

How to Select and Work Effectively with Consulting Engineers

>> GETTING THE BEST PROJECT



How to Select and Work Effectively with Consulting Engineers: Getting the Best Project

2012 Edition

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the Task Committee for the Update of Manual 45 of
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AUTHOR BIOGRAPHIES

Thomas E. Decker, P.E., M.ASCE

Tom Decker is a vice president of Brown and Caldwell based in Alexandria, VA. He received his bachelor of science and master of science in civil engineering degrees from the University of Missouri.

Francine Eide, P.E., M.ASCE

Fran Eide is the City Engineer for the City of Olympia, Washington, the state's capital city. She serves on ASCE's Committee on Business Practices. Eide received her bachelor of science in civil engineering degree from Saint Martin's University.

Harold J. Farchmin, P.E., F.ASCE, LEED AP

Harry Farchmin is vice president of Bloom Companies, LLC in Milwaukee, Wisconsin, past president of the Southeast Wisconsin Branch, and past director of the Wisconsin Section of the American Society of Civil Engineers (ASCE). He served as chair of the ASCE Membership Committee, Committee on Business Practices, and Engineering Management Division Executive Committee, and as a representative of ASCE on the Engineering Accreditation Commission of ABET, Inc. Farchmin received his bachelor of science and master of science in civil engineering degrees from the University of Wisconsin-Milwaukee.

Theodore L. Niemann, P.E., D.WRE, M.ASCE

Ted Niemann is a branch manager of RJN Group, Inc. in Louisville, Kentucky. He has served as president of the Louisville Branch and Kentucky Section of ASCE. Niemann received his bachelor of science and master of science in civil engineering degrees from the University of Kentucky.

Gary A. Parks, P.E., F.ASCE

Gary Parks retired from the Bonneville Power Administration as the regional manager in Redmond, Oregon. He is currently a consultant to the Western Electricity Coordinating Council, headquartered in Salt Lake City, Utah. He is a past president of the Oregon Section of ASCE and is the past chair of ASCE's Committee on Professional Practice. Parks received his bachelor of science in civil engineering and master of science in structural engineering degrees from Oregon State University.

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ASCE Task Committee for the Update of Manual 45 of the Committee on Professional Practice's constituent Committee on Business Practices

Harold J. Farchmin, P.E., F.ASCE, Chair

Thomas E. Decker, P.E., M.ASCE

Francine Eide, P.E., M.ASCE

David F. Garber, P.E., F.ASCE

Theodore L. Niemann, P.E., D.WRE, M.ASCE

Gary A. Parks, P.E., F.ASCE

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BLUE RIBBON REVIEW PANEL

Gregory E. DiLoreto, P.E., L.S., F.ASCE

Gregory C. Heitzman, P.E., M.ASCE

Kam Movassaghi, Ph.D., P.E., F.ASCE

Thomas R. Walther, P.E., F.ASCE

The Blue Ribbon Review Panel conducted an independent peer review of the draft manuscript.

ASCE Staff Contact

Rebecca M. Waldrup, P.E., M.ASCE

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FOREWORD

The American Society of Civil Engineers (ASCE) has been concerned with procedures for engaging engineering services since the early 1900s. The first ASCE manual on the subject was published in 1930. The designation *Manual No. 45—A Guide for the Engagement of Engineering Services* (“the manual”) was adopted in 1964, with revisions issued in 1972, 1975, 1981, 1988, 1996, and 2002. This manual is the 2011 edition. It has been renamed *How to Select and Work Effectively with Consulting Engineers: Getting the Best Project*.

This manual is intended to outline the functions of the consulting engineer in serving a project owner or other engineering services client, explain the services usually offered, provide methods of determining compensation for engineering services, and provide historical information on the remuneration received by consulting engineers for their services. A recommended procedure for interviewing and selecting a consulting engineer and guidance on contracts for engineering services are provided. This work is designed to serve the best interests of both the owner and the consulting engineer and to foster better understanding between them. The information offered is intended to apply to civil engineering practice and civil works projects; however, certain aspects of this manual may not be applicable to specialty practice.

The ASCE Task Committee for the Update of Manual 45 (“Task Committee”) began the update process by surveying users of the 2002 edition of the manual and prospective users. The survey responders evaluated the 2002 edition of the manual and provided suggestions for improvement. The Task Committee evaluated the results of the survey and used the results to prepare this new edition. Survey questionnaires were prepared by the Task Committee and were sent in early 2008 and again in late 2009 to consulting engineering firms and major owners whose assistance was requested to provide recent completed project data. Responses

were received from more than 360 firms and agencies. The Task Committee evaluated the results of the data in preparing this edition.

This edition omits the “fee curves” that were included in previous editions. While the previous fee curves were based on historical data collected and were meant to provide a frame of reference, they were sometimes used inappropriately to dictate the percentage fee. In lieu of the curves, the Task Committee has included plots of actual fee data obtained from recent surveys to give a visual sense of fees, but at the same time demonstrate the scatter in values due to the fact that each project is unique.

The Task Committee gratefully acknowledges those firms, agencies, and individuals that contributed their time and talent to make the revised manual better able to serve the public, clients, owners, and the profession.

CHAPTER 1

THE PRACTICE OF ENGINEERING

Over the next decade, public entities and private enterprise in America will allocate billions of dollars to improve infrastructure at the local, state, and federal levels in an effort to maintain current levels of services and to improve services in underserved areas. ASCE's *Report Card for America's Infrastructure*¹ estimates that trillions of dollars will be needed over the coming years to bring the nation's infrastructure to an acceptable level of service. ASCE's Infrastructure Investment Policy (PS 299)² warns of the potential adverse effect on our quality of life and U.S. competitiveness in world markets if our infrastructure is allowed to continue to deteriorate. Delaying infrastructure improvements until systems fail will result in even greater costs. ASCE is dedicated to advancing the highest standards in civil engineering to achieve quality-built projects that best utilize public and private funding sources. Many of these projects will be developed by government agencies and private owners working closely with consultants.

Civil engineering consulting firms serve as an adjunct to public agencies and private corporations when engineering expertise is needed or extra staffing is required. These firms can often provide project owners with expertise for a wide array of projects that the owners may not be able to complete with current staff.

Civil engineering firms vary in size and services offered. Some larger firms are able to provide a wide range of services covering all of the

¹ASCE. (2010). *Report card for America's infrastructure*, <<http://www.infrastructurereportcard.org/>> (Sept. 21, 2011).

²ASCE. (2011). "ASCE policy statements." <<http://www.asce.org/policystatements>> (Sept. 21, 2011).