

ACEC

PUBLISHED BY THE AMERICAN COUNCIL OF ENGINEERING COMPANIES

MARCH/APRIL 2008

ENGINEERINGiNC.

THE AWARD-WINNING BUSINESS MAGAZINE

www.acec.org

Innovative
Solutions
In Land
Development

Financial
Management
Strategies
That Work

Across the
Federation

Candidates
Address
Industry
Issues



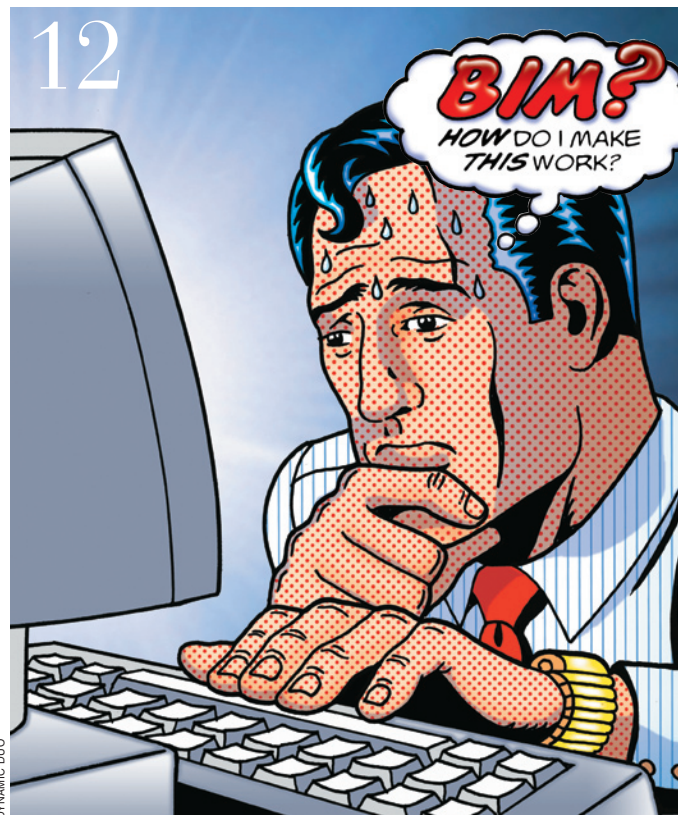
ACEC Annual Convention: "Winning in 2008" April 27-30
2007 ACEC/PAC Honor Roll



We'll know your project like the back of our hand.

We make it our business to know the risks of your project. Travelers has both professional liability and property casualty lines of insurance tailored specifically for engineers. And because our underwriters specialize in underwriting engineering risks, your coverage will evolve alongside your most complex projects. Which means saved time, money, and hassle. For more information on Travelers insurance for engineers, contact your independent agent or call 877.237.6588, ext. 32253. Let the introductions begin.

TRAVELERS 
Insurance. In-synch.™



DYNAMIC DUO

COVER STORY

BIM

Implementation issues delay the transition to next-generation modeling.

12

FEATURES

ELECTION PREVIEW

Positions on key industry issues by leading presidential candidates, and how to analyze election polling.

10

BOTTOM-LINE STRATEGIES

Sound financial management tactics help firms "beyond the numbers."

18

FROM THE GROUND UP

Innovative land development solutions.

22

2008 ANNUAL CONVENTION PRIMER

A preview of ACEC's 2008 Annual Convention and Legislative Summit.

28

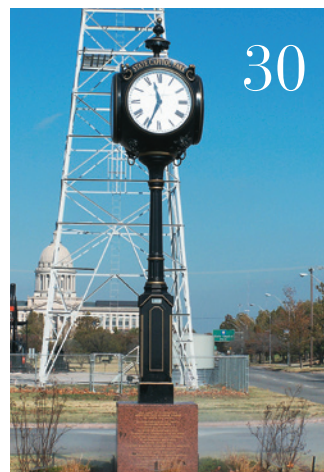
2007 ACEC/PAC HONOR ROLL

36



28

DEPARTMENTS



FROM ACEC TO YOU

BIM, election, ACEC Convention.

2

NEWS & NOTES

CELSOC becomes ACEC/California; \$458 million Big Dig settlement.

4

MARKET WATCH

Dubai, Abu Dhabi market surge.

6

LEGISLATIVE ACTION

House supports aid to engineering students; stimulus package includes beneficial tax provisions; Bush budget slashes infrastructure programs.

8

ACROSS THE FEDERATION

Highlights of ACEC State Organization activities.

30

BUSINESS INSIGHTS

Online repository of engineering contracts; new book details CMAR process.

34

MEMBERS IN THE NEWS

Michael R. Flannery appointed president and CEO of Woolpert, Inc.; Al Barkouli named president and COO of David Evans and Associates, Inc.

43

THE OFFICIAL PUBLICATION OF THE
AMERICAN COUNCIL OF ENGINEERING COMPANIES

AMERICAN COUNCIL OF ENGINEERING COMPANIES

CHAIRMAN	Orrin B. MacMurray
PRESIDENT & CEO	David A. Raymond
VICE PRESIDENT, OPERATIONS	Mary Ann Emely
VICE PRESIDENT, GOVERNMENT AFFAIRS	Steven Hall
VICE PRESIDENT, INSTITUTE FOR BUSINESS MANAGEMENT	Jeffrey L. Beard
DIRECTOR, COMMUNICATIONS and MEDIA	Alan D. Crockett
STAFF EDITOR	Andrea Keeney akeeney@acec.org (202) 682-4347

ACEC PUBLIC RELATIONS AND EDITORIAL ADVISORY COMMITTEE

CHAIRMAN Edward J. Mulcahy

THE MAGAZINE GROUP

EDITORIAL DIRECTOR	Thomas Halligan
MANAGING EDITOR	Corey Murray
ART DIRECTORS	Jeff Kibler, Melissa Hamid
PROJECT MANAGER	Mary Mieszcanski

ADVERTISING SALES

Nina Goldman
Assistant Director,
Advertising & Sales
ACEC
1015 15th Street, NW, 8th Floor
Washington, D.C. 20005-2605
(202) 347-7474
ngoldman@acec.org

From BIM to Annual Convention

Much has been made of the benefits of Building Information Modeling (BIM). The new 3D modeling software is being called revolutionary for its potential to reduce errors and omissions and provide a high level of design flexibility.

Despite this enthusiasm, software providers and many users have concerns about adaptability and liability. (See story on page 12.)

The Primary Season

We are also in the midst of an exciting election year with tremendous implications for our industry.



The Council will be playing a prominent role in supporting candidates favorable to our industry. Last year's record ACEC/PAC fundraising increased our financial clout for backing candidates who support our positions on energy, infrastructure funding, repeal of the unfair 3 percent withholding mandate and other important issues. (For a complete list of 2007 ACEC/PAC donors, see page 36.)

Make Your Voice Heard

These challenges will be the focus of our lobbying efforts on Capitol Hill at the upcoming Annual Convention, April 27–30, in Washington, D.C.

The Convention will feature election perspectives by Fox News' Chris Wallace, Tucker Carlson, host of MSNBC's *Tucker*, and former Clinton adviser Paul Begala. A town hall debate will address "Who should own America's infrastructure—the public or the private sector?"

This issue of *Engineering Inc.* also features the positions of leading presidential candidates on issues of importance to our industry, and a look into the realities of political polling. (See page 10.)

We also extend congratulations to ACEC/California, which changed its name from the Consulting Engineers and Land Surveyors of California (CELSOC) to become the 50th Member Organization of ACEC to subscribe to the common name.

See you at the Annual Convention. Your participation this year is very important.

Orrin B. MacMurray
ACEC Chairman

David A. Raymond
ACEC President & CEO

Engineering Inc., Volume 19, Number 2 (ISSN 1539-2694), is published bi-monthly by the American Council of Engineering Companies (ACEC), 1015 15th Street, NW, 8th Floor, Washington, D.C. 20005-2605. Periodicals postage paid at Washington, D.C., and at additional mailing offices. Annual subscriptions are \$24 for members (included in dues as a non-deductible amount); \$45 for U.S. non-members; \$65 for institutional subscriptions. Back issues are \$15.

POSTMASTER: Send address changes to *Engineering Inc.*, c/o ACEC, 1015 15th Street NW, 8th Floor, Washington, D.C. 20005-2605.

© 2008 American Council of Engineering Companies. All rights reserved. This publication may be copied, downloaded from the ACEC website, stored in electronic or hard-copy format, and disseminated to third parties for educational and information purposes. ACEC expressly disclaims any liability for damages of any kind in connection with such copying, downloading, storage, and/or dissemination. By copying, downloading, storing and/or disseminating this publication, the recipient of this publication expressly agrees to defend, indemnify, and hold ACEC, its officers, directors, employees, volunteers and agents harmless from and against any and all losses, damages, claims, causes of action and liabilities, including reasonable attorneys' fees and costs, arising out of or resulting from the recipient's use of this publication. Notwithstanding the above, no part of this publication may be altered, resold, licensed, or used for any other commercial purposes without the prior written permission of ACEC. Recipients may opt out of receiving the electronic version of this publication from ACEC by sending an e-mail with the subject line "Unsubscribe" to ACEC at magazine@acec.org.

For more current news on ACEC issues and developments, subscribe to the weekly electronic newsletter, *Last Word*. To subscribe, contact abrandstadter@acec.org. For members without electronic access, a fax-on-demand version is available. Contact Ann Brandstadter for information at 202-682-4333.

ACEC

AMERICAN COUNCIL OF ENGINEERING COMPANIES

WWW.ACEC.ORG

A powerful equation for ACEC Members



ACEC BIT

ACEC Business Insurance Trust (BIT)

The ACEC BIT is guided by practicing engineers with experience finding solutions to practice management issues. The trustees meet regularly to discuss ways to meet the insurance needs and help advance the practices of the ACEC membership.



Marsh

Program Administrator

Marsh has established a dedicated team in St. Louis, MO, with insurance professionals who only serve professional engineering firms such as yours.

Customized insurance solutions designed by engineers for engineers

Together, ACEC BIT and Marsh support your firm through:

- ✓ **Expertise all from one single resource.** Your firm will receive the insurance experience of The Hartford—an A+ rated carrier with nearly 200 years of experience—to provide you complete Business Insurance product and service expertise from one single source.
- ✓ **Customized business solutions designed exclusively for engineers by engineers.** Who better understands your specialty than engineers? No one. Your firm will receive customized business solutions directly from engineers to meet your specific needs in an ever-changing business environment.
- ✓ **Innovative coverage at competitive rates.** Your firm will receive premier Business and Liability coverage strategically designed to protect you from risks emerging from an increasingly litigious environment—at competitive rates that have been specially negotiated on your behalf.

To learn more about **customized Business Insurance and Professional Liability Insurance solutions**, contact us today for more information and a no-obligation rate quote.

Call **1-800-338-1391** or
visit **www.acecbit.com/equation**

ACEC

BUSINESS INSURANCE TRUST
Business & Professional Liability Insurance

Brokered and/or administered by the Marsh U.S. Consumer, a service of Seabury & Smith, Inc., Insurance Program Management. The ACEC Business Insurance Trust (BIT) has authorized Marsh U.S. Consumer to make Business and Professional Liability Insurance (PLI) available to member firms. The Hartford is the endorsed Business Insurance provider for ACEC. Neither ACEC nor the ACEC BIT endorses any one PLI provider. It is the objective of Marsh U.S. Consumer to offer a choice of PLI providers. The selection of PLI underwriters may change from time to time.

403885132651 (9/07) ©Seabury & Smith, Inc. 2007

CELSOC Becomes ACEC/California Solidifying Nationwide Brand

California is now the 50th Member Organization of ACEC to subscribe to the common name since the effort was launched in 2001 to bring all 51 federations under one brand.

CELSOC President Robert Salaber of Salaber Associates, Inc., in Dixon, Calif., announced the state's action: "California is excited about joining the rest of the nation in using the well-recognized and respected name of ACEC. The name CELSOC was respected and held special meaning for many of our members, includ-

ing our valued land surveying firms, but the time has come to take advantage of the national brand.

"I want to assure all our members that our organization's mission will not change with our new name. We will continue to fight for the professional practices of engineering and land surveying in our state, and we look forward to working side-by-side with the national organization, and the other ACEC State Organizations."

ACEC Chairman Mac MacMurray praised California's decision: "Having our largest state organization embrace the

ACEC name now adds to the strength of the federation and puts us only one state away from achieving a completely unified national brand." Texas is the lone state yet to adopt the ACEC name.

CELSOC President-elect William Green of RBF Consulting in Temecula, Calif., said: "I am thrilled to serve as the first president of ACEC/California, as I'll be taking office on the exact day that the name change takes effect. We, the CELSOC membership, have established ourselves as the legislative voice in Sacramento for the engineering and



ACEC Chairman Mac MacMurray

surveying communities and will continue to advocate state business and professional issues as ACEC/California."

Green is the first land surveyor to head the industry organization.

N C E E S

Professional Services

For Licensed Engineers

Whether you're seeking multistate licensure or continuing professional education, NCEES Professional Services can help you move forward in your career.

Council Records Program

Facilitating the comity licensure process
www.councilrecord.com

Registered Continuing Education Providers Program

Keeping you up-to-date with continuing education
www.rcepp.com

Big Dig Settlement: \$458 Million

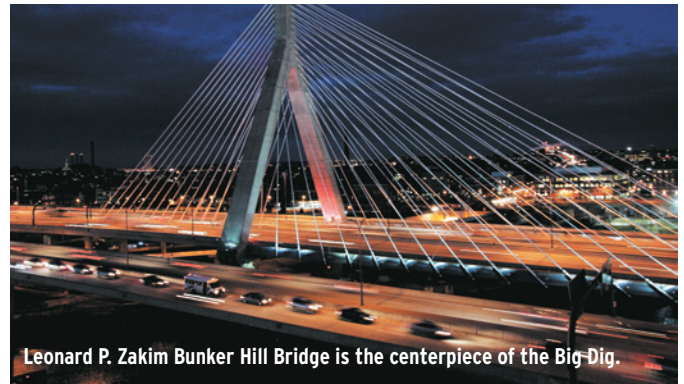
The joint venture of Bechtel/Parsons Brinckerhoff, which oversaw design and construction of the nation's largest public works project—Boston's Central Artery/Tunnel, also known as the Big Dig—has agreed to pay \$407 million of a total \$458 million to settle a state lawsuit stemming from leaks, a fatal ceiling collapse and other design flaws that plagued the project during construction.

Several smaller companies will pay some \$51 million related to cost recovery issues associated with the Big Dig as

part of the overall settlement. Bechtel/Parsons Brinckerhoff will not face criminal charges, but the settlement allows authorities to seek additional damages from the consortium in the event of a major future failure in the project causing more than \$50 million in damage.

The majority of the \$458 million will be held in a new state trust fund to pay for future non-routine repairs and maintenance of project tunnels and roadways.

ACEC/Massachusetts Executive Director Abbie Goodman said: "ACEC/Massachu-



Leonard P. Zakim Bunker Hill Bridge is the centerpiece of the Big-Dig.

setts and its member firms are pleased that a settlement has been reached with the Commonwealth.

"We have been actively and cooperatively working for a settlement of the issues related to the project for several years and continually advocated a single, fair, fact-based cost recovery settlement process with finality that was approved by both federal and

state authorities."

The \$14.79 billion Big Dig project replaced the old elevated Central Artery that ran through the heart of Boston with a series of underground tunnels, ramps and a new bridge.

For a comprehensive look at the major engineering achievement embodied as the Big Dig, see the July/August 2007 issue of *Engineering Inc.*

ENVISION. DESIGN. BUILD.

Our process begins with a simple conversation, but it is seamless collaboration that allows our clients to realize their true potential and vision. Whether our clients manage and develop commercial spaces, design personal residences, or oversee the complexities of integrating green design, we provide customized, fully integrated technology solutions that help them accomplish their goals and streamline their process along the way. We understand that it's all about results, and we're willing to do whatever it takes to help you succeed.



800.336.DESK • www.microdesk.com

Autodesk®
Authorized Training Center

Autodesk®
Premier Solutions Provider

Dubai, Abu Dhabi Surge as Emerging Development Markets

By Joe Salimando

The development boom in China is still in full swing. But for international marketers, China isn't the only game in town.

International business also is booming in regions such as the United Arab Emirates (UAE), where billions of dollars are being spent on new construction.

Oil exports have fueled a culture of prosperity and expansion with many engineering opportunities.

Arabian Boomtowns

What's already happened in Dubai is legendary. Engineers created a livable, man-made island where land didn't previously exist. Dubai also is now home to the world's tallest building and to state-of-the-art technology, including a futuristic rotating skyscraper.

Last year, more than 30,000 construction cranes dotted the small emirate's modern landscape. Those cranes represented 24 percent of operational construction cranes in the world and worked on construction projects worth more than \$300 billion combined.

Still in the planning stage, the Dubai Mall project soon will be the largest shopping complex in the world.

Dubai, which recently used its oil wealth to create its own commercial airline, Emirates Airline, and a major aircraft-leasing company, known as DAE Capital, now has plans to join the \$41 billion global aircraft-maintenance industry.

Step 1: Build the world's

largest facility for jetliner maintenance, repair and overhaul. Dubai also is creating a 140-square-kilometer (about 56 square miles) aviation center and airport. As part of that development, known as Dubai World Central, the government is investing \$1.5 billion to build an aircraft-upkeep complex capable of handling as many as 400 aircraft.

There are opportunities here. Engineering firms that can offer innovative ways to construct the new cities, houses and commercial buildings will find huge demand. Clients will hold at a premium building methods heavy on efficiency but light on manpower.

Abu Dhabi Makes Its Move

"Abu Dhabi will have the highest concentration of wealth on the planet" by 2020, said Kito de Boer, managing director of global development and consulting firm McKinsey & Co.'s Middle East office, during a conference last fall.

Between 2005 and 2020, de Boer projected, the UAE capital city would accumulate an oil surplus of \$800 billion.

Middle East news website Ameinfo.com reports that there is "\$2.4 trillion worth of active and announced projects in Abu Dhabi" alone.

Here, from the same report, is yet another eye-opener: "The Chief Operations Officer of Al Jaber Group, Fatima Al Jaber, already has 30,000 workers under her control, and was gearing up for the estimated workforce of 700,000 that will be needed

to construct the new Abu Dhabi."

Oil wealth justifies much of the expansion in the UAE. Still, the scale of what's planned is shocking. According to the *CIA World Factbook*, UAE's population is 4.4 million. In late 2006, Dubai Waterfront Co. announced plans to build—on what the *International Herald Tribune* described as "vacant beachfront"—"a self-contained community larger than Manhattan, with housing for 700,000 people."

Innovation Needed

Reading that snippet about going from 30,000 workers to 700,000, it's easy to become skeptical. From where will these people come? How can any city or nation accommodate \$2.4 trillion in construction?

One answer is prefabrication—and it's a niche where engineers likely will play a key role. Paul Arneill, an executive for Al Naboodah Laing O'Rourke, told *Construction Week* magazine in November that his firm's "ambition is that 70 percent of everything will be prefabricated in the future."

Jim Young of Realcomm.com, a commercial and corporate real estate technology website, wrote this about UAE after a late 2006 visit:

"During a presentation at *Festival City*, we heard how the Building Operations Center will serve as the hub for the building automation requirements in this 180-building project, as well as the central point for management of pub-



CHRIS JACKSON/GETTY IMAGES

lic utilities, traffic and safety systems. Their goal is to run all of these traditionally disparate systems over one standard IP network.

"Another subtle yet significant presence of innovative technology was found in restaurants, where servers arrived at your table with a small wireless device ready to take your order. Before they even left the table, your drink order was placed and on its way."

The November issue of *Arabian Business*, which keeps tabs on construction trends in the region, featured an interview with Arab real estate expert Khalid Esbaitah of Al Mazaya Holding.

Esbaitah's contention: "The current real estate boom is likely to expand to other neighboring markets in the Middle East, as we are currently witnessing mega-projects being launched in Jordan, Lebanon, Egypt, Tunisia and Morocco, with more projects to be announced in these countries and others in the future."

Opportunity is knocking.

Joe Salimando writes frequently on the construction industry at www.eleblog.com. He can be reached at ecdortcom@gmail.com.



ISO 9001:2000
(GIS Driven Multidiscipline Design Consultancy)

SECON PRIVATE LIMITED

Design Consultancy and Engineering Services

- GIS Driven Software Development
- Highway Engineering & Construction Supervision
- Irrigation, Flood Control & Water Management
- Cross Country Pipeline Transportation
- Environment Impact & Management Plan
- Right of Use Acquisition & Permitting
- Town Planning & Urban Development
- Water, Sewerage & Storm Water Engineering
- Structural Engineering
- Electrical Engineering
- Telecommunications Engineering

Investigation and Services

- GIS/CADD Data Conversion, Development and Maintenance
- Photogrammetry, LIDAR and Satellite Image Processing
- Engineering, Property and Hydrographic Surveys
- Geotech, Soil Investigation and Foundation Engineering
- Route Planning, 3D Corridor Mapping and GIS Database
- Terrain Evaluation and Geological Appraisal
- Ground Water and Resistivity Surveys
- Underwater Leak Detection and Turnkey Solutions

TOTAL SOLUTION FROM A SINGLE WINDOW

CORPORATE OFFICE

Plot No. 147, 7B Road, Export Promotion Industrial Park (EPIP), Whitefield, Bangalore - 560 066, INDIA
Tel: +91-80-41197778 Fax: +91-80-41194277 E-mail: feedback@secon.in

International Offices: Tampa Bay, Denver (USA), Tripoli (Libya)

Branch offices: Mumbai, New Delhi, Vadodara, Hyderabad

[Http://www.secon.in](http://www.secon.in)

SECON is an ISO 9001:2000 certified GIS Driven Multidiscipline Engineering company with over 700 personnel. SECON is a financially sound, stable, zero-debt company that was established in 1981. SECON is one of the leading multidiscipline engineering consulting firms and the largest and oldest surveying and mapping firm in India with over 27 years of experience. Most of SECON's clients are repeat and long-term clients. We have repeat business clients in the USA, India, Europe, Australia and Libya.

SECON has long-term partnerships with international engineering firms and can operate in most areas of Asia, the Middle East, and Africa. SECON prefers the offshore partnering model for its USA and European areas of operations and is looking for partners in the USA that could use SECON as an offshore design center.

The key differentiator for SECON is that the company is not just an offshore mapping firm, but a well-established (established in 1981) Multidiscipline Engineering firm.

SECON is willing to perform small (up to 100 hours) pilots at no cost as a proof of concept and to build its partners' confidence in SECON. SECON can offer significant discounts of up to 15% of its normal billing rates if business partners outsource long-term, high-volume projects.

SECON's ISO 9001:2000 certification ensures that products are delivered on time and are of highest quality. We combine high quality services with the low cost fee structure since we are based in India.

For more about SECON, visit www.secon.in or email feedback@secon.in



BUSH BUDGET SLASHES INFRASTRUCTURE PROGRAMS; ACEC ACTS TO RESTORE FUNDS

Stimulus Package Includes Beneficial Tax Provisions

President Bush in February signed a \$151.7 billion stimulus package that includes provisions to encourage more investment by engineering firms and other businesses.

H.R. 5140, the Recovery Rebates and Economic Stimulus for the American People Act, includes a 50 percent bonus depreciation provision that will allow firms to quickly recover half the cost of certain equipment put into service in 2008.

The bill also provides a temporary increase—from \$128,000 to \$250,000—in the limit on the amount of equipment that small businesses can write off in the year that equipment goes into service.

The stimulus package gives individuals earning less than \$75,000 a year a \$600 tax rebate; married couples earning less than \$150,000 receive a \$1,200 rebate.

ACEC worked with coalition partners during Senate debates to add \$5 billion in infrastructure investment to the bill. In a letter to senators, ACEC President Dave Raymond stressed the importance of infrastructure investment in stimulating short- and long-term economic growth: "This investment will create well-paying jobs—every \$1 billion worth of federal transportation investment creates 47,500 jobs—and boost the economy very quickly." Raymond added that the benefits "will be felt over the long term as well, as the resulting infrastructure improvements will help to sustain economic growth for years to come."

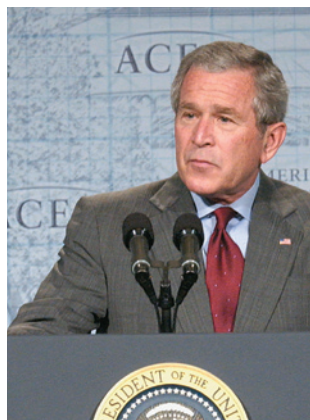
Under a bipartisan agreement to move the package forward, the Senate opted not to vote on an infrastructure amendment. House and Senate leaders are discussing the possibility of a second stimulus package that includes an infrastructure component.

Bush's FY2009 Budget Cuts Key Infrastructure Programs

Funding for transportation, water and other infrastructure faces severe cuts if President Bush's proposed \$3.1 trillion 2009 budget is enacted.

"At a time when the economy desperately needs a jump start, this budget proposal simply doesn't cut it," said ACEC President Dave Raymond. "We have our work cut out for us in persuading Congress to reorder our budget priorities to address our nation's infrastructure."

The budget for the U.S. Department of Transportation would be reduced by 10 percent. Proposed highway funding would be reduced by nearly \$2 billion in 2009 to \$39.4 billion from the \$41.2 billion it received in 2008. Transit funding would increase slightly from \$9.5 billion in 2008 to \$10.1 billion in 2009. The



President George W. Bush

administration also proposes that \$3.2 billion be moved from the transit account in FY2009 to cover the shortfall in the highway account.

Airport projects under the Airport Improvement Program would be slashed to \$2.6 billion—a reduction of \$765 million from the 2008 funding level.

The news is mixed for water infrastructure programs. The Clean Water Act State Revolving Fund (SRF) program would be cut significantly from \$689 million in 2008 to \$555 million in 2009. Drinking-water projects would receive a slight increase from \$829 million this year to \$842 million in 2009, while funding for Superfund cleanup projects would remain stable at \$1.26 billion.

The U.S. Army Corps of Engineers' Civil Works Program, which funds flood control and other Corps water projects, would be cut to \$4.7 billion in 2009 from \$5.6 billion in 2008.

On the positive side, military construction spending would increase significantly in 2009, growing from \$17.8 billion in 2008 to more than \$21 billion in 2009. The U.S. State Department's construction budget would increase \$1.8 billion to accommodate the construction of nine new embassies.

The energy sector would benefit as well. Bush's proposal includes additional funding to encourage the development of advanced nuclear power plants and clean coal technologies.

ACEC Opposes World Bank Procurement Plan for Borrowing Nations

ACEC and industry partners have expressed concerns with World Bank procurement officials over a pilot program that

ISSUES ON THE MOVE	WHAT'S NEXT
President's 2009 Budget	House, Senate to pass budget resolution in March
Loan Forgiveness for Engineers	House/Senate conference to be completed in the spring
Senate Water Bill	Committee consideration in March; floor passage anticipated in April

allows countries to use their own procurement rules on bank-financed projects.

ACEC believes that the proposal fails to ensure that the procurement practices of borrowing countries are equivalent to World Bank guidelines. Such changes might increase instances of fraud and corruption under bank-funded projects.

"The proposal is essentially a green light for borrowing countries to disregard international best practices in procurement and utilize any procurement methodologies they see fit, as long as they meet watered-down requirements," said ACEC International Committee Chairman Bill Howard.

ACEC and its coalition allies recommended improvements, and Congress intervened on behalf of our coalition by including language in the omnibus appropriations bill in December that would withhold 10 percent of U.S. funding to the bank until the U.S. Secretary of the Treasury reports on the extent to which the bank has applied its procurement guidelines, including Standard Bidding Documents, to all bank-funded projects, including those under the pilot program.

The language requires the bank to hold additional consultations with the private sector regarding the implementation of the pilot program and requires "pilot program countries" to meet all of the bank's antifraud and anticorruption policies.

Congressional Leaders Request Study on Water Trust Fund

ACEC is supporting an effort by senior members of the U.S. House infrastructure and tax-writing committees to work with the U.S. Government Accountability Office (GAO) to find new ways to fund water projects around the country.

House Transportation and Infrastructure Chairman Jim Oberstar (D-Minn.) joined Rep. Eddie Bernice Johnson (D-Texas), the chairwoman of the Subcommittee on Water Resources and Environment, and Rep. Earl Blumenauer (D-Ore.) of the House Ways and Means Committee in asking GAO for recommendations to create a new Clean Water Trust Fund.

Federal funding for wastewater facilities and other water-related projects currently is subject to available appropriations each year, and funding has varied widely in recent years. Congress provided more than \$1 billion for wastewater projects under the Clean Water Act State Revolving Fund program in 2007, but that funding level dropped to \$688 million in 2008 and President Bush's budget request for 2009 reduces it further to \$555 million.

"Federal appropriations are on the decline, and I fully expect that the president's budget will, again, miss the mark on address-

House Education Bill Follows ACEC Lead to Aid Engineering Students

The U.S. House of Representatives in February passed a major education bill that includes a key provision based on ACEC proposals to encourage more students to pursue engineering and other technical careers.

The legislation to reauthorize the Higher Education Act (H.R. 4137) includes a program that provides up to \$10,000 in student loan forgiveness for individuals serving in "high-need professions." ACEC worked to ensure engineering was included on that list.



Rep. Emanuel Cleaver (D-Mo.)

The provision is modeled after legislation drafted last year by ACEC and Rep. Emanuel Cleaver (D-Mo.). The bill, called the Strategic Technology/Engineering Program (STEP) Act of 2007, sought to create a new scholarship and loan forgiveness program for engineering students. Cleaver introduced the bill in September.

Although the provision included in H.R. 4137 is not as expansive as the Cleaver bill, it represents an important step forward in addressing the nation's engineer shortage.

"We need to find a way to put more kids into the pipeline toward rewarding careers in engineering," said former ACEC Chairman Ed Mulcahy of TranSystems, who worked with Cleaver's staff to draft the bill. "This legislation will help us to accomplish this objective."



Ed Mulcahy

ing the nation's water infrastructure needs," said Oberstar.

He has asked GAO to identify methods of raising at least \$10 billion per year to maintain and upgrade wastewater treatment and sewer-collection systems. The GAO study is scheduled for completion in January of next year. Based on its findings, Oberstar is expected to introduce new legislation. ■

FOR MORE NEWS

For weekly legislative news, visit ACEC's *Last Word* online at www.acec.org.

Race for the White House

Where leading candidates stand on industry issues



Barack Obama (D)

Positions:

- Supports increased federal investment in the physical sciences and engineering research, which has dropped by half since 1970.
- Will call for the creation of a "National Infrastructure Reinvestment Bank" that would invest \$60 billion over 10 years in highways, technology and other projects to "rebuild America" and create 2 million jobs in the process.
- Would mandate that all businesses provide health insurance to employees or contribute a percentage of payroll to a national plan.
- Supports overturning recent reductions in personal income-tax rates, estate taxes, capital gains and dividend taxes, except for lower- and middle-income taxpayers.

"As our society becomes more mobile and interconnected, the need for 21st-century transportation networks has never been greater. However, too many of our nation's railways, highways, bridges, airports and neighborhood streets are slowly decaying due to lack of investment and strategic long-term planning."

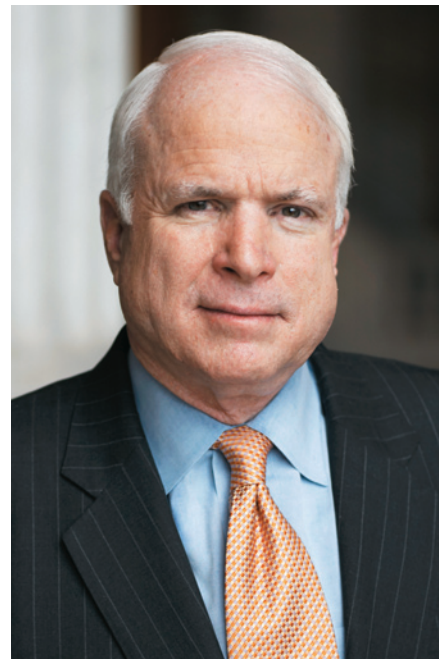


Hillary Clinton (D)

Positions:

- Supports establishment of a \$10 billion "emergency repair fund" to address the backlog of critical infrastructure needs, \$250 million in "emergency assessment grants" to conduct safety reviews of critical infrastructure and a national commission to assess engineering review standards to better prioritize repairs of roads and bridges.
- Would require large employers to provide health insurance or contribute to the cost of coverage; small businesses that provide quality health coverage would qualify for a tax credit.
- Proposes to cut 500,000 government contractors.
- Supports overturning recent reductions in personal income-tax rates, estate taxes, capital gains and dividend taxes, except for lower- and middle-income taxpayers.

"We are seeing the results of the failure to invest in infrastructure. The tragic bridge collapse in Minnesota this past summer, a recent levee break in Nevada and what happened with the levees in New Orleans are painful reminders that our infrastructure is in dangerous disrepair."



John McCain (R)

Positions:

- Proposes to cut the corporate tax rate from 35 percent to 25 percent to improve competitiveness; would keep in place recent rate reductions in estate taxes, individual taxes and capital gains and dividends.
- Opposes "earmarking" of infrastructure and other government spending programs. Voted against SAFETEA-LU because of earmarks.
- Supports tax code changes to stimulate the economy, including new expensing incentives to encourage businesses to invest in equipment and a permanent research and tax credit.
- Supports market-based health care reforms, including tax credits of up to \$5,000 for families to access insurance, and allowing individuals and businesses to purchase health insurance through trade associations or other professional associations.

"The federal government spends too much money, squanders precious resources on questionable projects pushed by special interests and ignores the priorities of the American taxpayer."

The Politics of Polling

Political pollsters outline the mechanics of polling and reveal keys to understanding presidential polling

By Maureen Conley

Polling plays such a prominent role in elections that recent failures to accurately gauge Hillary Clinton's support in New Hampshire, or Barack Obama's in South Carolina, raise the question: What are these pre-election polls really worth?

Frank Newport, editor-in-chief at the Gallup Poll, says polling is "a statistical technique to estimate what we would find if we interviewed everybody in a population," providing a snapshot of the public's preference at the time of the poll. The closer to the election, the more accurately the poll can predict the outcome.

April Radocchio, assistant director of the Quinnipiac University Poll, says the best polls follow standards set by the American Association for Public Opinion Research (AAPOR). To conduct a valid probability sampling poll, AAPOR's website says, the pollster first must define the population to be sampled: U.S. citizens, likely or registered voters, state residents, Republicans, Democrats and independents are among the most common categories, and each can be broken into subgroups by age, gender, ethnicity and so on.

The pollster also must select a "representative" sample—meaning one that represents accurately the population at large. Everyone in the sample has to have a chance of being selected for the poll. They do not, however, need to have an equal chance, which is where margin of error comes in. Newport says random samples can be compared demographically to large population characteristics, such as those maintained by the Census Bureau, and adjusted if necessary.

Margin of error is "the price you pay for not talking to everyone in your population group," AAPOR explains, and depends

mainly on sample size. What's more, Newport says, the margin does not change dramatically once samples reach 1,000. Gallup says it sometimes uses 2,000-person samples so that subgroup answers can be reported more accurately.

What Went Wrong?

So who's to blame for the woefully inaccurate polls prior to primaries in New Hampshire and South Carolina?

Pollsters have been conducting post-mortem examinations of New Hampshire data, reinterviewing poll participants to better understand what happened. New-



Frank Newport



Scott Keeter

port says those studies will take time. A special AAPOR committee says it plans to report its own findings in April 2008.

Theories abound. Some point to the large number of voters who made up or changed their minds on election day, or extraordinarily high voter turnout. Others suggest the compressed primary schedule did not allow polls sufficient time to reflect quickly moving events on the ground.

Still others point to the Bradley effect, referring to the 1982 California gubernatorial campaign of Los Angeles' African-American Mayor Tom Bradley, who narrowly lost after leading in pre-election polls—giving rise to the theory that some white voters might not admit they oppose a black candidate. Or perhaps Clinton's support was not fully captured because her supporters were less likely to participate in polls.

Scott Keeter, director of survey research at the Pew Research Center, says that, for the most part, polls tend to reliably predict elections. But he says they are "best used for understanding why people voted the way they did. Was it a vote for continuity or change? Was it based on certain issues as opposed to others?" asks Keeter.

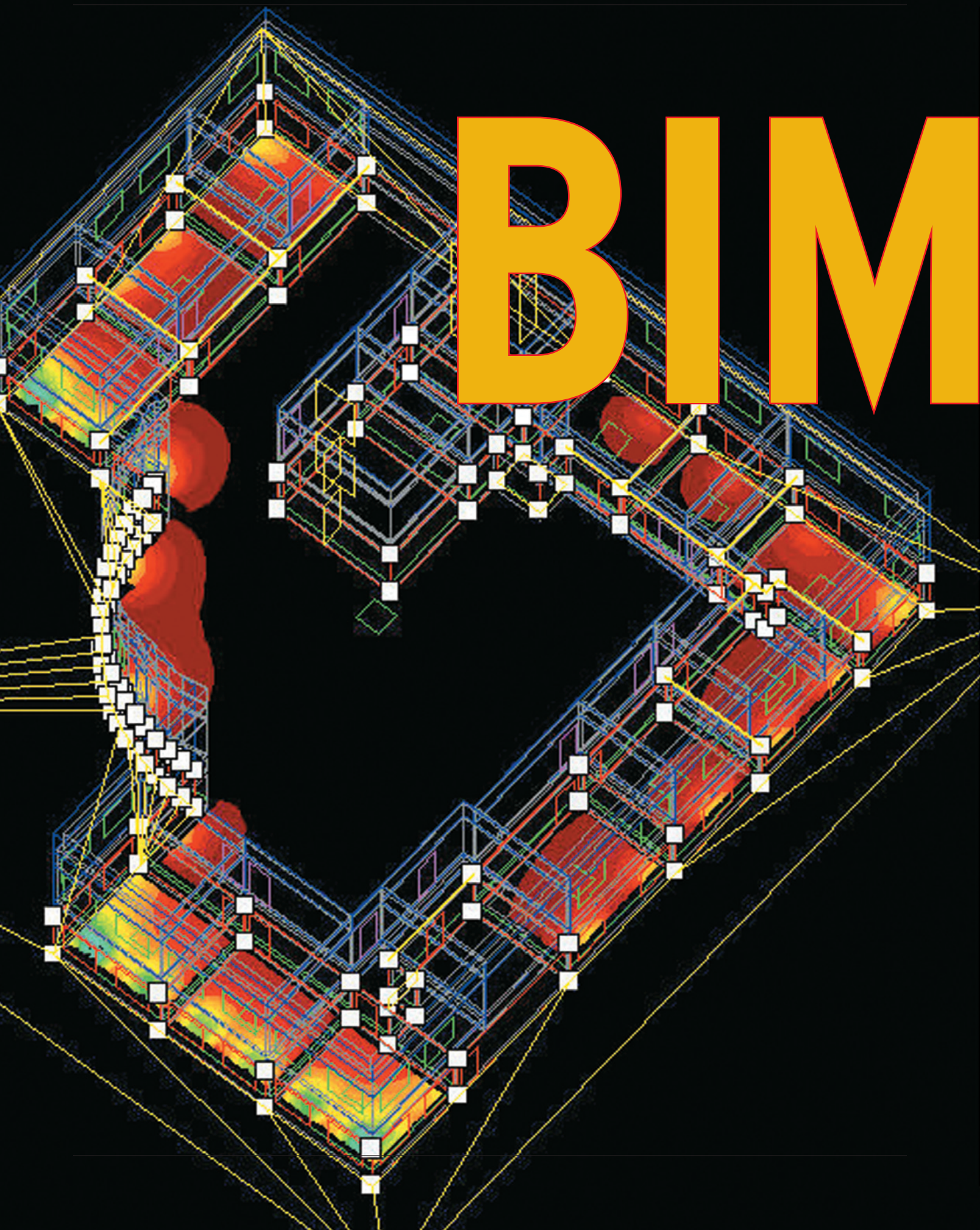
Fritz Wenzel, director of communications at Zogby International, warns polls are not a good predictive tool and "should not necessarily influence what people think" or how they vote.

Gallup employs statisticians and methodologists who constantly work to make its polls as accurate as possible. Zogby performs quality spot-checks by calling 2 percent of a sample a second time to verify that answers are accurately tallied. Pew tries to call each number multiple times, on different days and at different times, to give everyone in a sample a chance to be polled. Interviewers are well-trained and regularly monitored, and Pew pretests its surveys before they are deployed, says Keeter.

Keys to Victory

Asked what demographics are important in this presidential campaign, not all pollsters agree. In a close election, Keeter says, it could be women, and how much they rally around Clinton if she is the Democratic nominee; independents, and whether their skepticism about Clinton can be overcome; evangelical Christians, who gave 78 percent of their votes to Bush in 2004, but might not support John McCain in the same measure; and the black vote, and whether a highly energized black electorate could offset resistance to Obama elsewhere. Newport believes swing voters will again hold the key, since partisans are likely to vote their ticket. ■

BIM



Implementation issues delay transition to next-generation modeling

By Samuel Greengard

It helps engineers visualize a project and catch conflicts much sooner. It leads to better design decisions up front and a better set of documents in the field.

DAVID PLUKE

ERICKSEN, ROED & ASSOCIATES



James Dalton knows the pressures of completing projects on time and on budget. As chief of engineering and construction for the U.S. Army Corps of Engineers, he understands that the smallest details affect projects in big ways. That's why, when the Corps recently built a new warehouse to replace 14 temporary wooden warehouses at Fort McCoy in Wisconsin, it turned to Building Information Modeling (BIM) to design the 80,000-square-foot, state-of-the-art structure.

The goal? To expedite the design process, automate tasks, reduce errors and trim costs. By combining CAD with technical specifications, project management and other input, the agency ushered in what many in the industry see as the future of design engineering. With the integration of BIM, the Corps took processes that once took weeks and condensed them into days, giving design teams the ability to share electronic documents and files and give stakeholders up-to-the-minute access to project specifications.

The entire project was completed in 11 weeks, far less than the six months it would have taken had the Corps used conventional design systems.

"We spent less time drafting and more time designing as a team," says Dalton. "We were able to identify interference early in the design process, when it is easiest and most cost-

effective to make changes. We also were able to let the customer experience the project in a 3D virtual environment before it was built."

The Corps isn't the only government agency piloting next-generation BIM projects. The technology, which already has gained traction in the business world, is now rippling through government. The General Services Administration (GSA) is now using it for a variety of initiatives, and the U.S. Naval Facilities Engineering Command (NAVFAC) is mulling potential advantages of the technology. And they are not alone. Other federal, state and local agencies also are turning to this next-generation building tool.

"BIM represents the future of design," says David Pluke, vice president of technology at Ericksen, Roed & Associates, a St. Paul, Minn.-based engineering and design firm. "It helps engineers visualize a project and catch

BIM at a Glance

Traditional CAD applications provide advanced design and geometric capabilities. But BIM advances engineering and design further by incorporating data associated with a project and providing real-time, dynamic capabilities to spot problems and explore certain “what-if” scenarios. BIM supports an array of computer applications and funnels data into a central repository.

Essentially, it creates a series of data representations about a project.

For example, when constructing a building, BIM technology enables designers to input detailed information about the electricity, plumbing and ductwork, even the color of paint to be used, giving developers a clear-cut understanding of the scope and cost of the project before it begins.

Design professionals can then swap out changes and different scenarios—including

cost data and future energy consumption. BIM can even reuse existing data. If, for example, a company needs to build a call center for 200 employees, BIM can generate design options based on the climate, earthquake codes, equipment requirements, lighting, building costs, green initiatives and other factors. “BIM moves beyond 3D and creates a fourth dimension of data,” says Jeff Beard, ACEC’s vice president of business affairs.

Its capabilities and versatility make BIM ideal for complex projects, including wastewater treatment plants, bridges, tunnels, large buildings and highways. Rather than work off of hundreds, even thousands, of drawings and data files, an organization can create a single data repository, which it can share with business partners, subcontractors and other stakeholders. BIM also provides tools to examine a project and its costs over its life cycle.

conflicts much sooner. It leads to better design decisions up front and a better set of documents in the field.”

Yet, despite its enormous capabilities—and potential—substantial challenges remain. BIM is still in its infancy. Where large, private firms have proven to be among the first and most willing to experiment with the technology, slower-moving government agencies are trying to understand how and when to best use BIM, how to deal with competing platforms and how to work with partners, including A/E/C firms. Though BIM appears poised to work its way into engineering’s mainstream, it’s neither an easy nor a painless transition. And achieving bottom-line results isn’t a given.

Business Modeling: A New Frontier

Improving work processes is a central goal of almost any engineering technology. As the industry migrated from paper and vellum renderings to CAD during the 1980s, a new era of productivity emerged. Suddenly, engineers could develop projects in 3D. They had access to advanced modeling software, simulations and reusable design components. But they also ran into problems—not the least of which was the existence of incompatible file formats and technology standards.

“It took years for engineering firms to migrate entirely to CAD,” says Pluke. As they consider the usefulness of BIM, engineers remain mindful of these challenges.

Though major software vendors—including Bentley Systems, Autodesk and Graphisoft—are aggressively pushing new BIM-oriented solutions, lingering compatibility concerns, coupled with the potentially steep cost of adoption, have tempered enthusiasm about the transition.

A single seat runs upwards of \$5,000, and an organization adopting BIM also faces additional costs associated with altering workflows and acclimating staff to the software. Platform compatibility is another potential stumbling block. In some cases, firms considering BIM are forced to host the technology on multiple platforms, further bloating the cost of successful implementation.

“Getting up to speed can demand substantial money and resources,” says James Blake, a vice president of Hunt Valley, Md.-

based KCI Technologies, Inc., a design and engineering firm that works often with government agencies.

Then there is the issue of standardization. Because the A/E/C industry hasn’t migrated en masse to BIM, and because software vendors cling to proprietary systems and formats, using the software in the real world presents its share of obstacles.

“Although a growing number of organizations are adopting BIM, there isn’t a lot of knowledge about best practices and return on investment,” explains Blake. “People are still trying to figure out how to use it.”

Government agencies are largely in the early stages of adoption—and, as neophytes, regard BIM with equal parts optimism and caution.

“We expect BIM will become a tool that NAVFAC uses for the design, construction, operation and maintenance of facilities and infrastructure,” says Joseph Gott, NAVFAC’s acting chief engineer. “The drawback is we have many different companies offering software that isn’t necessarily based on common system architecture.”

NAVFAC relies on a mélange of applications, including Autodesk CAD, DrChecks, eProjects and Primavera, to oversee the design and construction of facilities for the Navy, the U.S. Marine Corps and other military commands. Though it has yet to select a platform for BIM, Gott says the agency is working with the National Institute of Building Sciences and the U.S. Department of Defense CAD/BIM Technology Cen-

Getting up to speed can demand substantial money and resources.

JAMES BLAKE
KCI TECHNOLOGIES





MAKE THE **RIGHT** DECISION.

Selecting the right BIM solution is a **critical decision** for your organization and directly impacts on your future competitiveness and profitability.

The **BIM Wizard** is an online tool that will produce a custom recommendation for either Bentley BIM or Revit based on your firm's needs.

Take the **BIM Wizard** to compare your BIM software needs against the community's and see which BIM software solution might be right for you. See why more architects and building professionals are making the move to Bentley's BIM solutions.

www.BIM-Wizard.com



The ability to spot design conflicts early in a project is a huge benefit.

JOSEPH GOTT
U.S. NAVAL FACILITIES ENGINEERING
COMMAND



ter to establish standards. Gott says NAVFAC must first understand the migration path and data-flow changes necessary before it commits to a transition.

"The ability to spot design conflicts early in a project is a huge benefit—particularly with long lead times for fabricated steel and other items," says Gott. "Everyone recognizes the value of BIM. Unfortunately, the current state of the software and environment is about where CAD was three or four years after its infancy. We don't have the budget or the inclination to support multiple platforms. We're waiting for a common architecture."

Corps administrators continue to keep a close eye on BIM. Dalton says that the agency has piloted a few BIM projects and is moving toward widespread adoption later this year.

Where NAVFAC remains unsure about what platform to build its system on, Dalton says, the Corps will deploy technology from Bentley Systems (because most of its legacy applications also run on Bentley) for a subset of projects developed under its standard facility designs approach.

Though Bentley is its platform of choice now, Dalton says, the Corps is constantly monitoring the landscape and expects to see expanded interoperability between platforms soon. "Our goal isn't to exclude any engineering firms. It's simply not practical to adopt multiple platforms for our reusable designs."

Apart from its recent warehouse project, the Corps also used BIM for a barracks renewal project at Fort Lewis in Washington. In both cases, Dalton says, the projects combined 3D modeling with materials acquisition.

The Corps also is using BIM in a variety of large-scale civil engineering projects—including the Mississippi River Lock and Dam 22 outside Hannibal, Mo.—to simulate and test possible renovation techniques prior to committing to a design.

With BIM, "we can view different options and scenarios and determine the best approach," says Dalton.

GSA is another federal agency heavily invested in BIM. The agency, responsible for government acquisitions, requires all of its building projects—and the A/E/C firms it contracts with—to submit and exchange files in IFC format (a nonproprietary interoperability standard), which encodes layers of data and makes it compatible within BIM systems. The agency works with several BIM applications, including products from Autodesk, Graphisoft, Bentley, Common Point, Solibri, Onuma and Riuska. GSA requires that all projects funded by Congress beginning in fiscal year 2007 be BIM- and IFC-compatible.

"Most larger firms already have the technology in place, and

a growing number of mid-size and small firms are adopting it as well," says Charles Matta, director of federal buildings and modernization for GSA, which manages upwards of 350 million square feet of warehouse and building space. The agency is so serious about the transition that it offers financial incentives to partner firms using BIM.

"The biggest value of Building Information Modeling is not the core software package, it's all the add-ons that you can apply to the model to take full advantage of the technology, whether you're talking about energy modeling or quality surveying, cost estimating or other elements," explains Matta.

GSA already is realizing some clear-cut benefits of the technology, which it first experimented with in 2003. "We have seen a reduction in change orders, better communication, improved designs and better overall project information," explains Matta. "We're now working with models that are a lot more accurate because we have the most current data available."

Designs on the Future

Though engineers across the board agree that BIM is the way of the future in collaboration and design, the ability to achieve results still is uncertain.

Far from the next logical step beyond CAD, BIM is an entirely different software package with more complex features. "You don't just move up a version," points out Daniel DeYoung, president and founder of DJG, Inc., a Williamsburg, Va.-based engineering firm. "Essentially, you start all over with a whole new application."

For A/E/C firms doing business with multiple government agencies—or a single agency that requires more than one BIM application—the cost of deploying software and training personnel can represent an enormous challenge.

"At a certain point, the question becomes: 'Is it possible to recoup my investment and derive the maximum benefit from the software?'" says KCI's Blake. "There's a certain amount of risk associated with installing multiple applications and not knowing which will prevail in the marketplace."

Some engineering firms report having received requests for proposals in a variety of BIM formats and say BIM's incompatibility across platforms makes it impossible to compete openly for contracts.

Though emerging interoperability standards such as IFC are helping GSA and other agencies address certain compatibility issues, there still is no single, open standard on which to build the technology.

The problem has led some executives to question whether moving to BIM, given its current interoperability issues, is wise. One criticism is that highly qualified firms—particularly smaller firms—will be unfairly excluded from bidding on projects. What's more, critics say, incompatible platforms and systems can skew the selection process and increase job costs while lowering performance.

The prospect of measuring cost benefits—and, more important, return on investment—on what is essentially an imma-

The software is fairly well developed in certain areas, but gaps remain in others.

SEAN SMITH
GRESHAM, SMITH AND PARTNERS



ture technology is daunting, says Sean Smith, division vice president at Gresham, Smith and Partners (GSP), a 900-person Nashville-based firm.

"The software is fairly well developed in certain areas, but gaps remain in others," he says. "It's unrealistic to think that you can install a package and use it productively out of the box. There are a lot of nuances and subtleties to address."

Moving to BIM requires firms to reshuffle and reorder an array of clearly established processes and relationships.

"BIM is supposed to be a smarter system that improves design, construction and facilities management processes," says DJG's DeYoung. However, "When you involve a number of companies—and numerous people have their fingerprints on a project—you crack open the door for ownership and chain-of-custody problems. BIM can make it more difficult to define the boundaries and liabilities," which, in turn, leads to disputes and costly litigation.

For their part, software vendors say they understand the problems and are working hard to develop more open platforms upon which to build the technology.

Paul McRoberts, director of engineering for the A/E/C Division of Autodesk, says the ultimate goal is to support a wide array of electronic file formats, including PDF, XML, Java, Excel and DWG, to name a few.

Christopher Jarrell, a product manager at Bentley Systems, says past attempts to create more open standards have been unsuccessful. "Data degradation, data loss and lack of data exchange are a huge issue in structural engineering software," he explains. Bentley is developing an integrated structural model, something Jarrell says will enable the company's software applications as well as competing products to read and write the same file format without passing through a translation layer.

For now, though, most firms will simply stay tuned to developments in the BIM arena as well as to the government agencies that choose to use it. Just as it took years for the industry to sort out the dizzying array of issues, concerns and problems surrounding CAD, these same issues are playing themselves out in the context of BIM.

"There's no question that BIM offers sophisticated capabilities and features," says GSP's Smith. "There are compelling reasons to use it, but it is a formidable transition." ■

Samuel Greengard is a freelance business writer based in West Linn, Ore.



Society for
Design
Administration

An Affiliate of The American Institute of Architects

**Learn.
Network.
Grow.**

The Society for Design Administration (SDA) is a professional organization comprised of administrative personnel in the design industry, including architecture, engineering, landscape architecture, interior design and construction firms. For over 45 years, we've promoted continuing education, best practices in the management of design firms, and professional standards for design firm administrative personnel.

SDA enhances the professional development and personal growth of its members and, as a result, the development and growth of their respective firms. SDA accomplishes this through a host of networking opportunities, both in person and online, and by providing educational resources in the areas of Finance, Human Resources, Information Technology, Marketing, Office Administration, and Project Management.

To learn more about the benefits of SDA and to obtain information on becoming a member, visit us online at:
www.sdadmin.org



Find
YOUR NEXT ENGINEER
on ACEC's Job Board ...

where today's engineering job seekers go to find their next jobs.

Since the ACEC Job Board's inception in August of 2005, over 1,000 member firms have posted job openings and more than 7,000 job seekers have posted resumes. Find your next new hire at:

www.acec.org/jobbank/index.cfm



**SMART
NEGOTIATING**

**FINANCIAL
REPORTS**

**PEER
REVIEWS**

**STRATEGIC
PLANNING**

**GOOD
MANAGEMENT**

**KNOWLEDGE
SHARING**

BENCHMARKING

**PROFIT
ACCOUNTABILITY**

**IN-HOUSE
EXPERTISE**

BUDGETING

**STATUS
REPORTS**

BOTTOM

By Jim Parsons

LINE STRATEGIES

Sound financial management tactics help firms 'beyond the numbers'

Sound financial management seems a natural complement to the practice of any engineering firm. Both deal in absolutes—one follows fundamental rules of budgeting and financial reporting while the other utilizes scientific principles to formulate the design of structural components.

■ Effective financial management, not unlike effective design and construction, requires more than a reliable tally of numbers and transactions. It requires superior management, period. Too often owners and managers adopt strategies that are ill-suited to the way their firms conduct business, or fail to maximize a firm's unique advantage.

"Expenses in all professional services firms are directly and 100 percent related to delivery of services," explains Jim Steiker, president of Philadelphia-based Shared Equity Strategies, Inc., a consultant to A/E firms on financial matters. "In addition to overhead, firms also have the costs of developing service lines, marketing, hiring staff ahead of the curve and so forth—things that are usually not well accounted for."

The project-based nature of A/E work is another important factor, according to

T. Wayne Owens, managing director of Deemer Davidson Prather, PC, a Duluth, Ga.-based accounting firm. As such, financial management involves project-specific contracts, time, staff, subcontractors and other direct costs.

"All this needs to be effectively integrated into the firm's information and reporting systems to give managers perspective," Owens says.

Barring a project-centric approach, "management might assume that one thing is

causing them to lose money when it's actually something else," says former ACEC Chairman Jeff Daggett, a senior vice president of WHPacific, Inc., an engineering/architecture/management services firm.

A Strategic Foundation

Any number of elements can influence the quality of an A/E firm's financial management strategy. But for financial tools and resources to be used effectively, firms need a sound foundation upon which to apply them. For that reason, Owens says, the bedrock of good financial management is strategic planning.

"You need a three- to five-year plan that states your goals and how to get there—the rate of growth, client and project types, geographic markets and so on," he says. "That ties in to the firm's annual business plan with a budget for achieving those objectives, which in turn ties in to project managers' incentives, compensation and professional development goals. All three must be devel-

Expenses in all professional services firms are directly and 100 percent related to delivery of services.

JIM STEIKER

SHARED EQUITY STRATEGIES



oped, maintained and analyzed together in order to be effective.”

“Smart planning helps firms avoid potentially resource-draining errors, such as deviating too far from their core clients and services, taking risky ventures into uncertain markets or taking on projects before a contract is in place,” says Owens. “You wind up building your budget around what the client will pay, rather than what it will take to meet your profit goals.”

Peter Ney, chief financial officer for EA Engineering, Science and Technology in Hunt Valley, Md., explains: “You have to create a culture where the financial and accounting team is as respected and appreciated as everyone else ‘bringing in’ the revenue. You have to hire and retain the best financial and accounting talent you can find because their creativity and excellence will help transform operational folks to the profit-accountability mentality that A/E firms need to succeed.”

Marian Ross, chief financial officer of Harris & Associates, a Concord, Calif.-based professional services firm, says adding a professional risk manager to the firm’s staff helped reduce its legal fees and other expenses.

“Because there are always new things like indemnification requirements that we have to take on as the prime, it’s essential to have someone who can stay on top of it,” she says.

No matter the firm, the point people for good financial management are the project managers who have the greatest influence on a project’s success. “These people need

to constantly know what they’ve spent in terms of time and resources, and if their progress is on track financially,” says Steve Isaacs, a senior faculty member with the Napa, Calif.-based Advanced Management Institute, an industry consultancy.

Ney says many firms mistakenly place accountability for profits on their finance departments.

“Project managers need to know that they are responsible for tracking their project financials and delivering a profit, not just technical excellence,” he explains.

But that’s sometimes easier said than done. Isaacs says a common problem among project managers is that many ascend to leadership positions without the training or experience necessary to properly administer important jobs. “Plus,” he adds, “in today’s environment, everyone’s busy. Project managers won’t back away from client or project needs, but they will often let administrative needs slide.”

Solving Problems... and Avoiding Them

Paradoxically, the very kind of growth and success that is contingent upon good financial management often is the reason A/E firms overlook the practice.

“Small firms realize pretty quickly that they need to watch numbers closely,” Isaacs says. “As they grow, they start to think that management responsibilities can become more specialized, which isn’t the case.”

Another common mistake is relying on off-the-shelf accounting and financial management software rather than tools tailored to the needs of A/E firms.

“Products such as QuickBooks might be OK for very small firms,” Owens says, “but A/E firms need to look at other alternatives if they’re going to grow.”

Having qualified financial management expertise in-house or under contract also is important to ensure that the routine aspects of financial management—accounting, billing, collections—are properly managed.

Project managers also need to be clear on their targets, says Daggett.

“For example, if a firm sets up a project with an effective multiplier of 3, but it comes

in at 2.7, the project manager will say it was profitable, but the firm has actually lost 10 percent of the potential revenue that could have been used for growth,” he says. “That’s why it’s important to continually emphasize the importance of meeting profit goals.”

“There are many metrics to measure financial success, and all of them have advantages and drawbacks,” explains Ney. “The key is to have a limited number of common metrics that are used across the company, and make sure that all managers understand them. Large amounts of time can be wasted if different units within the company use different metrics to measure success.”

Providing project managers with timely, consistent, to-the-point financial information can reinforce these principles without adding another responsibility.

“A daily one-sheet report can provide the latest project expenditures, billing status, revenue factor and other key details,” Daggett says. “A project manager immediately knows where things stand and what areas need special attention.”

Similarly, Owens says, involving project managers in contract negotiations helps build a better understanding—one that benefits the firm and its clients.

“In small- and mid-sized firms, especially where the owner is the main client contact, the project manager has no concept of what’s required and might be unaware of

Smart planning helps firms avoid potentially resource-draining errors.

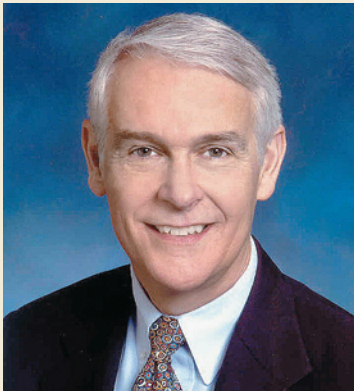
T. WAYNE OWENS

DEEMER DAVIDSON PRATHER



A daily one-sheet report can contain the latest project expenditures, billing status and other key details. A project manager immediately knows where things stand and what areas need special attention.

JEFF DAGGETT
WH PACIFIC, INC.



scope creep," he says. "By participating in developing of the scope, staffing levels and budget, project managers have the information to effectively manage the project from the outset."

"You need to know how to deal with clients because it all affects your bottom line," says Ross. "Smarter negotiating allows you to be more selective about the clients and projects you take on, which make you a more financially sound firm overall."

Share the Knowledge

Whether an A/E firm sees the need to tweak its existing financial management processes or craft an entirely new information management infrastructure, Ross advises to avoid taking a piecemeal approach, citing her own firm's experience as an example.

"As we've upgraded our corporate information systems, we've come to realize how one section affects the others," she says. "Because we got behind technologically, it became difficult to share information throughout the organization."

Daggett strongly recommends that ACEC members take advantage of the Council's Organizational Peer Review program. "You get the benefit of an objective examination of your firm's operations and practices from CEOs of other A/E firms, who bring the latest knowledge of manage-

ment to the table," he says. "ACEC's CEO Roundtables are another valuable forum for learning about the latest trends and asking questions in a confidential, non-threatening environment."

Benchmarking also is a helpful practice for improving financial management practices. Daggett recommends making comparisons to the top-performing quartile of A/E firms. "That way, you're always challenging yourself at a high level," he says. "It's a very constructive process."

The biggest obstacle to good financial management may well be the instinct to keep traditionally sensitive information close to the vest.

"Firms fear that their employees will perform differently, and I agree—they'll do

better by knowing how they contribute to the bottom line," Isaacs says. "If you maintain the attitude that financial information is a black box, you won't succeed."

Though many A/E senior managers might see it differently, Isaacs says, their firm's success hinges on its ability to see the broader picture. "Younger generations that are now in the workplace have higher expectations about having information," he explains. "They want to know what's going on, how they contribute and what rewards they'll receive in return. There are ways to safely share key financial information, and firms need to commit themselves to doing it." ■

Jim Parsons is a freelance business writer living in Bristol, Va.

Integrated Electrical Software

Drafting

Runs in AutoCAD®
Light Fixture Layouts
One Line Riser Diagram
Panel Schedules
Fully Customizable Graphics
Circuit Looping & Tick Marks

Calculations

Circuit Load Totals
Breaker Sizing
Feeder Sizing
Fault Current Calculations
Voltage Drop
Photometrics

www.designmaster.biz

866-516-9497

DESIGN **master**



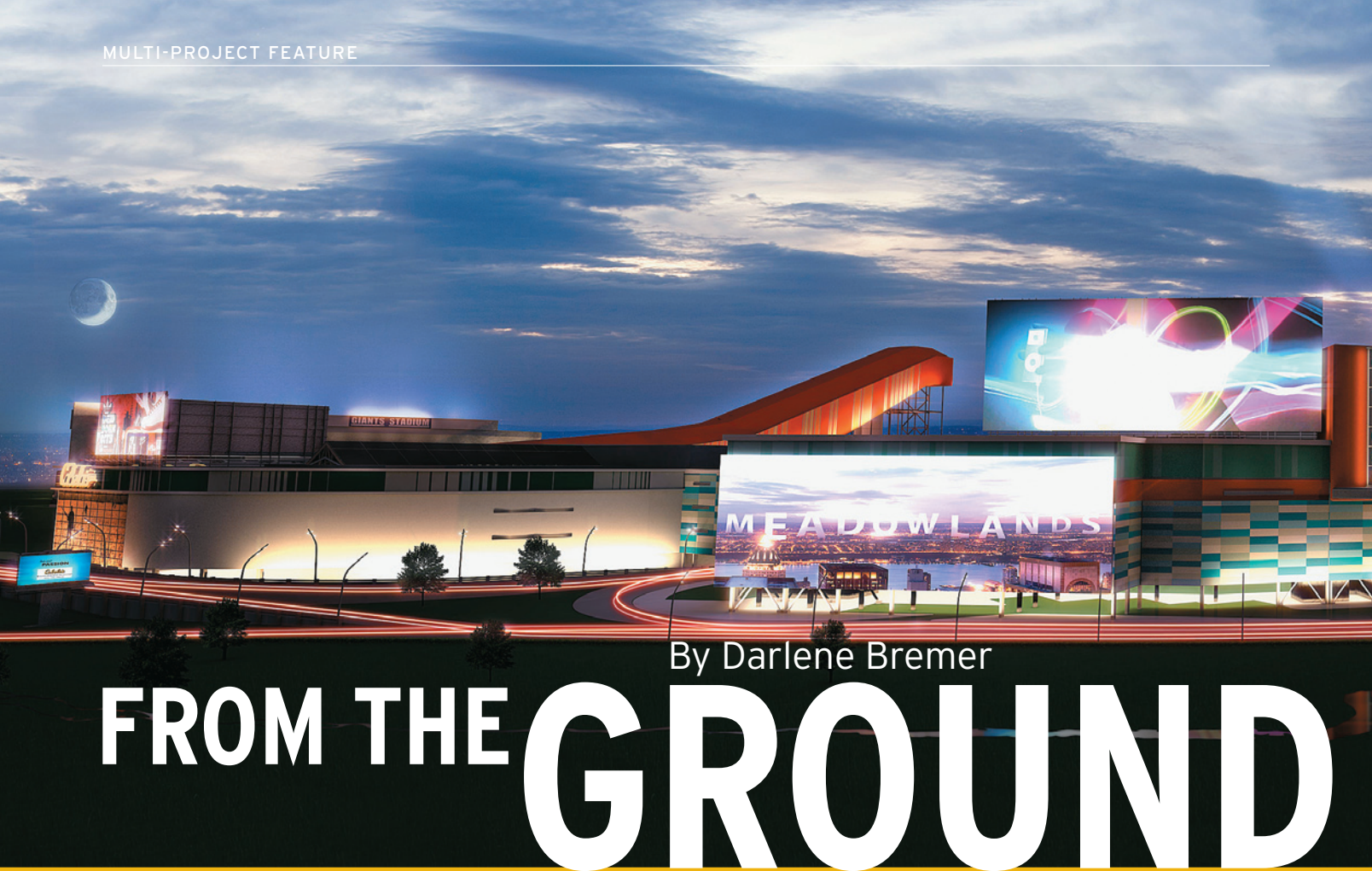
LET
Engineering Inc.
**WORK
FOR YOU**

**With an ad in
Engineering Inc.
you can:**

- Reach your clients and colleagues.
- Enhance business prospects.
- Thank those important to your success.



Contact ACEC Assistant Director of Advertising & Sales Nina S. Goldman at 202-347-7474 or by email at ngoldman@acec.org, or visit the website at www.acec.org/directories/advertise.cfm.



By Darlene Bremer

FROM THE GROUND

Creating a Dynamic Entertainment Destination

PROJECT:
Meadowlands Xanadu,
East Rutherford, N.J.

FIRM:
Langan Engineering
& Environmental
Services, Inc.,
Elmwood Park, N.J.

The 4.96-million-square-foot Meadowlands Xanadu project is designed to become one of the most distinctive mixed-use developments in the world. Standing adjacent to Giants Stadium in New Jersey, the massive Xanadu complex includes plans for a broad array of entertainment facilities including a minor-league baseball park to an indoor ski slope,

The 4.96-million-square-foot Meadowlands Xanadu project will include a minor league baseball park, an ice-skating rink, shopping and an indoor ski slope, among other amenities.

An artist's rendering shows the Xanadu complex at night.



UP

ACEC Member Firms provide innovative solutions to land development issues

hotels, restaurants and office space. Not to mention a multilevel parking garage, which, in itself, is remarkable for the tri-state area.

The venue also will host an ice-skating rink and a variety of other shops and meeting places, inviting providers of all manner of goods and services, from fashion to home and life products and even education.

"The objective," observes David Gockel, president and CEO of Langan Engineering & Environmental Services, the New Jersey-based design and engineering firm heading the project, "was to redevelop a somewhat underused venue with a tremendous existing infrastructure in the heart of the New York metropolitan area that would be consistent with and complementary to the other components on the site, be sustainably designed

and provide a wide array of options."

Langan's responsibilities for the \$1.3 billion project, with the first major building scheduled for completion this fall, include overall project management; a comprehensive geotechnical investigation; landscape architecture permit planning; the design of off-site roadway improvements; and site and civil engineering, including detailed phased plans for grading, storm drainage, sanitary sewer and potable water for permitting purposes.

"Langan also prepared the environmental impact statement and navigated the team through complex regulatory issues, including the preparation of more than 15 state and federal approvals required for the project," says Gockel. The investigation helped the project team better understand

the environmental impact of the project. It was that understanding that aided engineers as they sought to determine the best means of construction.

To determine the optimal foundation strength, Langan developed a comprehensive pile load test that involved driving different types of piles into the bedrock. The piles eventually chosen for the foundation were recycled oil-casing pipe. The pipes were not only strong enough to support the project, but they also were recycled, which was important, because developers had pledged to be as environmentally conscious as possible, says Gockel. Redeveloping an actively used site presented its own set of challenges. Developers had to ensure that attendees and participants of other Meadowlands events,



David Gockel

including NFL football games at Giants Stadium, still had access to the existing arena, stadium and racetrack during construction. "For most projects, the parking areas are built last. However, for this project, one of the major parking decks was constructed first to minimize traffic disruption for Meadowlands' event parking," explains Gockel.

Sustainability in Stone Creek

PROJECT:
Stone Creek
Planned Unit
Development,
Fairhope, Ala.

FIRM:
Volkert &
Associates, Inc.,
Mobile, Ala.

When developers began work on the 190-acre Stone Creek Planned Unit Development project in 2004, the goal was to create a self-contained community where residents could live and work—even shop and go out for a night on the town, if they so choose.

As the project got under way, developers contracted with Mobile, Ala.-based Volkert & Associates, Inc., to conduct initial project surveys and wetland delineations. The company also was responsible for developing the site's master plan, including planning for housing lots, roads and commercial properties. Plans for landscape architecture, rezoning, annexation, envi-

ronmental protection, storm drainage, utilities and other services also were included in Volkert's initial analysis. The company then stayed on board throughout the process to oversee construction.

Completed in 2006, the project coincided with the city's comprehensive plan for quality growth, in building a traditional neighborhood with a village center, providing residents a self-contained lifestyle where everything from retail stores and restaurants to banks and day care is available within walking distance of their homes. The development includes a mix of lot sizes, three lakes, a clubhouse, a swimming pool and tennis courts.

The project was extensive. But the lakes were particularly challenging, says Volkert Vice President Steve Commander, one of the lead engineers responsible for the development.

"The lakes were designed as an amenity while serving as detention ponds for storm water detention and filtration," says Commander. Develop-

ers were adamant that the detention ponds not look like detention ponds, but instead serve as attractive features of the community. The company met the challenge by enlarging the ponds to achieve more surface area and decreasing the freeboard necessary for the ponds to serve as water storage facilities. The ponds also were lined with clay to retain the water in sandy soil. Prior to filling the ponds with water, the survey crew taped a blue line around the perimeter at the designated water elevation so engineers could better visualize the desired height of the water. "This was done in case any adjustments were needed to the overall structure of the ponds," Commander explains.

Another challenge was the trees. The undeveloped site was completely forested, making it difficult for city officials and community members to visualize the concept and its merits as a finished product.

To ease that process, Volkert employed 3D computer models to aid in the city's approval process and to help other stakeholders better understand

the layout. "Using the technology at several public hearings, one with the Fairhope Planning Commission and another with the Fairhope City Council, we were able to demonstrate what the final result of the plan would be and eventually received unified public support for the project," explains Commander.

Volkert's team of landscape architects, environmental scientists and engineers also performed extensive site investigations and worked closely with the Fairhope planning staff to create an effective blueprint from which to work. "These unified efforts created an environmentally sensitive plan that addressed the needs of the developer and the requirements of the Fairhope Comprehensive Plan," says Commander.



Steve Commander



The 190-acre Stone Creek Planned Unit Development includes three lakes, a village center, clubhouse and swimming pool, and tennis courts.



Construction crews cut a road through the forest for a housing complex.



A man-made lake serves as a detention pond for storm runoff.

The Sporting Life



PROJECT:
Legacy
Development
Subdivision,
Eagle, Iowa

FIRM:
Stanley
Consultants, Inc.,
Muscatine, Iowa

Read the names associated with the Legacy Development Subdivision, the massive 700-acre land development project under way in Eagle, Iowa, and it sounds like a who's who in American sports history. Names such as Courier, Nicklaus, Hamm and Spitz headline the project, which aims to combine residential living with world-class athletics and instruction.

As part of the project, a vast swath of Iowa farmland has been converted to make room for a complex featuring upscale housing and state-of-the-art sports instruction academies.

Jack Nicklaus plans to open one of his signature academies of golf; Mia Hamm, Brandi Chastain and Julie Foudy, three former members of the U.S. women's soccer team,



plan to open an academy of soccer. Tennis star Jim Courier and Olympic gold medalist Mark Spitz also plan to open instructional facilities as part of the project. Residents living in the development will pay a monthly fee to access the facilities and for group instruction.

The first phase of the project consisted of 225 acres and 340 home sites and was completed at the end of 2007. The full plan includes more than 1,500 homes, retail and commercial space, elementary school sites and more than 30 acres of ponds. Phase II of the project won't begin until summer.

Before development began, the entire site was farmland.

"The goal was to take idle land and turn it into a thriving community that would be integrated into the natural topography," says Steve Arnold, project principal for Stanley Consultants, the Iowa-based design firm that heads the project. Stanley began by annexing the land and rezoning it into the City of Eagle. "Our responsibilities encompassed the entire development process from the initial topographic mapping and boundary surveys to the final engineered plans for streets, sewer, water, gravity irrigation and site grading," explains Scott Wonders, vice president and manager of Stanley Consultants' office in Boise, Idaho.



Steve Arnold



Scott Wonders

The company faced obstacles from the start. There was a lack of existing utility infrastructure near the site, which required the extension of nearly a mile of oversized sewer main. Even running water was a problem. The Legacy Development project was the first major construction project to test the city's revamped water system. "This was to be the first water system owned and operated by the City of Eagle and required a great deal of coordination to implement," explains Arnold. Success required that the company work with the Department of Environmental Quality and with the city officials to plot the location of water mains and make allowances for future connectivity.

Project organizers say the design complements the natural landscape and should ensure the development's sustainability for years to come.

The Vision Plan includes a 124-acre, 2,900-unit residential neighborhood with hiking trails, parks and a town center.

A Hollywood Vision

PROJECT:
NBC Universal
Vision Plan,
Los Angeles

FIRM:
Psomas,
Los Angeles

NBC Universal in Los Angeles is the largest working movie studio in the world. Formed in 1909, its Universal Studios in Hollywood also is one of the oldest. To help the company make the transition into the 21st century, NBC Universal in 2006 unveiled a long-term Vision Plan for renovating its 391-acre Universal City property, including the studio, its Universal Studios Hollywood theme park and Universal CityWalk, a popular tourist attraction featuring a variety of Hollywood-themed shops and restaurants.

The goal is to create a blue-

print that will carry the company and its facilities through the next quarter-century.

"The Vision Plan seeks to accommodate future uses of the property, address economic and employment vitality concerns, integrate new housing and transportation for employees and visitors, and environmental stewardship that will benefit both the company and the region," explains Tom Smith, senior vice president of West Coast real estate for NBC Universal.

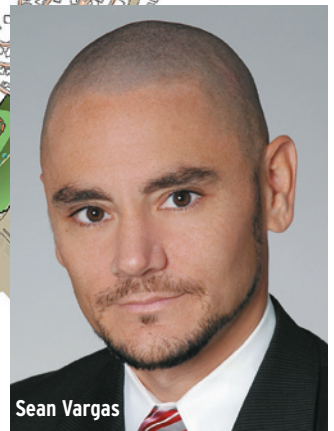
The Vision Plan calls for a multiyear commitment that aims to upgrade NBC Universal's existing studio, generate new office space and refresh the theme park's operations. NBC Universal tapped Psomas, a California-based design and engineering firm, to assist in the development of a new 124-acre, 2,900-unit residential neighborhood complete with hiking trails, parks and a

town center.

"Overall, Psomas will be responsible for conducting topographical surveys to locate existing improvements, boundary surveys to define NBC's ownership of the land and the boundary between the city and county of Los Angeles, conducting the planning and entitlements process and avoiding or mitigating environmental impacts of the project during and post-construction through sustainable engineering solutions," explains Sean Vargas, Psomas' vice president and principal.

"The project is in a highly developed area where a great number of people already live and work," says Vargas.

In an effort to ease mounting concerns about the project's impact on traffic patterns and the environment, NBC Universal says it will hold a series of meetings demonstrat-



Sean Vargas

ing how the project can be conducted responsibly and with regard for the community and its citizens.

The property straddles Los Angeles City and County lines, which requires Psomas and other project participants to plan in advance for two distinct sets of local permit and zoning requirements.

"The team that NBC put together, including engineers, architects, planners, public relations specialists and land-use attorneys, developed a blueprint that enables us to demonstrate to both jurisdictions how the development balances the needs and priorities of each," says Vargas. ■



Are you leaving money on the table by under-utilizing your staff?

Industry experts have estimated that an integrated project management system, like Deltek Vision, can improve employee utilization by 8%. How would that impact **your** bottom line? Deltek Vision gives you complete insight into your resources and project requirements and helps you optimize your employees' time without burning them out. See for yourself. **Watch an online demo at www.deltek.com/vision**

www.deltek.com





ACEC's Annual Convention and Legislative Summit

The industry's most important political networking and advocacy event will help determine the outcome of many issues critical to the health of our industry. Your participation in Convention activities and as a "citizen lobbyist" will be vital to political outcomes.

"Primary Season" Reception/Dinner Sunday, April 27

Experience the excitement of a national political convention at this specially themed dinner complete with patriotic bunting, state buttons and placards. Dinner includes musical entertainment and special political guests straight from the campaign trail.



Campaign 2008 Chris Wallace Monday, April 28

The veteran host of *Fox News Sunday* will share his views and predict the outcome of the election.

Legislative Summit

Join ACEC's citizen lobbyists in carrying important industry messages to Capitol Hill:

- Stimulate the economy and rebuild America's infrastructure through increased investments in transportation and environmental infrastructure
- Kill unfair 3 percent withholding mandate
- Advance key tax, energy and land development issues of importance to the engineering industry

Participate in a popular training session on "How to Think Like a Member of Congress."

Washington, D.C. April 27-30, 2008

Business Education Sessions

Learn the latest business insights from more than 30 education sessions addressing important management topics, including:

- Mergers and Acquisitions
- Key insights on contracting with federal agencies
- Sustainable Design
- Secrets of the Generational Workforce
- Town Hall Meeting—*Who should own America's Infrastructure—Government or private firms?*

ACEC/PAC Sweepstakes Drawing

Grand Prize: \$10,000

The winner of the ACEC/PAC Sweepstakes drawing will win \$10,000 in cash! The second-place winner receives \$5,000, third place \$2,000 and fourth place \$1,000. Tickets are \$200 each. ACEC is capping sales this year at 400 tickets. Ticket sales begin in January and end Tuesday, April 29, or until tickets are sold out. *The winner will be announced at Wednesday's ACEC/PAC Breakfast.* Limit: five tickets per person. Raffle tickets will be sold onsite from Sunday, April 27, to Tuesday, April 29.

Hotel Information

Convention activities will be held at The Grand Hyatt, located at 1000 H St., N.W., in Washington. ACEC's discounted room rate is \$260, single/double occupancy, plus tax. Call the hotel at (202) 582-1234 and reference ACEC.

The cut-off date for reservations is April 4. ACEC's discounted hotel rates are available through the cut-off date or until rooms in the block are sold out, whichever occurs first.

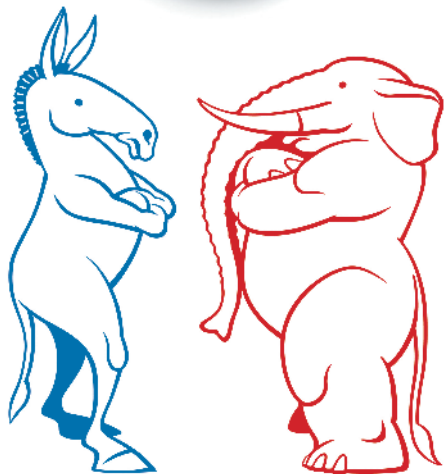
To register, or for more information, go to www.acec.org.



Great Debate **Tucker Carlson vs. Paul Begala**

Monday, April 28

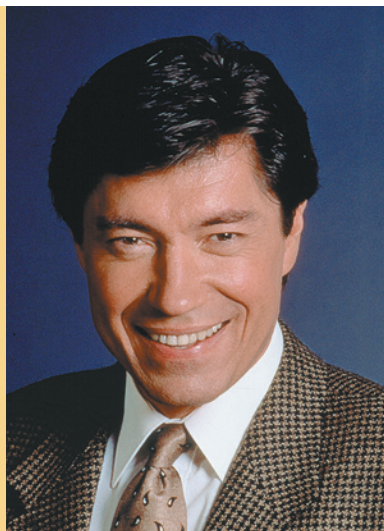
Two leading political observers will square off in a rousing debate as the national race heads down the home stretch. Representing the Blue states is Paul Begala, former top aide to President Clinton, and on the Red side, Tucker Carlson, host of MSNBC's *Tucker* and former co-host of CNN's *Crossfire*.



STEVE McCracken

Sensational Spouse Program

- Hillwood Museum and Gardens
- Spouse/Guest Only Breakfasts
- The National Cathedral Tour & Tea
- Shopping and Tour—Georgetown
- "Hollywood in Washington" Tour



Engineering Excellence Awards Gala

**Emmy Award-Winning
Host Ross Shafer**

Tuesday, April 29

Known as the "Academy Awards" of the engineering industry, the annual black-tie reception, dinner and awards program honors the year's most outstanding projects.



ACROSS

THE FEDERATION

HIGHLIGHTS FROM ACEC STATE ORGANIZATIONS

ACEC/Alabama

Presented ACEC's award-winning video "The Voice of the Engineering Industry" at nine regional membership meetings throughout the state for effective image enhancement with members and clients. Attendees included the speaker of the Alabama House, key legislators and leaders from several major state universities.

ACEC/Alaska

Lobbied the governor and state legislature for progress on the proposed Alaska natural gas pipeline. The estimated \$30 billion project would deliver natural gas from northern Alaska to the continental United States. Worked with the U.S. Army Corps of Engineers to address design-build concerns for regional base realignment projects.

ACEC/Arizona

Received Award of Excellence from the Arizona Society of Association Executives for 2007 Engineering Excellence Awards brochure. The full-color publication showcases award-winning member projects and is distributed to more than 4,000 Arizona construction firms and colleagues.

ACEC/Arkansas

Conducted Project Management Boot Camp. Implemented new state PAC fundraising program through donations of 10 percent of annual dues. Planned Engineering Excellence Awards Banquet at Governor's Mansion.

ACEC/California

Achieved a major victory for state consulting firms when the California Supreme Court ruled unanimously to once again uphold Proposition 35, the law authorizing state and local agencies

to procure private engineering, surveying and environmental services.

Launched grassroots campaign aimed at junior high and high school students to recruit new engineers and surveyors for California's workforce. The campaign's educational DVD is available at www.celsoc.org.

ACEC/Colorado

More than 100 members attended the Council's first "Dancing With Engineers" event, held jointly with the Rocky Mountain School of Dance (RMSD). Designed to attract young engineers to the Council, the event was choreographed by RMSD and featured 12 members.

ACEC/Connecticut

Presented recommendations to the Governor's Commission on reforming the state Department of Transportation, including continued support for Qualifications-Based Selection (QBS), increased transparency on projects, and the need for debriefing after selection interviews.

ACEC/Delaware

Worked with the Delaware Department of Transportation to address overhead rates and profit formulas, and with the Department of Natural Resources to clarify and simplify its contracting procedure.

ACEC/Florida

Produced and distributed "Engineer's Guide to Community Service," a how-to publication for participants in the Council's leadership and legislative programs.

ACEC/Georgia

Summer Conference drew 400 attendees and featured Georgia's secretary of state, along with a panel of state agency leaders who addressed the "State of Affairs in Engineering."

ACEC/Hawaii

Negotiated removal, over the wishes of the governor, of an onerous contract requirement mandating that design professionals "defend" the state, regardless of negligence, in a lawsuit. Also achieved reinstatement of a Design Claims Conciliation



ACEC/CO engineers displayed their creative side at "Dancing With Engineers!" From left to right: Patrick Sullivan, HDR Engineering, Inc.; Melanie Lawrance, Leonard Rice Engineers, Inc.; Chris Ernst, Merrick & Company; Jessica Myklebust, Felsburg Holt & Ullevig; Jocasta Champion, CTL/Thompson, Inc.; Matt Bliss, Camp Dresser & McKee, Inc.; Tara Fishbain, HDR Engineering, Inc.; Keith Hidalgo, Felsburg Holt & Ullevig; and Amanda Welton, CTL/Thompson, Inc.

Panel to combat frivolous lawsuits against engineering firms after years of attempts to pass a Certificate of Merit bill.

ACEC/Idaho

Worked with the Idaho Department of Transportation on language for potential design-build legislation for federally funded projects. Also advocated for enhanced use of GARVEE bonds to increase transportation funding.

ACEC/Illinois

Testified at a U.S. House Subcommittee on Highways and Transit hearing on transportation issues for the 2016 Summer Olympic Games, which Chicago seeks to host.

ACEC/Indiana

Coordinated awareness campaign for state legislators on funding needs for water/wastewater infrastructure. Held focus group with "private-client" firms to explore special membership needs and concerns about current Council programs and services.

ACEC/Iowa

Initiated partnering program with state Department of Natural Resources resulting in streamlining of water and wastewater permitting process and review of procurement and contract procedures.

ACEC/Kansas

Led coalition advocacy of new statewide Comprehensive Transportation Plan, and taught a class for the Master of Public Administration program at the University of Kansas on project management and procurement of design services.

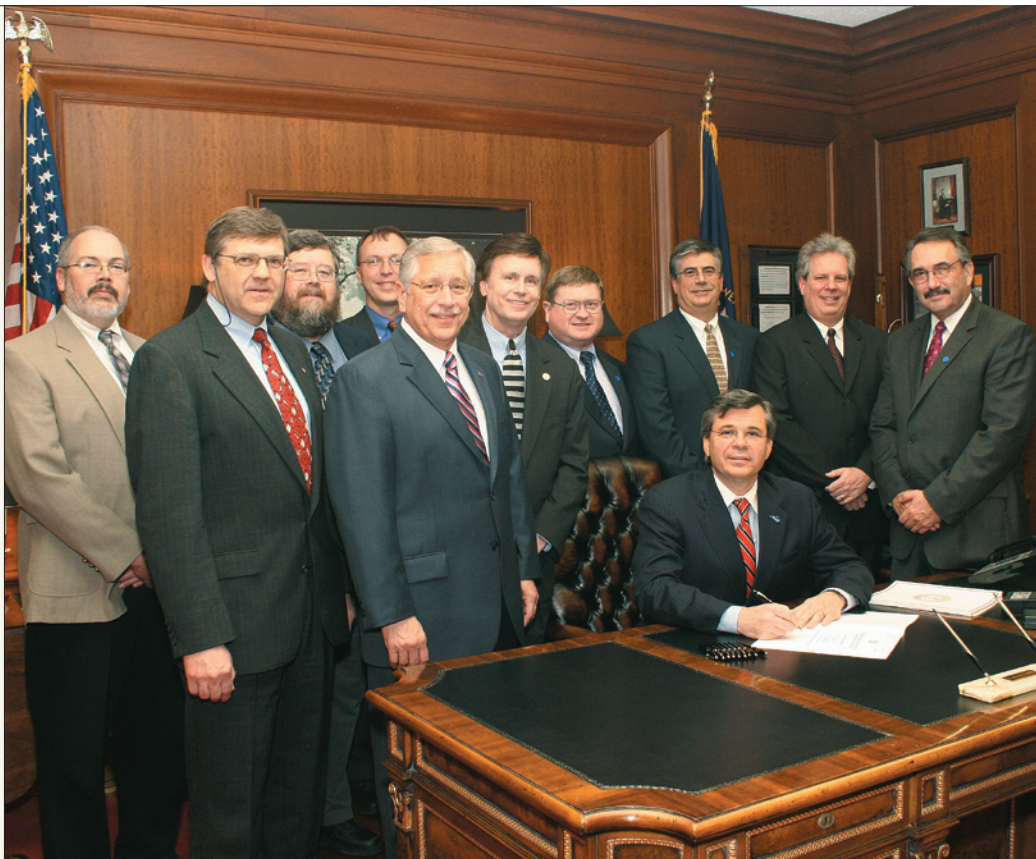
ACEC/Kentucky

Played a major role in guiding a continuing education bill through the Kentucky General Assembly that would require engineers to obtain 30 hours of continuing education in the two years prior to license renewal.

ACEC/Louisiana

Held second successful "Outlook to Rebuild Louisiana" conference featuring leaders of key government agencies.

Also advised state agencies on QBS, engineering selection criteria, and plan review process.



Kentucky Governor Ernie Fletcher signing Continuing Education Bill—standing from left: ACEC/KY President Paul West; ACEC/KY member Steve Gardner; ACEC/KY Past President Randy Gnau; ACEC/KY member Stephen Scott; ACEC/KY Executive Director George Binder; Rep. Tommy Thompson (bill sponsor); Dennis Smith, chairman, Board of Licensure; ACEC/KY National Director Randall Russell; David Cox, executive director, Board of Licensure; and ACEC/KY member Richard Sutherland.

ACEC/Maine

Engineers from member firms provided valuable industry experience to Maine public school students as part of a program to encourage students to pursue careers in engineering.

ACEC/Maryland

Celebrated 50th anniversary by defeating legislation that would have expanded the state's sales tax to include engineering services. Assisted in delivering more than \$400 million annually in new transportation funding.

ACEC/Massachusetts

Introduced bills in the legislature to: (1) create a state water infrastructure finance commission to address the growing need for funding water and wastewater projects; (2) clarify the role of the Board of Registration of Professional Engineers and Land Surveyors; (3) create a QBS law for horizontal projects conducted by state agencies.

ACEC/Metro Washington

Sponsored networking luncheons with county, state and federal agency leaders in transportation, water/wastewater infrastructure and the environment; and met with county officials to address concerns with fee proposals.

ACEC/Michigan

Developed the Michigan Design and Construction Coalition to encourage young people to consider careers in engineering and construction. Hosted an exhibit during the annual Michigan Youth Engineering and Science Expo that attracted more than 15,000 high school students.

ACEC/Minnesota

Led coalition to secure voter-passage of an amendment to the state constitution mandating motor vehicle sales taxes be 100 percent dedicated to roads and transit by 2011.

Launched effort to develop professional skills of young members and to pro-

mote benefits of involvement in Council activities.

ACEC/Mississippi

Honored Gov. Haley Barbour with the 2007 Leadership Award for his outstanding guidance after Hurricane Katrina.

Also served as lead sponsor of Design-Build/Construction Management At-Risk legislation to guide use of the delivery method by state agencies.

ACEC/Missouri

Hosted a meeting of Missouri-based design organizations to coordinate common professional interests pertaining to: licensing law changes, proposed Bachelors + 30 model law, interprofessional issues, and coordination of the now-mandatory QBS law for Missouri's local governments.

ACEC/Montana

Established a Water Policy Committee to guide elected officials on issues likely to be addressed during the 2009 legislative session, including new water-rights applications in closed basins, modifications to the water-rights application process, individual wells that are currently exempt from closed-basin laws, and water-quality issues in aquifers.

ACEC/Nebraska

Hosted a forum to support increased infrastructure funding, which included officials

from the state's Natural Resources Committee, Transportation Committee and Appropriations Committee.

ACEC/Nevada

Joined with state contractors, labor unions and business owners to address the state's looming transportation infrastructure crisis as part of the Nevada Highway Users Coalition.

ACEC/New Hampshire

Defeated proposed legislation that would have mandated that design professional firms pay a disproportionately large share of civil damages.

ACEC/New Jersey

Defeated legislation that would have prohibited state agencies from contracting out services to the private sector, including engineering.

ACEC/New Mexico

Played lead role in New Mexico Department of Transportation study of the state's transportation funding history, assessment of current needs, and recommendations for future funding solutions. The final report—*House Memorial 35: Sustainable Funding Strategies*—is available on the NMDOT website.

ACEC/New York

Developed a flash movie presentation titled

Consulting Engineering—A Career That Matters to raise awareness of the profession among college students, featuring young engineers describing their work across the various engineering disciplines. It can be viewed at www.acecny.org.

ACEC/North Carolina

Commissioned a study on how to enhance the organization's visibility in the public and legislative arenas; and undertook a branding campaign with special focus on the media, white papers on timely issues, use of the Council's logo by member firms, and the tagline: "Engineering North Carolina's Future."

ACEC/North Dakota

Led industry-wide coalition to revise state statute on construction management which legislators overwhelmingly passed.

ACEC/Ohio

Charged state PAC trustees with working with the Council's staff and outside lobbyist to select political candidates worthy of financial support and to carry out fundraising efforts to meet state and national political action goals.

ACEC/Oklahoma

Led a coalition effort to donate a "centennial clock" to the state in celebration of Oklahoma's 100th birthday. The \$25,000 replica of a 1907-era clock is located on the south side of the state capitol.

ACEC/Oregon

Worked with representatives of the schools of engineering at the University of Portland, Portland State University and Oregon State University to foster greater interest in engineering careers.

ACEC/Pennsylvania

Led a broad-based coalition to pass legislation creating a partnership between the Pennsylvania Department of Transportation (PennDOT) and the Pennsylvania Turnpike Commission to create additional revenue for highway projects. The bill provided for the transfer of \$83.3 billion from the Turnpike Commission to PennDOT for transportation projects and the lease of Interstate 80 from PennDOT to the Turnpike Commission.



At the ACEC/Mississippi Annual Meeting Governor Haley Barbour (second from left) meets with ACEC/MS President Bill Burle (far left), ACEC/MS Executive Director Judy Adams and ACEC/MS National Director Charles Williford (far right).

ACEC/South Carolina

Led business coalition that achieved passage of meaningful workers' compensation reform. Also lobbied for reform of state DOT laws governing the practice of engineering and surveying.

ACEC/South Dakota

Tendered Council support for the South Dakota Energy Smart Initiative, designed to foster development of energy efficiency programs in South Dakota.

ACEC/Tennessee

Achieved passage in the General Assembly of the Tennessee Tollway

Act allowing work on two pilot toll projects, constituting a new option for developing large-scale highway projects.

Also sponsored a forum for Nashville mayoral candidates, which drew a standing-room-only crowd.

ACEC/Utah

Worked closely with the state legislature to gain passage of record infrastructure funding for transportation, water and vertical infrastructure projects, including \$1 billion for the state highway fund.



Wisconsin Governor Jim Doyle (second from right) greets ACEC/Wisconsin leadership at the State Facilities Consultants Conference. From left to right: ACEC/WI Executive Director Carol Godiksen, ACEC/WI President Phil Budde, and State Chief Engineer Tab Tabrizi.

ACEC/Vermont

Led coalition effort to oppose legislation that would require bidding by design professionals on state-funded education projects.

ACEC/Virginia

Hosted welcome reception for the new Virginia DOT commissioner. Spearheaded middle school program to increase awareness of engineering as a career. More than 200 seventh- and eighth-graders contributed essays to a competition. The top 25 winners received a weekend trip to an engineering boot camp to learn more about the profession.

ACEC/Washington

Introduced a bill in the State Senate that would require anyone claiming that a design professional violated a standard of care to obtain a Certificate of Merit by a qualified expert before filing a claim. Also spearheaded an industry coalition to raise the profile of infrastructure and funding needs before the media, legislators and policy-makers.

ACEC/West Virginia

Promoted QBS throughout the state through the West Virginia QBS Council. The U.S. Department of Agriculture has expressed interest in using the West Virginia

QBS manual as its main QBS resource, which would be distributed to several hundred agencies nationwide.

Also played a lead role in West Virginia for Better Transportation to educate West Virginians on the state's needs.

ACEC/Wisconsin

Published a special magazine to honor the Council's 50th anniversary. Also hosted the 16th annual Division of State Facilities Consultants Conference, drawing record attendance and featuring a keynote address by the Governor.

ACEC/Wyoming

Hosted a statewide conference on issues faced by member firms and clients, including the Department of Transportation, State Engineer's Office, Water Development Commission, School Facilities Commission and the Department of Environmental Quality.

CEC/Texas

Concluded successful legislative session focused on enhancing opportunities for regional toll-road authorities to advance key projects, expanding alternate project delivery methods into the infrastructure area, and tightening limits on broad-form indemnity agreements. Also conducted seventh leadership class and hosted a second annual project-delivery conference.



ACEC/Oklahoma Centennial Clock



NEW 'CONTRACTS CENTRAL'; NEW BOOK DETAILS CMAR PROCESS

Council Launches One-Stop Contract Shop

ACEC has launched "Contracts & Risk Management Central," an online repository of universal contract forms and supporting documentation used nationwide by more than 500,000 design and engineering professionals.

The website, accessible through the ACEC Bookstore at store.acec.org, is designed to help engineers—and clients—manage the reams of paperwork that often accompany large-scale projects. The site includes project contracts of several professional associations and boards, including the Engineers Joint Contract Documents Committee, International Federation of Consulting Engineers, Council of Professional Surveyors, Construction Management Association of America, Council of American Structural Engineers, and the American Institute of Architects.

Ed Bajer, ACEC's senior director of contracts and risk management, says the goal is to provide a single, centralized location where engineers can retrieve the contracts necessary to do their jobs under the law.

"We wanted to offer a wider variety of contracts and risk management tools than we ever had before," says Bajer. "People can come to the site and get exactly what they need, no matter what they want to do."

Documents range from bid forms and contractor forms to change orders, copyright assignment, design-build, government funding contracts, payment forms, surveying contracts and more. Bajer says the Council plans to continue to expand its resources.

New Book Offers Insights into CMAR

As the Construction Manager-at-Risk (CMAR) project delivery method grows in popularity, ACEC has published a new book that explains how to use CMAR.

The book's author, Elliott Gappinger, president of Oridian Construction Services, says that one of the primary attractions of CMAR is that the project owner can select its contractors on the basis of project-relevant qualifications and then negotiate the contract price—much the same as engaging the services of a professional engineer.

According to Gappinger, other owner benefits to CMAR include:

- Use of contractor expertise in the design phase of the project;
- Reduction of time required for bid advertising and execution of construction contracts;
- Opportunities to negotiate the project scope with the con-

tractor to suit the budget, without change orders; and

- Virtual elimination of claims and disputes that add cost to the project during construction.

Engineers who participate in CMAR projects often find that their role is made more complex by the presence of the contractor in the design phase. Construction is frequently started before plans are complete, adding stress to the process of producing final plans and specifications. Design professionals can take several steps to mitigate these impacts, including:

- During negotiation of the design contract, get a clear definition of the expected relationship between A/E and contractor;
- Allow plenty of time for design coordination meetings and plan reviews to include the contractor in the process;
- Expect that the owner might ask to have contractor-furnished design details included in the project plans; and
- Be prepared to produce plans and specifications for Guaranteed Maximum Price (GMP) preparation, in addition to the usual sequence of review drawings. Projects with multiple phases might have multiple GMPs.

CMAR is a qualifications-based contractor selection process for the general contractor. CMAR differs from design-build in that the owner contracts separately with the design firm and the contractor. The owner of a CMAR project defines and manages the relationship between the two. Thus, the A/E works directly for the owner, as on traditional design-bid-build projects, the difference being that the contractor is inserted into the traditional designer/owner relationship. This matter of combining the traditional with something new creates a need for fairly sophisticated project management on behalf of the owner—something that many do not expect when they first enter into the CMAR process.

CMAR seems to work best on projects that require special contractor expertise, have multiple phases, or are time driven. According to CMAR advocates, the process allows the project owner to assemble the design and construction professionals that provide the best combination of qualifications and experience for the project. ■

The ACEC Institute for Business Management provides comprehensive and accessible business management education for engineering company principals and their staffs. Visit <http://www.acec.org/calendar/eventList.cfm> for a complete listing of ACEC programs.

How does right of way impact your projects?

Knowledge of right of way practices can actually help you reduce costs and streamline processes—especially when land is needed for highway construction, relocation and other infrastructure projects.

We bring right of way training to your door

The International Right of Way Association has provided unparalleled training and education for more than 70 years. With certified instructors and courses tailored to your specific needs, your staff will gain valuable skills they can apply in the workplace immediately.

We offer over 50 courses in the areas of:

- Engineering
- Surveying
- Real Estate Law
- Environmental
- Asset Management
- Appraisal

We've customized courses for a wide range of employers, including the U.S. Army Corps of Engineers; DOT's in NY, FL, CA, VA, NJ, ID, NH, PA; San Diego Gas & Electric; City of Ottawa; University of Louisiana; ExxonMobil; and the U.S. Forest Service.

To discuss your training needs, contact:


Valerie Fries, Course Director

fries@irwaonline.org or

(310) 538-0233, ext. 143

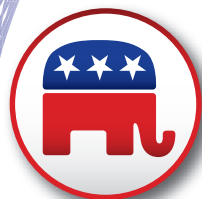


Visit www.irwaonline.org for a complete list of courses.



Winning in 2008

ACEC's Annual Convention and Legislative Summit
April 27-30 • The Grand Hyatt Hotel • Washington, D.C.

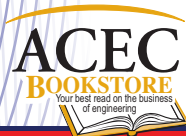


Stop by the ACEC Bookstore while attending the Annual Convention and Legislative Summit April 27-30.


Winning in 2008

Shop for:

- The latest industry books
- Unique engineering-related merchandise
- Signed books

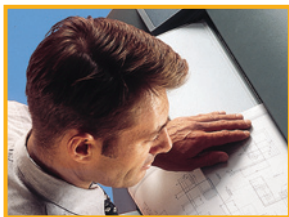


For additional information please contact Jackie Pysarchuk at jpysarchuk@acec.org



Autodesk
Authorized ISV Partner

Service Point
www.servicepointusa.com



On-Site Print & Document Management

Improve your firm's bottom line and efficiency

Over 450 A/E firms across the U.S. have done so with
On-Site Services from Service Point.

New large & small format
printers placed in your offices
without capital outlay

Electronic tracking
& reporting of print
output by project

Equipment service
& supplies included
in usage cost

Project Management tools
to communicate with design
teams & manage archives

See us at the **ACEC Convention**
April 27 - 30th, Washington, DC

Consolidate expenses, reduce overhead, maximize productivity.

Service Centers in the Northeast, Mid-Atlantic, Orlando & Las Vegas | On-Site Services Nationwide | (800) 448-6002

ACEC/PAC Completes Banner Year

Stage Set for \$1 Million PAC



Chuck Pennoni, chairman of Pennoni Associates in Philadelphia, greets Rep. Allyson Schwartz (D-Pa.) during a reception in her honor in January.

As the national election campaign and state races heat up, record ACEC/PAC fundraising has positioned ACEC to weigh in on political issues likely to affect the engineering industry. Propelled by a robust year-end finish, ACEC/PAC raised more than \$550,000 in 2007, eclipsing the previous record of \$440,000 set in 2006. Another record was achieved when 33 states reached their PAC fundraising goals, up from 27 in 2006.

“ACEC’s political program really caught fire in 2007,” said ACEC Chairman “Mac” MacMurray, “which has us well positioned to becoming a million-dollar PAC for the first time in the Council’s history.”

Said ACEC President Dave Raymond: “We’re achieving this success because more ACEC members than ever before are stepping up to support our political program,” adding that “these fundraising totals send a strong message that our industry is playing to win.”

ACEC/PAC Champions already are actively raising money for 2008, setting the stage for a record election-cycle fundraising total projected to exceed \$1 million.

2007 ACEC/PAC CAPITOL CLUB

Craig Avery
Raymond Messer

Chuck Pennoni
Ralph Peterson

2007 ACEC/PAC CHAIRMAN’S CLUB

Efren Abratique
Don Allen
Fred Berger
Chris Borton
Art Brooks
DeWayne Brown
Chris Burke
Janice Burnett
Robert Close
Thomas Collins
Dick Corrigan
Jeff Daggett
Michael Della Rocca
Daniel DeYoung
Don Durden
Eric Flicker
Jim Gallt
Ron Gilkerson
Paul Grosser
David Harrell
John Hennessy III
Bill Howard
Bob Jones
David D. Kennedy

Jacob Lipa
Danny Longworth
Jeffrey Lookup
Orrin “Mac” MacMurray
Bob Macomber
Evan Mossbarger
Tom Mosure
Ed Mulcahy
Terry Neimeyer
David Oates
Phillip Ottinger
Ralph Palmer
Satch Pecori
Dennis Petersen
Chris Poland
Frank Rudd
John Schneider
Randolph Scott
Stephen Scott
Dan Thacher
Douglas Watson
Doris Willmer
Karen Wood

2007 ACEC/PAC MILLENNIUM CLUB

Husam Ahmad	Bill Garrity	Frank Nicoladis
Thomas Ahneman	Charlie Geer	James Owen
Philios Angelides	Woody Germany	Bart Patton
Wilfred Barry	Jeffrey Geurian	Tim Psomas
Jack Beemer	Robin Greenleaf	Bob Radley
Gus Bell	Dave Greenwood	David Raymond
Reginald Benton	Bruce Haldors	Robert Refvem
David Bills	Steve Hall	David Reser
Ron Billstein	Harvey Hammond	Theodore Richards
Mitchell Bohannon	Mark Hamouz	Christopher Robertson
John Boldt	Lawrence Hansen	Kathy Robertson
Mike Bonar	Philip Houser	Dave Ruby
Rich Bub	Roger Jacobson	Don Rutledge
Philip Budde	Janet Jenkins	Robert Salaber
Gregg Bundschuh	David John	Gerry Salontai
Tom Burke	David E. Kennedy	Ronald Schultz
Brent Campbell	Todd Kenner	Jerry Shellberg
Angie Cannon	Sally Kohn	Raj Sheth
Harold Cannon	Kevin Koski	Jay Shutt
Larry Carroll	Mark Kramer	Mitchel Simpler
Pedro Cevallos-Candau	Gene Krametbauer	Jay Simson
David Collings	Robert Krieger	Peter Strub
Everett Cowan	Jeffrey Kronser	Jerry Stump
Andrew Cummings	Steve Lane	Gregg Ten Eyck
Del Dausman	Francis Leathers	Gregs Thomopoulos
Dan Davis	Hal Lochner	Rick Toole
Fermin Diaz	Gary Loesch	Jeff Volk
James Duncan	Keith London	Kevin Weed
Marshall Elizer	M. L. Love	Dick Wells
David Evans	Joseph Macrina	Win Westfall
Doug Folk	Joseph McAtee	Ken Wightman
Dennis Ford	Sam McCachern	Mark Wilson
John Foster	Paul McCarthy	Mark Wirfs
Daniel Fredendall	James McDonald	Jay Wolverton
Lester Fukuda	Joseph McMahan	Bob Wright
David Gaboury	Peter Meshia	David Wright
Darcie Gabrisko	Bob Miller	Paul Yarossi
Kurt Gahnberg	Fred Mirmiran	Carl Yates
Alain Gallet	Abe Munfakh	Allen Yourman
Thomas Gambino	Blake Murillo	
	Ken Nelson	

ACEC President Dave Raymond, right, greets Rep. Joe Knollenberg (R-Mich.) during a special reception for the lawmaker at ACEC headquarters.



ACEC/PAC—the American Council of Engineering Companies Political Action Committee—is the engineering industry's preeminent political action committee. The sole purpose of ACEC/PAC is to elect candidates to the U.S. House of Representatives and Senate who support policies and legislation favorable to the engineering industry.

The Capitol Club members donate \$5,000 per year to ACEC/PAC to support key House and Senate members.

The Chairman's Club mobilizes ACEC's most politically active PAC contributors. Chairman's Club members agree to pledge a minimum of \$2,500 per year to support key House and Senate members (of which at least \$1,000 is given to ACEC/PAC and the balance is available for direct giving to candidates at ACEC/PAC-sponsored events).

The Millennium Club members donate \$1,000 per year to ACEC/PAC to support key House and Senate members.

State Goals—The PAC Champions assign each ACEC state organization an annual fundraising goal based on its membership strength.

ACEC/PAC Honor Roll by State



States that achieved 2007 ACEC/PAC goal

• **2007 State PAC Champions in bold**



ALABAMA (35)

Alain Gallet
Jason Ayers
Kenneth Bailey
Bob Barnett
John Bowlin
Chad Bowman
Billy Carwile
Renee Casillas
Steve Commander
Tyler Davis
J. David Gullede
Kelly Huffstutler
Bert Hughes
James Joyce
H. McClure
David Moon
Kevin Moore
Gary (Russ) Nevin
Leslie Noble
Guy O'Connor
Robert Portera
Lauren Pratt
Christopher Roberts
Randy Sain
J. Schaffer
Dwayne Smith
Steven Speaks
Bob St. John
Michael Tate
H. White
Frank Whitman
Charles Williams
Forest Wilson
Jennifer Wilson
D. York



ALASKA (22)

Floyd Damron
Duane Anderson
Rickey Bennett
Dennis Berry
Tanya Bratslavsky
Marka Brooks
Bret Coburn
Stafford Gashan
Duane Hippe
John McClellan
Lance Mearg
Duane Miller
Kevin Murphy
Mark Musial
Paul Ramert

2007 ACEC/PAC HONOR ROLL

Frank Rast
Charles Riddle
James Sawhill
Daniel Sterley
Willem Van Hemert
Timothy Vig
Jack Wilbur

★ ARIZONA (133)

Robert Stanley

Ronald Ablin
Robert Alcala
Catherine Alcorn
Thomas Arn
Gary Bacon
Vicki Beaubien
Michael Bonar
William Brickley
Arthur Brooks
Kerry Brough
Barry Brown
Dewey Brown
Lawrence Bruce
Janice Burnett
Misael Cabrera
James Campbell
Peter Chan
Matthew Clark
Jerry Collins
John Conrad
Cindy Cornelius
Gregg Creaser
Chris D'Arcangelis
J. Deatherage
Dave DeChant
Kent Dibble
Paul Dickman
Andrew DiLeo
James Dowell
Charles Dryden
Samuel Edmondson
David Fabiano
George Fares
Jeff Farnsworth
Kenneth Feyen
Michael Fleury
P. Folk
Jerry Frieling
Devon Furstenau
Uday Gandhe
Joseph Gervasio
Greg Gesicki
Thomas Gettings
C. Gnanasambanthan
Michael Gordon
Alexander Gourlay
Edward Gruner
Jay Guertin
Lawrence Hansen
Mark Hanshaw
Larry Hanson
Charles Harris
Daniel Heller
Peter Hemingway
Michael Holder
J. Hollingsworth
Steven Hunt
Natalya Hyland
Paul Iezzi

Jeffrey Kracht
Philip Lagas
Eduardo Latimer
David Leistiko
James Lemon
William Linck
Greg Lingor
Thomas Lodge
Oleg Lysyj
David Mahaffay
James Martin
Patrick Marum
George Maseeh
Douglas McCants
James McCluskie
Thomas McGovern
Tom McLean
Robert Meade
Eric Mears
Frank Medina
Richard Mettee
Bob Mickelson
Diane Miller
Patrice Miller
Jeffrey Minch
Brent Mutti
Sateesh Nabar
Gary Newman
Carolyn Newman-Crane

James Nichols
James Oliver
Antonio Paez
Ashok Patel
Bruce Paton
Rod Penniman
Claudia Perchinelli
Richard Perry
R. Peters
David Peterson
Joseph Phillips
Benjamin Porritt
Steven Rex
Edward Ricci
Justan Rice
R. Richards
Gary Rogers
Albert Romano
Joel Saurey
Michael Schiller
Douglas Schneider
James Schoen
Paul Scott
Christy Sipos
Stephen Smith
Kenneth Spiker
Ronald Starling
Robert Suarez
Michael Sylvain
Frank Tantone
Rebecca Timmer
Stephen Todd
Darrell Truitt
Phil Turner
Stanley Turney
David Valentine
Robert Wagner
Gordon Wark
James Weaver
Berwyn Wilbrink

Darrel Wood
Michael Young
Jan Zander
Robert Zicafoose

★ ARKANSAS (20)

L. Carl Yates

Thomas Bond
Matt Crafton
Sam Cummings
Roger Dodds
Dennis Ford
Jeffrey Geurian
Robert Graham
Ann Hamilton
Brad Hammond
Tom Hopper
Brock Johnson
Jerry Martin
Barry McCormick
Neal Morrison
Herbert Parker
Les Price
C. Shupe
James Ulmer
Daniel Williams

★ CALIFORNIA (86)

Jacob Lipa

Efren Abratique
Shahnawaz Ahmad
Greg Bardini
Jim Boss
Gene Bougdanos
Ron Bowman
Thomas Brisbin
Kin Chan
George Cinquini
Robert Close
Patrick Courtney
Joseph Covello
J. Crawford
Kyle Davy
Robert DeWitt
Christopher Diaz
Vincent Doyle
Paul Enneking
Raymond Fares
Lou Ann Frederick
José Gama
Christopher Gorges
James Graydon
William Green
Michael Greenspan
Ed Henderson
Kim Henry
Keith Higgins
Eric Hinzle
Ronald Horn
Patrick Huston
J. Kapp
David Kennedy
Eddie Kho
Robert Krieger
Joseph Kulikowski
Michael Lane
Keith London
Perry Maljian
James McDonald

Michael Mooradian
Richard Morton
Blake Murillo
Eric Noel
Edward O'Brien
Robert Ost
Joseph Paoluccio
Bartlett Patton
Albert Perdon
Kevin Peterson
Chris Poland
Richard Pool
Bruce Presser
Alanna Psomas
Timothy Psomas
Richard Ray
Ignacio Roman
Roland Rothman
Jane Rozga
Robert Salaber
Gerald Salontai
Jeff Savard
Bruce Schmith
Gunjit Sikand
Larry Simonetti
Robert Sims
Kenneth Sinclair
Iver Skavdal
Gary Skrel
Erik Soderberg
Melvin Sukow
Steven Tayanipour
Chad Taylor
Robert Terada
Murli Tolaney
James Van Beveren
Stephanie Wagner
Jeff Walker
Donald Weiden
Win Westfall
Thomas Wosser
Steven Wrightson
Daniel Yau
Allen Yourman
Chris Zadoorian

★ COLORADO (61)

Gregg Ten Eyck

Ed Armbruster
John Ballegeer
Michael Barrett
Scott Beck
Cade Benson
Leslie Botham
James Brady
Weylan Bryant
Scott Cattran
Ray Chamberlain
Ralph Christie
John Clarke
Charles Crum
Dan Donegon
Paul Duncan
Rod Eisenbraun
Michael Ellsberry
Russell Erbes
Lauren Evans
Robert Felsburg
Greg Fischer
Jon Ford

David Frick
Brien Gidlow
George Hadji
Mark Hamouz
Billy Harris
Joseph Hart
Marvinetta Hartwig
Paul Hause
Peter Hinckley
Linda Hoffmann
Frank Holliday
Stephen Holt
David Huelskamp
Gary Johnson
Karl Knapp
James Kramer
Narender Kumar
Tracy Lyman
Charles McKnight
Michael Meints
Gordon Meurer
Stuart Monical
Peter Monroe
M. Ridley Moorman
Steven Pawlak
Ralph Peterson
Robert Refvem
Marilen Reimer
Randall Ritchey
Thomas Roberts
R. Roush
Barry Schulz
William Siegel
LaDawn Capek Sperling
Ronald Vasquez
Janet Williams
Erin Wilson
Brian Zick

★ CONNECTICUT (22)

Thomas Ahneman

Rodney Bascom
Paul Brady
Nils Ericson
John Foster
Walter Gancarz
Nicholas Graviano
Leslie Haines
George Jacobs
Geoffrey Jacobson
Robert Jurasin
John Miller
Ashwatha Narayana
Bangalore Neelkantiah
Sophia Nirshberg
Richard Repeta
Bruce Richardson
Paul Schmidt
James Sherwonit
Thoams St. Denis
Theodore von
Rosenvinge
Nate Whetten

★ DELAWARE (37)

Jeffrey Bross

Tim Anderson

Michael Angelo
Nathan Nate Buttorff
Thomas Carroll
R. Charles
Joseph Charma
James Cloonan
A. Cottrell
John Fabian
Ahmad Faqiri
Mario Gangemi
Philip Horsey
Ted Januszka
Stephen Johns
Bruce Jones
Mike Karia
Keith Kooker
Jennifer Laning
Stephan Lehm
Robert MacIntosh
Hugh Mahaffy
Gregory Moore
Josh Moss
Jessica Nichols
Edward Rasiul
Scott Rathfon
Juergen Riemann
David Simkins
Dev Sitaram
W. Stack
Theodore Thomson
Matthew Vanrenslar
Punith Venkatesh
Dwight Walters
Ted Williams
Jason Winterling

★ FLORIDA (37)

Robert Macomber

Suzanne Bartlett
Charles Carlan
Andrew Cummings
Christopher Dausch
Kimberlee DeBosier
Fermin Diaz
Scott Eckler
Nancy Faller Brown
James Fennell
John Foley
Charles Geer
Maryam Ghaybi
David Gildersleeve
Warren Hahn
Michael Hermesmeyer
Leslie Hernandez
David John
Tanzer Kalayci
Todd Kenner
Sally Kohn
Robert Maxman
Joseph McMahon
Steve Means
Steve Mifflin
Robert Miller
John Padavich
Anthony Paniccia
J. Michael Potter
Stephen Precourt
David Reser
Frank Rudd
Steven Shealey

Sandra Smith
William Stone
Jeffrey Trim
David Wright

★
GEORGIA (100)

Donald Allen
Reza Abree
David Albin
Kenneth Anderson
Jay Ashtiani
Curt Askeland
W. Ballard
Timothy Beck
G. Holmes Bell
Gus H. Bell
Brian Bolick
Stevan Brodie
A. Buckel
Gregg Bundschuh
Charles Button
Patrick Carr
Michael Chasman
Brian Cole
David Collings
James Cranford
Thomas Crochet
R. Neil Davies
Lawren (Dan) Davis
Richard Deason
Thomas Driver
Ronny Dudley
Ed Ellis
Aaron Epstein
Henry Esterly
Eldon Evans
Stanley Everett
Charles Ezelle
R. Ferguson
Thomas Gambino
Leo Gentile
Charles George
Tom Gorman
Russell Griebel
Murray Griffin
William Griffin
Daniel Guill
Jeff Halliburton
Rich Hallman
James Hamilton
Wayne Haynie
John Heath
Greg Helfrich
Donald Hill
Charles Hocking
Carl Hofstadter
Paul Holt
Thomas Hruby
David Huetter
Birdel Jackson
Doyle Kelley
J. Mark Kilby
Richard Little
William Lovett
Debbie Luna
Joseph Macrina
Paul Mamalakis
Samuel McCachern
Robert Miller

Mehdi Moazzami
Emmy Montanye
David Morgan
Michael Nguyen
T. Owens
Mark Pickering
Jan Pitman
J. Pond
Christopher Quigley
Fred Rezaenia
Chris Roberds
Thomas Robertson
Jeffrey Simmons
Santanu Sinharoy
Daniel Skalsky
Scott Smelter
Charles Spencer
William Toole
Hamid Vagnef
Roland Vaughan
James Vaughn
John Watkins
Dennis Welch
Bob Wheelchel
William White
J. Stephen Willenborg
Edgar Williams
Doris Willmer
James Willmer
James Willson
Gary Witsman
Steven Wohlfeil
Jerry Wolvertton
D. Woolridge
Neil Wyche
Roman Zhest
Thomas Ziegler

★
HAWAII (16)

David Bills
Terrance Arashiro
Richard Frey
Lester Fukuda
Royce Fukunaga
Ken Hayashida
Ronald Katahara
John Katahira
Janice Marsters
Richard Moss
June Nakamura
George Nishimura
Jon Nishimura
Lennox Nishimura
Barry Jim On
Lambert Yamashita

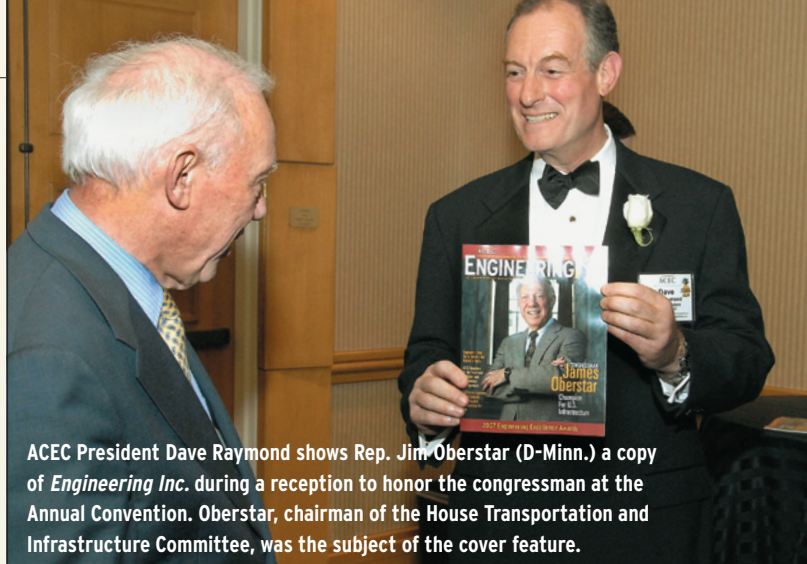
★
IDAHO (37)

Richard Jacobson
Craig Anderson
Steve Arnold
Todd Bartolome
Mark Bowen
Bob Bruce
David Butzier
Doug Camenisch
Jack Coe
Dan Coonce
Elaine Davis

Karen Doherty
Hank Fenske
Bryan Foote
Gary Funkhouser
Dennis Galinato
Timothy Haener
Rex Hansen
Vance Henry
Kevin Hoagland
Larry Hoffman
Loren Jalbert
Stephen Lewis
Rod Linja
Sam Matthews
Michael Merhar
Teri Ottens
James Porter
Gordon Smith
Roger Sorensen
David Stangel
Bill Taylor
George Wagner
Clair Waite
Paul Wasser
Jason Wolfe
Scott Wonders

★
ILLINOIS (130)

Peter H. Mesha
Donald Rutledge
Timothy Barry
Reginald Benton
Robert Benton
Michael G. Berry
J. Paul Biggers
Mary Coombe Bloxdorf
David Booher
Paul Bouchard
Jamil Bou-Saab
John C. Bouse
Craig Brunner
Brian Buchheit
Thomas E. Buchheit
Christopher Burke
Robert Burkhardt
Randall Bus
S. John Calise
Daniel Cecchi
Pedro Cevallos-Candau
Thomas Collins
John Coombe
Charles Craddock
Peter Czosnyka
James Daum
Paul DeBruyne
Michael DeSantiago
Michael Doerfler
Allen L. DuBose
Houssam El-Moursi
Timothy Faerber
Corina Farez
P. J. Fitzpatrick
James D. Flickinger
Gregg Foltz
John A. Frauenhoffer
John Frerich
Frank Furlan
Darcie Gabrisko
Heather Gaffney



ACEC President Dave Raymond shows Rep. Jim Oberstar (D-Minn.) a copy of *Engineering Inc.* during a reception to honor the congressman at the Annual Convention. Oberstar, chairman of the House Transportation and Infrastructure Committee, was the subject of the cover feature.

Walter Goin
Michael Goodkind
James J. Graveel
Joe Greene
Robert W. Gudmundson
Joseph Hagerty
Mohammad Hassan
Kevin Hayes
Phillip A. Hazenfield
Gerald Heimsoth
Alicia Hermann
Susan Hill
Mark L. Hine
David Hinkston
Frank Hodina
Gary R. Hoelscher
Alan J. Hollenbeck
John G. Hooker
Philip L. Houser
James E. Huff
Linda L. Huff
Bradley Hummert
Charles Hurliman
Gary L. Hutchison
George Jamison
Karen Jensen
Thomas Jester
Martin Joyce
Gregory P. Kacvinsky
Edward Kalina
David Kennedy
Michael Klingner
James Klug
Kevin Koski
Kevin Kuhn
Sidney W. LeGrand
Nicholas Lizanich
Harry Lochner
Steve Luetkehans
Diane Lukas
ReJena Lyon
Manning Mahaffee
Robin Martel
Timothy Martin
James Marty
Michael K. McCaw
Philippe F. Moreau
Thomas J. Morris
Kenneth Nelson
William Nelson
David Oates
John P. O'Neill

Thomas S. Palansky
John J. (Jack) Pastore
Douglas Paulus
Satch Pecori
Theresa Pelletier
Chandra N. Prasad
Donald M. Pries
Lori L. Quigg
Hari Rabadia
Scott Rakers
Andrew Rathsack
Sadhu Singh Rikhiraj
Birinder S. Sachdeva
William Schafer
Myron K. Scheibe
Kevin T. Serafin
Jerrold L. Shaffer
William Sleeman
Tom Smiles
William Sprague
Karen Steingraber
Charles J. Stenzel
Mark Stott
Joseph D. Stutz
Wayne Swafford
B. Robert Tessitore
Roland G. Thouvenot
Paul Wang
Stephen R. Wavering
Regina Webster
Alan W. Wendorf
Craig Williams
Bob Wire
Richard Woodford
Magued Zaglama
Michael Zelinskaskas
John Zietlow

★
INDIANA (83)

Philip Beer
Beth Bauer
John Brand
Brian Bryant
Marvin Burns
Floyd Burroughs
Walter Charles
Stephen Christian
Michael Cline
Willis Conner
Daniel Cutshaw
Steven Davidson
Terrance DeBoo

Thomas Dick
Scott Dompke
Kent Downey
Mary Downey
Richard Erhardt
John Fisher
Thomas Ford
Sherly George
Stephen Goddard
Robert Gray
Huyck Gregory
Kathy Hall
William Hall
Thomas Helbing
Gregory Henneke
Gregory Holden
Scott Hornsby
Paul Hummel
Greg Ilko
Dale Jacobs
Steven Jones
Marlin Knowles
Peter Kohut
Philip Kuntz
John Kupke
Gary Ladd
Richard Lautz
Scott Ludlow
Stephen Luther
Kimberly Lutz
Larry Manning
Michael Mathias
Rick Miller
Stephanie Morse
Dennis Neidigh
Trent Newport
Alex Oak
Richard O'Connor
Andrew Olson
Richard Olson
Jeffrey Peters
Gary Pohl
Jeffrey Ponist
Christopher Pope
Richard Rampone
Dawn Replogle
Scott Reske
David Richter
Roland Salzman
Brent Siebenthal
Brian Slagle
Ross Snider
E. Sondles

2007 ACEC/PAC HONOR ROLL

Leo Spaans
Patricia Spence
Frank St. John
Jon Stolz
Ibrahim Swidan
Dale Tekippe
Mark Urban
Jay Vorisek
Roger Ward
David Warder
Bradley Watson
Stephen Weintraut
Darren Wells
Martin Wessler
Elizabeth Wilkinson
Daniel Woo
John Yoder

★ IOWA (43) Jerry Shellberg

John Bender
Richard Berndt
Larry Berns
Larry Buchholz
F. Daoud
Ivan Droessler
Mike Dryden
Tom Edgerton
Donald Etler
Michael Flattery
Thomas Hayden
Keith Hobson
Gilbert Jones
Alan Jensen
Michael Kammerer
Paul Kline
Jeffrey Krueger
Neal Kuehl
Philip Larson
R. Dan Lovett
Kim McKeown
John Meyer
David Moermond
Dale Moore
Patrick Mullin
Allen Munsterman
Herbert Ohrt
Robert Payer
Douglas Post
Bennett Reischauer
Gayle Roberts
Kent Rode
Ralph Russell
Penny Schmitz
David Scott
J. Scott Shevel
Terrence Smith
Gregg Thomopulos
Allen Varney
Dale Watson
Rick White
Curtis Wiseman

★ KANSAS (27) Maurice Bowersox

Debra Allison
Steven Bachenberg
Kenneth Bengtson

Joseph Brand
Ryan Branfort
Bill Brungardt
Matthew Brungardt
Kent Dvorak
Troy Eisenbraun
David Gaboury
Martin Goedecke
Kenneth Hancock
Mike Hess
Kevin Honomichl
Saint Johnson
Kenzil Lynn
Dale Maltbie
Glen Nilsen
Michael Olson
Chris Price
Brent Remsberg
Murray Rhodes
Clinton Robinson
Thomas Ruggles
Karl Svaty
N. Wooten

★ KENTUCKY (37) Ron Gilkerson

Michael Anderson
Hugo Aparicio
George Athanasakes
Craig Avery
John Beyke
Stephen Bickel
George Binder
Daniel Byers
Sean Chapman
Don Fuller
James Galt
Louie Greenwell
Kenneth Hardin
Joe Herman
Carol Kearns
Mark Litkenhus
Danny Longworth
John Malueg
Chad Modesitt
Evan Mossbarger
Scott Murray
Kenny Ott
Ralph Palmer
Ben Quinn
Randy Roberts
Randall Russell
Kurt Schaefer
John Schneider
Randolph Scott
Stephen Scott
John Storm
Richard Sutherland
Dan Thacher
Joseph Tierney
Karen Wood
Greg Yankey

★ LOUISIANA (7) Frank Nicoladis

Wilfred Barry
Lawrence Blanchette
Blake Kinchen

James Ledet
Richard Shread
Kenneth Smith

★ MAINE (5)

John Nelson
Jack Palmer
William Shelley
Guy Vaillancourt
Bruce Ward

★ MARYLAND (59) Daniel Cheng

Doug Andrew
Nathan Beil
James Blake
Joseph Blaney
Stephen Carl
Maureen Decker
Jeffery Dingle
Charles Emely
Harvey Floyd
Christopher Fronheiser
Kunal Gangopadhyay
Robert Garcia
James Gellenthin
Robert Halbert
John Healey
Christopher Heyn
Michael Hild
Dana Knight
Leon Kriebel
Gregory Lang
Richard Magnani
Joseph Makar
Kenneth Marshall
Jeffery McBride
Donald McConnell
Laura Mehiel
Fred Mirmiran
Alan Mlinarchik
John Moeller
Thomas Mohler
David Mongan
Michael Myers
Terry Neimeyer
Charles Olsen
Jim Otradovec
Beverly Pannee
Kerry Rexroad
Cathy Ritter
Thomas Ritter
Stuart Robinson
James Shumaker
Joseph Siemek
Simon Simon
Leonard Smith
Richard Smulovitz
Harry Stephen
R. Sternberger
Stacy Stone
Raymond Streib
Douglas Suess
Stuart Taub
Frank Waesche
Frederick Wagner
David Wallace
George Wirth

Timothy Wolfe
Stephen Zentz
James Zito

★ MASSACHUSETTS (66) Michael Hanlon

Robert Vokes
Alexis Arakelian
Anni Autio
Mary Barry
Joseph Beggan
Bruce Beverly
David Bohn
Lisa Brothers
Robert Brustlin
Brian Buckley
Nicholas Campagna
Alfred Carrier
Dennis Coffey
Robert Cutone
Joan DeLorey
Crystale Dion
John Donovan
Brian Doyle
Stanley Elkerton
Mark Ensign
Nicola Ferzacca
Harold Flight
John Giudici
Joel Goodmonson
Brett Gough
Lisa Gove
Robin Greenleaf
Dean Groves
Mary Hall
Mike Herlihy
Edward Hollingshead
Diane Howard
William Howard
Patrick Hughes
J. Irwin
Ko Ishikura
Ildiko Johasz
William Kelleher
Michael Kenealy
Christopher Koehler
Brian Lawlor
Francis Leathers
John Manning
Michael McInnis
Richard Moore
Thomas Morgan
Paul Murphy
Judith Nitsch
Richard O'Brien
Margaret O'Meara
Stephen O'Neill
Robert Otoski
James Pappas
Michael Powers
William Reed
Peter Richardson
Gregory Roy
L. Roy
Alec Smith
Erik Stoothoff
Edie Triano
Joel Uglevich

Susan Van Tuyl
Guillermo Vicens
David Young

★ METRO WASHINGTON (17) Philios Angelides

Fredric Berger
Laurence Bory
Jonathan Carter
Richard Corrigan
Sandra Gitlin
David Greenwood
Steve Hall
Cynthia Hu
Roger Jordan
Dennis Kamber
Cort Kane
Dan Knise
Gerald Levitt
Colvin Matheson
Dave Raymond
Michael Wiercinski

★ MICHIGAN (91) Daniel Fredendall

Walter Alix
Regine Beauboeuf
Michael Bergstrom
Matthew Bissett
Danny Bongiovanni
Kirk Branson
Ron Brenke
James Canham
Curt Christeson
Christopher Cook
James Cook
William Costick
Robert Czachorski
Craig Dashner
Don Devries
Kent Early
Bruce Elenbaas
James Escamilla
Lee Fahrner
Jacqueline Fleis
Lawrence Fleis
Karl Freed
John Friel
Michael Fuller
Paul Galdes
Arnold Geldermans
William Gipson
Philip Glupker
Rhett Gronevelt
Russell Gronevelt
Philip Hampton
Noel Hargrave-Thomas
Patrick Hastings
Lester Hewitt
John Hiltz
Helen Himes
Kevin Hoppe
Roger Johr
Samuel Kain
Vytautas Kaunelis
Jonathan Kramer

Mark Kramer
Randall Kriscunas
David Lakin
Christopher Lamus
Mark Loch
Thomas Long
James Lynch
Alan McComb
Andrew McCune
Timothy McNamara
Lawrence Miller
Shelby Money
Abe Munfakh
Thomas Newhof
Stephen Nichols
James Page
Stephen Pangori
Michael Peters
Evan Pratt
Vicki Putala
G Ramanjuam
Robert Rayl
Brian Rice
Roy Rose
David Ruby
James Schiffer
Clif Seiber
Thomas Sereseroz
Craig Shumaker
Steven Sills
Matt Simon
Terry Simpson
James Smalligan
Rebecca Smits
Mark Smolinski
Annette Stroman
James Susan
Keith Swaffar
James Townley
Amy Trahey
Steve Vanden Brink
Robert Vander Male
Paul Wade
Douglas Watson
Philip Westmoreland
Tom Weston
Bruce Wilberding
Kenneth Wiley
Gordon Wilson

★ MINNESOTA (3) William Bennett

Timothy Moe
William Sayre

★ MISSISSIPPI (44) Charles Williford

Judy Adams
Hunter Arnold
Perry Atherton
M. Burge
W. Burle
William Burle
Jim Cannatella
Ronald Cassada
L. Compton
Larry Cooley

Thomas Crowder
Edwin Dedeaux
David Dennis
Robert Diamond
Robert Eley
Slade Exley
Roger Foster
Tone Garrett
Gregory Gearhart
Kenneth Geno
Steven Haynes
Marcus Hooker
James Hust
Frank Johnson
C. Kaiser
Herbert King
Karl Long
Walter Lyons
Betty Martinek
Aaron Masters
Shea McNease
Blake Mendrop
James Morrison
W. Neel
James Nelson
Mark Seymour
Stanley Spradling
Jerry Tullios
Rhonda Varner
Chad Wages
Joe Waggoner
Kyle Wallace
Gene Wardlaw

MISSOURI (33)

Marc Alper
Edward Mulcahy
Ed Alizadeh
Phillip Borrowman
Michael Carroll
Joel Cerwick
William Clarke
Jacques Darvish
David Diestelkamp
Kevin Eisenbeis
Richard Frueh
Robert Goodwillie
Thomas Gredell
David Hamilton
Scott Harding
Mark A. Harms
Gene Hinshaw
George John
Eric Lidholm
Alexander Macias
Paul Malir
Joseph Marsh
Gholam Masoumy
T. McMillen
Gary Prather
Paul Ridlen
Clinton Robinson
Michael Smith
Scott Smith
John Sonderman
Stephen Wells
Daniel Wilson
John Yarnell



MONTANA (21)

Vaughn Anderson
Larry Bickell
Ronald Billstein
Brent Campbell
Paul Druyvestein
Terry Forest
Woody Germany
Gary Hendrix
Glenn Howard
Mike Jensen
Erling Juel
Jeremy Keene
James Maierle
Ty Monks
Robert Morrison
Scott Murphy
Dan Nebel
Gary Simonich
Byron Stahly
Julie Titchbourne
David Zahller



NEBRASKA (30)

Michael McMeekin
Kyle Anderson
Terry Atkins
Linda Beacham
John Christiansen
Frank Comisar
Tim Farmer
Michael Gerdes
Michael Gorman
Louis Lamberty
Larry Lewis
James Linderholm
George Little
Scott Loos
Thomas Marnik
Robert Matlock
George Morrissey
John Olsson
Steven Oltmans
Daniel Owens
Leslie Peterson
Ken Pollard
Nancy Pridal
Loren Steenson
Thomas Thelen
Daniel Thiele
Brett Wawers
Steven Weidenhammer
Curt Westergren
Jeffrey Williamson



NEVADA (10)

Wayne Horiacher
Larry Carroll
Curt Chapman
James Duddleston
David Frohnen
Allen Gray
Gene Krametbauer
Allen Pavelka
Cynthia Potter
Scott Smith

NEW HAMPSHIRE (11)

Frank O'Callaghan
Gerard Blanchette
James Errico
Edward Gardiner
Barry Kimball
Alistair MacDonald
Craig Musselman
Abhijit Nobis
Michael Penney
Arthur Rose
R. Shillaber

NEW JERSEY (5)

Peter Allen
Chris Donahey
John Hotopp
Theodore Schlette
James Twomey

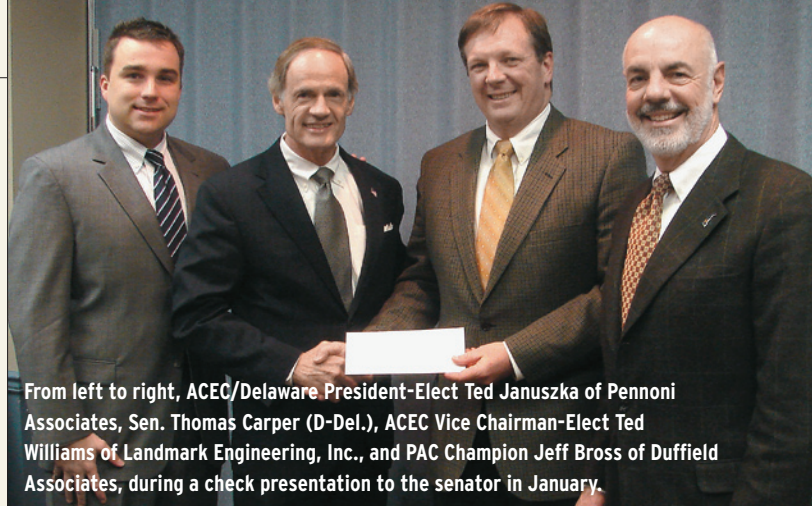


NEW MEXICO (35)

Kent Freier
Daniel Aguirre
Adelmo Archuleta
Brian Burnett
Mary Carter
Barbara Crockett
Kerry Davis
David Dozier
Kevin Eades
George Esqueda
James Gibbs
Paul Gorder
David Grieves
John Gwynne
Deborah Hicks
Steven House
Paul Karas
David Kondziolka
Michael Malloy
James Massengill
David Maxwell
Steven Metro
JT Montoya
John Pate
Jerry Paz
Scott Perkins
John Provine
Niva Romero
James Ross
H. Snyder
Eric Sorenson
Howard Stone
James Topmiller
Scott Verhines
David Wilson

NEW YORK (69)

Michael Della Rocca
Husam Ahmad
Joseph Amato
Frank Ambrosio
B. Angelakos
Paul Bello
Paul Boyce
Dolores Buckenberger
Serge Budzyn



From left to right, ACEC/Delaware President-Elect Ted Januszka of Pennoni Associates, Sen. Thomas Carper (D-Del.), ACEC Vice Chairman-Elect Ted Williams of Landmark Engineering, Inc., and PAC Champion Jeff Bross of Duffield Associates, during a check presentation to the senator in January.

Russell Bullock
Ammon Bush
Mary Carter
Maureen Clegg
Raymond Daddazio
Eugene Daly
Lewis Damrauer
Del Dausman
Katherine Dewkett
Daniel Duprey
Joy Eipel
Kenneth Eipel
James Fagan
Larry Fairchild
Anthony Fisher
Bradley Fisher
Charles Franzese
Hamilton Garnsey
Edward Garrigan
John Giancola
Charles Gozdziowski
Paul Grosser
Edward Haggerty
Steven Hearl
John Hennessy
Steve Hutchins
Greg Kelly
Glenn Lasher
Bruce Letts
Evans Lizardos
Gary Loesch
Jeffrey Lookup
Patrick Lynch
Orrin MacMurray
Richard Maitino
Jeffery Manor
Lance Manus
James McDuffee
Susan Morog
Hannah O'Grady
Mark Petranchuk
Charles Pisano
Gina Potfora
Robert Radley
Darin Rathbun
Gregory Roy
Edward Schiller
Wassim Selman
Linda Shumaker
Mitchel Simpler
Jay Simson
Bryan Smith
Mark Storch
Eric Thorkildsen
John Trimble

John Waltz
Chandra Weiss
Paul Wilke
Walter Windus
Paul Yarossi

NORTH CAROLINA (25)

Kenneth Smith
DeWayne Brown
Thomas Burchett
Donald Chandler
Eugene Conti
Timothy Donohue
Phyllis Elikai
Chih-kuo Ko
Michael Krannitz
Jeannine Martin
G. Matthis
Barbara Mulkey
Randall Neuhaus
Joseph Pfeiffer
Robert Phillips
David Pond
Michael Ray
Richard Rohrbaugh
David Ruggles
Steven Thomas
Amy Wazenegger
Richard Wells
Mark Wilson
Roger Woods
Robert Wright



NORTH DAKOTA (15)

Jeffrey Volk
Jessica Ackerman
Rolly Ackerman
Ryan Ackerman
Dean Anagnost
Gregory Doulton
Alan Estvold
Roger Fenstad
Gerald Floden
Eugene Jackson
Jeff Lund
Brant Malsam
Jeffrey McElwain
Barry Schuchard
Lawrence Woodbury

OHIO (71)

Thomas Mosure

Michael Bandwen
Douglas Batt
Keith Bennett
Richard Bertz
Patrick Blayney
James Bollibon
David Breitfeller
Raymond Briya
Frank Bronzo
B. Brubaker
Daniel Bucher
Michael Buettner
Douglas Carrera
Douglas Coffey
Jerry Dailey
Tony Damon
Lee Dillworth
Mark Droll
Ronald Eifert
John Eisenmann
James Frederick
Lawrence Fulton
Bronson Funke
Joseph Grani
Paul Gruner
Steven Hamit
Charles Hammontree
Stanley Harris
Greg Heaton
Ned Heminger
Mark Henderson
William Hulse
Ali Jamshidi
Bipender Jindal
H. Kairouz
Charles Kessler
J. King
James Kleingers
Nelson Kohman
M. Lichtenberg
James Lockard
John Lyons
James Mawhorr
Mitchell McCoy
Edward McHenry
Paul McMullen
David Mosure
James Myers
Dean Niese
R. Ortman
John Pierko
Chris Pore
Bryon Ringley
Robert Ruse
C. Satyapriya

2007 ACEC/PAC HONOR ROLL

Steven Schaefer
Robert Schuerger
Ronald Schultz
Edward Sefcik
Paula Selvaggio
Jay Shutt
Gregg Simon
C. Smith
Gregory Tkacz
Edward Turner
James Van Ostran
Richard Werner
Daniel Whited
Donna Wirth
Greg Wright

OKLAHOMA (9)

Darold Davis

James Benson
Gerald Finn
J. Ford
Thomas Hendrick
Michael Homan
Stacy Loeffler
Alan Soltani
James Stewart

OREGON (16)

Jack Beemer

Stephen Anderson
Stacy Bartoletti
James Carnahan
David Evans
Dwight Hardin
Gayle Harley
Devon Pereira
Cindi Polychronis
Ermel Quevedo
Gregg Scholz
Mel Sears
D. Andrew Vessely
Scott Wallace
Kenneth Wightman
Mark Wirfs



PENNSYLVANIA (70)

Christopher Borton

Mark Alisesky
Chester Allen
S. Barnes
Victor Bertolina
Lisa Brozey
Jeffrey Campbell
Nicholas Coppage
James Cullison
Edward D'Alba
Bony Dawood
Paul DeBarry
David DeLizza
John Diviney
Thomas Donahue
Ronald Drnevich
James Eisenhardt
James Elliott
Ellen Ferretti
Eric Flicker

Eric Frary
Donald Gennuso
Joseph Gillott
Robert Goetz
William Gralski
David Hersh
Jeffrey Hill
Andrew Hilt
Arthur Hoffmann
Charles Skip Homan
Carl Hunt
Christine Hunt
Cynthia Jampole
W. Andrews Jenkins
Lynn Knepp
G. Kurgan
Thomas Lawson
James Lombardi
Russell MacNair
Mark Magalotti
Thomas Maheady
Michael Marso
Joseph McAtee
Christopher McCue
Paul McQuade
Kristina Monahan
Todd Morris
Michael Mudry
G. Myers
Kenneth Nadler
Joseph O'Neil
C. Pennoni
Michael Poletti
John Prybella
George Rettew
John Robinson
Richard Robyak
Barry Schoch
Jerome Schwertz
Brian Shunk
James Smith
Justin Smith
Larry Smith
Dave Stewart
William Stout
Doug Warfel
Michael Wilk
Steven Wilson
Thomas Zagorski
Dale Zeiders



SOUTH CAROLINA (46)

Miller Love

Velma Atkinson
William Blackwood
James Bohannon
James Broyles
Allen Chestnut
A. Davis
Dan Dennis
James DuPre
Haze Elliott
Elham Farzam
Robert Ferrell
Joseph Greenburg
W. Grubbs
Donald Hamburger
Larry Hargrove

Michael Horton
Kenneth Humphries
Janet Jenkins
Irwin Johnson
Joe Jones
Charles Joye
James Keistler
Daniel Leahy
James Lewis
Michael McGuire
Jack Mobley
James O'Connor
C. Palmer
Arthur Parrish
M. Perry
Robert J. Probst
Frederick Quinn
Kevin Shoemake
M. Smith
William Spearman
Charles Stearns
Peter Strub
David Taylor
Jerry Timmons
Hollis Walker
Richard Ward
Walter Warren
Guy White
Tony Woody
Mark Yodice



SOUTH DAKOTA (20)

Dennis Micko

David Berg
Gail Boddicker
Jon Brown
John deWit
Norm deWit
Tony Dwire
Daniel Eisenbraun
Daryl Englund
Terry Helms
Ralph Lindner
Kim McLaury
Brian Meyer
Monty Miller
Dan Painter
Harlan Quenzer
Laurie Schultz
Neil Stodolski
Todd Van Maanen
Bryan Vulcan



TENNESSEE (40)

Gerald Stump

John Agee
Jeff Arnold
Alan Aront
Mark Askew
William Barry
F. Burnette
Angela Cannon
W. Cannon
Phillip Coop
Everett Cowan
Charles Craycraft
Marshall Elizer



The winning foursome from the ACEC/PAC golf tournament at the Fall Conference in Maui is left to right: Gary Bourne, David Winter, Kurt Gahnberg, and ACEC/Washington Executive Director Bill Garrity.

Pat Harcourt
Edward Hargraves
David Harrell
Greg Harris
Mark Harrison
Tommy Jordan
John Kenny
Catherine Kingery
Stephen Lane
James Littlejohn
Shannon Looney
Stephen Meyer
William Moore
James Morinec
Thomas Needham
Phillip Ottinger
Wayne Overman
Shane Pike
Sandra Reaga
Brad Salsbury
Michael Stomer
Susan Thrasher
Candy Toler
Edward Watt
Marion Wynne
David Yates
David Young

TEXAS (10)

Don Durden

John Birkhoff
Thomas Burke
J. R. Jones
Kenneth Koch
Raymond Messer
Dennis Petersen
Lisa Ruth
Dennis Sander
Ayub Sandhu



UTAH (53)

Karen Nichols

Hiram Alba
Marvin Allen
David Alter
Craig Ashcroft
Craig Bagley
Larry Becknell
Dale Bennett
Norman Bennion
Larry Bowen
Michael Brehm
John Buttenob
Lee Cammack
Fredric Campbell

Michael Collins
Bob Davis
Robert Davis
Darrel Dixon
Fred Duberow
Bruce Erickson
Leo Florence
James Horrocks
Gary Horton
David Jenkins
Brent Jensen
Jeremiah Johnson
Patricia Jones
Mike Kobe
Bob Lynds
Rachel McQuillen
Chris Mikell
Leslie Morton
Gary Myers
Richard Noble
James Olson
Craig Peterson
Stan Postma
Andy Powell
Bruce Reading
Ronald Reaveley
Scott Rocke
James Schwing
Michael Scott
Shawn Shuler
Michael Smith
Matthew Spencer
Kenneth Spiers
William Stringer
Lisa Tuck
John Wallace
David Warnock
Kenneth Watson
Rick Wheadon

VERMONT (3)

John Lens

Robert Faulkner
John Forcier



VIRGINIA (48)

Daniel DeYoung

Cindy Allen
Michael Allen
Ken Anderson
Gerald Augst
Kevin Austin
Jim Baldridge
John Ballard
C. Bamforth

Donald Booth
Herbert Braun
Ned Cleland
Cecil Doyle
Alvin Dunbar
Ronald Ewing
Michael Galli
Matt Gough
Roger Hart
Ronald Helton
Michael Hurd
Nancy Israel
William Johnson
Samuel Kirby
Kevin Kokal
Jeffrey Lighthiser
David Lookenbill
John Mann
Michael A. Matthews
Michael W. Matthews
Arthur McKinney
Adam Mickiewicz
Timothy Mills
Peter O'Hara
Jeffrey Perry
Steven Roberts
Ann Samford
R. Schwartz
Richard Simon
Don Sipher
Kenneth Stepka
Roger Stroud
Renison Tisdale
R. Vaughan
Gary Weishaar
C. Williams
Frank Willson
Franklyn Wilson
Christopher Workman



WASHINGTON (94)

Kevin Weed

Jess Abed
Diane Adams
Steve Aisaka
Kurt Anderson
Cale Ash
Atef Azzam
Lawrence Balanko
Kristen Betty
Rachel Boehm
Ralph Boirum
Robert Bourdages
Stan Boyle
Ronald Cardwell

Hicham Chatila
Kevin Collins
Jeff Daggett
Jon Davies
Peter De Boldt
Rick Della
Crystal Donner
James Duncan
Dean Franz
Kurt Gahnberg
Bob Galteland
William Garrity
Steven Greene
Bruce Haldors
Jan Harding
Steve Hartwig
Amy Haugerud
Timothy Hedges
Fred Holmgren
Sa Hong
Dana Hook
Holger Jensen
Steven Johnston
Kevin Jones
Wes Jorgenson
Edward Kistner
Barry Knight
Janice Kramer
Rahmi Kutsal
Diane Lenius
Jennifer Lowe
Jeff Lundstrom
Jeff Lykken
Dwight Malott
David Markley
Kenneth McGowan
Dan McKinney
Matt McMenamin
Dwight Miller
James Miller
Sky Miller
Jana Mirai
Clifton Morey
Randy Noble
John Norris
Tarelle Osborn
Mary Oslin
Jon Pascal
Christopher Robertson
Kathleen Robertson
Robert Robinson
Dave Rodgers
John Rowland
Don Russell
Arnfinn Rusten
Jesus Sanchez
Steve Sandelius
Richard Schaefer
Robert Shulock
Thomas Skillings
Carol Slaughterbeck
Michael Stringam
Arnon Sugar
Jay Swift
Troy Thrun
Larry Toedtli
Stu Turner
Stephen Wagner
Colin Wagoner
David Waite

Nancy Walker
Jane Ward
Jeffrey Webber
Matt Winkleman
David Winter
Daniel Wu
Ming-Jiun Jim Wu
Michael Yeoman
Loy Young
William Zbitnoff

WEST VIRGINIA (3)
Dayton Carpenter
Elwood Penn
Deborah Wilson


WISCONSIN (30)
Rajan Sheth

John Boldt
Richard Bub
Philip Budde
Michael Campbell
Russell Chesmore
Michael Davy
Terry Giles
David Glodowski
Carol Godiksen
R. Green
Kevin Hagen
Harvey Hammond
Julie Hoppe
Jeffrey Kronser
Thomas Lanser
William Mielke
Rosalie Morgan
James Owen
Andrew Platz
John Rathke
Matthew Richards
Theodore Richards
Richard Satterlee
Richard Smith
Amy Squitieri
Stanley Sugden
Yash Wadhwa
Kenneth Williams
Matthew Yentz


WYOMING (17)
Roger Jacobson

David Coffey
Travis Conklin
Thomas Crump
Jeremy Easum
James Evans
James Gores
Harry Hughes
Howard Johnson
Joseph Lord
Joseph Manatos
Paul McCarthy
Robert Overfield
Craig Shauers
David Shultz
E. Stetson
Lynn Stutzman

Mergers and Acquisitions

A **ECOM Technology Corp.** announced plans to acquire two U.S. engineering firms: **Earth Tech, Inc.**, and **Boyle Engineering Corp.**, further enhancing the firm's expertise in water/wastewater, transportation and environmental markets.

Earth Tech provides engineering consulting services to water/wastewater, environmental, transportation and facilities clients, and employs 7,000 people worldwide.

"By adding Earth Tech to AECOM, we immediately strengthen our position in our core water and wastewater markets. We also bolster our environmental, facilities and transportation businesses, while further expanding AECOM's global footprint," said John M. Dionisio, AECOM president and CEO.

The firm also entered into an agreement to acquire Boyle Engineering, a Newport Beach, Calif.-based engineering firm that specializes in the water sector, including drinking water, wastewater treatment and water-resource management. Boyle, which has a strong presence in the southeast and western United States, employs more than 600 people.

"We are excited about welcoming Boyle to the AECOM family," said Dionisio. "For more than 65 years, Boyle has been a leader in the delivery of water and wastewater services. They will enhance our leadership in the water and environmental infrastructure markets."

Calendar of Events

2008

MARCH

- 18** **Industry Improvement Initiatives—Are U.S. Firms Behind?** (online seminar)
- 19** **Developing and Implementing Winning Strategies for Engineers, Architects and Construction Companies** (online seminar)
- 25** **The Talent War—Recruitment and Retention in Today's Competitive Engineering Industry** (online seminar)
- 26** **New Approaches to Design Management** (online seminar)
- 26-29** **Business of Design Consulting (BDC) for the Engineering Firm of the 21st Century, New Orleans**

APRIL

- 1** **Thinking Outside the Inbox: Deploying an E-Mail Management Process Enterprise-Wide** (online seminar)
- 2** **Pandemic Flu—Implications for Your Firm and Your Clients** (online seminar)
- 8** **Merger and Acquisition Transactions—Looking Ahead** (online seminar)
- 9** **The Business Case for Sustainable Engineering Practice** (online seminar)
- 15** **Escaping the Wal-Marting of Engineering** (online seminar)
- 16** **rcep.net: The NCEES/ACEC Nationwide Portal to Continuing Education for Engineers** (online seminar)
- 27-30** **ACEC Annual Convention & Legislative Summit, Washington, D.C.**

Additional information on ACEC's events is available at www.acec.org. To add your events to this calendar, e-mail Andrea Keeney at akeeney@acec.org.

Now Hiring

Simpson Gumpertz & Heger is a national consulting engineering firm that designs, investigates, and rehabilitates structures and building enclosures.

We are always looking for highly qualified candidates interested in working on challenging and exciting projects in an environment that promotes employee growth and satisfaction. We have five offices: Boston, Los Angeles, New York, San Francisco, and Washington, DC.



From left clockwise: Macallen Building, Boston, MA; MIT Simmons Hall, Cambridge, MA; John Hancock Tower, Boston, MA; John Adams Courthouse, Boston, MA

We offer an excellent compensation and benefits package in a corporate culture based on learning and growth.



To learn more about SGH and current job opportunities, visit our web site at www.sgh.com/EmploymentOpportunities.

Please send your resume to:
Simpson Gumpertz & Heger Inc.
Attn: Human Resources Dept.
41 Seyon Street, Bldg. I, Suite 500
Waltham, MA 02453
Fax: 781-907-9009

MEMBERS IN THE NEWS

On The Move



Michael R. Flannery

Michael R. Flannery was appointed president and CEO of **Woolpert, Inc.** Flannery succeeds Rex W. Cowden, who stepped down and now serves as Woolpert senior vice president, where he manages ongoing acquisition initiatives.



Al Barkouli

Al Barkouli was named president and COO of **David Evans and Associates, Inc.** Barkouli succeeds Ken Wightman, who recently became CEO. Founder Dave Evans continues to serve as chairman of the board of directors.



Chuck Kohler

Chuck Kohler was appointed executive vice president of **Parsons Brinckerhoff (PB)**, where he will oversee information technology, risk management, staff development, business development systems and market intelligence. He was previously operations director for PB's Europe/Africa operations.



George J. Pierson

George J. Pierson was named COO of PB's Americas operations. Pierson, an engineer and attorney, joined the firm in 2006 as general counsel and secretary; he will manage the firm's operations in North and South America. **Stuart Glenn** was named COO of PB's international operations. Glenn succeeds Keith J. Hawksworth, now PB's CEO. Glenn will oversee PB's operations in Asia, Europe, Africa, the Middle East and Asia-Pacific regions. He is currently managing director of the firm's Australia-Pacific group.



Stuart Glenn



How Can One Simple Move Today Help Your Employees Enjoy a Better Tomorrow?

One easy way to help your employees get on the road to a more sound financial future is by offering them a 401(k) defined contribution plan. But if you've hesitated because you're concerned about the fiduciary responsibilities—or feel you'd need help with enrollment—the ACEC Retirement Trust has what you need.

As a participating employer in the ACEC Retirement Trust, you have access to the following:

- **Fiduciary support**—Prudential Retirement® is the recordkeeper for the ACEC Retirement Trust and has the experience and expertise to help you meet your fiduciary responsibilities as a plan sponsor. ACEC Retirement Trust offers fiduciary assistance by selecting the plan investment options.
- **Comprehensive advisory services**—The ACEC Retirement Trust, together with Prudential Retirement, can provide you with the tools and services you need to help ensure that the plan you adopt is well designed, cost effective, financially sound and compliant with applicable laws.

- **Automatic enrollment**—When you offer a plan that participates in the ACEC Retirement Trust, the automatic enrollment feature enables you to enroll all your eligible employees without requiring them to actively enroll.

Don't your employees deserve a more financially secure future? With a 401(k) defined contribution plan that participates in the ACEC Retirement Trust, you can help them get on the right path. If your firm is already participating in the ACEC Retirement Trust, simply contact your representative for assistance.

Do you need to join the ACEC Retirement Trust?
Contact Nancy Barrette at (800) 521-9463 or via e-mail at nancy.barrette@wachoviasec.com for information on how your firm can join.

Act today—to help your employees prepare for a better tomorrow.



Prudential Retirement's group annuity contracts are issued by Prudential Retirement Insurance and Annuity Company (PRIAC), Hartford, CT, a Prudential Financial company. Securities products and services are offered by Prudential Investment Management Services LLC (PIMS), Three Gateway Center, 14th Floor, Newark, NJ 07102-4077. PIMS is a Prudential Financial company. Prudential Retirement, Prudential Financial, PRU, Prudential and the Rock logo are registered service marks of The Prudential Insurance Company of America, Newark, NJ and its affiliates. Prudential Retirement is a Prudential Financial business.

Indirectly through subsidiaries, Prudential Financial Inc. owns 38% and Wachovia Corporation owns 62% of Wachovia Securities LLC. Nancy Barrette is a Financial Advisor for Wachovia Securities LLC, 1 New York Plaza, New York, NY 10292.



The ACEC Life/Health Trust makes it easier to offer affordable, high-quality benefit plans to your employees.

It's all about choosing the right people for the job.

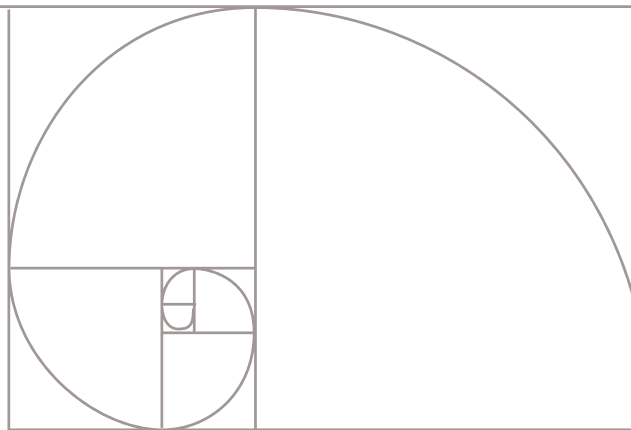
We know it's important to have knowledgeable people on your team. That's why the ACEC Life/Health Trust has chosen UnitedHealthcare, one of the largest health and well-being services companies in the world, to administer and insure the health care coverage plans from health, dental, vision, disability, life and more. Together, we're committed to providing solutions to our client base that includes more than 1,400 firms and 44,000 employees and their dependents who enjoy an enhanced health care experience and improved health.

As a member of the ACEC Life/Health Trust, you'll find the right plans for your whole firm in one place.

Additional ACEC Life/Health Trust benefits

ACEC Life/Health Trust members receive the following benefits:

- Specific rates, pricing and custom plan designs
- Dedicated ACEC sales and service teams waiting to serve you
- All governing decisions are made by the Trust specifically on behalf of engineering firms
- Preferred retention/renewal strategy and approach
- 24-hour NurseLineSM access
- Wellness representatives assigned specifically to ACEC member companies
- Fully integrated consumer-driven health products, including banking services
- Easy-to-use information on physicians and hospitals
- Online self-service tools that give members access to personal health records, plan transactions and account information at any time



Insured and serviced by:



©2008 United HealthCare Services, Inc. Insurance coverage provided by or through United HealthCare Insurance Company or its affiliates. Administrative services provided by United HealthCare Insurance Company, United HealthCare Services, Inc. or their affiliates. Health plan coverage provided by or through a UnitedHealthcare company.

The NurseLineSM service can not diagnose problems or recommend specific treatment. The information provided through the NurseLine service is not a substitute for your doctor's care.

UHCEW346178-002

**For more information
or a no-obligation quote,
call 1-877-275-3644 or visit
www.uhctoday.com/acec**