

## Sticks & Bricks: A Practical Guide to Construction Systems and Technology

Reviewed by Lawrence C. Melton



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Edited by Christopher C. Whitney, Robert J. MacPherson, and James Duffy O'Connor.

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All construction lawyers—those with engineering degrees as well as we liberal arts types—frequently operate way beyond our areas of competence on technical issues. We are often in over our heads, out on the margin, standing up in court, and—well, not to put too fine a point on it—faking it. But after ample discovery and time with clients and experts, we all become one-shot experts at putting technical matters into everyday speech for the benefit of lay finders of fact. And it doesn't matter what the subject—hydraulic conductivity, biological sludges, radioactive waste, autogenous burning, stand-up time, split spoon sampling, grain size distribution—we can get up to speed for a trial. We can even sound like we know what we are talking about. But then . . . well, the technical information doesn't always have a lot of carryover value to other cases. Every case is different. No matter how much you know about wastewater treatment plants, your next case may involve remotely monitored radar installations.

Every case has a technical learning curve, but if we didn't like that aspect of construction practice, we would (if free market models are worth anything) be doing something else. Now, thanks to our ABA Forum on the Construction Industry, help with the learning curve is on the way: *STICKS & BRICKS: A PRACTICAL GUIDE TO CONSTRUCTION SYSTEMS AND TECHNOLOGY* (Christopher C. Whitney, Robert J. MacPherson, & James Duffy O'Connor eds., ABA 2001).

The book includes nine chapters on topics that you will encounter no matter how general, or how specialized, your construction practice: Foundation, Concrete Basics, Structural Steel, Masonry, Curtain Walls, HVAC, Electrical,

*Lawrence C. Melton lives in Columbia, South Carolina, and practices with the Washington, D.C., firm of Bastianelli, Brown & Kelley Chtd.*

and Roofing. Each chapter has been written, and well illustrated, by highly qualified engineers who take a common-sense approach and explain it from the bottom up. It's not exactly *Construction for Dummies*, but it is close enough to get the job done. Every chapter also has a useful bibliography of more specialized materials for those who need them.

By way of example, I turned to my most pressing technical topic, whether a heat restriction on concrete was commercially impractical. By turning to "Composition of Concrete," I quickly learned that there are five basic types of portland cement. Type II cement generates less heat than type I but is more expensive. Type IV cement is used when heat of hydration must be minimized, typically in massive structures such as dams, but strength gain is slower than for other cement types. Other variables for heat generation are amount of water relative to cement, the fineness of the cement grind, and the ambient temperature. Now, of course, the book didn't answer my question (a judge or jury may ultimately have to answer that), but it will certainly make my next round of interviews with the client and the experts more informed. I also have a list of industry standard references.

Thus, *Sticks & Bricks* provides both a good start and a clear path forward. Beginning lawyers will find the book invaluable as a tool to understand the basics of construction. Even gray hairs will find a need for the book, because few have become experts in every phase of construction and many have forgotten what they learned. In short, every construction lawyer will find a use for this book, and the editors and authors should be congratulated for what obviously took a lot of work (we all know how hard it is for PEs to write simple, coherent prose!).

Because of all the useful knowledge it contains, *Sticks & Bricks* is a great place to start. But if you are in litigation on a technical issue and end up knowing no more than *Sticks & Bricks*, you are probably in trouble. Keep it by your desk. Look up terms you don't understand. Read up on a subject before you meet with a potential expert or your client or as you prepare for a deposition. But remember, *Sticks & Bricks* will not turn you into an engineer.

My one regret was that *Sticks & Bricks* stopped where it did without including more technical subjects or some of the business aspects of construction, like estimating and scheduling, that lead to as many disputes as the purely technical side of things. Perhaps the Forum will increase the technical coverage in the next edition, or perhaps it has a book on estimating, scheduling, and other business aspects of construction up its sleeve. Let's hope so. And let's hope it meets the high standard set by *Sticks & Bricks*. 