

Building Bridges

I just finished reading my latest copy of *PS&D* (November/December 2006). The cover story features the design of animal research facilities, and the timing couldn't have been better. One of the projects I'm currently working on is a veterinary hospital in central Virginia. The information in the article is exactly what I needed to help educate me on some of the nuances of plumbing systems for animal health care facilities. That same article served me well when I met with one of the owners to determine the plumbing requirements for some of the special plumbing equipment associated with veterinary medicine, dental examinations, and surgery.

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As I was looking for more information in the magazine, I turned to pages 38 and 39. The feature on these pages is titled "Engineer and Contractor Wish Lists." I remember getting the e-mail from *PS&D* asking me to send in my two cents. Since I've worked on both sides of the aisle, so to speak, I decided to leave it alone.

Reading the responses was fascinating. I have no idea how many responses the magazine received, but of the 15 responses that were printed, only one was from a contractor. I can't really draw an inference about readership from this, except that it makes sense that *PS&D* is read by more plumbing engineers than plumbing contractors. Many of the plumbing engineers who replied seem to feel that plumbing contractors don't appreciate or understand the hard work that goes into designing, drafting, and specifying a plumbing system. Most of the engineers' wish list comments seemed to take the plumbing installers to task for cutting corners, ignoring plans and specifications, and installing whatever they want in spite of the plumbing engineer. The response written by a plumbing contractor contained only one sentence. He used that sentence to wish for complete and accurate information. That one request spoke volumes to me. I think it is only fair that the poor plumbing contractor gets a little more ink. So here goes...

The applied theory of plumbing contracting (installing) is often at the mercy of the budget. It should be understood that once building begins, the ability of the installer to stay ahead of schedule and under budget directly affects his ability to get paid and turn a profit. I wish every plumbing job went as planned, but if you have spent any time at all in the field, you know that almost never happens. In the pure theory world of plumbing design, everything fits neatly on the drawings and details. We specify quality materials and fixtures that we know will give the owner a high-quality system that will last for years. More often than not, it's not the contractor who changes things—it's the owner! Have any of you ever had to install a plumbing system using so-called 95 percent drawings? How about 65 percent? I have. That's all the owner would pay for. The contractor shouldn't be expected to hold spec unless all documents are complete. It's almost a certainty these days that budget pressure will change the building design. Grand ideas in the planning stage give way to the realities of paying for them. Those realities cause a value

engineering session to become a pure cost-cutting exercise in a hurry. How many design engineers are even asked to attend VE meetings? I have attended many VE meetings that were purposely held without the engineer's knowledge. "We'll have an easier time without him"—that's a quote. Contractors often get the job after the owner and the general contractor have sliced it up.

The assumption that you better understand the technical aspects of plumbing systems because you have a Professional Engineer designation after your name is not always a safe one. I can introduce you to Master Plumbers with years and years of installation experience. I wouldn't dare tell them that they don't understand plumbing systems, unless I want a two-hour lecture that starts with "Now you listen here, pipsqueak!" He will tell you that in a pinch he doesn't need your plumbing drawing to do his job. The architectural drawing will identify the walls and plumbing fixture locations. The Master Plumber can take it from there and install a code-compliant system, just like that. To the plumbing installer, the code official is at the top of the heap, not the engineer.

Sometimes the drawings show a lack of understanding on the engineer's part. If you are one of those who draw a battery of fixtures with a vent coming off each individual fixture, stop it. A plumber will ignore the individual vent in favor of a circuit vent every time. Once the plumber breaks from the drawings because of something that obvious, he feels free to go his own way in other areas.

Let's be very clear about one thing: No matter which hat we wear, we all represent the owner. We must keep in mind that, in the end, the customer is always served, whether it's by you or your competition. We all need to work more closely with our counterparts and make it a team effort to the benefit of the owner. After all, the owner pays the bills.

NOW, BACK TO THE VETERINARIANS

Dr. Smith (his real last name) is one of a group of veterinarians who have pooled their resources to provide a new facility to serve the pet-owning public. He attended the meeting representing the owners. The meeting was held in the offices of the general contractor, which was represented by the project manager and field superintendent. My firm was represented by myself (plumbing), our HVAC engineer, and our electrical engineer. Since we design and build, we brought our own project manager as well.

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