



## Getting Your Fill

**Construction of and on Compacted Fills** by Edward J. Monahan; John Wiley & Sons, N.Y.; 1986; 192 pages; \$37.95, hardcover.

Building compacted fills is a fairly common problem, common enough that Edward Monahan, a registered engineer and professor, saw the need to write a book on the subject. According to the preface the book is directed toward constructors and other nonspecialists, assuming no prior knowledge of the subject on the part of his readers. Later he adds another readership category, that of young engineers and technicians who are likely to be working as field inspectors. In my view this is really Monahan's primary audience, as I found the discussion going over my head (as a typical nonspecialist) early and often. Unfortunately this situation was not always remedied by the glossaries, index, or text. So I was left in the dark about concepts such as *Atterberg Limit tests, liquid limit, and dilatancy*. The occasional formulas and mathematical calculations included in the book also seemed aimed at a more technical readership.

The book is further limited by the use of examples drawn from projects such as highway embankments and dam construction—rather than, say, the backfilling of foundations. Finally, the author devotes more than 13 pages to his own avant-garde idea of using rigid foam plastic for fill (he holds two patents on the method), which might have been better devoted to other topics.

Nonetheless there is much to be learned from *Compacted Fills*. Of particular interest are the mechanics of frost action, an excellent chapter on types of specifications and their

implementation, practical advice on field inspection (right down to gear and clothing), and how to avoid most costly blunders. How many times have you seen, or written, a spec calling for "95 percent compaction"? Did you know that there are actually two compaction test standards, and that one uses 4 1/2 times more energy than the other? Only the latter is suitable for load bearing situations, so do yourself a favor and don't blindly spec "95 percent," without first learning the difference. You'll also learn that soil moisture content influences compaction energy, and that clays are energy sensitive while free draining sands must be compacted while "puddled."

Beyond the technical details, Monahan's concern with ethical issues and practical day-to-day situations on the job is another real strength of the book. Finally, Monahan's sense of humor permeates the book, saving it from being dry, analytical, and "textbooky." From his observations on lawyers (they sue everyone in sight to gain a bigger settlement pool), to his own corollary to Murphy's law (Monahan's theory of the perversity of inanimate objects), to his citation of an article of "The Uselessness of Elephants in Compacting Fills," the author attempts to make a rather narrow technical subject readable, understandable, and enjoyable, and to a large degree he succeeds.

*Compacted Fills* is expensive and will be of interest to a limited number of readers, but it fills both a theoretical and practical niche. —Paul Hanke

## Building Small

**The Small House** by Duo Dickinson; McGraw Hill, N.Y.; 1986; 194 pages; \$34.95 hardcover.

**Modest Mansions** by Don Prowler; Rodale Press, Emmaus, Pa.; 1985; 268 pages; \$19.95 hardcover, \$12.95 paperback.

Beauty, it has been said, is in the eye of the beholder, and so it may be with smallness. Henry David Thoreau, for instance, reputedly wanted to experiment with living in a packing crate, although the average person might have thought his cabin on the shore of Walden Pond was small enough. On the other hand, if Elvis Presley had been forced to move from his Graceland Mansion into a typical suburban tract home he probably would have felt unduly cramped. In fact, I knew of a 4,000 plus-square-foot luxury house that feels terribly small from being carved up inside.

The idea of small houses has occasioned two recent books by architects: *The Small House* by Duo Dickinson and *Modest Mansions* by Don Prowler. Both tackle the tricky problem of defining just what constitutes a "small" house and then attempt to set forth principles of small house design, illustrated by appropriate examples. The results differ dramatically in style, content, and usefulness.

As the preceding examples point out, there is in reality no such thing as a "small" house, and both architects admit there is some latitude to the definition. Prowler's examples are never more than 1,500 square feet, with most being substantially less. This compares to an average 1983 American house size of 1,740 square feet. Dickinson, on the other hand, defines small as ranging from a two bedroom house of less than 2,000 square feet to a five bedroom house of less than 3,500 square feet, and his examples include several specimens approaching his maximum limit. Granted a house full of teenagers might make even the largest abode seem small, but by Dickinson's logic a feudal mansion with 20 bedrooms could be called "small." As Dickinson says, "small is a relative modifier."

Another problem with Dickinson's book is its excess of architectural jargon of the worst sort. Language such as what follows abounds throughout the book: "Seeing the conflict inherent in the aesthetic apartheid of a High Tech style so high that it is somewhat out of control and a Sub-bourgeois Bucolic style, Lipsey divined his own aesthetic integration.. ." or, "... an implicitly ad hoc sense of gratuitous juxtaposition..."

In contrast, Prowler's writing is exceptionally clear, and his drawings carefully illustrate his points. Dickinson's examples, however, offer more in the way of art criticism, and are not clearly drawn from the text.

One interesting aspect of *The Small House* is Dickinson's effort to quantify what he calls "perceived space"—those tricks-of-the-trade that make small houses seem larger than they are. And I did enjoy some of his case studies, especially the retrospective appendix on the work of Arthur Carrara, an early follower of Frank Lloyd Wright. Nonetheless, *The Small House* stands more as an photographic essay on what young architects are doing these days than as a guide to creating small houses.

*Modest Mansions* is in every way superior as a practical guide to compact homes. Prowler argues persuasively for the construction of smaller but higher quality houses in today's market, addresses issues of planning, detailing and building scaled-down buildings, and explains how to use space efficiently. He ends the book with appendices on the changing impact of codes and dimensional standards on every room in the house, plus an excellent bibliography. Packed with practical information and advice, clearly presented and well illustrated, *Modest Mansions* is one of the best books I've read in the recent past on any subject. It's "must" reading for anyone in the residential design or homebuilding field.

—Paul Hanke

## FREE & CHEAP

**Electromagnetic Lock:** A product brochure highlighting Securiton's Magnalock system is available from Securiton, 1815 W. 205th St., Suite 103, Torrance, CA 90501; or call 800-624-5265, (in Cal. 213/618-0204).

**Plastic Flooring:** A four-page Data Bulletin (526) describes NorCore plastic honeycomb in a variety of flooring constructions, including gyms, swimming pools, concert stages, and exhibit booths. For information: Data Bulletin (526) Norfield Corporation, 36 Kenosia Ave., Danbury, CT 06810; or call 203/792-5110.

**Movable Walls:** A major manufacturer movable wall systems has released a brochure on the company's three systems, especially designed for commercial applications — Silhouette, Silhouette III, and Fine Line. For info: Virginia Metal Industries, Inc. P.O. Box 709 Orange, VA 22960; 703/672-2800.

**Curved Exterior:** An eight-page product brochure describing the merits of the Binkley Floclad curved wall, roof, and fascia system, is available. Shows various applications for the product, which is suited for both new and remodeling projects. Contact Binkley Company, 12161 Lackland Rd., St. Louis, MO 63146; 314/434-7110.

**Architectural Product Manual:** A comprehensive 400-page technical manual detailing specs and performance characteristics for Amarlite architectural products is available from ARCO. While providing a compilation of the company's line of entrances and storefronts, curtain-wall systems, and windows, the manual also includes windload charts, schematics, and scale drawings depicting various installations. Write Amarlite Architectural Products, P.O. Box 1719, Atlanta, GA 30301; or call 404/691-5750.

**Skylight Products:** A 20-page brochure featuring Sunglo Skylight Productions, including plastic-glazed skylights in continuous vaulted half-round, quarter-round, walkway systems, pyramid, lean-to, ridgetlight, and octagon configurations. Explains the company's "thermalized" skylight design. For info, contact Sunglo, 3030 Cherry, Kansas City, MO 64108 816/561-1155.

**Upgrading Walls and Ceilings:** An eight-page brochure describes how to use U.S. Gypsum products and systems for wall and ceiling construction in single- and multi-family homes. The company also provides a pocket-size field guide for framing crews and forepersons using the company's Separation Wall System in multi-housing developments. For a copy of either, write to U.S. Gypsum, Dept. 122-ZZ, 101 South Wacker Dr., Chicago, IL 60606.

**Door Products:** Several door product manufacturers have released information on a variety of door types. Minton has issued an eight-page brochure on its line of 20-minute fire-rated solid wood Firestite and rail doors and Firejamb wood jams. For a copy of *Minton Fire-Rated Door and Jamb Brochure*, call or write Minton, P.O. Box 520, Mountain View, CA 94042; 800/654-6468 (in Cal. 800/521-5335). Ceco Door Division has released a six-page brochure on its adjustable split frame, steel door/frame system. SetRite features pre-hung, no-shim installation. For info contact CECO Door Division, 1400 Kensington Rd., Oak Brook, IL 60522; 312/990-1400. Finally, Cookson has a product catalog entitled *Cookson Rolling Doors 1987*. For a copy write The Cookson Company, 800 Tulip Drive, Gastonia, NC 28052.

**Architectural Trash:** A four-page brochure describing Kadee's line of architecturally designed trash receptacles, benches, and planters. For info contact Kadee Industries, Inc. 160 Northfield Rd., Bedford, OH 44146; 800/321-3827 (in Ohio collect 439-8650).

**Coating Products:** Du Pont has published a 40-page manual on the use of its high-performance coatings for architectural commercial and industrial applications. Special sections of *Du Pont High Performance Coatings* give information on project planning, surface preparation, coating application guidelines, inspection methods, and painting economics. Contact Du Pont, Room X50479, Wilmington, DE 19801; 800/346-4748.

**Remodeler's Standards:** A 92-page reference manual for general and specially remodeling contractors is divided into 11 major construction categories organized by the typical construction sequence. Each major category contains a number of specific standards and each standard provides an "observation or description of a particular defect, the actual performance standard itself, and the prescribed "corrective measure." The manual costs \$10 for NAHB members, \$12.50 for non-members. To order a copy of *Quality Standards*, call the NAHB Bookstore toll free at 800/368-5242.