Code

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## INTRODUCTION

The last five years have produced some of the most rapid changes any of us have ever experienced. Events such as the creation of the European Common Market and the North American Free Trade Agreement have resulted in a new "global economy." How these changes affect those of us in the code enforcement field is of immediate concern.

Our regional method of code development has been effective and responsive to the country's needs. We have been able to address technical design issues such as high winds, snow loads, seismic conditions and other localized situations by producing codes aimed at specific regions. However, the new global economy has caused our regional code system to become outdated. As the construction industry expands its scope from national to international, we have begun to work within an expanded environment and must continue to move in this direction.

For several years, the three model code groups have worked together to produce the Council of American Building Officials' (CABO) *CABO One and Two Family Dwelling Code* and *Model Energy Code* and have further coordinated the model codes through CABO's Board for the Coordination of the Model Codes. More recently, our latest code editions have been published in a common code format, a major advancement for those who must use all three model codes. But this common code format is not the final solution. The common format makes us aware of the differences and inconsistencies among our codes, and justifying these differences is becoming increasingly difficult. In fact, these differences are considered by some to discredit the validity and accuracy of the codes and to unnecessarily add to the cost of construction. The American Institute of Architects (AIA) recognized these problems and called for national uniformity in codes with its Resolution L-1, passed unanimously at AIA's annual convention in 1991. With these conditions identified, the question is, what are we going to do about it?

The Council of American Building Officials Planning Committee met in November 1993 to address these issues. After much discussion, it was agreed to begin work immediately on expand-

ing the *CABO One and Two Family Dwelling Code* with the expressed interest of making it *the* residential code for the nation. This code will contain a complete set of provisions, including plumbing, electrical and mechanical requirements. The code is intended to be applicable and usable for both site- and factory-built residential structures. New committees were established by CABO and have begun working in this direction.

## Plumbing Code Development

A more significant step was the establishment of a plan to start work on a jointly sponsored plumbing code. A plumbing code was appropriate for ICBO since the contractual agreement between ICBO and the International Association of Plumbing and Mechanical Officials was not renewed. The CABO Planning Committee met again in February in Dallas, Texas, where the three model code organizations made plans to create a draft of a new joint plumbing code derived from the most current plumbing codes of each organization: the *ICBO Plumbing Code* (1979), Building Officials and Code Administrators International's (BOCA) *National Plumbing Code* (1993), and Southern Building Code Congress International's (SBCCI) *Standard Plumbing Code* (1994). Each of these model plumbing codes consists of provisions that have been adopted and enforced by jurisdictions.

A task committee consisting of three volunteers and three staff members from each organization began work immediately to meet an aggressive timeframe established by the planning committee. The initial development was done without public input; the task committee's goal was simply to combine the features of each existing document into an integrated and usable single code which could be presented to the memberships at each groups' annual fall meeting.

The code organizations agreed to produce the draft in common code format and include metrication, and the task committee strove to include gender-neutral text, avoid permissive language, provide a table format of allowable materials and reference standards within the text, provide appropriate reference material and text in the appendices, and address certain format issues.

In the event of conflicting provisions, the task committee adhered to the following principles:

- Provisions shall adequately protect public health, safety and welfare
- Provisions shall not tend to unnecessarily increase construction costs
- Provisions shall not restrict the use of new materials, products or methods of construction
- Provisions shall not give preferential treatment to types or classes of materials, products or methods of construction
- Provisions shall not obstruct the substantive uniformity of the code

In addition, the task committee did not attempt to address new code issues:

The task committee did a highly creditable job and published the first draft on May 16, 1994. This draft was made available to interested parties who wished to comment on its contents.

### Public Hearing

Two sessions of a public hearing were scheduled to receive feedback from interested parties on the content of the first draft. The first hearing session was held in Fairfax, Virginia, June 20-21, 1994, and the second in Reno, Nevada, June 23-25, 1994.

A special hearing committee was created to debate and establish recommendations for revisions to the first draft. The hearing committee consisted of the following jurisdictional members of each of the model code organizations:

John LaTorra—Chair (ICBO)

Carole McLemore, Building Official, City of LaMarque, Texas—Vice-Chair (SBCCI)

Bob Croft, Combination Inspector, Town of Parker, Colorado (ICBO)

Robert Storchheim, Building Official, City of Irvine, California (ICBO)

Robert Konyndyk, Chief, Plumbing Division, State of Michigan Department of Labor (BOCA)

Jud Collins, Programs Supervisor, State of Oklahoma Department of Health (BOCA)

Ernest Lester, Plumbing/Mechanical/Building Inspector, Town of Haymarket, Sterling, Virginia (BOCA)

The two hearing sessions were facilitated by moderators Joe Bertoni and Glenn Erickson. Assigned to provide staff support were Hari Ramanathan, staff engineer, ICBO; Ken Schoonover, vice-president, Code Development, BOCA; and Richard Beck, assistant manager, Code Development, SBCCI.

The hearing committee's task was to accept comments and make modifications to the draft document. Based on input, the hearing committee voted on each specific revision to the first draft. The public hearings were not intended to be equivalent to our code development committee hearings, and the hearing committee was not intended to be a code change committee. However, there were some similarities. Specific proposals were submitted in writing and debate and committee voting was similar to the code change process. Since the document is not yet a code and is not following established code development procedures, staff will further revise the document to clarify and coordinate the provisions, with concurrence from the hearing committee.

### Final Draft

The final draft document, scheduled to be available in early August, will be presented to the memberships of ICBO and BOCA for acceptance at each groups' annual meeting. Thus far, SBCCI has only agreed to assist ICBO in the development of a plumbing

code for use by ICBO. At ICBO's Annual Conference in Indianapolis, Indiana, the code will be presented during the business session scheduled for Thursday morning, September 15. At BOCA's Annual Conference in Dearborn, Michigan, the code will be presented on Tuesday morning, September 20.

Although there will be some technical disparities with other codes, users will be familiar with most of the provisions since the majority of plumbing codes were developed or amended based on technical studies done in the 1920s through 1940s. Much of that early work was sponsored by the United States Department of Commerce and the National Bureau of Standards (i.e., Report BMS 66). In addition, all codes have a similar development process that responds to new materials, significant events and industry concerns in the same general timeframe, and many code changes have been promoted by industry.

In addition to the common code format and metrication, two other differences will be noticed: the only specific water pipe sizing method is included in Appendix E and fuel piping will be included in other model mechanical or gas codes. In general, however, provisions in the joint code will not lead to major new construction practices; they are based on provisions from the time-tested and nationally recognized model plumbing codes of ICBO, BOCA and SBCCI. The code considers methods of installation that have been used regionally with proven safety records to apply on a national basis.

The new plumbing code is not a perfect document and will not satisfy everyone's concerns. As with all model codes, this document should be continually updated. If the final draft document is accepted by the memberships, it will immediately be subject to an established code development process similar to the type to which we are accustomed. The greater the participation, the better the code will be.

### Impact of This Effort

If this effort proves to be successful and is accepted by the memberships of the model code organizations, it will most likely serve as the pattern for moving to national uniformity in our model code systems. If our organizations are able to cooperatively produce this model plumbing code, plans would then be made to move quickly toward a joint mechanical code using a similar process.

The benefits to be derived from national uniformity in our code system are enormous. One set of regulations developed by the model code organizations would facilitate working relationships with the federal government. Groups such as the United States Department of Defense, General Services Administration, Housing and Urban Development, Environmental Protection Agency and Department of Energy could easily reference the joint model codes. Schools of architecture and engineering could teach the joint codes, educational material could be developed at less cost per student, and more funds could be put into research and development.

Joint codes could be the basis for professional architectural and engineering exams and credentials for building officials and inspectors could be accepted nationwide, providing more professional flexibility. Manufacturers could put more money into innovative products rather than trying to comply with multiple codes. Our nation could work more effectively with our neighbors to the north and south, as well as with the European Common Market.

If we work together on the same set of codes, new concerns will be easier to handle. Current efforts to mitigate losses from disasters such as earthquakes, floods and high winds could be expanded through national cooperation. The bottom line is that we must try to overlook minor difficulties and personal interests to see the long-term benefits to our nation and to our system of voluntary code development. ■