possible–and this needs to start as early as possible in the process. The designs all start in our office and studio, but the final designs with their details and full conviction spring up from somewhere between all of us.

Also, we never fill a set of plans with dimensions. We use dimensions only when this is the best way to describe our priority of requirements. Other things we say about a measurement are "line up," and "center" and "equal." This way the lines drawn in the plans can more easily be responsive to the realities of the space. It is a format with priorities and emphasis.

Specific Components of Contract Administration: Recommendations

In this context of flexibility, I can address some specifics of what is traditionally known as *contract administration.* The contract administration phase includes the following eight stages for the designer.

REVIEW SHOP DRAWINGS

Designers should see shop drawings not as strict limitations or controls over the project but rather as opportunities to solve problems they may encounter on the way to implementing their vision. For me, this is an opportunity to encourage the fabricators to bring their knowledge to the process, to use what they can do best and modify the details if necessary. But I will fight for a detail or a concept that is critical to my vision. Once I designed five-foot by ten-foot sliding doors in 1/4-inch aluminum sheets for the offices of a record company. I had simple tubing attached on one side running horizontally, and on the other side the tubing ran vertically. To me it was a hollow core door, but inside out. The contractor worried it wouldn't work. The fabricator said it would warp and rack. I asked them to send it to their engineer. He said it wouldn't work. To understand this structure better I lay my fingers of one hand horizontally across the vertical fingers of the other. I could see it would work. "Make one and if it doesn't work I'll pay for it." It worked and they made all four.

APPROVE SAMPLES

Designers should never try to match the sample of one material to another; this is a perverse idea. If they aren't the same material, then they won't have

the same qualities. When designers develop custom samples they should offer "recipes" to fabricators for the direction they think might work best and ask for some variations, if necessary. For instance: "Take the fir plywood, stain it black and then sandblast it," and "Take the fir plywood, sandblast it and then stain it black." These are recipes. Every fabricator will give you different solutions, because every fabricator's hand is different. It is difficult enough matching a sample by another fabricator in the same material. Celebrate the difference of the materials, the processes, and the eye and hand of the fabricator. Never give the client the expectation of matchy-matchy, which looks OK on a computer screen but not in life.

SUBMIT MATERIALS, CUT SHEETS, AND PRODUCTS

Although we start this procedure way back in the initial design phases while we are developing ideas, some design elements require research or are dependent on other decisions and can't properly be selected until later. Many times a materials choice will require designers to use salesmanship and communication skills: The designer may need to sell a client on an idea that is difficult to imagine. When you present the material you wish to use, it makes it more difficult to imagine, like the sandpaper we have used as a wallcovering of a showroom. You need to explain how it will look different (better) in context. Also, never promise a performance from a material that is not possible. Everything wears. Some materials wear in and some wear out. Many times we pre-wear elements of our designs.

REVIEW PROGRESS AND QUALITY OF WORK

Being flexible in the process of design does not mean being sloppy. When it comes to making satisfactory progress and finishing a quality project, professionalism is critical, and from the get-go designers must establish procedures and methods for handling all questions and changes. Communication of expectations is critical and the first sign of not meeting these expectations (workmanship, schedule, attendance) should be identified sharply and clearly. Then, as necessary, the designer should grease the squeaky wheel. A client may wander onto a jobsite and question procedure with unauthorized personnel, like a worker on the job. When clients see elements appear out of order or out of the context of the rest of the design on a site, they frequently need reassurance that the right choices have been made, that the work is being carried out correctly. They may ask, "Why is this happening this way?" Simi-