



Designing For Quality:

An Interview with
John Raeber

By Kristin Berkery

There's no question that John Raeber, FAIA, FCSI, CCS is highly respected among design professionals. At the Woodwork Institute, we greatly appreciate his extensive knowledge and well-informed opinions about design and construction. He has received numerous Wilbur L. Johnston Awards from the Woodwork Institute for specifications he's written, and he's championed the Institute's standards for many years.

WI Director of Architectural Services Dave Thomas sat down with Mr. Raeber to ask him about his career, millwork standards, value engineering, and some of the challenges he's encountered in the construction industry.

Raeber graduated from architecture school in 1973 and obtained his architect's license in 1976. He started his career in St. Louis, Missouri, writing specifications long-distance for Helmuth Obata + Kassabaum's (HOK) San Francisco office. He moved

DESIGN



Former WI Director of Architectural Services David Thomas (right) presents Mr. Raeber with the Wilbur L. Johnston Award for specification writers.

to California in 1979 where he worked for Gensler & Associates in San Francisco. Some of the well-known projects he's worked on include the Moscone Convention Center in San Francisco and one of the world's largest airports, the King Khalid International Airport in Riyadh, Saudi Arabia. He has also written specs for projects across the U.S., the Caribbean, and Canada.

He first became familiar with the Woodwork Institute of California (as the Woodwork Institute was called until 2003) through the organization's longtime inspector, Wilbur Johnston, CSI. (The Wilbur L. Johnston Award for specification writers was named in his honor.) The first project Raeber worked on that required Woodwork Institute certification was the Xerox Corporation's Palo Alto Research Center in 1975.

"When I came out here [to California]," says Raeber, "I found that I could say 'I want WIC certification on the project' and Wil would go out there and tell me what was good and what was bad. I had over 100 architects that were depending on me to answer those kinds of questions, and I could pass them on to Wil. It gave me a comfort level so I could concentrate on other things."

As a result of those experiences, Raeber started requiring WI certification on all projects except those that couldn't afford it (such as Housing and Urban Development projects) or were located outside the service area. However, he disagrees with the relatively common practice of eliminating certifications from construction projects under the guise of "value engineering." Raeber is a former vice president of the St. Louis Chapter of the Society of American Value Engineers and was a trained and certified value engineer.

"I haven't seen any value engineering done in 20 years," he says. "Nobody's using value engineering [in construction projects] – people are doing costing. They're taking a term and misapplying it. If all you're doing is making the project cheaper, there's no 'value' to it. Anybody can make a project cheaper. Value engineering has a process, it has a procedure, it has a training program, and if you're really doing value engineering, which I was trained to do, you don't choose the cheaper way. Lots of times, value engineering will cause the project's price to go up, not down."


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“If my client asked me to value-engineer the casework on a project, I might say ‘We’ll go with Custom Grade instead of Premium Grade.’ But I would never say ‘Don’t do the certification program’ because my client is losing value by cutting that program out.”

Value engineering was pioneered by Lawrence Miles, an engineer who worked for General Electric for more than 30 years. At the request of GE, Miles founded the principles of “value engineering” and “value analysis” in 1947 with the goal of improving cost and productivity. In 1959 the Society of American Value Engineers was founded, which promotes the objectives of creating a higher-quality end product, ensuring long-term cost effectiveness, and improving performance. In a nutshell, “value” is considered to be the point at which customer satisfaction and price meet, and “value analysis” is the process of examining a specific product or service and developing the most efficient way to accomplish it, not just the most economical.

“In my experience,” continues Raeber, “Today’s ‘value engineering’ is usually requested by an owner who’s been given a sales pitch about how they can save ten percent of the project cost by bringing in a construction manager who’s going to value the project and save all this money. But many construction managers are not designers and they’re not constructors. Too often they’re people that are involved with financial institutions. They seem to have no expertise beyond ‘Is two dollars more or less than four dollars?’ To be honest with you, the owner can tell whether two dollars is more or less than four dollars, and the owner should be making those determinations.”

Raeber’s experience with modern value engineering is illustrated in a college preparatory school project he worked on a few years ago.

“The school wanted a fireplace in the dormitory, and we told them it was going to be about \$25,000 to \$30,000 for the fireplace. They didn’t have the budget for it. A construction management team sold the school on the fact that they could save them \$25,000 on the project so they could afford the fireplace. Well, I got called into a meeting with the architects, the contractor, the owner, and the construction management team. The construction manager immediately says, ‘Your spec writer spec’d the most expensive shower door in the country for this project.’ I had specified a quality glass and metal frame shower door for the project that cost \$365. The construction manager then tells them he has a perfectly good shower door that costs \$185, which would save them half. He spent at least 20 minutes discussing this shower door.

“Once he was finished, I said, ‘You’re right – I’m the one who picked that shower door and I’ll stand by my decision.

It does cost more, but we’re in a school with teenage kids. They’re gonna be bumping into the doors, and I know this shower door I spec’d is gonna take that. I also know the shower door you’re talking about at \$185 is going to fall apart in that type of use.’

“Then I told the owner, ‘You spent more money on this meeting talking about the shower doors... why didn’t the construction manager just tell you to use a rod and shower curtain like I did in the first place? It would cost \$25.’ My first suggestion would have saved them more money than the construction manager. I also explained that I was a trained value engineer and I knew what I was talking about. In the end, the school got donations from graduates to pay for the \$25,000 fireplace.”

Raeber promotes the Institute’s standards and certification programs because he’s seen instances where non-certified projects have incurred problems that could have been avoided otherwise. He says he believes that some owners mistakenly think that providing specific performance criteria replaces the need for a certification, which Raeber says happens with some design-build projects.

“For performance criteria to work, you have to have a definition of exactly what you expect and a means to prove it’s been achieved after it’s done. Wouldn’t a certification program do that better than anything else? If you’re telling me you’re going to go out there and performance-test every cabinet in the job, are you going to put a 50-pound weight on it? Are you going to stand on the drawers? Let’s say you’ve got 1,100 cabinets in there and you test the first one and it fails. Then what do you do? Do you tear them all out and replace them? Do you test every one of the 1,100 units and make the contractors replace every one of them that doesn’t hold up right? The certification program is a value to the project, not a cost. WI standards are probably the best thing that can happen with design-build.”

It’s clear that John Raeber’s background and experience has influenced his opinions about the importance of using established standards as a way to measure the quality of a millwork project. As the saying goes, “Build it once, build it right.” The Woodwork Institute’s *Manual of Millwork* and certification programs allow millworkers to do just that.

The Woodwork Institute’s Manual of Millwork is available online at www.woodworkinstitute.com/publications. To learn more about the Institute’s awards programs, including the Wilbur L. Johnston Award for specification writers, visit www.woodworkinstitute.com/awards. More information about value engineering can be found at www.value-eng.org. 