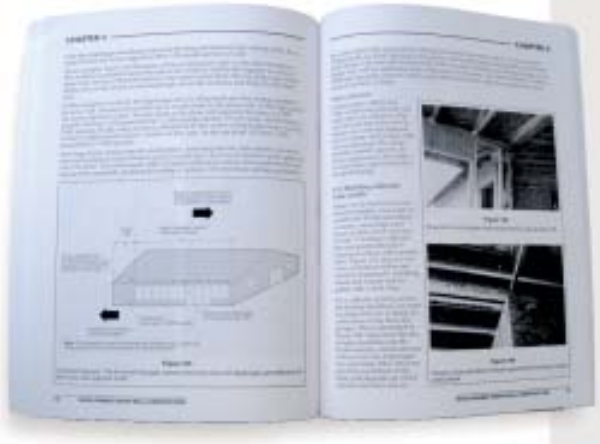
Resources

Plain-Language Shear Wall Guide

by Tim Uhler



Wood-Framed Shear Wall Construction – An Illustrated Guide, by Thor Matteson, Structural Engineer (International Code Council, Inc., 2004), 800/786-4452; www.iccsafe.org.

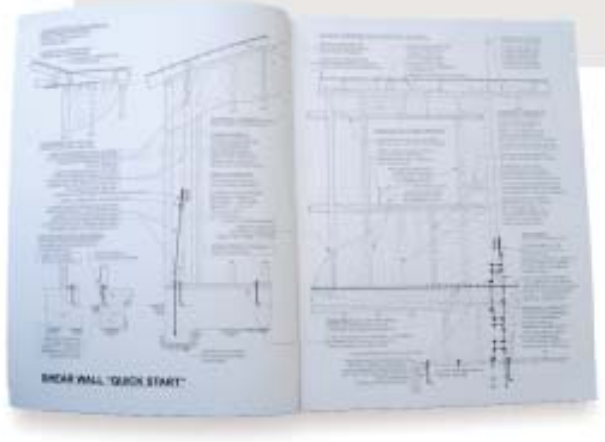
As a framer, I have found it difficult to keep up with all the changes that happen in the building code. One of the more confusing areas of the code has to do with the proper construction of shear walls. I can't tell you how many fellow carpenters I've talked to who think building a shear wall is simply a matter of adding more nails to the sheathing.

It's hard to find information about shear walls that is concise and easy to understand. The only place I know to get it is in Thor Matteson's book, *Wood-Framed Shear Wall Construction — An Illustrated Guide*.

Importance of Shear Walls

Shear walls are an extremely important part of the frame. Building them properly is every bit as important as correctly sizing the structural members. The book clears up common misconceptions, such as the belief held by many older carpenters that since shear walls didn't used to be required, why make such a big deal out of them now? Matteson's book has about as many pages as the magazine you're reading right now. It's filled with pictures and tables to illustrate the points the author is trying to make.

In my experience the biggest impediment to the proper construction of shear walls is the lack of understanding on the part of the carpenters, superintendents, and foremen who are in charge of building them. Matteson's book provides the necessary background so that those of us in the field can understand how shear walls work and the role they play in the performance and longevity of a wood-framed home. The pictures and diagrams make it much easier to understand the principles involved.



Common Errors

A chapter on basic construction requirements covers common field errors and points out differences between what the code might say and what materials are actually available in the field. I especially like the photos that show what to do and what not to do when you're building a shear wall. They look like they could be from my job or the job down the road. For example, there's a picture of a J-bolt that was not set high enough so, of course, the carpenters notched the sill plate around it. We've all seen this kind of thing, and Matteson makes it clear why it's not acceptable in a shear wall.

Another chapter covers the manufactured shear walls that have become so common in recent years. It also introduces the reader to collectors; how they work and mistakes to avoid when building them. The last part of the book discusses advanced topics such as how to deal with shear walls that have windows in them and what do when the top of the wall is sloped (rake walls) or when the building has stepped footings.

The author's past experience as a carpenter proves invaluable because he understands that it's one thing to design something on a piece of paper and another to actually build it on site. One of my pet peeves is that I sometimes have to deal with engineers and inspectors who have no real-world experience with building things. It's as if carpenters, inspectors, and engineers are all speaking different languages. The best thing about Matteson's book is that it's written in language that can be understood by anyone.

I have read this book a couple of times and keep a copy in my truck. In my opinion, it should be required reading for superintendents, inspectors, and anyone who leads a framing crew.

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