The Bookshelf

Book Review Editor: Theodore J. Weidner, Ph.D., P.E., AIA

Technical manuals are sometimes difficult to read but very valuable in use. This issue presents two such manuals. The first presents the new, and sometimes controversial, Construction Specifications Institute format for construction specifications. The second provides some valuable data to support and justify maintenance expenditures.

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The Project Resource Manual: CSI Manual of Practice, fifth

edition, Alexandria, Virginia: Construction Specifications Institute, 2004 (www.csinet.org), 657 pages, hardcover.

The Construction

Specification Institute's fifth edition of *The Project Resource Manual: CSI Manual of Practice* is an excellent construction project resource for all members of the building team. In this new edition, CSI demonstrates an expanded focus on teamwork and partnering by including owners and contractors and formally recognizing them as important team members in the creation of successful facilities.

The manual is organized by modules, describing the facility life cycle in varying levels of detail from project conception through demolition. Module topics include: project con-



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ception; project delivery; design; construction documentation; bidding, negotiating, and purchasing; construction; and facilities management. The design, construction documentation, bidding, and construction modules are appropriately detailed while the remaining modules provide general overview information, including how the topics relate to the design and specification process. For example, the module on project conception discusses the importance of determining project priorities in the planning phase to avoid poor design decisions later on. Another planning section emphasizes documenting owner wants versus needs and obtaining owner approvals, noting that no assumptions should be made.

The detailed portions of the manual discuss specification methods and contract administration, including explanations, interpretations, and expectations helpful in understanding common industry standards. Quality control processes, such as stating information once in the correct location and processes for researching and assembling contract document information, are explained well, and include the implications of producing incorrect or poorly assembled construction documents.

The module on construction documents also contains an interesting overview of the specification methods of various governmental agencies and the use of master guide specifications. A more detailed discussion of the advantages and disadvantages of using an owner-provided master guide specification would be a welcome addition to the manual. I found that some information is repeated in several sections throughout the manual, seemingly in error; however the repetition may enhance use of the manual as a topical reference.

Overall, *The Project Resource Manual* is an important educational tool in training those involved in developing, reviewing, and implementing construction documents. A concise discussion of the responsibilities and expectations of team members through the partnering concept, with an emphasis on successful contract administration, creates the potential for this manual to improve the construction delivery process.

Reviewed by

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The Whitestone Building Maintenance and Repair Cost Reference 2004-2005, ninth Annual Edition,

Peter S. Lufkin. Chad Turner. and Jon Miller, Santa Barbara, California: Whitestone Research, 2004 (www.whitestoneresearch.com), 289 pages, softcover.

The Whitestone

Building Maintenance and Repair Cost Reference documents 50 different building types. There are several that are of particular interest to education facility officers-both higher education and K-12.

This ninth edition provides updated cost information for the 50 modeled building types which include elementary schools, college classrooms, college student unions, dormitories, gymnasiums, hockey rinks along with 44 other building types. The cost information is based on models developed by Whitestone Research and

using cost data from R.S. Means. The models are each comprised of the many building components that are required: doors, windows, plumbing fixtures, and connecting infrastructures such as copper piping. Each model identifies the building type, size (area), height (stories), general description, replacement cost, and other components. Costs, annual preventive maintenance, scheduled maintenance, and capital renewal are provided including a 50-year cost profile for maintenance which includes a breakdown by building system.

While the reader may be tempted to find a direct correlation between the building area and components, the authors caution that the models are not scalable. The raw data (unit costs and life-cycle for over 300 components) are provided so that a sophisticated user can develop maintenance costs for a building that does not match one of the models. Adjust-

ment data for different metropolitan areas are also provided so error can be minimized. Added details of life-cycle variations in HVAC equipment area are also provided.

Whitestone Research has compiled a more expensive, user-friendly software package—MARS cost forecasting system-that is based on the same data presented in this reference. It remains possible, with effort, to develop a detailed cost model at a lower cost for a specific building based on the data provided in this publication.

The Whitestone Cost Reference provides a great deal of data which can be used to develop a fact-based record of building maintenance costs. When someone at your campus asks why maintenance costs so much, you can show them through this reference.

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