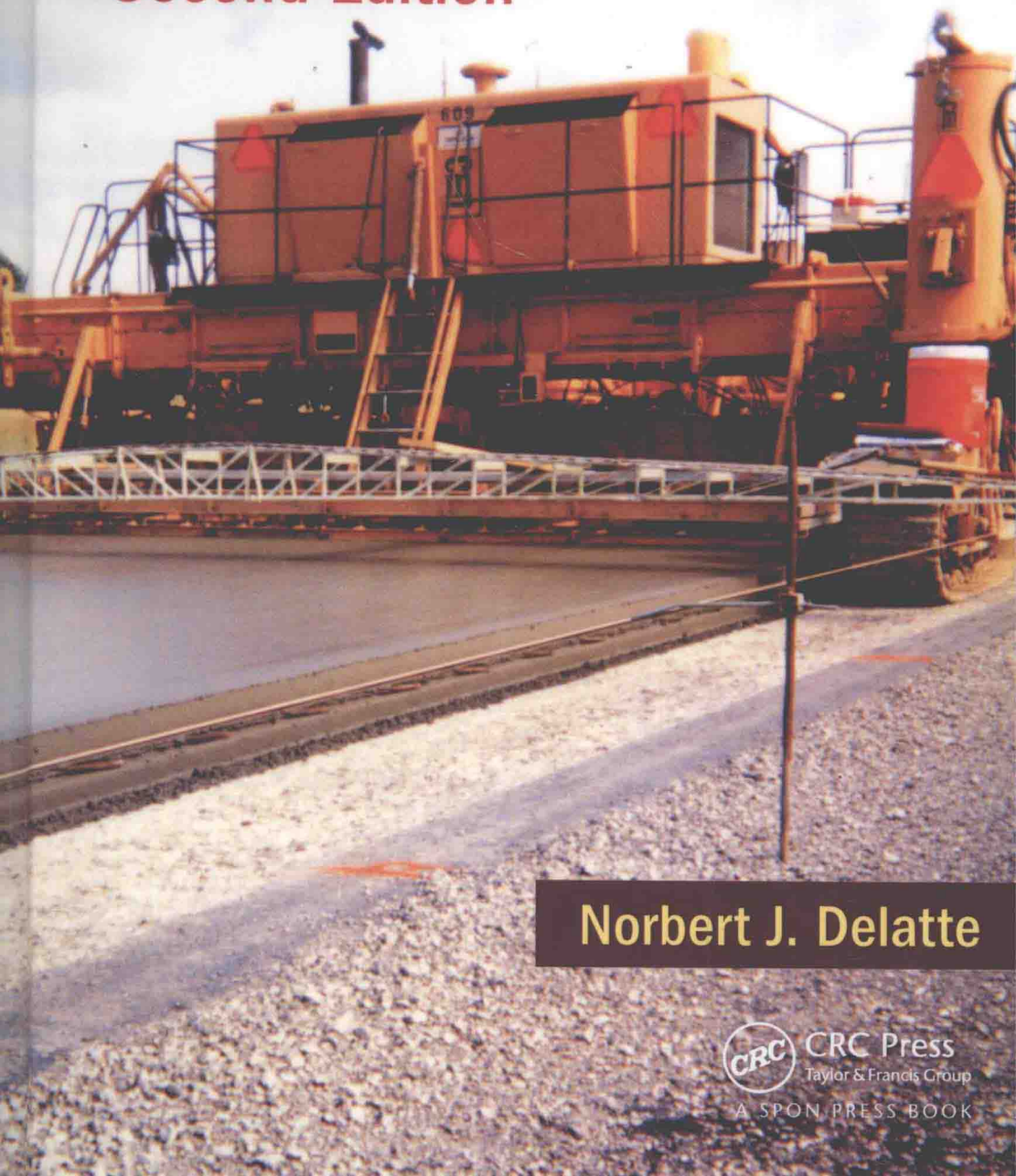


Concrete Pavement Design, Construction, and Performance

Second Edition



Norbert J. Delatte



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I dedicate this book to my late father, Norbert Delatte Sr.,
who taught me to love books.

Preface to the second edition

In the years since the first edition was published, there have been a number of changes in concrete pavement technology. Some approaches are now less used. Other topics have become more important and required new chapters, such as sustainability, the *Mechanistic-Empirical Pavement Design Guide* for highways, and pervious concrete and roller compacted pavements. All other chapters have been thoroughly reviewed, and trimmed to make room for new material. I hope that this work will continue to be of value to students, professors, researchers, and practicing engineers.

Acknowledgments

There are too many people to thank for helping me with this book, but I will try anyway. To begin with, the members of American Concrete Institute Committees 325–Concrete Pavements, Committee 327–Roller-Compacted Concrete Pavements, Committee 330–Concrete Parking Lots and Site Paving, and Committee 522–Pervious Concrete, helped me considerably with discussions during committee meetings and over beers afterward. James Shilstone, Sr. (Jim) and James Shilstone, Jr. (Jay) supplied material for Chapter 5, and Juan Pablo Covarrubias supplied material for Chapter 9. Tim Smith of the Cement Association of Canada, Dale Crowl of the Ohio Department of Transportation, and George Palko of The Great Lakes Construction Company supplied photographs. In addition to my colleagues, I would like to thank my students in courses at Cleveland State University and at the University of Alabama at Birmingham over the years, because teaching them challenged me to research and synthesize the material. Finally, I need to thank my wife Lynn and our children, Isabella and Joe, for their patience while I was drafting this manuscript.

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He served for 11 years in the United States Army as an officer in the Corps of Engineers, including 2 years of service in the Republic of Korea, wartime service in the Arabian Peninsula during Operation Desert Storm, and command of an engineer company during Hurricane Andrew relief operations in southern Florida. He taught as an assistant professor at the United States Military Academy at West Point, New York during the academic year 1996–1997. He specializes in concrete pavement behavior and performance, structural engineering, transportation engineering, and construction materials. Dr. Delatte is a member of the American Concrete Institute, the American Society of Civil Engineers, and the American Society for Engineering Education. He is the Transportation Research Board (TRB) University Representative for Cleveland State University, and serves as a member on two TRB committees—AFN40, Concrete Materials and Placement Techniques (2006–present) and AFN20, Properties of Concrete (2007–present).

He is the chair of ACI Committee 327 (Roller-Compacted Concrete Pavements), former chair of ACI Committee 325 (Concrete Pavements), and a member of ACI Committees 330 (Concrete Parking Lots and Site Paving) and 522 (Pervious Concrete). He is the former chair of the ASCE Technical Council on Forensic Engineering (TCFE) Executive Committee and the TCFE Education Committee. In addition, he is the editor of ASCE's *Journal of Professional Issues in Engineering Education and Practice*. Dr. Delatte is a registered professional engineer in the States of Ohio and Alabama and in the Commonwealth of Virginia.

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