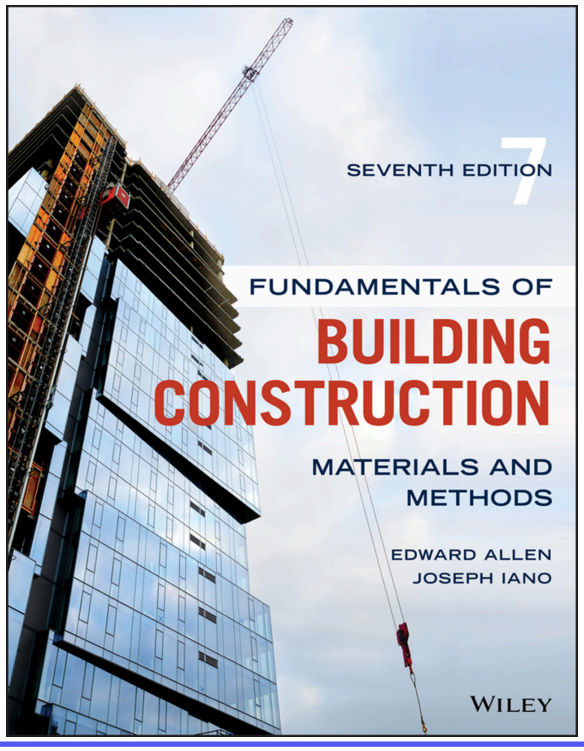


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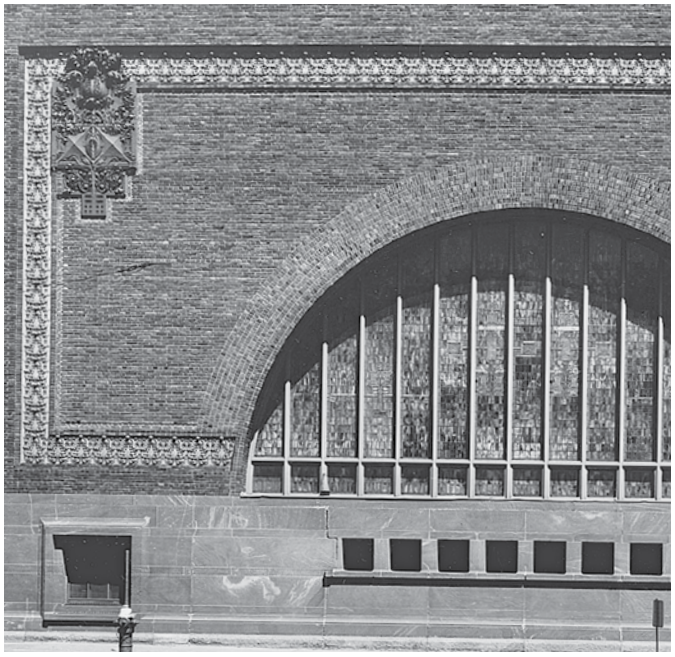
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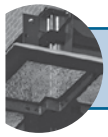

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Preface to the *Seventh Edition*

First published over a quarter century ago, *Fundamentals of Building Construction: Materials and Methods* has wrought a revolution in building construction education. It made a previously unpopular area of study not merely palatable but vibrant and well liked. It has taken a practical, and at times undervalued, body of knowledge and made it widely recognized as centrally relevant to good building design. It has replaced dry, unattractive books with a well-designed, readable volume that students value and keep as a reference work. It was the first book in its field to be evenhanded in its coverage and profusely and effectively illustrated throughout. It was the first to release the teacher from the burden of explaining everything in the subject, thereby freeing class time for discussions, case studies, field trips, and other enrichments.

Gaining a useful knowledge of the materials and methods of building construction is crucial and a necessity for the student of architecture, engineering, or construction, but it can be a daunting task. The field is broad, diverse, complex, and under constant change, such that it seems impossible to ever master. This book has gained its preeminent status as an academic text in this field because of its logical organization, outstanding illustrations, clear writing, and distinctive philosophy.

It is *integrative*, presenting a unified narrative that interweaves issues of building science, material properties, building craft, and legal constraints so that the reader does not have to refer to separate parts of the book to make the connections among these issues. The elements of building construction are presented as whole working systems rather than disconnected parts.

It is *selective* rather than comprehensive. This makes it easy and pleasant for the reader to gain a working knowledge that can later be expanded, without piling on so many facts and figures that the reader becomes discouraged from learning about construction. This book deals, as its subtitle indicates, with fundamentals.

It is *empowering* because it is structured around the process of designing and constructing buildings. The student of architecture will find that it features the design possibilities of the various materials and systems. Students interested in building or managing the construction process will find its organization around construction sequences to be invaluable.

This seventh edition incorporates extensive updates and revisions. Chapter 4, now entitled "Heavy Timber and Mass Timber Construction," covers new and exciting developments in the design and construction of tall wood buildings. We discuss mass timber construction methods, upcoming building code provisions that will regulate this new construction type, and more. A rewritten chapter, now titled "Designing the Building Enclosure," comprehensively addresses in one place all aspects of building enclosure ("building envelope") science, making this important material easier for students to access and instructors to teach. In Chapter 1, our coverage of sustainable building has kept pace with this evolving topic, including, for example, an expanded discussion of the increasingly sophisticated tools available for assessing the environmental and health impacts of building materials. Throughout the remainder of the text the reader will find extensive updates in content, along with new illustrations and photographs, reflecting the latest practices and developments in the field.

In this edition, a special thank-you goes to Fast + Epp engineers, and in particular, Davin Lewis, P.E., of that firm, for their generous advice and assistance. Thank you as well to David Barber of Arup and Colin Shane of RDH for their efforts. Lastly, we offer our thanks to the many teachers, students, and professionals who have purchased and used this work. Your satisfaction is our greatest reward, your loyalty is greatly appreciated, and your comments are always welcome!

—E.A., Weyland, Massachusetts
—J.I., Seattle, Washington

Additional resources for instructors and students are readily available via the companion website: www.wiley.com/go/allenfbc7e.

Icons throughout the text indicate SketchUp exercises and animations which are also available for download on the companion website.