

# The VOICE

The official magazine of The Construction Users Roundtable

Fall 2008



## Globally Boundless

### An Owner's Guide to International Business

#### INSIDE:

- A Great LEAP: Modularization as a Strategy
- Crane Safety
- Litigation Woes for Green Building
- CURT Member Profiles
- Whose Job Is It To Train Construction Workers?



# The only tool you'll ever need to find the best quality contractor for your project

## BEST VALUE CONTRACTING

LOOKUP BY SPECIALTY:



### Advanced Lookup

#### FIND A CONTRACTOR

Thousands of Contractors for your needs.

City

City

State/Province

State/Province

Specialty Work Type:

Specialty

-- More Search Option --

-- Map Search --

SEARCH

RESET

#### FEATURED CONTRACTORS



**Contractor Name,**

Detailed Information about the Contractor, location and work performed



**Contractor Name 2**

Detailed information about the contractor, location and work performed.

Copyright 2006-2007. All rights reserved | [Privacy Policy](#)

# bestvaluecontracting.com



# Making Clients Successful

You don't have to look far for ways Burns & McDonnell makes its clients successful.

From the water you provide to the environment you protect, from the airports and roads you build and maintain to the electricity you generate and distribute. Burns & McDonnell serves both the public and private sectors, delivering innovative, sustainable and value-based solutions.

That's important to us, because we don't just work in the communities we serve. We live there, too. When we make it better for our clients, we make it better for all of us.

*Engineering, Architecture, Construction,  
Environmental and Consulting Solutions*



*Visit [www.burnsmcd.com/CURT](http://www.burnsmcd.com/CURT)*

Atlanta • Chicago • Denver • Houston • Kansas City, Mo. • Miami • Phoenix • San Diego • St. Louis

Chattanooga, Tenn. • Cincinnati • Fort Worth, Texas • Minneapolis-St. Paul • New York • O'Fallon, Ill. • San Francisco • Wallingford, Conn. • Washington, D.C. • Wichita, Kan.

Drug Testing

PFT/RFT

Safety Training

Safety Eyeglasses

Common Arc Welding

EVS (Employee  
Verification System)

Manpower Reserve

Immigration

Scaffold Training

Steel Erection

Project Management  
Training

Leadership Training

Red Wing Safety Footwear

Recruitment

Internship Program

# MOBILIZATION, OPTIMIZATION, STABILIZATION AND TRAINING FUND



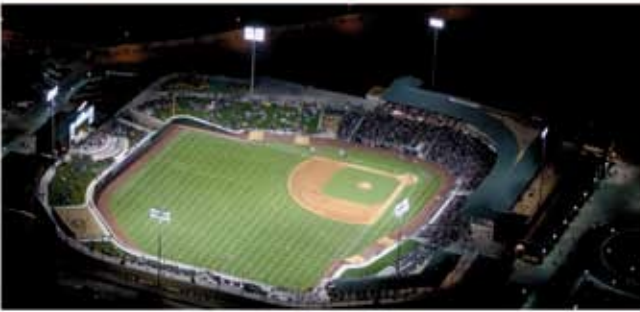
MOST

753 State Ave., Suite 800  
Kansas City, KS 66101  
913-281-5036  
[www.mostprograms.com](http://www.mostprograms.com)



# Training The Future Of Our Industry

Associated Builders and Contractors (ABC) is fully engaged to enable craft and construction management professionals to achieve success in all facets of the industry.



- 1 ABC WORKS WITH CONSTRUCTION MANAGEMENT STUDENTS** at 53 college campuses across the country. We strive to support a dynamic learning environment that exposes students to proven leadership practices to complement their technical education, so they enter the workforce ready to perform.
- 2 ABC PROVIDES BOTH FINANCIAL AND HUMAN RESOURCES** to support the Gulf Rebuild: Education, Advancement and Training (GREAT) campaign, an industry-wide initiative to recruit and train 20,000 new construction craft professionals in the Gulf Coast region by the end of 2009.
- 3 ABC SUPPORTS THE ACE MENTOR PROGRAM** through its five-year, \$250,000 donation. This program is designed to connect high school students with contractors, designers and engineers from leading construction and design firms who volunteer their time and energy. Additionally, ABC member firms and chapters nationwide work closely with the ACE Mentor program to provide services and support.
- 4 ABC EQUIPS EMERGING CRAFT PROFESSIONALS** with outstanding class- and field-based training programs through its network of chapter offices located across the country. More than 140 top finalists compete each year in ABC's National Craft Championships, a program that honors the most outstanding trainees from ABC chapter and member programs.

To learn more about ABC and its commitment to training tomorrow's construction leaders, visit [www.abc.org](http://www.abc.org)  
Associated Builders and Contractors, 4250 North Fairfax Drive, Arlington, VA 22203





## A Promise Delivered

At Turner, a promise made is a promise delivered. Our overriding promise is to clearly understand client needs and provide the highest level of services in the industry. To learn more about Turner visit [www.turnerconstruction.com](http://www.turnerconstruction.com).

Building the Future

**Turner**

**On the Cover:**

As American companies set up shop around the world they are quickly realizing that what's "normal" in the United States may not be so typical abroad. This article features tips and tales from some of construction's biggest international players. Read more on page 36.



**CURT LEADERS:**

- 9** Egon Larsen, CURT President
- 11** Jocelyn Scott, 2008 Conference Chairperson
- 13** Gregory Sizemore, Esq., CURT Executive Vice President

**GET TO KNOW CURT:**

- 14** Membership Information
- 16** Publication Order Form
- 18** CURT Comments

**COVER STORY:**

- 36** Globally Boundless: An Owner's Guide to International Business

**FEATURES:**

- 28** Leadership and the Emerging Generations: The Next Generation of Construction
- 43** Crane Safety: Is the Sky Falling?
- 47** A Great LEAP: Modularization as a Strategy

**LEGAL BRIEF:**

- 55** Litigation Woes for Green Building

**PROFILES:**

- 59** Architect of the Capitol
- 61** Contractor Profile: Fluor Corporation
- 63** Associated General Contractors of America

**LUC UPDATE:**

- 65** An Introduction to Local User Councils and the Western Council of Construction Consumers

**CURT INITIATIVES:**

- 68** The 2008 CURT National Conference
- 71** The Construction Workforce Development Center: Fighting the Perfect Storm

**BACK AT YOU:**

- 73** Whose Job Is It To Train Construction Workers?
- 75** CURT Welcomes New Members
- 77** BUYER'S GUIDE

Published For: **The Construction Users Roundtable** 4100 Executive Park Drive Cincinnati, Ohio 45241 Tel: (513) 563-4131 Fax: (513) 733-9551  
 E-mail: construction-users@curt.org Web: www.curt.org

**Published by** Matrix Group Publishing, Please return all undeliverable addresses to: 16516 El Camino Real, Suite 413, Houston, TX, 77062 **Toll Free Tel** (866) 999-1299 **Toll Free Fax** (866) 244-2544 **President & CEO** Jack Andress **Senior Publisher** Maurice P. LaBorde **Publisher & Director of Sales** Joe Strazzullo (jstrazzullo@matrixgroupinc.net) **Editor-in-Chief** Shannon Lutter (shannonl@matrixgroupinc.net) **Finance/Accounting & Administration** Shoshana Weinberg, Pat Andress, Nathan Redekop (accounting@matrixgroupinc.net) **Director of Marketing & Circulation** Shoshana Weinberg **Sales Manager** Neil Gottfred **Sales Team Leader** Rick Kuzie **Matrix Group Publishing Account Executives** Albert Brydges, Davin Commandeur, Lewis Daigle, Miles Meagher, Ken Percival, Peter Schulz, Vicki Sutton, Declan O'Donovan, Jessica Potter, Bruce Lea, Kevin Harris, Brian Davey **Advertising Design** James Robinson **Layout & Design** J. Peters ©2008 Matrix Group Publishing. All rights reserved. Contents may not be reproduced by any means, in whole or in part, without the prior written permission of the publisher. The opinions expressed in this publication are not necessarily those of Matrix Group Publishing.

Worldwide specialists in heavy lifting and transport

# MAMMOET



Mammoet is a world-wide specialist in heavy and complex lifting and transportation projects.

We engineer, lift and transport in the petrochemical/chemical, energy (including nuclear), civil engineering and marine/offshore industries.

Mammoet USA, Inc.  
20625 FM 521  
Rosharon, TX 77583 USA  
Phone 1 281 368 2200  
Fax 1 281 368 2178

Several locations throughout North America.

[www.mammoet.com](http://www.mammoet.com)



## The Challenges and Success in CURT's Future

I'd like to start my inaugural message by thanking the CURT organization and leadership for giving me the opportunity to become your new president. I am grateful and appreciative of the honor and vote of confidence the organization has given me with this challenging position.

It is an exciting time to be part of the construction industry and in particular leading many of those who will be counting on successfully implementing large capital programs at historic levels over the next few years.

There are and will be many challenges to overcome to reach our objectives. We have discussed, identified and are working on issues like labor shortages, contract strategies and getting more out of our engineering dollars. We also need to address the effects of these issues to accurately predict and incorporate the impact of these challenges into our schedules and costs as we go forward. The opportunities and positive effect the CURT organization can have on this is enormous. CURT needs and will take the time and effort to organize, facilitate and make the leadership and resources available to deliver this potential to the construction industry.

CURT has been very successful in organizing industry leaders to identify opportunities and make improvements for the betterment of the capital programs implemented by our members and industry in general. This facilitation has been one of the key deliverables we have accomplished at CURT over the years and has had a tremendous impact on successfully managing the ever changing environment of construction which we work in. I personally know it has enhanced programs that have been very successful at Air Products and is a key factor for Air Products' participation in CURT.

Over the summer the board members and I gathered for two days to review our strategic plans and chart what our direction will be for the next few years. Obviously, growing the CURT organization will be important in increasing our influence and impact to the industry. However, growth by itself is not the reason but more the result of delivering a difference to our customers and industry. We

concluded that our ability to get the decision makers to the table and the facilitation of identifying problems, opportunities and most importantly implementing solutions has been a key-value add-on of CURT. This process allows our members to not only influence but more importantly participate and gain experience in making the necessary improvements in our ability to create capital projects.

Going forward, we will be focusing not only on current problems in construction but also the methods, structure and resources within CURT to enable us to effectively facilitate resolution of these issues. We will be planning to roll out programs that enhance our infrastructure and CURT's ability to deal more efficiently and effectively with industry challenges. We will be enhancing staffing, resourcing, planning processes, communications, member participation, etc. at CURT to improve our efficient use and leveraging of our members' valuable time. We are looking at what our membership needs and wants through marketing plans and development programs to ensure we are delivering the value and addressing the right issues in a timely and effective manner. All of these efforts will be aimed at delivering to you, our customers, the leadership and competitive advantages that make a difference.

One final note that I am most excited about in our strategic plans, is that we intend to grow a CURT presence outside the continental U.S. Many of you have indicated that an international presence would benefit the global portions of your companies and allow them to take advantage of the benefits we have enjoyed in the U.S. Over the coming months we will be performing the research and developing the plans to make this a reality. Our early intent is to focus on Asia with an eventual activity or start on the ground in the spring of 2010. More information will be forthcoming on this exciting development.

Egon Larsen  
Air Products and Chemicals, Inc.  
CURT President

Obviously, growing the CURT organization will be important in increasing our influence and impact to the industry. However, growth by itself is not the reason but more the result of delivering a difference to our customers and industry. We concluded that our ability to get the decision makers to the table and the facilitation of identifying problems, opportunities and most importantly implementing solutions has been a key-value add-on of CURT.

Masonry comes  
in many beautiful colors  
including a particular  
shade of green.

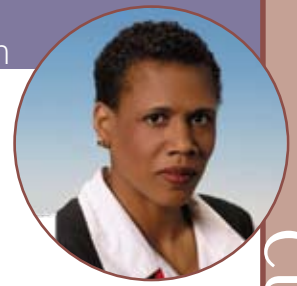
**MASONRY POSSESSES INCREDIBLE  
ENVIRONMENTAL BENEFITS.**

For starters, its wide availability makes shipping easy on the environment. What's more, many materials are made with highly recycled content, and chemical neutrality makes them readily reusable. Perhaps most significant is that masonry has insulating properties that reduce heating and cooling costs as well as the building's overall carbon footprint. To find out more, visit The International Masonry Institute at [www.imiweb.org](http://www.imiweb.org).



BRICK | STONE | TILE | MARBLE | TERRAZZO | PLASTER | CEMENT | RESTORATION





## Look Around and Learn at Our Conference

Look around at the next conference break. Do you see anything different? Do you see some faces you haven't seen at conferences before? Perhaps you see a few younger folks—but they're not the University of Cincinnati students Greg brings to help, since they are participating in all the conference sessions and not running mikes during the Q&A! They sure seem to have lots of energy!

We are pleased that we have members of the "Next Generation" sub-team joining us here at the 2008 CURT National Conference. The next generation of construction industry workforce comes to us with different backgrounds, experiences and skills than most of us had at the same age. They are comfortable collaborating and communicating using a variety of technologies, they are comfortable with multi-culturalism, they are accustomed to busy schedules and changing events. On the other hand, many of us have acquired the wisdom that comes from personal and professional experience, from successes and from failures. As we learn from them, they learn from us—could we ask for a better "win-win" situation?

In reflection, it has been a busy few weeks in the United States. The presidential elections have drawn to a close and, as we look to an administration change in Washington this January, what will be the platform we are driving to ensure our "next four years" are productive and profitable? Do we expect the industry issues we are currently facing to continue into the foreseeable future? Are there other issues looming on the horizon that we haven't yet noticed? Are we trying to anticipate them? Are we comfortable with the global megatrends happening around us and their impact

on our industry? Do we have the nerve to "change the game" if we have to?

I believe this Conference will help us answer some of these questions. For one, we have great insight here, brought to us by industry leaders such as Chad Holliday, CEO and Chairman of DuPont and Craig Martin, President and CEO of Jacobs Engineering Group.

Our hard working CURT sub-teams have also brought us new insight into leading edge safety practices and workforce productivity.

The Conference includes sessions which share some great precautionary stories too, to keep us out of litigation yet allow us to make risk and innovation work for us. At this CURT

Conference we're working hard to bring you the information you need to ensure a successful future for your company and our industry.

I urge you to take advantage of this wonderful opportunity to learn, share, network, collaborate and grow. Find someone new and learn something from them, and then share something with them. Make the Conference a learning session for your own self-development and then make sure you stay on a journey of lifelong learning. We hope that you use the lessons and advice from the Conference to develop a platform for making your company and the industry better in the next four years!

Jocelyn Scott, DuPont  
CURT National Conference Chairperson

I urge you to take advantage of this wonderful opportunity to learn, share, network, collaborate and grow. Find someone new and learn something from them, and then share something with them. Make the Conference a learning session for your own self-development and then make sure you stay on a journey of lifelong learning.

See page 68 of *The VOICE* for more details on the 2008 CURT National Conference.

# Cornerstone of CRAFTSMANSHIP



A NEW ERA OF CRAFT PROFESSIONALS

SAFE. PRODUCTIVE. SUSTAINABLE.



NATIONAL CENTER FOR CONSTRUCTION  
EDUCATION AND RESEARCH

[www.nccer.org](http://www.nccer.org)



## Relying on the Next Generation to Innovate and Sustain

The theme for this year's National Conference is "Strategies for a Sustainable Future: The Next Generation of Construction." The purpose is to explore strategies that will enable owners to thrive in a global economy, to plan while being cognizant of the environment and to attract the finest talents in both the craft and management sides of our business.

To better understand the "next generation," the National Conference Committee convened a Next Generation Advisory Group to assist in the planning and execution of the conference. This group, comprised of young professionals 30 years old and younger, was asked to assist in the planning of the conference and to make presentations. The purpose is to understand what they feel, what their professional expectations and aspirations are, how they communicate and what attracted them to construction in the first place. The goal is to help conference attendees better understand these "millennials" and to provide insight in order to develop effective strategies that will attract, train and retain outstanding talent.

We welcome their inputs and insights, however, we are more impressed with their willingness to collaborate and work with the "more senior" among us. Their passion is energizing and their commitment to excellence is admirable. It is truly a joy to work with them.

Having said all that, I would like to address my comments to these inspiring young professionals and other "newcomers" reading this article. I want to share some insight from someone a bit more advanced in the journey...the rest of you can listen in, too.

First, we are depending on you! As the industry's population ages, we must rely on you to innovate, create and sustain. Better ways of planning and executing construction projects should be researched and studied. Global resources must be evaluated and properly utilized. New processes,

products and methods must be developed. It's a tall order, but you can do it.

Many who have preceded you in this great industry have sacrificed and worked hard to provide you with concepts and tools to build upon. LEAN Project Delivery, ConcensusDOCS, BIM and other new technologies are yours to improve. Organizations like CII, CURT and NCCER are available for you to lead and grow. Yes, we are depending on you!

Second, you have a responsibility to collaborate with us and to help us learn and understand you. LinkedIn, Webinars, Avatars, MySpace, Facebook, iPhone, Podcasts and Social Networking are terms many of us are familiar with, but few of us over 40 fully understand. So it is your responsibility to "reverse mentor" us. Information flow and collaboration goes both ways. While young professionals are learning from the more experienced among us, be patient. Help us understand. Your words and actions are continually educating others around you.

Finally, on a personal note, dream big! The construction industry needs your passion, your enthusiasm, your energy, your knowledge and your inspiration. Your success and happiness in this industry depends on your willingness to help solve our problems...so go for it. Feel strongly about the things that matter and be smart! Think twice before you make decisions or do things. Be bold in what you stand for and careful what you fall for. In other words, hold fast to the values and principles you have brought to the table. Character is much more easily kept than recovered. Enough! Suffice it to say that God must adore young construction industry professionals because that's where all the fun begins. Welcome aboard!

Greg Sizemore, Esq.  
CURT Executive Vice President

While young professionals are learning from the more experienced among us, be patient. Help us understand. Your words and actions are continually educating others around you.

# Membership Information

## Membership Categories

### REGULAR MEMBERSHIP

Construction Owner: Any industrial or major commercial user of construction or maintenance services who spends at least \$75 million annually as a corporation. The company must be represented by at least one high ranking corporate policy maker usually the vice-president or corporate manager of construction or engineering.

### ASSOCIATE MEMBERSHIP

Contractor, Subcontractor, Specialty Contractor, Supplier, Service Provider: From time to time the Board may create a number of Associate Members positions. Provided space is available, Associate Members may be recommended by an Owner/Member and the recommendation must be accompanied by two letters of recommendation and be approved by a 2/3 majority vote of the Board.

### ASSOCIATION ASSOCIATE MEMBERSHIP

Any not-for-profit national trade association, research organization, or educational organization that provides services to the industrial or commercial construction industry may be eligible for membership in CURT and submit an application to join, provided they meet the Association Associate Membership requirements established by the Board of Trustees and an opening in this category of membership becomes available.

## CURT Members 2008

*Representatives from these companies are primarily Corporate Directors of Construction, Engineering or commensurate positions with decision-making authority.*

### OWNER MEMBERS

ABBOTT  
 AIR PRODUCTS & CHEMICALS, INC.  
 ALSTOM POWER INC.  
 AMERICAN ELECTRIC POWER  
 AMERISTAR CASINOS, INC.  
 ANHEUSER-BUSCH CO.  
 AT&T  
 BARRICK GOLD CORPORATION  
 BAXTER HEALTHCARE CORP.  
 THE BOEING COMPANY  
 BP PLC  
 CATERPILLAR INC.  
 CHEVRON  
 CHRYSLER, LLC  
 CISCO SYSTEMS  
 CITIGROUP  
 CONOCOPHILLIPS  
 CONSTELLATION GENERATION GROUP  
 DTE ENERGY  
 THE DOW CHEMICAL COMPANY  
 DOMINION GENERATION  
 DUKE ENERGY CORPORATION  
 DUPONT  
 DYNEGY GENERATION  
 EXELON CORPORATION  
 EXXONMOBIL CHEMICAL CO.  
 FIRSTENERGY CORPORATION  
 FLORIDA POWER & LIGHT - NUCLEAR  
 GENERAL ELECTRIC COMPANY  
 GENERAL MILLS, INC.  
 GENERAL MOTORS CORPORATION  
 HCA HEALTHCARE CORP.  
 HERCULES, INC.  
 HONDA OF AMERICA MFG., INC.  
 INTEL CORPORATION  
 JOHNSON & JOHNSON  
 KANSAS CITY POWER & LIGHT CO.  
 LINDE PROCESS PLANTS  
 THE MCGRAW-HILL COMPANIES  
 MEADWESTVACO CORPORATION  
 MERCK & COMPANY, INC.  
 NEVADA POWER CO.  
 ONTARIO POWER GENERATION  
 PFIZER, INC.  
 PRAXAIR, INC.  
 THE PROCTER & GAMBLE CO.  
 PROGRESS ENERGY  
 PSEG POWER, LLC  
 ROHM AND HAAS  
 SALT RIVER PROJECT  
 SHELL GLOBAL SOLUTIONS (U.S.), INC.  
 SOUTHERN COMPANY  
 SUNCOR ENERGY SERVICES INC.

SUNOCO, INC.  
 TAMPA ELECTRIC COMPANY  
 TENNESSEE VALLEY AUTHORITY  
 TOYOTA MOTOR MFG. NORTH AMERICA  
 TYCO INTERNATIONAL  
 U.S. ARCHITECT OF THE CAPITOL  
 U.S. ARMY CORPS OF ENGINEERS  
 U.S. GENERAL SERVICES ADMINISTRATION  
 WALT DISNEY IMAGINEERING

### CONTRACTOR ASSOCIATE MEMBERS

ALBERICI GROUP, INC.  
 BE&K  
 BECHTEL  
 EGIZII ELECTRIC, INC.  
 FLUOR CORPORATION  
 GILBANE BUILDING COMPANY  
 JACOBS ENGINEERING GROUP, INC.  
 RUDOLPH/LIBBE COMPANIES  
 THE SHAW GROUP, INC.  
 TETRA TECH EC INC.  
 TURNER CONSTRUCTION  
 WASHINGTON GROUP INTERNATIONAL

### ASSOCIATION MEMBERS

ABC (ASSOCIATED BUILDERS & CONTRACTORS)  
 AGC (ASSOCIATED GENERAL CONTRACTORS)  
 AIA (AMERICAN INSTITUTE OF ARCHITECTS)  
 AISC (AMERICAN INSTITUTE OF STEEL CONSTRUCTION)  
 FCA (FINISHING CONTRACTORS ASSOCIATION)  
 MCAA (MECHANICAL CONTRACTORS ASSOC. OF AMERICA)  
 NACA (NORTH AMERICAN CONTRACTORS ASSOCIATION)  
 NAWIC (NATIONAL ASSOCIATION OF WOMEN IN CONSTRUCTION)  
 NECA (NATIONAL ELECTRICAL CONTRACTORS ASSOCIATION)  
 NCCER (NATIONAL CENTER FOR CONSTRUCTION EDUCATION & RESEARCH)  
 SMACNA (SHEET METAL/AIR CONDITIONING CONTRACTORS NATIONAL ASSOCIATION)  
 TAUC (THE ASSOCIATION OF UNION CONSTRUCTORS)

# SMART SOLUTIONS FOR FALL PROTECTION

▶ Ask the Expert ... Ask Miller.

The screenshot shows a web browser window with the URL <http://www.millerfallprotection.com>. The Miller logo is prominently displayed. Navigation buttons include Home, About Miller, Fall Protection Products, Engineered Solutions, Training, and Other Miller Services. A search bar is visible with the text "search ...". A technical service number is listed: 800/873-5242 (+1 814/432-2118). The main content area features a large image of the Miller SkyGRIP Temporary Horizontal Lifeline System, described as having "MAXIMUM GRIPPING POWER". Two inset images show the system's application on steel and concrete structures, with the text "Interchangeable stanchion posts" below them.

**Your  
On-line  
Resource:**

- PRODUCTS
- SERVICES
- TRAINING
- APPLICATION SOLUTIONS

**MILLER**  
by SPERIAN

**GET  
CONNECTED**  
[www.millersmartsolutions.com](http://www.millersmartsolutions.com)

▶ Ask the Expert ... Ask Miller.

**800/873-5242**  
(Press 4 for Technical Service)

[www.millersmartsolutions.com](http://www.millersmartsolutions.com)

# The Construction Users Roundtable Publication Order Form

4100 Executive Park Drive, Suite 210 ~ Cincinnati, OH 45241-4023 ~ 513-563-4131 ~ 513-733-9551 (Fax)  
 gpalmer@curt.org ~ www.CURT.org

|                             |                  |       |
|-----------------------------|------------------|-------|
| <b>PERSONAL INFORMATION</b> | Name             | Title |
|                             | Company          |       |
|                             | Address          |       |
|                             | City, State, Zip |       |
|                             | Phone            | Fax   |
|                             | E-Mail           |       |

| Publication Name  | Price         | Quantity        | Total |
|---|---------------|-----------------|-------|
| UP-101 Construction Measures: Key Performance Indicators                                    | \$11.95       | _____           | _____ |
| UP-201 Construction Project Controls: Cost, Schedule, & Change Management                   | \$11.95       | _____           | _____ |
| WP-401 Confronting The Skilled Workforce Shortage   | \$11.95       | _____           | _____ |
| R-402 CURT Tripartite Initiative Executive Summary  | \$11.95       | _____           | _____ |
| R-402A CURT Tripartite Study On Extended Overtime On Construction Projects                  | \$11.95       | _____           | _____ |
| R-402B CURT Tripartite Study On Absenteeism In Construction                                 | \$11.95       | _____           | _____ |
| R-402C CTI Report: Eliminating Work Disruptions & Jurisdictional Disputes                   | \$11.95       | _____           | _____ |
| UP-403 Construction Labor: Managing The Construction Workforce                              | \$11.95       | _____           | _____ |
| T-404 Construction Labor: Craft Employee Training Evaluation Tool                           | \$11.95       | _____           | _____ |
| R-405 CURT Tripartite Initiative Report: Project Stakeholder Responsibilities               | \$11.95       | _____           | _____ |
| SS-406 CURT Tripartite Initiative: Workplace Attitudes Survey, Summary of Results           | \$16.95       | _____           | _____ |
| SS-407 CURT Owner Survey: Impact of Gulf Coast Hurricanes on Owner Projects, Survey Results | \$16.95       | _____           | _____ |
| UP-408 Construction Labor: Improving Productivity on Union Projects                         | \$11.95       | _____           | _____ |
| WP-410 CURT-CWDC Workforce Initiative 2008  | \$11.95       | _____           | _____ |
| UP-601 Construction Purchasing: Capital Purchasing & Contracting                            | \$11.95       | _____           | _____ |
| UP-701 Construction Quality: Achieving Quality On Capital Projects                          | \$11.95       | _____           | _____ |
| UP-801 Construction Safety: Contractor & Craft Worker Prequalification                      | \$11.95       | _____           | _____ |
| UP-802 Construction Safety: The Owner's Role  | \$11.95       | _____           | _____ |
| UP-803 Construction Safety: Prebid & Bid Clarification                                      | \$11.95       | _____           | _____ |
| UP-804 Construction Safety: Contract Terms & Conditions                                     | \$11.95       | _____           | _____ |
| UP-805 Construction Safety: Monitoring Contractor Performance                               | \$11.95       | _____           | _____ |
| UP-806 Improving Safety Programs  | \$11.95       | _____           | _____ |
| R-807 CURT Owners' Safety Blueprint   | \$11.95       | _____           | _____ |
| T-808 Construction Safety: Owners' Safety Blueprint, Assessment Tool                        | \$11.95       | _____           | _____ |
| TM-809A Construction Safety: Owners' Safety Blueprint, Training Module (Instructor Pack)*   | \$199.95      | _____           | _____ |
| * Includes one copy of TM-809B  |               |                 |       |
| TM-809B Construction Safety: Owners' Safety Blueprint, Training Module (Student Workbook)   | \$19.95       | _____           | _____ |
| UP-1001 Construction Strategy: Selecting Contracting Strategies                             | \$11.95       | _____           | _____ |
| UP-1002 Construction Strategy: Selecting The Right Contractor                               | \$11.95       | _____           | _____ |
| WP-1003 Construction Strategy: Optimizing The Construction Process                          | \$11.95       | _____           | _____ |
| WDVD-1004 Construction Strategy: LEAN Project Delivery                                      | \$49.95       | _____           | _____ |
| WP-1004A Construction Strategy: CURT's Path Toward LEAN Project Delivery                    | \$11.95       | _____           | _____ |
| WP-1201 Guidelines On The Use Of Reverse Auction Technology                                 | \$11.95       | _____           | _____ |
| WP-1202 Collaboration, Integrated Information And The Project Life Cycle                    | \$11.95       | _____           | _____ |
| <b>Price includes shipping and handling. Please allow 7-10 days for delivery</b>            | <b>TOTAL:</b> | <b>\$ _____</b> |       |

|   |  |  |  |
|---|--|--|--|
| <b>PAYMENT</b>  | <b>(Check and complete all appropriate boxes and lines)</b>  |  |  |
|   | <input type="checkbox"/> Visa <input type="checkbox"/> MasterCard <input type="checkbox"/> American Express <input type="checkbox"/> Discover                    # _____                    Exp: _____ |  |  |
|   | Signature: _____   |  |  |
| <input type="checkbox"/> Payment by check # _____ to "The Construction Users Roundtable" is enclosed. |  |  |  |

# Applying our Talent to World Class Projects since...1916



*Bigge Crane and Rigging Co. is North America's premier heavy lift and specialized transportation contractor providing engineered solutions for loads in excess of 150 tons for any application.*

**BIGGE**  
Established 1916  
**CRANE and RIGGING CO.**



10700 Bigge Ave. San Leandro, CA 94577  
Tel: 888-337-2444 • [info@bigge.com](mailto:info@bigge.com)  
[www.bigge.com](http://www.bigge.com)

# CURT Comments

Here CURT Officers, Board of Trustee Members and Committee Chairs voice their opinions on the next generation of construction, working overseas and the importance of the CURT National Conference.

## CURT Officers



### **Egon J. Larsen**

CURT President  
AIR PRODUCTS AND CHEMICALS, INC.  
Global Construction Manager  
Allentown, PA

"More and more companies are going global. That's why at CURT we will be venturing to go global as well. Over the next two years our plan is to establish a branch of CURT that will operate internationally. It will be a part of our existing organization and it will give our member companies the help and support they need to thrive in a global arena."

Larsen is responsible for Air Products and Chemicals, Inc.'s construction activities totaling approximately \$700M annually. This includes locations in the Americas, Europe, Asia and the Middle East. With over 25 years of experience in managing projects and construction, he has been instrumental in numerous capital project initiatives and development programs.



### **Michael G. Conley**

CURT Vice President  
DUPONT ENGINEERING  
Manager, DuPont Project Engineering Center  
Wilmington, DE

"We are all aware of and focused on the critical workforce issues facing our industry across the board—crafts, supervision, engineers, etc. A major discussion point in this ongoing dialog is the need to attract new talent into the industry.

We all can play a role—and need to play a role—in attracting new talent to this great industry by encouraging friends and family around us to become a part of the industry; by communicating the benefits of this industry to others; by providing leadership within our companies in attracting and developing new talent; and by being selective in the companies we work with that also are active in developing the work force."

Michael G. Conley has over 25 years of construction and engineering management experience. His career has spanned the United States and Europe, and includes construction, design, project controls, project management and business engineering management. He currently manages the DuPont Project Engineering Center, a unique organization whose goal is project execution excellence and the renewal of engineering skills within DuPont. In 2002, he became DuPont representative to the Construction Users Roundtable (CURT). He has served as co-chair of the CURT open shop subcommittee of the workforce development committee. Conley has also served on the Board of Trustees for the National Center for Construction Education and Research (NCCER).



### Larry Wargo

CURT Treasurer  
FIRSTENERGY  
Consultant, Contractor Services  
Akron, OH

"The key element of CURT's Conference is that it provides a forum for owners to be heard, to share ideas and to table concerns. Every year the momentum of this conference has been growing. Its visibility has been growing. Its influence has been growing. It's a great indicator of just how beneficial this Conference is."

Larry Wargo has been with Ohio Edison and FirstEnergy Corp. for over 30 years. Over the years, he has held a number of management positions in fossil generation and, most recently, is a consultant for contractor services. In addition to his duties with FirstEnergy Corp., Wargo serves in a variety of capacities with a number of different associations. These include CURT's Industrial Relations Committee, National Tripartite Committee, Overtime Sub-Committee; the Northwest Ohio Great Lakes Construction Alliance; the Boilermaker National Conference Planning Committee; the Ohio Construction Coalition Absenteeism Committee; and judge for the NMAPC Zero Injury Safety Awards Program.



### Curtis Ashley Baker, P.E.

CURT Secretary  
SOUTHERN COMPANY  
GENERATION  
Vice President, Construction  
Birmingham, AL

"I do not believe you can completely realize the benefits that CURT has to offer unless you attend the National Conference. These include great networking opportunities, interesting presentations on relevant topics by industry leaders, and educational break-out sessions that offer current trends and issue resolutions. The Conference is a true benefit to the industry."

Baker is currently responsible for the implementation of Southern Company Generation's environmental projects in Alabama, Florida and Mississippi, with project estimates totaling approximately \$3 billion. He has 28 years experience in Project Management and Construction in the Utility industry. Baker participates on the CURT Tripartite Initiative and the CURT Katrina Response Committee.

## Board of Trustees



### Ricardo Aparicio, AIA, Esq.

CURT Past President  
GENERAL ELECTRIC COMPANY  
Contracts Manager Project Services  
Birmingham, AL

"I know from personal experience how much hard work and dedication goes into making sure the National Conference continues to be CURT's flagship event for the year. The Board is indebted to the entire CURT staff and the 2008 National Conference Committee, for once again putting together what is sure to be a highly informative and proactive agenda."

Aparicio is in-house Counsel and Contracts Manager for General Electric's Corporate Properties and Services Operation. Aparicio holds a Bachelor of Architecture and Juris Doctor degrees from the University of Miami, FL and is a certified specialist in Construction Law in the State of Florida, where he holds concurrent professional licenses to practice architecture, interior design, construction and law.



### Steven B. Satrom

CURT President Emeritus  
AIR PRODUCTS AND  
CHEMICALS, INC.  
Vice President of Engineering,  
Energy Businesses  
Allentown, PA

"Much has been written about needs and attitudes of different generations in the workplace. The first thing to realize is that all generations want to feel pride in their work, to feel appreciated for a job well done, and to have opportunities to better themselves. That said, the younger generations appear more willing to change employers or careers if their needs are not being met. They value work-life balance and want to feel included in decisions concerning how their work is done. Specific practices to address some of these concerns might include supervisory training that includes blending the ideas of the new generations with the experience of the boomers in work planning, flexible holiday schedules, cafeteria benefit plans, and candid performance feedback. With today's competition for talent at all levels in the industry, enlightened business practices that are inclusive of the needs of a multigenerational workforce are a must."

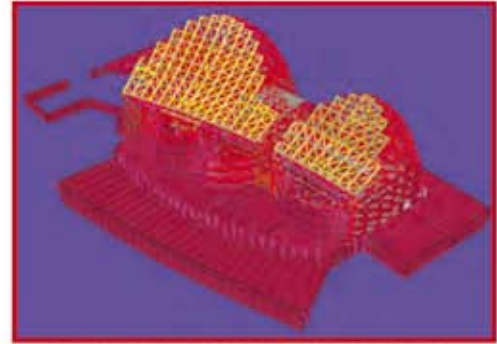
Satrom is responsible for Air Product's energy related Projects globally. He also acts as General Manager of the America's Engineering Center and has executive sponsorship of the Global Construction Management function. Satrom was the first President of CURT and one of the founding members. He was instrumental in establishing the initial focus for CURT, creating a viable entity and gaining industry acceptance and recognition necessary for it to become the "Voice of the Owner."



# MIDWEST STEEL, INC.

**Ranked #2 in the Nation!**

**Performance, Quality and SAFETY– #1 Priorities**



**EFFECTIVE STEEL STRATEGIES  
WITH 3-D MODELING TO DRIVE  
PROJECT COLLABORATION**



- Industrial (light, medium, heavy)
- Paint Systems
- Commercial (offices, high rises, airport facilities)
- Research & Development
- Hospitals
- Universities
- Power Plants
- Rack Structures

**Contact: Thomas R. Broad (313) 873-2220**

**2525 East Grand Blvd., Detroit, MI 48211**

**E-mail: [tombroad@midweststeel.com](mailto:tombroad@midweststeel.com)**

**[www.midweststeel.com](http://www.midweststeel.com)**

*Offering MBE Project Participation with our affiliate company, Indiana Bridge-Midwest Steel,  
an AISC MBE Certified Structural Steel Contractor.*



**Allen Bunner**

TYCO INTERNATIONAL  
 Director, Engineered Systems  
 Bath, OH

“The CURT National Conference is unique in perspective and agenda. Our perspective is owner-centric, yet we value the roles of all

our business partners in the challenges of building and maintaining our companies’ infrastructures. It is difficult for construction companies to find this perspective highlighted at a national event. The agenda provides access and direct dialogue with key business leaders using their construction services in North America and globally. The Conference has been growing each and every year and I attribute this to CURT’s endeavor for continuous improvement. The conference seeks feedback during and after each event, and strives to make each conference of value, fresh in content and germane to our current and future industry challenges. Our high percentage of repeat attendees return each year knowing the conference will merit their time investment.”

Bunner has had more than 30 years of mechanical and electrical contracting background, specializing in fixed fire protection systems, including more than 20 years focused in Special Hazards systems, and 15 years experience with International contracting and exportation of fire protection technologies.



**Charles G. Hardy**

GENERAL SERVICES  
 ADMINISTRATION, CCM  
 Deputy Director, GSA PBS Great  
 Lakes Region Office of  
 Property Development  
 Chicago, IL

“Now, more than ever, it is imperative that the owner community continues its dialogue with all sectors of the construction industry. The CURT National Conference provides this opportunity for dialogue, bringing together leaders from all the different sectors of the industry, to share success stories and lessons learned, along with goals and strategies for the future. I urge everyone to take advantage of these opportunities, that this Conference so aptly provides.”

Charles G. Hardy is a licensed architect and certified construction manager. Before joining GSA in 1991, Hardy was an architect with architectural firms in Florida and Illinois practicing in the areas of real estate development and office design. Additionally, Hardy is a retired officer of the U.S. Air Force Reserve.



**Gregory L. Sizemore, Esq.**

Executive Vice President  
 THE CONSTRUCTION  
 USERS ROUNDTABLE  
 Cincinnati, OH

“For the first time since its inception, the CURT National Conference formally recognized the value and necessity of engaging our young professionals, the rising stars of the industry. It is my expectation that the Next Generation Advisory Group will one day become a standing committee at CURT. At the same time CURT must recognize its responsibility in creating a nurturing environment for these young people who will be responsible for sustaining our businesses well into the future.”

Sizemore has over 25 years of construction industry and association management experience. For eighteen years Sizemore has been the Executive Director of the Construction Owners Association of the Tri-State (COATS) in Cincinnati, Ohio, and, in 1989 Sizemore started Sizemore & Company, a construction industry association management and consulting firm. He was instrumental in the startup of CURT and has served as the Executive Director since its inception. Sizemore serves on various industry and civic boards including the University of Cincinnati’s Industrial Advisory Council, the Advisory Committee to the Albany Technical College, the West Virginia Construction Coalition Conference and the ACE Mentor Board.

# What does 2 billion work hours look like?

**With 2 billion work hours, you could build more than 285 Empire State Buildings.**

The National Maintenance Agreements have facilitated more than \$290 billion in work and over 2 billion work hours. The NMA brings up to 14 crafts to the job working under one standardized set of terms and conditions making it the most attractive labor-management contract available to owners today. In conjunction with TAUC, these projects are executed by the safest, most productive team of contractors and skilled craftspeople in the construction business.

To see how the NMA and TAUC can provide a cost-effective solution to perform maintenance and repair work for America's industrial and manufacturing base, visit:

[www.ImprovingPlantLife.com](http://www.ImprovingPlantLife.com)

For monthly "newscasts" on NMA activity



**Celebrating  
2 Billion Work Hours  
2008**



[www.TAUC.com](http://www.TAUC.com)  
2500+ Contractors  
Utilizing 14 Skilled Trades





**Steve Mongiardo**

MERCK & CO., INC.  
Senior Director, Infrastructure,  
Environmental and Office Projects  
Lebanon, NJ

“The CURT National Conference has created a forum for owners and suppliers to the industry to unify their positions and share the latest in industry trends. It’s vital for the industry to gather and discuss the hot topics of the day because these are the first topics on our minds and they impact our ability to build and operate our facilities in a cost effective manner. The Conference has a great knack for identifying the industry’s ‘pinch points’ and then focusing on them to drive change.”

Steve Mongiardo has been with Merck & Co., Inc. for 21 years and currently manages projects at domestic Merck sites including West Point, PA; Danville, PA; Albany, GA; and Elkton, VA. In his position he is responsible for all major capital utilities/infrastructure projects which support new research and manufacturing facilities. These projects include new power generation facilities, high voltage distribution systems, water treatment facilities, office complexes, site development, parking garages, and chilled water distribution facilities. Steve Mongiardo was elected to the CURT Board in June 2007. He is also Co-Chairman of the Workforce Development and Industrial Relations Committee.



**CURT Committee Chairs**

**Education and Implementation Committee**



**Patrick Duffy**

Chairman  
TAMPA ELECTRIC COMPANY  
Manager, Project Management  
Tampa, FL

“Attracting and retaining younger workers to mitigate the labor shortage in construction and engineering is critical. Younger workers expect to change employers frequently. Appealing to Generation Xers and Millennials requires a different approach. Companies should emphasize their place in the community, environmental policies, and create a vision of what the employee and company can achieve together. Also important are the use of technology, family-oriented policies, continuous education, independence, flexibility, and a supervisor trained to understand the younger generations. Young workers have high expectations; meet them, assign meaningful work, and you will have excellent employees for the long term.”

Patrick Duffy has been managing projects at Tampa Electric for eight years and is currently responsible for a program of maintenance capital and plant improvement projects of \$50 million to \$100 million annually. Before joining Tampa Electric, he spent 10 years with a large engineering and construction firm working primarily for the process industries. Duffy has been active with CURT since 2002. He is also the Past President of the Florida Construction Users Roundtable (FCURT).

**LEAN Construction Committee**



**Albert Schwarzkopf**

Co-Chairman  
MERCK AND CO., INC  
Project Engineer Global  
Engineering Services  
Durham, NC

“The CURT National Conference is an opportunity for owners to network with other owners, union and non-union trade organizations and constructors. Additionally it provides seminar opportunities on numerous subjects that directly impact the effectiveness of construction. This single event allows best practices to be shared and questions to be asked and answered. I know of no other place where this can be done in as effective and comprehensive manner. The Conference is successful because it consistently brings high quality people presenting pertinent information to the issues of the day. It allows for discussion and it helps provide a path forward...which is always a recipe for success.”

Al Schwarzkopf has been with Merck & Co for 12 years and currently manages projects within the SE Region and Latin America for Merck. In his position he is responsible for all capital projects under \$5 million at the new Vaccine Manufacturing Facility in Durham, NC, and some additional projects throughout the Southeast region and Puerto Rico.

## LEAN Construction Committee



### George Lancos

Co-Chairman  
JOHNSON & JOHNSON WORLD-  
WIDE ENGINEERING & REAL  
ESTATE (WVVERE)  
Project Director  
Vacaville, CA

"I think that the National Conference's success can be attributed to being very diverse and cutting edge with respect to the presenters and the presentations that are given. The National Conference Committee works very hard to come up with a theme that meets the needs of the industry. They then try to make sure that all of the sessions leave the attendees with some kind of take away or learning that they might be able to use in their own business. I think that this information exchange is helping to build the audience from year to year."

George Lancos has been with Johnson & Johnson for 18 years. He has held various positions within Facilities, Procurement and Engineering throughout his career and is currently a Project Director within the Worldwide Engineering group. He is responsible for large capital project implementation on the West Coast.



## Workforce Development and Industrial Relations Committee



### Gerry Sprentall

Co-Chairman  
INTEL CORPORATION  
CSC Operations Construction Man-  
ager  
Chandler, AZ

"Welcome to the CURT National Conference. This year the theme, "Strategies for a Sustainable Future: The Next Generation of Construction" is especially poignant as our industry continues to face workforce shortages across the nation. We hope that the Conference leads to much discussion on what strategies are being used throughout the country to attract new workers and retain the ones we already have. As more and more people retire, we must do all we can to ensure we have a sustainable future."

Gerald (Gerry) Sprentall is a Construction Manager for Intel Corporation. He has over 26 years of industrial construction experience, and began his career in 1981, working in nuclear power, petro/chemical, pharmaceutical, food and beverage, and for the past 12 years, the microelectronic industry. Active in a variety of professional organizations, Sprentall also serves on the NCCER Board of Trustees. He holds a Bachelors Degree in Industrial Construction Management from Colorado State University.

## Safety Committee



### Arthur Goehry

Chairman  
JOHNSON & JOHNSON  
Director, Worldwide Engineering Services  
Johnson & Johnson  
New Brunswick, NJ

"We must realize that the Baby Boomer generation has fully supported and encouraged the assumption that our children had to focus on attending college so that they might achieve higher paying jobs in the professional arena. This strategy might have worked for awhile, but as we now take a look at what reality is, the more stable profession may very well be that within the construction skilled labor force. The economic environment has the 'professional' wary of the next take over and down size. The construction industry provides an avenue to satisfying, well paid, stable work. You can't argue with that. It is incumbent upon the construction user owners to encourage and communicate the needs and benefits of the skilled labor profession. An entirely different mindset needs to be developed and promoted or we won't have the infrastructure of transportation systems or buildings available for all the "white collar" professionals to work!"

Arthur Goehry has been with Johnson & Johnson for 26 years, holding various positions within Facilities, Project and International Engineering. He is currently the Director of Project Management in the Worldwide Engineering Group and is responsible for large capital projects throughout North and South America. Goehry has a Bachelors Degree in Civil Engineering from Lafayette College and a Masters of Science in Management Engineering from the New Jersey Institute of Technology (NJIT).



## National Conference Planning Committee



### Jocelyn Scott

Chairman  
DUPONT  
Director of DuPont Capital Asset Productivity  
Wilmington, DE

"We are living in times of great change and we have seen many industries knocked off their feet by sweeping change. If we are to control our destiny we must embrace the trends of the future and reinvent ourselves and our industry. Knowledge and planning are essential. Use the Conference to learn, share and network. Together we can transform the industry."

Jocelyn Scott joined DuPont in 1984 where she has held numerous positions in engineering, operations and R&D. Prior to her current position she served as Director of DuPont Engineering Research and Technology. She has also held the roles of Executive Assistant to the Chairman & CEO, Business Engineering Manager for DuPont Teijin Films joint venture and Planning Manager for DuPont Engineering. Scott is active in industry organizations including the Construction Users Roundtable. She has served on engineering education advisory boards for the University of Delaware, M.I.T., Penn State, the University of Michigan and local boards in support of minority engineering education.

# ARE YOU PREPARED TO MANAGE THE RISK INHERENT IN YOUR NEXT PROJECT?



Navigant Consulting is the leader in helping owners address the challenges of major construction projects with clear thinking, independent expertise and innovative solutions. We provide a full scope of consulting services that minimize the risks inherent in today's construction market from strategic planning and real estate acquisition to project planning, construction, closeout, and dispute resolution, when necessary.

Before you begin your next project, call upon the experts at Navigant Consulting. Turn to us for direction[s].

Contacts »

Terry Yeager 404.589.4207

**NAVIGANT**  
CONSULTING

### Process Transformation Committee



**Charles G. Hardy**

GENERAL SERVICES  
ADMINISTRATION, CCM  
Deputy Director, GSA PBS Great Lakes Region Office of Property  
Development  
Chicago, IL

Charles Hardy is also on the CURT Board of Trustees. See page 21 for more information.

### National Conference Planning Committee



**Norbert W.  
Young, Jr.,  
FAIA**

Vice Chairperson  
THE MCGRAW-HILL  
COMPANIES  
President  
New York, NY

"The current global financial issues are daunting and challenging each and every one of us! How timely then to be coming together at the CURT National Conference. It's a great opportunity to meet and network with people industry-wide and with not only a national but also a global perspective. The wealth of knowledge here for this event is staggering and here they all are, ready and willing to share their knowledge with you! There is no other opportunity like this, at any other event in North America."

Norbert W. Young, Jr., FAIA, joined McGraw-Hill Companies in December 1997 as Vice President, Editorial, for Dodge. His knowledge of their brands—Dodge, Sweets, Architectural Record, Engineering News-Record, GreenSource, 11 Regional Publications and construction.com—has been instrumental. Young is a registered architect who holds a Master of Architecture degree from the University of Pennsylvania. His professional affiliations include The American Institute of Architects, where he is a Fellow; the Urban Land Institute; the Construction Specifications Institute; and the International Alliance for Interoperability, where he served as Chairman of the IA-INA Board of Directors. Prior to McGraw-Hill, he was president of the Bovis Construction Group's Bovis Management Systems; was a partner at Toombs Development Company, where he managed all aspects of design and construction; and spent 12 years as a practicing architect in Philadelphia. ●



## Industrial Construction Built On Decades of Proven Experience

MC Industrial, Inc., an independent McCarthy company, serves the specialized construction needs of the industrial market nationwide. We've built our foundation on decades of proven experience in the automotive, food and beverage, aviation/aerospace, manufacturing and power markets.



www.mc-industrial.com • 314-968-3300



*tools for success*  
**RESOLUTION**

**Good Relationships Determine  
How Well Any Job Gets Done.**

This is why the Painters and Allied Trades LMCI is committed to enhancing the relationship between the contractor and union, to help reinforce the common agenda you both share.

We've devised strategies and seminars to make the collective bargaining experience a positive exchange of goals. By stressing the value of minimizing differences and emphasizing how both sides can achieve their goals, contractors can better serve their workforce and their customers.

The Painters and Allied Trades Labor Management Cooperation Initiative programs are the result of a partnership with the Finishing Contractors Association and the International Union of Painters & Allied Trades.

The tools you need to succeed can be found at [www.LMCIonline.org](http://www.LMCIonline.org) or by phone toll-free at (888) 934-6474 or (202) 637-0798.



Supervisor Training • Safety Training • Mutual Gains Bargaining • International Networking • Online Resources



# Leadership and the Emerging Generations:

## The Next Generation of Construction

**By Robert W. Wendover, The Center  
for Generational Studies**

Frank is the 55-year-old superintendent for a construction firm in suburban Philadelphia. He's been with the organization for 15 years, having spent the prior 20 in another firm within the industry.

Adam, Frank's assistant superintendent, is 38 and on his eighth job and fourth industry since he graduated from college. Having just completed his MBA in finance, Adam is exploring his options. "After all," he says, "I've learned everything I can here and have no desire to move up the ladder."

Ask Frank why he chose this career and he'll relate a long tale of starting out in the engineering business and one thing

led to another. Ask Adam why he chose this career and he'll respond, "Who says this is a career and why is that important?"

As Generation X (Xers) evolves into senior leadership roles over the next decade, they will have a profound impact on organizations throughout the country. This impact will differ considerably from their parents. But we have yet to see what effect this will have on work style, execution and organizational performance.

### **It's all about the job**

A comparison between Boomers and Xers reveals some striking differences:

**Loyalty:** Loyalty to an organization has been a hallmark of the Baby Boomers. Xers came of age watching their parents suffer layoffs and the struggles involved with maintaining a career. They have surmised that demonstrating loyalty to one organization is not a benefit and probably a detriment. Many will never allow themselves to become so emotionally or financially attached to one organization.

**Socialization:** Baby Boomers have used the workplace as a major source of social contacts. Their offspring, the Xers, have developed a far different strategy. With the coming of the electronic age, these young professionals have taken to

## WHAT YOUNG LEADERS HAVE TO SAY

**NAME:** Lamont Johnson Jr.

**AGE:** 28

**COMPANY:** BE&K Construction Co.

**POSITION:** Chief Field Engineer

**Q** If you could give your employer a list of your top five “wants/needs” to stay at your job, what would they be?

They would be:

1. The opportunity for advancement;
2. A competitive salary/benefits;
3. Acknowledgement that my hard work is noticed;
4. A work environment that promotes teamwork and unity (for example, managers that are easy to get along with and teams that work together); and
5. Knowing that the company values its people (for example, training, daycare, facilities, and tools to work with).

**Q** Do you think there is a significant difference between how Generation X and Baby Boomers view work ethics?

I don't think that there is a significant difference. I just believe that the opportunities are greater for this generation than they were for the Baby Boomers. Many Generation Xers realize that there are many opportunities at various employers, especially in the engineering and construction industry at this time. With the workforce becoming more global, the opportunities are vast and an employee doesn't have to stay in an unsatisfying position because it is the only opportunity. As a member of Generation X, we work to live instead of live to work.

Also, in many instances, we have seen employees work very hard and then get laid off the next year. Thus, many employees do not show company loyalty because they realize that this job may not exist tomorrow. I believe that this generation of employee is of the mindset that, “I am only as loyal to the company as the company shows its loyalty towards me.”

**Q** Do you ever feel you are looked at differently because you are young amidst a workforce that, in this industry, is generally older? Are your opinions/ideas respected?

I know that I am looked at differently because I am younger than most of my counterparts. During most meetings I am the youngest

person sitting at the table. I do find that my ideas and opinion are respected, though. However, I believe as a young person you must enter into most situations with a sense of humility. I find that many of my counterparts will treat a younger person as an equal, if we don't come in with a “know-it-all” mindset.

**Q** Technology is a factor when it comes to generational differences. Where as you grew up with computers, older generations may not see the benefits of using advanced technologies, such as Building Information Modeling, in the office. Have you encountered situations where technology has been an issue?

I would not say that technology is an issue in regards to generational differences; it is usually an area in which the generations can come together. In many situations I have found that if I help an older colleague with a technology issue, then they are more acceptable in aiding me in other areas that they may have expertise.

**Q** What are your expectations for your employer/managers?

I expect my manager to give expectations, direction and feedback. I would expect my manager to be exact in defining goals and responsibilities, while allowing me the freedom and opportunity to achieve these results in my own manner.

**Q** Have you managed employees that were older than you and were you accepted in a manager's position?

Yes, I have managed employees that are older than I am. So far, I have not had any problems and they have accepted me as a manager. I think that this plays into any career, no matter what your age or experience level; if you treat people with respect and define expectations then you will see proven results.

**Q** In an age where construction workers of all kinds can be hard to find and even harder to retain, what suggestions do you have for the owner community to attract young workers, and keep them around?

We must keep wages competitive, promote the industry at all age levels, and treat employees as a valued asset. We must realize that a company is only as good as the people that work for it.

*Continued from 28*

the Internet to connect with those they care about and to find new friends. They are careful about developing close relationships in an organization they may choose to leave tomorrow. They see a job as a job, not as a source for social contacts.

### Personal job identification:

Without drawing too broad of generalization, Boomers, as a cohort, have lived to work. Their evolution as the first dual-career couple generation produced millions of latch-key kids who surmised that parents' careers came first

in many situations. Xers work to live. This has been demonstrated amply in the attitudes they display about work ethic and loyalty. While many Baby Boom leaders have allowed themselves to be consumed by their corporate identity, those in the next generation will actively

*Continued on 30*

Continued from 29

strive for a clear separation between family and work life. "After all," they will say, "It's only a means to an end."

**Work/life balance:** If there is an issue where Boomers and Xers differ in a most pronounced way, it is in the subject of work and life balance. Xers are unwilling to work the long hours that many present-day jobs expect. They rail against traditional, but inflexible, organizational practices that cost them

time away from family. While they are determined to perform well on the job, they wonder why work has to be performed at the office when it could be done at home or at the beach while spending time with family and friends.

**Education and training:** Over the past 20 years, there has been a tectonic shift from an emphasis on education to that of vocation. While Boomers chose liberal arts and science majors

as undergraduates, Xers have chosen engineering, business, finance, and computer programming. While no one should chide these young leaders for their choice of major, their ascendancy into senior leadership will be colored by a different sense of the value of education than their parents. But as this generation has emerged better educated, employers, in turn, have raised their expectations as well. Yet these same employers

Continued on 32

## WHAT YOUNG LEADERS HAVE TO SAY

**NAME:** Justina Quinney

**AGE:** 24

**COMPANY:** Southern Company Construction

**POSITION:** Field Engineer

**Q** If you could give your employer a list of your top five "wants/needs" to stay at your job, what would they be?

They would be:

1. A defined career path;
2. A good work environment;
3. Enough vacation or time off to do services...mission trips, etc.;
4. Recognition for over and beyond work; and
5. Company stability.

**Q** Do you think there is a significant difference between how Generation X and Baby Boomers view work ethics?

I have found that our generation will not be as loyal to one company, whereas the older generation might have worked for the same company for over 30 years. I don't believe that our generation will make it that far with one company. However, I don't agree that the younger generation is lacking as much with our work ethics. I feel like we have a lot of young people with tons of drive to succeed and will put in that time to move up in their company.

**Q** Do you ever feel you are looked at differently because you are young amidst a workforce that, in this industry, is generally older? Are your opinions/ideas respected?

Being young and a female is always different in our industry. However, you must not feel inferior and you won't be. I have learned to stand my ground and this is well known by the "older" folks. I do believe that my opinions are respected in most instances, but I know that there is a lot for me to learn so

when I don't have the best ideas, then I do not feel slighted. I just learn from the circumstances.

**Q** Technology is a factor when it comes to generational differences. Where as you grew up with computers, older generations may not see the benefits of using advanced technologies, such as Building Information Modeling, in the office. Have you encountered situations where technology has been an issue?

I have seen generational gaps in technology, however, it is something we can all learn with a little more training.

**Q** What are your expectations for your employer/managers?

I strongly believe in mentoring because there is so much knowledge that you can both share with each other. I do expect my managers to help with weekly planning with orders/directions. That way, everything is very clear. I hate not having defined expectations. Managers should review their direct employee's roles and responsibilities the first day of work and not put this off. When this does not happen, new employees are left with a confused and unwanted perception.

**Q** In an age where construction workers of all kinds can be hard to find and even harder to retain, what suggestions do you have for the owner community to attract young workers, and keep them around?

I believe to attract young workers in the construction industry a company must advertise young employees in their company that love their job. I know the biggest attraction for me to enter the industry was from students who have experienced cooperative learning programs and loved what they were doing. Also, keeping employees around should not be so hard if they feel welcome and respected. Pair up a newcomer with an experienced employee and develop good new hire training.

skire.com

# BREAK NEW GROUND



Schedules are important, but they don't represent the entire picture. Spreadsheets are useful, but they can't deliver deep visibility, be easily audited, or enforce approval processes. That's why many owners are breaking new ground—with Skire Unifier™.

Unifier is the leading capital project, integrated workplace, and project portfolio management platform. It has proven itself many times over—from managing programs of ongoing improvements to highly visible, multi-billion-dollar capital projects.

***We map to your business processes***—without any programming.

***You accelerate decision-making and minimize risk***—with visibility across your project portfolio and into project budgets, costs, forecasts, and funding sources—in real time.

***We've done this before***—100-percent Web-based with standard configurations, we integrate with your existing systems to get you up and running quickly.

***Before you break ground or start your next capital improvement projects, do it with the leader.***

***Contact us at 866.467.5473 or visit us at [www.skire.com](http://www.skire.com).***

Please come see us at the CURT Fall Conference  
November 10-12 in Rancho Mirage, CA, at Booth Number #38!

Skire

© 2008 Skire, Inc. All rights reserved.

*Continued from 30*

sometimes complain of a lack of critical thinking skills among these new leaders.

**Attitudes toward teamwork:**

Baby Boomers have embraced a myriad of teamwork concepts since their popularity began 30 years ago. Introduce a new teamwork concept into today's organizations and Xers will be polite while containing a strong urge to run for the exit. Experience has taught them to wait before embracing a new

initiative for fear that its momentum will evaporate within the first few weeks.

**How will Xers differ as leaders?**

As this new generation of leaders begins to migrate into positions of senior responsibility, they will transform both vision and practice. Here's how:

**Emphasis on life balance:**

The tendency of Xers to focus on

balancing work with the rest of their lives has caused dissonance between the generations. As they assume responsibility at senior levels, organizations will make a shift in the way that work is evaluated. For older workers, there will be less intrinsic recognition and reward for long hours and similar sacrifices. The overall emphasis will transition to a truly outcome-based measurement of performance.

*Continued on 33*

**WHAT YOUNG LEADERS HAVE TO SAY**

**NAME:** Natasha McCurry

**AGE:** 33

**COMPANY:** BE&K Construction Co.

**POSITION:** Project Support Systems Analyst

**Q If you could give your employer a list of your top five "wants/needs" to stay at your job, what would they be?**

They would be:

1. Ethics;
2. Stability;
3. Work/life balance;
4. Team atmosphere; and
5. Opportunities to help make the organization more consistent and productive.

**Q Do you think there is a significant difference between how Generation X and Baby Boomers view work ethics?**

Yes. I think many individuals from the younger generation have seen their parents as workaholics; but in entering the workforce have found that many situations that are labeled as "urgent" turn out to be a "hurry-up-and-wait" situation. Some individuals stay as long as it takes to get the job done, pouring their whole heart into it and many times, they are not the ones who get recognized for the accomplishments. The result is that the employees may feel that their priorities are out-of-line and adjust their behavior to match the reward.

**Q Do you ever feel you are looked at differently because you are young amidst a workforce that, in this industry, is generally older? Are your opinions/ideas respected?**

Although our senior colleagues have significantly more experience, I have never felt that they look down at us. They respect the efficiency and ideas that we bring to the table and

seem honored when we ask for their insight. They welcome our questions and are willing to help when we ask.

**Q What are your expectations for your employer/managers?**

Open communication is imperative. We need to be kept informed of upcoming changes or strategies. More specifically and more importantly, though, and still keeping with that thought, is to provide a specific growth development plan for employees to be able to refer to frequently. This growth development plan should graphically represent the various opportunities throughout the company, and should not only provide detail regarding requirements to move to the next level but also should provide information about training that the company offers to achieve those requirements.

Managers should also either recommend a mentor for new employees, or give the employee an option to select their own mentor (multiple mentors recommended), and the manager should conduct a minimum of semi-annual formal reviews (with the mentor and employee) of the employees' progress toward this growth.

**Q In an age where construction workers of all kinds can be hard to find and even harder to retain, what suggestions do you have for the owner community to attract young workers, and keep them around?**

We need to do more planning and standardization of repetitive processes. Constant change can be frustrating, particularly when schedules are constantly being compressed. Initiating a collaborative partnering concept between the client and all members of the construction team, combined with occasional opportunities to interact with each other outside the project's requirements, helps individuals to establish a positive rapport that results in better productivity, increased client satisfaction, and increased employee satisfaction.

Continued from 32

### **Less willingness to travel and relocate:**

This same desire for balance will result in more judicious travel practices. While one should not discount the importance of traveling to important customers and company sites, technology is already eliminating a portion of these practices. As Generation X assumes responsibility, they are sure to take full advantage of this option.

### **Shorter average leadership tenure:**

Those in Generation X have already demonstrated that they view jobs more as contracts than careers. Xers place a high value on the ability to position themselves for the next opportunity. This, they feel, ensures economic security, intellectual stimulation, and an ability to maintain a healthy balance of life and work.

### **An international perspective:**

The members of Generation X think nothing of conducting business abroad. After all, they matriculated into the American workforce at the beginning of

globalization. As international borders continue to dissolve, they will embrace management practices they believe will augment the traditional approaches in the U.S.

### **Increasing emphasis on technology as a decision-making tool:**

Generation X has grown up learning to trust the computer. It is only natural then that its leaders will search for ways to use it as a means for improving efficiency. The long-term impacts of this practice remain to be felt. But it is sure to have a critical effect on certain types of organizational decision making going forward.

### **A more perfunctory style of communication:**

Generation X has also come of age with e-mail and text messaging. They tend to communicate with a wider range of people during the day than older generations. But these communications are generally brief, to the point, and tend not to have the emotion attached to them that one uses in a

telephone conversation. Going forward, these emerging leaders will foster a more detached style of communication than we have ever seen.

### **Preparing for the new cadre of leaders**

Generation X will vastly alter the landscape of organizational leadership going forward. As the next decade evolves, this intergenerational transition will occupy a great deal of time and effort. But the organizations that succeed in coping with these changes will be the ones that work to anticipate and address these challenges now. Here are some questions to consider:

- How will your organization's leadership practices evolve over the next few years as the members of Generation X assume senior level responsibilities?
- How might your organization's operational model change over the next few years based on these trends?

Continued on 34



"Just three years out of school and I'm already changing the infrastructure of NYC"

Barbara Moses, Engineer, Skanska in New York

As a participant in Skanska's mentorship program Barbara Moses gets to work on six job sites in three years. "I wanted to be out in the field – and here I am," she says. So far she's worked as an estimator in the main office, as a field engineer on a water treatment plant and now she's a cost engineer on the FDR expressway. Throughout the program she receives mentoring support from VP Mike Cobelli. "It's great to have someone I can talk to about my work and my career," she says. But what Barbara appreciates the most is the wide variety of people she's encountered: "Everyone knows so much and they're all willing to pass it down." Read more about the mentorship program and the different projects Barbara has worked on at [skanska.com](http://skanska.com).

**SKANSKA**

[www.skanska.com](http://www.skanska.com)

# NAWIC

Enhancing the Success of  
Women in Construction  
Since 1955

*Building  
Your Future*



**National Association of  
Women in Construction**

**170 CHAPTERS  
ACROSS THE COUNTRY  
FIND YOURS AT**

**www.nawic.org**

*Continued from 33*

- Where might the dissonance occur between present and future leaders within your organization?
- What steps might you take to anticipate and work to resolve this dissonance?
- How will the evolution in leadership be perceived by the "rank and file" within your organization? What dissonance might this create?
- What steps might need to be taken to address these perceptions and resolve this dissonance? ●

*Robert W. Wendover is  
Managing Director of The Center for  
Generational Studies and the author  
of "Crossing the Generational Divide".  
Contact him at [wendover@gentrends.com](mailto:wendover@gentrends.com).*

An advertisement for I.M.P.A.C.T. The background is a photograph of a construction worker wearing a hard hat and safety vest, working on a steel structure. The text is overlaid on the image. The main title is "Ironworker Management Progressive Action Cooperative Trust" in a yellow, stylized font. Below it, a list of services is provided in a white box with a dark background. At the bottom, there is a logo for I.M.P.A.C.T. and the slogan "A NEW WAY OF DOING BUSINESS" in large, bold, yellow letters. Contact information is at the bottom right.

**Ironworker  
Management  
Progressive  
Action Cooperative  
Trust**

- Local IMPACT  
Labor-Management  
Boards Nationwide**
- Workers Comp  
Insurance Programs**
- Drug Testing**
- Safety Training**
- Foreman Training**
- National Welding  
Certification Program**
- National Health  
Insurance Program**
- National Safety &  
Health Roundtable**
- Project Tracking  
Systems**
- Union Leadership  
Training**
- Marketing**
- Recruitment**

**A NEW WAY OF  
DOING BUSINESS**

**800.545.4921  
www.impact-net.org**

**I.M.P.A.C.T.  
REINFORCE OUR FUTURE**



## Delivering Success

**There are no problems, only solutions.**  
We work as your partner to maximize the efficiency of your space and streamline your budget and schedule. Our superior project delivery, collaborative team approach and focus on owner best interests are Structure Tone hallmarks leading to 75% annual business from repeat customers and our top ranking as a worldwide construction services firm.



**STRUCTURETONE**

Pavarini | Constructors | Pavarini McGovern  
[www.structuretone.com](http://www.structuretone.com)

**Your Project. Your Needs.  
Our Construction Expertise.**

© John Baer/PDM Pictures



# Globally Boundless:

## An Owner's Guide to International Business

The entire world is just a hop, skip and a jump away. This statement has never been more true as American companies set up shop at all corners of the earth. Opening plants and building in other countries though, does not come without challenges on a number of fronts, from safety to finding reputable companies to partner with to ensuring that cultural faux pas don't lead to embarrassment for your company and for yourself.

Egon Larsen, Global Construction Manager for Air Products and

Chemicals, Inc. and President of CURT, knows first-hand how much business overseas has increased and the amount of work Air Products has had to do to ensure operations around the world run smoothly. Larsen, who travels regularly to visit projects in Europe, Asia and the Americas, says that Air Products currently has projects on the go on five of the seven continents around the world.

Larsen says that while, "Each location comes with its own set of issues, the key to resolving problems and running a successful project is to figure

out what works at each location." For example, "In the United States good safety records are often rewarded with lunches or family BBQs. However, when we polled workers in China as to what they'd like to have as rewards, the top vote was for soap and shampoo. From that survey we learned never assume what workers value. Now we always ask because we've learned that we need to understand the country beyond just understanding the language. We have to understand the people and their values."

### An owner's perspective

"Some of the biggest challenges we see overseas are finding adequate skills and capabilities, and understanding what client's wants and expectations are, permitting, local ethics, common practices, and how to get the job done in the location. I suggest that before owners embark on projects globally they conduct an investigation report early on. This includes hiring an experienced third party firm to find companies that have a working presence in the area who understand safety, quality, schedule, cost and ethical standards; communicating with other peer owner companies that have a presence in the area; and establishing research with other multinational owner and contractor firms that have working experience in the country's market and environment."

*Joe Gionfriddo, Corporate Engineering Global Construction Management Process Owner, Procter and Gamble*



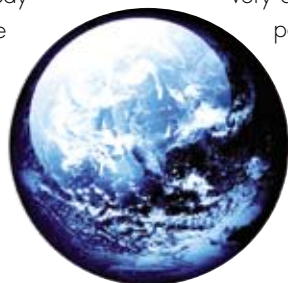
Photo by Paulo Correa.

## Safety first

The biggest issue on any construction project is safety. However, while keeping everyone safe is part of the culture of construction in the United States and Canada, elsewhere in the world it is not necessarily priority number one and often falls behind schedule and budget. As Handy Truitt, Division Manager of Global Facilities Services, Human Services Division of Caterpillar Inc., explains, the first step taken when Caterpillar embarks on an overseas project is to network with whoever they can to learn the names of competent suppliers (design consultants, design/builders, contractors, etc.) and then Caterpillar further explores those companies that repeatedly come up as having good records.

When it comes to hiring potential builders, Truitt explains that, "We not only visit their main office, but also examples of recent buildings they've completed, especially any that are similar to what our company intends to build. During these visits, we pay particular attention to the 'fit and finish' of the building, and we talk to the building owners and get their feedback on how the builder was to work with. This not only serves to help pre-qualify contractors whom we eventually elect to invite to bid, but can also serve to establish a common understanding of the level of quality that we expect and require."

Truitt adds that many other countries do not have safety information as robust as what is available in the U.S. When this is the case Caterpillar visits companies' construction sites. "This can help us judge whether the construction activities are being performed safely," Truitt says.



This was a major oversight for the owner and the general contractor because it increased our risk for potential safety problems."

Even with the most in-depth research, Tom Weise, who traveled extensively for Intel Corporation as Director of Facilities, Materials and Services before retiring, says that you can't plan for the unexpected. He recalls a project in Israel where they had not identified the fact that the majority of the labor pool was coming from the Baltic regions and not from the local market. As such, "We had to give safety training each morning in seven different languages. This was a major oversight for the owner and the general contractor because it increased our risk for potential safety problems."

In order to reduce incidents like this one, Weise says that Intel has a strategy that includes an active list of pre-approved contractors. When work begins in countries where Intel has not previously worked, Weise says that, "New contractors are groomed to meet our safety expectations."

Above all, the key to safety success, says Weise, is to, "Plan and plan some more. Make your expectations very clear on issues such as safety performance and kickback issues—which, if discovered, need to be dealt with swiftly and aggressively."

"We had to give safety training each morning in seven different languages.

## Open dialogue

Weise, who is also a Past President of the Construction Users Roundtable (CURT) says that talking with other owners is paramount to achieving success. He says that one of the advantages of being a member of CURT is, "Making contact with other individuals and companies that have similar interests and builds, which

## An owner's perspective

"At Dow, the biggest challenges we face when building overseas are:

- A lack of understanding of local codes and permitting requirements;
- Our own business expectations around cost and schedule and what can actually be achieved in country;
- A location's impact on supply plans;
- Tariffs on imports and local content requirements; and
- Skill set and availability of the local labor pool, especially when it comes to understanding and accepting Dow's safety standards.

In order to overcome these challenges we often partner/joint venture with a company that is already working in the country on large projects or first time projects in the country. We will also use independent third party data on the industry if available, as well as IPA if they have data on the location.

I'd also strongly suggest that owners and their management learn the local customs and hire locals for interfacing with governmental authorities. It's also a good idea to hire consultants with area or global knowledge. It can (will) be hard to find companies that will immediately meet your standards. You can find companies that will have great documentation on standards and procedures but when you go to an actual job site you see no one in the field has any idea that those standards exist and in environments where employees are paid for work done, they will not want to follow any procedure that slows them down.

Above all, go slow and expect the unexpected. For example, in China we learned that just because someone says yes it doesn't mean they agree with you, it just means they hear what you say."

*Bob Schulz, Construction Technology Center Manager, Engineering Solutions, The Dow Chemical Company*



# DIG THIS DEAL

**0%** | **48**  
FINANCING | MONTHS



POWER AND RELIABILITY ARE NOW EVEN MORE ATTRACTIVE. CALL TODAY FOR THE TEREX DEALER NEAR YOU AND SAVE WITH SPECIAL FINANCING.



**1-866-390-7266**

ON ALL TEREX® WHEEL LOADERS AND EXCAVATORS

The above rates and terms are offered exclusively by Terex Financial Services™ for Terex® Excavators and Wheel Loaders funded from 06/01/08 through 12/31/08. Rates and terms are subject to change or cancellation at any time without notice, subject to credit approval and completion of satisfactory documentation. © Terex Corporation 2008. Terex® is a registered trademark of Terex Corporation in the United States of America and many other countries.

leads to conversations on local market risks and mitigation practices.”

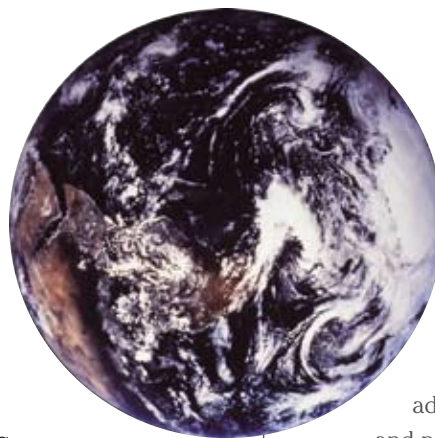
Egon Larsen, CURT’s current President couldn’t agree more. In fact, he says that one of the reasons for Air Product’s involvement in CURT is the open dialogue Weise speaks of. “CURT gives us the opportunity to benchmark with other companies who are facing the same issues we are or, who have already overcome issues and may have advice. It’s not like you can walk up to the CEO of another company and say, ‘tell me all your secrets’. Membership in CURT though, gives us an avenue to dialogue, providing numerous networking opportunities, as well as the chance to hear other owner companies in similar situations speak about what’s working or not working for them.”

Truitt, who says that Caterpillar plans to invest over \$750 Million (USD) in new facilities in Asia Pacific and other emerging markets in the next five years,

explains that the company actually has a network with other CURT members who also have international operations.

“We have done a considerable amount of benchmarking with one or more of the facilities staff of other global companies.”

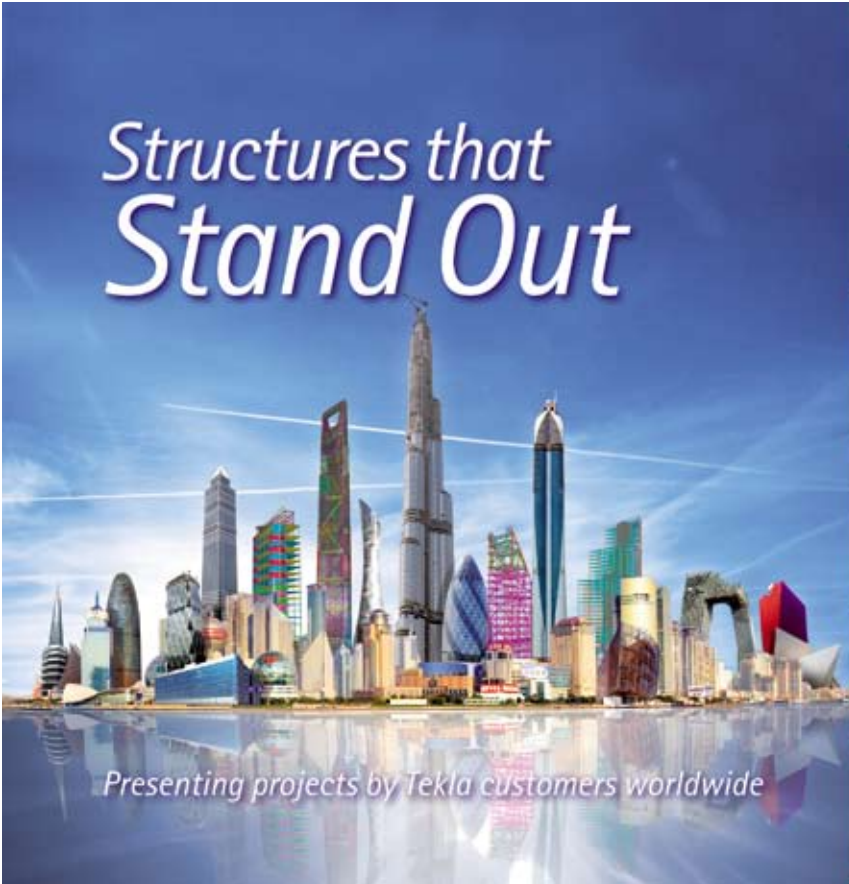
Whether you’re planning on branching out over seas or are already there, Weise has this advice: “Be careful what you wish for! Going global is a business strategy that requires careful consideration in the field of construction and the risks can be overwhelming. My personal advice is if you seek this path try to partner with a local company to reduce the risk in the market you have targeted.” ●



### An owner’s perspective


“Safety, compared to U.S. expectations, is the biggest challenge we have in developing projects globally. As such, we plan up front for additional safety resources and procedures, even providing the PPE. Our next biggest challenge is predictability related to scheduling—even when we try to factor in that projects are likely to take up to twice as long as they do in the United States. In order to control this we first seek out Intel experienced firms, but in the end it’s the local trades that tend to vary widely on performance. This is why we always plan for the worst unless there is data to suggest otherwise.”

*Allen Ware, Director, Facilities Materials & Services, Intel Corporation*



Structures that  
Stand Out


Presenting projects by Tekla customers worldwide



TEKLA®

Tekla Structures is building information modeling (BIM) software that streamlines the delivery process of design, detailing, fabrication, and construction organizations. While integrating openly with architectural models, its strength lies in the contractor end of the process. Thousands of Tekla Structures users in more than 80 countries have successfully delivered BIM-based projects across the world. Contact Tekla for more information, tel. 1.877.835.5265

www.tekla.com





*A new era of customer commitment*

- A pro customer approach
- A “can-do” attitude
- Jurisdictional warranties
- Post job report cards

**Getting the safest, most productive and skilled craftsmen on your job is now more attractive than ever before.**

The **Mechanical Allied Crafts Council**, or **MAC**, consists of six international unions joining together to be more of a “business partner” with owners and end users. We’re serious about your success.

Contact: Tony Rohrer (651) 436-2590 rohrer41@comcast.net

***For more information & a free brochure go to:  
BuildMAC.org***



**William P. Hite, Gen. Pres.**  
United Association  
of Plumbers, Pipefitters &  
Sprinklerfitters



**Edwin D. Hill, Pres.**  
International Brotherhood  
of Electrical Workers



**Michael J. Sullivan, Pres.**  
Sheet Metal Workers  
International Association



# Construction's Unbeatable Team

## YOU. And US!



James A. Grogan Jr., Pres.  
International Association of  
Heat and Frost Insulators  
and Allied Workers



Joseph J. Hunt, Gen. Pres.  
International Association of  
Bridge, Structural, Ornamental  
and Reinforcing Iron Workers



Dana Brigham, Gen. Pres.  
International Union of  
Elevator Constructors

# Manitex

Better Product . . . Better Payback . . .  
Offering the best choices for your applications

- General Contracting
- Fleet Operators
- HVAC
- Roofing



## SX



- Power Line Construction
- Residential Construction
- General Contracting
- Roofing

- Sign Construction
- Sign Maintenance
- Aerial Platform Fleets
- Mining



- Oil Field
- Taxi Service
- Mining
- and much more . . .

the new Model 50110S

**Manitex**  
MOVING FORWARD FASTER

3000 South Austin Avenue  
Georgetown, Texas 78626  
mtxsales@manitex.com  
www.manitex.com

Contacts: Norm Burch (817) 705-9444 • Marvin Faulk (214) 502-6357 • Bruce Steele (330) 284-2541 • Main Office (512) 942-3000

# Crane Safety: Is the Sky Falling?

**Not the way media portrays it. But is this the time to review crane “best practices” and particularly training and certification requirements for crane operators who work with and around cranes? Absolutely, argues this author.**

**By Graham Brent,  
Executive Director  
of the non-profit  
certification  
organization, National  
Commission for the  
Certification of Crane  
Operators (NCCCO)**

**T**here has probably been more mainstream media coverage about cranes and crane operations over the last six months than at any time in history. Of course, the reason for this is wellknown: the media loves a “good” story and, as regrettable as the accidents are that have occurred during this time, the sad fact is that they are as fascinating to a general

audience as any crisis with a strong human and, perhaps most importantly, *public* impact.

Probably not since the tower crane collapse almost two decades ago in San Francisco, which claimed five lives, have we seen the national print and broadcast media with such a severe case of “crane fever.” That accident spawned a flurry of

## The Maryland experience

- Regulations designed to prevent incidents that could cause serious injury or death related to the operation of cranes when used in construction, demolition, or maintenance.
- Spearheaded by Labor Commissioner Ron DeJuliis who assembled a committee of 20 local construction experts including contractors, crane rental firms, manufacturers, labor organizations, and NCCCO to develop these standards in an unprecedented three-month period.
- Identifies the specific training, testing, and re-testing requirements of crane operators, crane operator trainees, riggers (levels 1, 2, and 3), and signalpersons.
- The MOSH (Maryland OSH) Advisory Board unanimously approved the regulations which should take effect before the end of 2008.



state legislative initiatives (the California requirement for third-party crane inspections by licensed certifiers came out of this) and, though the attempt was initially unsuccessful, it set the stage for a debate that culminated in the mandating of crane operator certification in the state three years ago.

But do we really have a "crisis"? Certainly, it's hard to explain to anyone, let alone the non-technical media, why so many crane-related accidents have occurred

in such dramatic fashion in such a short period. It's true that, with the media on crane "high alert", all manner of incidents that would barely have made it into print, say, in February, are now regularly emblazoned across the front pages of regional newspapers across the country. But the fact is that any one of the New York or Miami tower crane accidents would justifiably have attracted intense scrutiny and raised serious questions. The same holds

equally true of the mobile crane accidents in Wyoming, Kansas City, or Houston, each of them the subject of catastrophic damage to property and, in two cases, human life.

Part of the antidote to the "sky is falling" attitude adopted by much of the media is that, when the incidents are examined, some of them are found not to be "crane" accidents at all. Although all the reports are not yet in, and all accidents are (naturally) the subject of litigation, at least one appears to have been caused by a failure to inspect and use a piece of rigging gear correctly. Another, to adequately follow inspection procedures. Yet a third to comply with the manufacturer's explicit erection instructions.

Obviously, without establishing a root cause, it's difficult to address it. In such situations, with the public demanding action, and the media baying at their heels, public officials have a tendency to employ a "knee-jerk" response. We've seen that happen in the past few months in cities such as New York and Philadelphia. And we've seen it happen in states like Maryland.

While "knee-jerk" reactions may or may not be beneficial, they do lead to one thing: *dialogue with the industry*. New York City apparently hasn't had much of it. Philadelphia didn't have it to begin with, but got it in the nick of time. Maryland, which had the benefit of a former crane operator in the role of Labor Commissioner, had it from the beginning. As a result, notably in the latter two instances, we have seen the constructive reform of requirements for the use, erection, and inspection of cranes, as well as those who work in and around them, of historic proportions. And we've seen it occur with (in terms of standard legislative progress, at least) lightning speed. But, most importantly, we've seen it with the full participation, cooperation and acceptance of the industry it is intended to regulate.

Most significant in these more recent state and city debates concerning training and certification requirements, is how the focus has widened well beyond crane operators to encompass similar qualifications for riggers, signalpersons, and inspectors. Of course, that makes perfect sense to the

## Leading industries

in Northwest Indiana and the Greater Chicago Area -- our valued clients for construction services since 1969

ArcelorMittal Steel ■ Archer Daniels Midland ■ Ashland ■ Best Foods ■ BP ■ Cargill ■ Con Agra Foods ■ Corn Products International ■ Criterion Catalysts & Technologies ■ Croda Industrial Specialties ■ Dominion ■ Dover Chemical Corporation ■ Ecolab ■ ELG Metals ■ Elgin, Joliet & Eastern Railway Company ■ Exxon Mobil ■ Hammond Port Authority ■ Holcim ■ Horsehead Corporation ■ Indiana Harbor Coke Company ■ Indiana Port Authority ■ INEOS Oligimers ■ International Paper Company ■ Koch Industries ■ Macsteel Service Centers USA ■ Madison Paper Industries ■ Material Service Corporation ■ Nucor Vulcraft Group ■ Resource Management Companies ■ Rhodia ■ Savage Services Corporation ■ U. S. Steel Corporation ■ Unilever



Building Trust ■ Constructing Solutions ■ Minimizing Risk

for information on our Companies and our capabilities, contact  
T. J. Ferrantella, President, 219 / 933-4110 (Direct)  
tferr@engineeredco.com (Email)

710 Michigan Street • Hammond, Indiana 46320  
219 / 931-8700 (Indiana) • 708 / 891-3100 (Illinois)

crane operator who has to rely, in large part, on his employer to provide him (or her) with a properly inspected and maintained crane, on the rigger to properly rig the load he is about to lift, and (an operator's pet "peeve") on the signalperson (particularly when lifting "in the blind") to provide correct and appropriate hand and/or verbal instructions. It's also a recognition of the many and varied causes of crane accidents (as we noted previously), and the fact that (a surprise, perhaps, to many) crane accidents are not always the result of "operator error."

This activity at state and city level, all of it unprecedented, and all of it a direct response to the spate of accidents we have witnessed over the last six months, begs a parallel with another historic event: The publication in October of the first complete revision of federal OSHA's rules for crane operations since they were written over 30 years ago. Featured prominently among its new provisions, and mirroring state initiatives, are new certification and qualification requirements for crane operators and signalpersons.

The history of this Proposed Federal Rule (or C-DAC as it has come to be referred to after the Cranes and Derricks Advisory Committee that developed it) is well known. In a similar vein to Maryland and Philadelphia, OSHA used a process of industry involvement known as "negotiated rulemaking." Twenty-three crane experts

selected by OSHA met eleven times over a 12-month period to completely overhaul the outdated federal regulations—and then waited four years, while the document they created and delivered (on time) to federal OSHA wended its way through a labyrinthine trail between the Department of Labor, the Small Business Administration, and the Office of Management and Budget, undergoing a seemingly endless process of review and oversight.

It's true that OSHA spent some of that time writing an explanatory Preamble, an introductory document that has added several hundred pages to the original C-DAC recommendation.\* As you read this, OSHA's Proposed Rule revising Subpart N: Cranes and Derricks is out for public comment. If you are in any way engaged in, or affected by, cranes of almost any size or type in the construction industry, this document and its provisions will affect the way you do business.

It will behoove you to familiarize yourself with its implications. It's been three decades since the last revision—it may be a while before you get another chance.

Will publication of the proposed federal rule staunch the flow of initiatives at state and city level? It's too soon to tell. But many legislatures, when advised that a federal initiative was underway, re-energized their efforts upon realizing that OSHA would not require operator

certification until *four years after* the other provisions of the revised rule.

Add to that the standard one-year implementation period, as well as the estimated 12 months that OSHA will likely need to receive and process the expected deluge of public comments, and that puts us at almost 2015—an unpalatably long time, many believe, for those who work, with, in and around cranes to be unnecessarily exposed to the consequences of inadequate training and certification. ●

(\* OSHA's Proposed Rule for Cranes and Derricks in Construction can be downloaded from [www.nccco.org/ProposedRule.pdf](http://www.nccco.org/ProposedRule.pdf). A companion document, *20 Facts About Crane Operator Certification and the Proposed Federal Rule* is available from [www.nccco.org/news/downloads/20\\_Facts-NCCCO.pdf](http://www.nccco.org/news/downloads/20_Facts-NCCCO.pdf)

*Graham J. Brent has been the Executive Director of the National Commission for the Certification of Crane Operators (NCCCO) since 1996. He is responsible for all aspects of the administration and development of NCCCO's national crane operator certification programs. Prior to joining NCCCO, he served as an NCCCO Commissioner, and instructed operators, inspectors and management on hazard recognition and equipment safety, as well as OSHA/ANSI standards compliance.*

|                            | <b>Fatal Accidents<br/>June 1, 2002 to<br/>May 31, 2005</b> | <b>Injury<br/>Cases</b> |
|----------------------------|---|-------------------------|
| High-Voltage Line Contacts | 5   | 7                       |
| Struck by Loads            | 4   | 18                      |
| Mobile Cranes Overturned   | 1   | 5                       |
| <b>Total Cases</b>         | <b>10</b>   | <b>30</b>               |

|                            | <b>Fatal Accidents<br/>June 1, 2005 to<br/>May 31, 2008</b> | <b>Injury<br/>Cases</b> |
|----------------------------|---|-------------------------|
| High-Voltage Line Contacts | 1   | 4                       |
| Struck by Loads            | 0   | 3                       |
| Mobile Cranes Overturned   | 1   | 6                       |
| <b>Total Cases</b>         | <b>2</b>  | <b>13</b>               |

### California crane fatalities

Crane-related fatalities and injuries in California have declined sharply according to a report by the Division of Occupational Safety and Health (DOSH). Cal-OSHA reviewed the records of crane-related citations and accident descriptions for a three-year period prior to, and after, the regulation requiring mobile and tower crane operators to be certified came into effect on June 1, 2005. Fatalities dropped 80 percent and injuries 57 percent, as the table shows.

PROGRAM LIFECYCLE

# START - FINISH

## CMiC FOR CAPITAL PROJECTS

- Document Management
- Cashflow Management
- Fund Management
- Contractor Performance Management
- Bid & Procurement Management
- Cost Control

THE MOST COMPLETE SOLUTION FOR OWNERS

**CMiC**  
Making Smart Companies Smarter

Tel: 416-736-0123 Email: [sales@cmic.ca](mailto:sales@cmic.ca) [www.cmic.ca](http://www.cmic.ca)

# A Great LEAP: Modularization as a Strategy

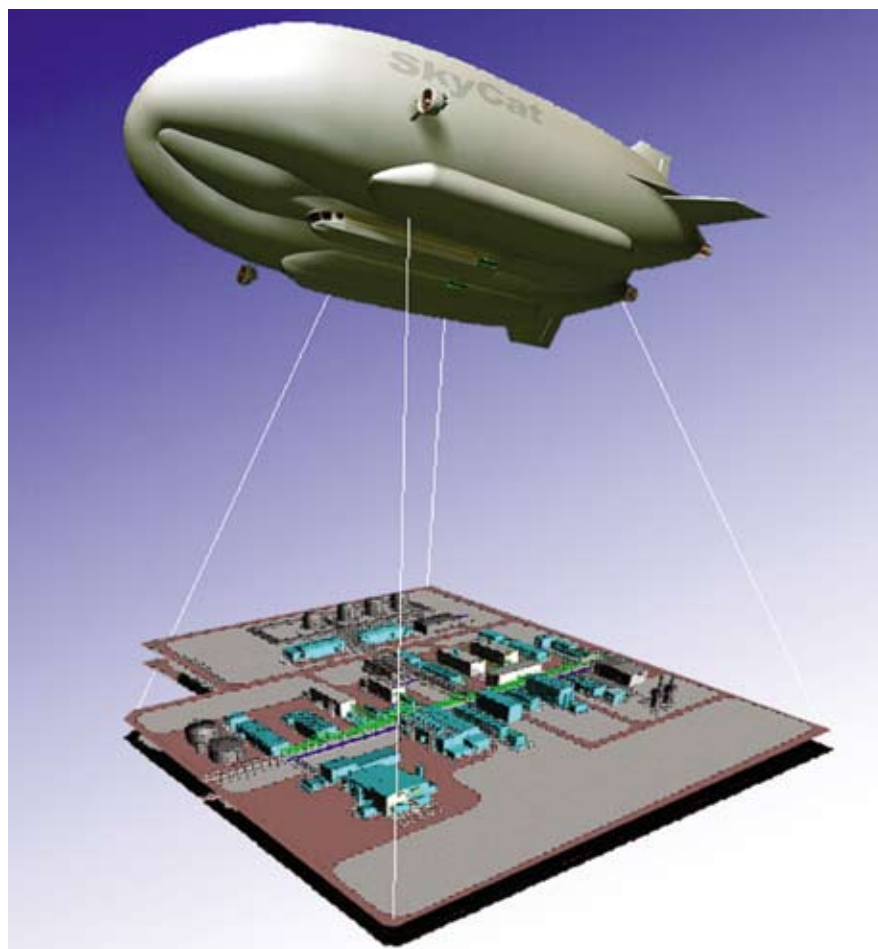
**If we could fly your whole plant in and put it at the final site, would you care?**

**By Robert Prieto, Senior Vice President and Gary Chanko, Director, Construction Operations, Fluor**

The delivery of complex construction programs in today's resource constrained global marketplace is causing increased consideration and utilization of modularization and pre-assembly strategies. The use of these project execution methods is being driven by a mindset change that seeks to implement a Leveraged Execution And Procurement (LEAP) approach to achieve strategic business objectives which underpin the program's objectives.

The LEAP approach in turn is shaped by one or more fundamental program drivers that seek to gain schedule, cost or quality advantages by opening up additional construction fronts; changing build methodologies and compressing the overall program delivery cycle by overlapping execution activities; and breaking traditional construction precedence logic.

This paper identifies factors to be considered in the decision to modularize and the degree to which a modularization or pre-fabrication strategy is specifically applied. Supply and demand considerations and alternatives must be evaluated in conjunction with the modularization decision process as well as other critical success factors unique to the program management of module fabrication yard activities. Special risk factors which should be considered in the utilization of a modularization based LEAP strategy are included.



## **Leveraged Execution And Procurement (LEAP)**

Leveraged Execution And Procurement represents a fundamentally different approach to project delivery than the more traditional "linear" stick built approach to facility design, procurement and construction.

LEAP begins with construction-driven execution thinking. This means focus is placed on how you must build the project in order to achieve the strategic business

objectives the organization has defined for the program. Increasingly the principle driver is schedule, recognizing the value of time to market or as a strategy to control high construction escalation rates. But other drivers are possible and include transferring activities to lower cost locations or improving the quality of construction by relocating certain work from harsh environmental or poorly trained labor regimes (Table 1, page 48).

Following the decision of how to build the program is a decision framework to buy

**Table 1: LEAP Strategy Drivers**

**Schedule:**

- Time to market (market share; limited value based time horizon for program outputs (for example, pharmaceutical).
- Limit effects of labor and material escalation.
- Shortage of labor, particularly skilled labor and supervision.
- Constrained construction front.
- Extended permitting or site infrastructure periods.
- Labor availability and productivity impacted by site environment (remote, harsh).

**Cost:**

- High site based, effective direct labor cost (considers productivity).
- High site based labor overheads and indirects (inducements; costs to sustain labor at site camp, etc).
- Underutilized, costly specialized construction equipment at site location or excess specialized equipment required by multiple site parallel construction.
- Escalation due to later start of site based construction activities and schedule creep.
- Waste stream /surplus material transport and management at site.
- Higher cost power and water at site.

**Quality:**

- Labor force turnover at remote sites (may not be significant for all geographies).
- Multiple build teams for repeated facilities (diminished learning curve).
- Site labor turnover limits build team experience effect.
- Limited ability to create a controlled environment or the high cost of controlled environments at the site.

**HSE:**

- Limited control of the work environment.
- Predominance of working at heights.
- Difficult to develop and maintain safety culture with high turn over in workforce.
- High site and community environmental impacts.

out the various elements of supply including systems, structures and components, as well as, the engineering and construction labor required. These decision sets are constrained by the construction strategy selected and in turn affect the nature, detail and timing of engineering, procurement and contracting activities.

These considerations are collectively expressed such that LEAP = C M<sup>2</sup> E (see page 50 for representational chart).

Leveraged Execution And Procurement builds on four key concepts:

1. Focus on construction driven project execution by breaking traditional program precedence and concurrently designing, procuring, building and commissioning to the maximum degree possible.
2. Develop a programmatic mindset and seek to leverage each effort across the entire program.
3. Address the changed management requirements that Leveraged Execution And Procurement utilizing modularization requires.
4. Use knowledge management and sharing is a key driver to program success.

Table 2 (page 50) provides insight into some of the key concepts which flow from these strategy drivers.

*Mark Your Calendar & Plan to Attend the*

# North American Ironworker/IMPACT

## LABOR-MANAGEMENT CONFERENCE

- How Do We Grow Our Marketshare
- How to Have a Drug-Free Work Force
- Work Comp/General Liability Insurance
- Improved Safety Performance

**PARIS LAS VEGAS : LAS VEGAS, NV . FEBRUARY 8-12, 2009**

[www.ironworkers.org](http://www.ironworkers.org) | 800.545.4921 | [www.impact-net.org](http://www.impact-net.org)



refresh your outlook.

This is how it should feel™

**THE WESTIN**  
MISSION HILLS  
RESORT & SPA  
RANCHO MIRAGE

STARWOOD PREFERRED GUEST®

Inspiration has a venue. Hold your next meeting at The Westin Mission Hills Resort & Spa, where a clutter free ambience gives your ideas room to grow.

For more information or to make a reservation, please visit [ranchomiragemeetings.com](http://ranchomiragemeetings.com) or call 760-328-5955.

- From board meetings to trade shows bring your next meeting to life.
- The Spa at Mission Hills and two championship golf courses ensure the spirit is renewed.
- Book by December 31, 2008 for arrivals by December 31, 2009 and save 3% on your master bill plus Receive double Starwood Preferred Planner Points and One round of golf or one sixty minute spa treatment for every fifteen room nights consumed for your next meeting by mentioning Construction Users Roundtable.

Terms and Conditions Apply. ©2008 Starwood Hotels & Resorts Worldwide, Inc. All rights reserved.

| C   | M <sup>2</sup>  | E  |
|---|---|--|
| <b>Construction</b>   | <b>Material Management</b>  | <b>Engineering</b>   |
| First think how you will construct it (modular and pre-fab; standard site layouts). | Then how you will procure it (standard program designs, strategic supplier relationships) and get it to the site. | Driven by Leveraged Execution And Procurement Strategy (changed engineering process and activities). |

### How far can you LEAP: modularization and pre-assembly defined

In trying to define the degree of modularization or prefabrication which is desirable, it is important to keep sight of the strategic business objectives which the program seeks to achieve, as well as, the program drivers which are applicable (Table 1, page 48).

In discussing modularization as a strategy with an owner who had not previously employed it as a delivery strategy and who was unfamiliar with what was possible, we posed a simple question. "If we could fly your whole plant in and put it at the final site, would you care?"

The magic of computer graphics aside, this is not a likely scenario, at least not yet today. But there are degrees of pre-

fabrication and modularization possible and different solution sets for each program. This "modularization frontier" can be thought of as a function of the **attractiveness** of modularization and the **degree** to which it is readily achievable on a given program.

Attractiveness may be viewed as considering:

- Installed cost differential (labor, material, logistics).
- Value of time to market.
- Site labor constraint.
- Environmental and community impacts.
- Risk mitigation.

Similarly, degree of pre-assembly or modularization may be viewed as considering:

- The ability to break precedences, in effect allowing the sequence of construction to be significantly modified.

- Size of modules that can be fabricated and transported to a specific site.

### Factors to be considered in the modularization decision

As one goes through the process of evaluating what can be modularized and more importantly what should be modularized in order to achieve the organization's strategic business objectives, there are a number of factors which must be comprehensively considered. Broadly, these factors include:

- Strategic business objectives and opportunity value.
- Program drivers; schedule, cost quality, HSE.
- Site based factors: seasonal impact, environmental mitigation, labor availability.
- Modularization constraints: site access limitations, route constraints, lift factors.
- Supply chain reconfiguration: changed sourcing impacts, duty or tax posture.
- Candidate mod yard factors: political, yard resources, bonded warehousing.

**Table 2: Key Concepts Embedded in a Modularization Based Leveraged Execution And Procurement (LEAP) Strategy**

#### 1. Focus on project execution by breaking traditional program precedence and concurrently designing, procuring, building and commissioning to the maximum degree possible

- Design activities and deliverables guided by the principle of facilitating a LEAN project execution approach.
- Engineering and procurement activities focused on maximizing standardization and modularization.
- Utilize global engineering centers to expand available resource base and fast track design using 24 hour work cycles.
- Focus on optimizing project execution, not project design.
- Reduce number of unique, engineered items of supply through standardization at the component level.
- Specify standardized connection details, bolt sizes and assembly methods.
- Implement aggressive pre-assembly strategy.
- Deliver utilizing modularization and achieving higher degree of standardization on non-module portions of the facility.
- Permanent construction increasingly takes place away from the final plant location.

#### 2. Develop a programmatic mindset and seek to leverage each effort across the entire program

- Program to be driven by schedule.
- Changed Front End Loading process must address a programmatic approach versus a project approach.
- Achieve significant project leverage with early involvement of key partners - vendors, contractors and subcontractors as part of the project team will deliver added value.
- Strategic suppliers will be drawn into the FEL process.

- Implement strategic sourcing.
- Set of readily produced standard assemblies, such as standard structural member sizes which will be used in program wide steel design.
- Focus on modified sequence of activities that modularization and development of strategic supplier relationships requires.
- Modularization fundamentally restructures the supply chain and creates additional construction or fabrication sites.
- Logistical planning and coordination of delivery of materials to individual modules and construction sites increases importance of the material management function.
- Assess the anticipated business risks associated with executing the project in multiple intermediate locations (mod yard; pre-fab facility).
- Work in progress measurement will be increasingly important.
- Augmented supplier quality assurance efforts will be applied.
- Startup readiness risk assessment and planning should start at the outset of the project.
- Integrated suite of management policies, systems and automation software essential.
- Singular final engineering deliverable in the form of an electronic database (electronic turnover of project completion documentation).

#### 3. Address the changed management requirements that Leveraged Execution And Procurement requires for modularization

- Capture lessons learned from completed and ongoing projects.
- Knowledge bases, tool sets and procedures structured for implementation in stand-alone, work-share and highly modularized project settings.
- Component library to be expanded to include standardized components and assembly details such as standard steel member sizes, connectors, bolts and other bulk supply.

# Your Goals = Our Goals

## A Safe Workplace

We have a proven track record of making safety more than just an 8-hour class. It's the top priority for every worker and UA member. Every Day.

## Highly Productive Skilled Workers

At the UA, our greatest assets are our members. That's why we've been investing over \$100 million annually in programs to train the most qualified workers in the United States and Canada.

## In Budget and On Time

Union jobs are almost 17 percent more productive on average than open/merit shops and subcontractor-supplied labor is 13 percent more productive on average than direct-hire labor. When you look at the numbers, it's easy to see that good labor productivity does more than reduce cost; it also ensures more jobs get done on time, as well as improving product quality. And that's what the UA is committed to on every job.



202-628-5823 [www.ua.org](http://www.ua.org)

- Program management factors: supervisory, cross cultural and currency factors.
- Political and labor relations impacts: work rules/agreements, direct, indirect.

**Special risk factors in modularization based LEAP**

Modularization as part of a leveraged execution and procurement strategy offers great opportunities but also requires the management of new risks. Key to the management of these risks is a broader more programmatic perspective based on achieving strategic business objectives. These new risks that modularization introduces span the gamut from availability of required facilities and transport to new labor, economic and political risks. As in any risk management effort the key to successful management and mitigation starts with the recognition that risks exist.

Special risk factors include: available mod yard and pre-assembly facilities and yard commitment lead times; reliance on

specialized transport, RORO or LOLO; labor relations complexity including labor disenfranchisement with the use of a mod yard and industrial relations issues; economics of management and decision frameworks with currency exchange, inflation, differential labor costs and escalation in labor costs; other exposure to duty, tariff, tax, export and import control regimes; and finally, political stability and cross cultural risks.

**Conclusion**

Leveraged Execution And Procurement (LEAP) is key to meeting major capital program delivery objectives in today's resource constrained market. Increasingly, modularization has grown to be a valued component of the LEAP strategy. Its utilization and acceptance across a wide range of industries and owners requires owners and program managers to more fully understand its possibilities, key decision factors and the special risks entailed. This paper provides a ready

guide to those new to the modularization process. ●

*Robert Prieto is Senior Vice President for Fluor, where he leads strategy for Fluor's Industrial and Infrastructure group. Prieto focuses on the development and delivery of large, complex projects worldwide. He has had an executive sponsorship role in the World Trade Center Transportation Hub; West Coast Rail Modernization; Train Protection and Warning System; Level 3 Communications Long Haul Network and Superconducting Super Collider.*

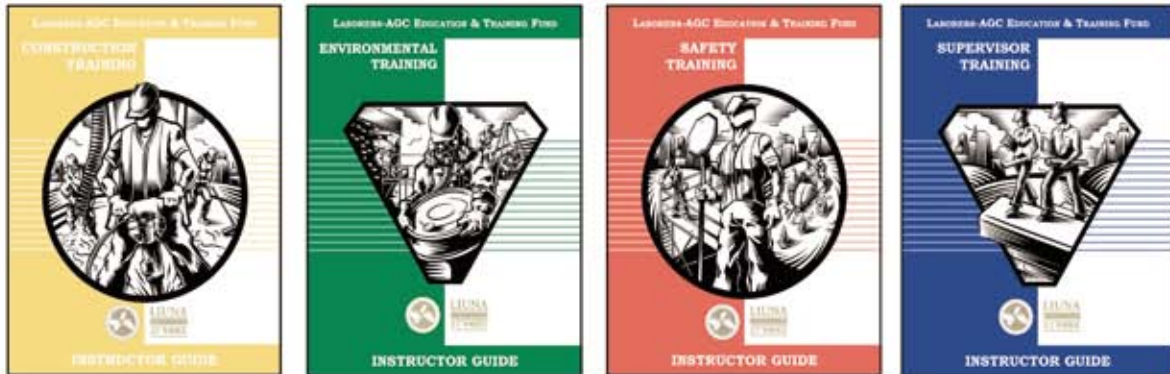
*As a director in Fluor's Construction Technology Group, Gary Chanko provides innovative technologies and work processes to support construction activities across the variety of industries Fluor serves at project sites across six continents. He is an experienced project manager having worked on projects in Singapore, the Philippines, Malaysia, Australia, the Middle East, Canada, and the United States.*



Teton Industrial Construction is a diversified, full service heavy industrial contractor based in Atlanta, Georgia doing business throughout North America. Teton is a member of the PCL family of companies with over a century of construction excellence, leadership, and unsurpassed value.  
 Watch us build at [www.tetonindustrial.com](http://www.tetonindustrial.com)

6445 Shiloh Road, Suite E  
 Alpharetta, Georgia 30005  
 678-965-3100

# LABORERS' TRAINING:



## INDEPENDENTLY ACCREDITED

### IS YOURS?

These days, a lot of construction industry training programs claim accreditation. But most have not been accredited by independent, third-party agencies, and some have even “accredited” themselves.

The Laborers’ International Union of North America (LIUNA) and its official training organization, the Laborers-AGC Education and Training Fund, operate differently. We sought, and received, accreditation from the International Accreditation Service (IAS), an *independent, third-party* accreditation body.

The IAS has certified that Laborers-AGC meets the highest industry standards for instructor development, curriculum development, and curriculum. That’s the LIUNA Advantage, and it is available only to contractors and owners who work with LIUNA.

For more information about Laborers’ training and its accreditation credentials, please contact John LeConche, Executive Director, the Laborers-AGC Education and Training Fund, at (860) 974-0800.



# WATT, TIEDER, HOFFAR & FITZGERALD, L.L.P.<sup>®</sup>

ATTORNEYS AT LAW

“Clients choose this firm  
because they want to  
hire the best.”

- Chambers USA Guide to America's  
Leading Business Lawyers

**Construction Law**  
**Government Contracts**  
**International Construction Law**  
**Suretyship**  
**Commercial Real Estate**

[www.wthf.com](http://www.wthf.com)  
**WTHF**  
BUILDING SOLUTIONS<sup>®</sup>

[T] 703.749.1000 | [F] 703.893.8029  
[contactus@wthf.com](mailto:contactus@wthf.com)

Irvine, CA | Las Vegas, NV | McLean, VA | San Francisco, CA | Frankfurt, Germany



# Litigation Woes for Green Building

By Edward J. Parrott, Vivian Katsantonis and  
Chris Cheatham, Watt, Tieder, Hoffar & Fitzgerald, L.L.P.

## I. INTRODUCTION

With the increased popularity of green building, litigation arising from green building projects is certain to follow. In 2007, one of the first signs of green building litigation occurred when an owner sued a contractor, in part, because the project allegedly failed to achieve Leadership in Energy and Environmental Design (LEED) Silver certification through the U.S. Green Building Council (USGBC). While this case did not go to trial as scheduled in August 2007, Shaw Development's counter-complaint is instructive as to the many unique legal risks arising from green building projects.

This article will first review green building basics. The Shaw Development-Southern Builders contract will then be analyzed to assess how green building risks were shifted between the two parties. The article will also review the two legal claims asserted by Shaw Development against Southern Builders resulting from the failed LEED certification. Finally, the article will discuss the damages component of the counter-complaint, which is based on Shaw Development's failure to achieve green building tax incentives. Failure to achieve government incentives or comply with government regulations will likely be the most common form of damages in early green building litigation.

## II. GREEN BUILDING BASICS

The aim of green building is to incorporate design and construction practices that decrease a building's use of energy, water, and materials and that reduce a building's impacts on health and the environment through better siting, design, construction operation and maintenance.

Green building provides three primary benefits: 1) lower operating costs; 2) improved public and occupant health; and 3) reduced impacts on the environment.

The preeminent system for measuring a building's "greenness" is the LEED rating system created by the USGBC. Under the LEED rating system, buildings are scored based on five major categories: 1) sustainable sites; 2) water efficiency; 3) energy and atmosphere; 4) materials and resources; and 5) indoor environmental quality. Different LEED scoring systems apply to different types of projects and increased green performance results in higher certification ratings: certified, silver, gold or platinum. Importantly, the USGBC determines certification after construction is complete when an applicant submits documentation showing compliance with the requirements of the applicable rating system.

In recent years there has been an increased interest in green building due, in part, to the recognition of economic benefits associated with this type of building. These economic benefits are the result of savings in the use of energy and water and increases in profits and asset values. For example, a study released in March 2008 by CoStar Group concluded that "sustainable green" buildings outperform their peer non-green assets in key areas such as occupancy, sale price and rental rates, sometimes by wide margins. Government incentives and regulations have also spurred green building. As more parties undertake green building projects either because of anticipated increased profits or because of government mandates, the possibility of failed expectations will increase. These failed expectations will result in green building disputes, claims and litigation.



### III. SOUTHERN BUILDERS

On February 16, 2007, Shaw Development, L.L.C. (Shaw Development) filed a counter-complaint against Southern Builders, Inc. (Southern Builders) in the Circuit Court of Somerset County, MA. Shaw Development originally purchased property in Somerset County, and retained Southern Builders on April 7, 2005 to construct the Captain's Gallery Luxury Condominiums (Condominiums Project) on the property. Southern Builders was the general contractor and agreed to build the Condominium Project for \$6,995,000.00. In the counter-complaint, Shaw Development alleged, among other things, that Southern Builders failed to construct the Condominium project in a good and workmanlike fashion and, as a result, the Project did not achieve USGBC LEED Silver certification. Shaw Development sought damages in the amount of \$635,000.00, based on the value of Maryland green building tax credits that were not obtained due to the failure to achieve certification. Shaw Development's counter-complaint provides no further justification for its claims related to the failed LEED certification and the case never proceeded to trial.

#### a. The contract

The primary means for dictating a contractor's green building requirements, along with other construction responsibilities, is through the general contract between the contractor and the owner. When parties undertake a green building project, it is important for contractors to analyze all the construction documents, including those incorporated into the general contract, to determine green building responsibilities.

Shaw and Southern Builders relied on an AIA A101-2007 Standard Form of Agreement Between Owner and Contractor as their general contract. The A101-2007 contract does not specifically mention "green building" or include green building strategies. Instead, as explained in its counter-complaint, Shaw relied on documents that were incorporated into the A101-1997 to define Southern Builders' green building responsibilities:

*Specifically, the Project Manual and Scope of Work required Southern Builders to construct an environmentally sound "Green Building" in conformance with a "Silver Certification Level . . . ."*

Contractors must recognize that general contracts can incorporate additional documents that contain green building requirements. For example, the A101-1997 contract between Shaw and Southern Builders incorporated "Attached Exhibits" through § 8.1.3. Among the "Attached Exhibits" to the contract, Shaw included the "Project Manual" and "Scope of Work."

Did these two incorporated documents include green building requirements to be performed by Southern Builders? Like the AIA contract, the "Scope of Work" did not mention "green building" or reference any specific green building strategies. Instead, the Scope of Work provided a laundry list of construction components of which Southern Builders was responsible. The Project Manual, on the other hand, did make specific reference to green building certification:

*Project is designed to comply with a Silver Certification Level according to the U.S. Green Building Council's Leadership in Energy and Environmental Design (LEED) Rating System, as specified in Division I Section "LEED Requirements."*

Shaw Development's AIA contract and incorporated Scope of Work and Project Manual create questions as to Southern Builders' responsibility for constructing a LEED Silver certified project. While the Project Manual does state the Project was designed to comply with LEED Silver certification, the Project Manual clause does not assign the contractor responsibility to construct a project according to LEED Silver certification. Instead, as stated in A101-2007, the contractor is responsible for building according to the designs and specifications. Thus, the contractor could be liable if it failed to build according to plans and specifications resulting in a failure to achieve LEED certification.

Owners and contractors are well served to clearly describe the contractor's responsibilities related to the construction of

a green building project. A contractor's general responsibilities should not change even if a project is to be certified green; the contractor should be responsible to build on time, at bid price and according to contract specifications. There are specific green building strategies wholly within the control of the contractor that should be clearly outlined. For example, the contractor is typically responsible for coordinating the recycling of materials from the project site. Both parties would have been better served to clearly state the goal of green building certification and list the contractor's green building responsibilities in the AIA contract.

#### b. Shaw Development's causes of action

When owners and developers move forward with green building projects, they often do so with the goal of achieving a specific green building certification. While parties may have declared their intent to obtain specific certification, this does not guarantee that the end product will satisfy the necessary requirements for this certification level. What happens if a building fails to achieve green building certification, as anticipated by the owner?

The owner may blame the designers, engineers, contractors and subcontractors for such a failure and sue one or all of the parties. Based on the counter-complaint and Project Manual, Shaw Development anticipated that the project would achieve LEED Silver Certification and brought an action for breach of contract and negligence against Southern Builders when the certification was not obtained. The liability of parties for failing to achieve a green building certification will be determined by the relevant contracts or related promises. If a contract provision guarantees a specific green building certification, the promising party will be responsible for the failed certification.

As previously discussed, it is not clear from the AIA contract, Scope of Work or Project Manual that Southern Builders agreed to construct the Condominium Project to achieve LEED Certification. Without this certification guarantee, Shaw

would most likely have had to prove that Southern Builders failed to construct the Condominium Project according to the plans and specifications, and this failure resulted in the project not achieving LEED certification.

**c. Green building mandates and incentives**

Parties that bring claims or lawsuits based on a green building project's failure to achieve certification must also prove damages. Often times, owners seek green building certification to, in part, obtain government incentives or comply with mandates. In Shaw Development's counter-complaint, damages were based on the owner's failure to achieve green building tax credits:

*Shaw Development demands judgment in its favor and against Southern Builders for . . . Six Hundred Thirty-Five Thousand Dollars (\$635,000.00) in tax credits for failing to construct the Project in*

*conformance with a (LEED) "Silver Certification . . . ."*

The tax credits for which Shaw sought damages were part of a State of Maryland green building tax incentive program. To achieve these tax credits, a business must construct or rehabilitate a building located in Maryland with at least 20,000 square feet of interior space to achieve LEED Silver Certification. Notably, all credits through this Maryland program have been allocated. Many other municipalities, cities and states have created similar incentive programs to encourage green building. A recent AIA study found that counties with green building programs have increased over 400 percent. As more owners undertake green building projects to attain these government incentives, the risk that owners will not receive green building certification becomes more problematic. Additionally, many cities, including Washington, D.C., New York City, Los Angeles and San Francisco have adopted mandatory green building laws

and codes that will require the incorporation of green building strategies into all construction projects. Failure to comply with green building laws and codes creates potential liability risks.

**IV. CONCLUSION**

As inexperienced parties undertake green building projects, unmet expectations will result in disputes and lawsuits. Parties must protect themselves on the front end by clearly stating all parties' understanding of the green building certification process and what is to be achieved. Furthermore, parties must fully understand green building incentives and mandates and comply with the specific requirements. Failure to do so can lead to owner damages, as illustrated by Shaw Development's counter-complaint. While Shaw Development v. Southern Builders was apparently settled without a trial, further green building litigation is just around the corner and won't be as easily settled. ●

# At the Young Group, we wear many hats, in many places

Since 1895, The Young Group has built a reputation for quality and versatility as a specialty contractor. Our customers know they can trust us to create safe environments for their critical assets. So when you need roofing, scaffolding, or any of our many other services, you should think of The Young Group first, right off the top of your head.



**ROOFING**  
**SCAFFOLDING**  
**TECHNICAL SERVICES**  
**MECHANICAL INSULATION**  
**INDUSTRIAL WALL & ROOF**  
**CUSTOM METAL FABRICATION**  
**INSULATION DISTRIBUTION**  
**FABRICATED PRODUCTS**



The Young Group, LTD  
 1054 Central Industrial Drive  
 Saint Louis, MO 63110  
 314.771.3080



*we've got you covered*

**SPECIALTY CONTRACTORS**



prime contracting / civil / steel erection / equipment setting / heavy mechanical / heavy rigging / maintenance / plate work  
boiler erection and repairs / piping / electrical / refractory / construction management and consulting services



## Performance Driven

**Aker Construction's** consistent performance has enabled us to become North America's premiere construction company leader.

We are committed and dedicated to working through our alliance with labor to provide a safe and productive work environment. Our vision is to be the preferred partner with labor, clients, our employees and community.

**USA Tel 724-416-6900**

[www.akersolutions.com](http://www.akersolutions.com)

 **AkerSolutions™**

part of Aker

steel - power - environmental - chemical - petrochemical - oil and gas - heavy and light industry

# Architect of the Capitol



## **THE OWNER: ARCHITECT OF THE CAPITOL**

**THE WEBSITE:**  
www.aoc.gov

## **THE HISTORY:**

The 2,200 employees of the Office of the Architect of the Capitol (AOC) are responsible to the United States Congress for the maintenance, operation, development and preservation of 16.5 million square feet of buildings and more than 450 acres of land throughout the Capitol complex. This includes stewardship of such national treasures as the Capitol, Capitol Visitor's Center, the House and Senate office buildings, the Library of Congress buildings, the Supreme Court building, the U.S. Botanic Garden, the Capitol Power Plant and other facilities. The AOC also provides professional expertise with regard to the preservation of architectural and artistic elements entrusted to its care, and provides recommendations concerning design, construction and maintenance of the facilities and grounds.

Stephen T. Ayers, AIA, AOC's Deputy Architect/Chief Operating Officer, is serving as Acting Architect of the Capitol until a new Architect is appointed by the President and confirmed by the Senate.

## **THE RIGHT NOW:**

The Capitol complex is presently subdivided into nine jurisdictions: U.S. Capitol Building, Capitol Grounds, House Office Buildings, Senate Office Buildings, Library of Congress Buildings and Grounds, Capitol Power Plant, Botanic Garden, Supreme Court, and the Capitol Police Buildings and Grounds. Starting this year, the Capitol Visitor Center will be added as a tenth jurisdiction.

For each jurisdiction, the AOC has multiple projects underway. Highlights include:

- The Capitol Visitor Center: The Capitol Visitor Center (CVC) is the largest addition to the Capitol in its 214-year history and is approximately three quarters the size of the Capitol itself. This three-story underground facility will welcome

millions of visitors to the seat of the U.S. government in a secure, educational, accessible and convenient environment. It will be open to the public on December 2, 2008.

- Ft. Meade Book Storage Modules: The AOC is responsible for the construction of high-technology, high-density book storage facilities for the Library of Congress on a 100-acre site at Ft. George G. Meade in Anne Arundel County, MD. The storage modules are being constructed in phases and modules 3 and 4 are scheduled for completion in 2009.
- Supreme Court Modernization: In July 2003, the AOC embarked on a multi-year Supreme Court modernization project with two main goals—to replace virtually all of the original systems, including electrical, plumbing, and HVAC (which have been in the building since it opened during the first term of President Franklin Roosevelt 70 years ago) and to build an annex that will house the Court Police. Completion is scheduled for 2010.

## **THE FUTURE:**

Looking forward a number of projects are scheduled for completion, including:

- Completion of the Capitol Visitor Center (CVC);
- Complex-wide energy, sustainability, and water conservation initiatives;
- Complete facility condition assessments; and
- Complete Capitol Complex Master Plan.

## **THE SOCIAL COMMITMENT:**

The AOC's stewardship responsibilities include an impressive sustainability and energy savings plan, which consists of several initiatives. For the energy savings plan, Stephen Ayers explains, "The first is to address the low cost issues, such as replacing incandescent light bulbs with compact fluorescent light bulbs, occupancy sensors, an energy awareness program, and fundamentally changing the culture. At the same time we are implementing these areas we are installing building level metering to

track the results of our actions. This will later lead to metering of various building systems, called sub-metering, to better monitor our energy trends."

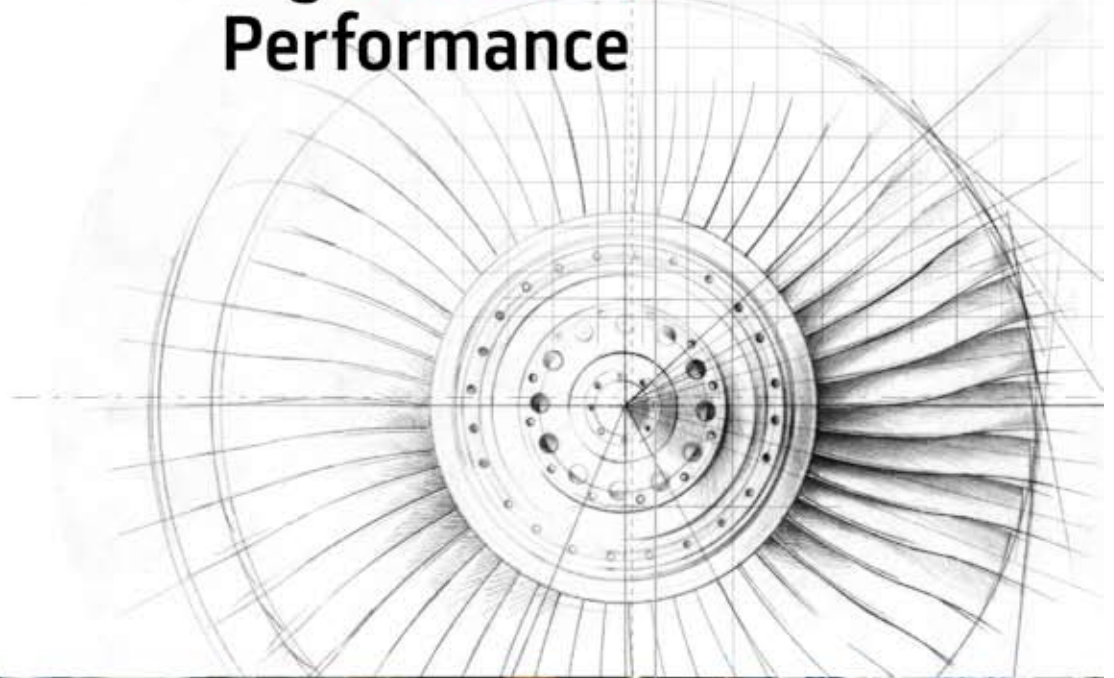
Other major initiatives recently completed include the West Refrigeration Plant expansion, investigation into the use of rain gardens and photo voltaic roof surfaces, daylight harvesting, the renovation of the Science and Technology Committee Hearing Room, and steam trap replacements campus-wide.

## **THE AWARDS:**

Awards are many for the AOC, and include:

- *The National Garden at the U.S. Botanic Garden, completed in 2006, received:*
- The 2007 Project Achievement Honorable Mention Award from the Construction Management Association of America, National Capital Chapter.
- A 2007 Washington Building Congress Craftsmanship Award for Site work and Landscaping.
- *The U.S. Capitol Power Plant West Refrigeration Plant Expansion Project received:*
- April 2008: Construction Management Association of America, National Capital Chapter, Project Achievement Award, construction value under \$100 million.
- October 2008: Construction Management Association of America, National Project Achievement Award in the category of Infrastructure Project, Less than \$100 million. ●

# Powering **Asset** Performance



As a power generator, you expect services that will optimise your plant's short and long-term efficiency. Drawing on a century of in-depth experience, Alstom offers a complete range of services, support and solutions for all fleet types, worldwide. Alstom experts improve output and extend plant lifecycle—even when you are operating under environmental and commercial constraints.

**We have the services to power your plant performance.**

[www.alstom.com](http://www.alstom.com)

*We are shaping the future*

**ALSTOM**

## **THE CONTRACTOR: FLUOR CORPORATION**

**THE WEBSITE:**  
www.fluor.com

## **THE HISTORY:**

Fluor began as Fluor Construction Company in 1912 and quickly built its reputation for applying innovative methods and performing precise engineering and construction work within the emerging petroleum industry. During the 1920s, Fluor developed expertise in the oil and gas field in process construction. Incorporated in 1924, the company began executing more complex engineering and construction projects, which continue today to be a cornerstone of Fluor's expertise.

Now Fluor Corporation is one of the world's largest, publicly owned engineering, procurement, construction and maintenance services companies. Over the past century, Fluor, through its operating subsidiaries, has become a trusted global business leader by providing exceptional services and technical knowledge across every phase of a project. Clients rely on Fluor to deliver world-class solutions that optimize their assets, improve their competitive position, and increase their long-term business success.

## **THE RIGHT NOW:**

In August 2008 Fluor Corporation announced that the company was awarded multiple contracts by BP America for its Whiting (IN) Refinery modernization project. Fluor is responsible for overall program and



*The Luminant Oak Grove Power Plant, a clean coal technology power plant for which Fluor is performing EPC and commissioning. Oak Grove, TX.*

construction management, engineering, procurement, fabrication and construction.

Fluor recently completed frontend engineering and design and began detailed engineering and construction in July 2008 with a projected completion date of fourth quarter of 2011. When complete, the modernization project will increase the Whiting facility's gasoline production by 1.7 million gallons per day and will equip the refinery to process increased amounts of secure Canadian crude oil.

"Fluor is pleased to assist BP with its Whiting modernization project that is the largest private investment ever in the history of the State of Indiana," says David Seaton, President of Fluor's Energy and Chemicals Business. "We have a long and successful history working on numerous global projects for BP and we look forward to successfully executing this milestone project."

## **THE FUTURE:**

One major project that Fluor is excited about was announced in May 2008 when the company signed a contract with Scottish and Southern Energy (SSE) to design and construct the 500 megawatt (MW) Greater Gabbard Offshore Wind Farm. The venture is the world's largest offshore wind farm project to move into the construction phase and will be built approximately 25 kilometers off the Suffolk coast of the United Kingdom (UK). The new award will be booked in the company's second quarter of 2008 and is worth approximately \$1.8 billion (GBP 900 million).

The Greater Gabbard Offshore Wind Farm Project will feature 140 wind turbines each having a rated capacity of 3.6 MW. Construction work is scheduled to commence for the offshore site in summer 2009, with work to prepare the site for the onshore substation already underway. The wind farm will be commissioned in two phases, with the entire construction scheduled to be completed in 2011.

## **THE SOCIAL COMMITMENT:**

Fluor Corporation and its people go

beyond legal requirements and traditional practices to do business in a socially, economically and environmentally responsible way. For example, they:

- Use a global workforce and supplier network of diverse ideas, backgrounds and expertise.
- Rank among the safest companies in the industries in which we work, one result of our determination to minimize any negative impact to the environment or harm to employees, clients, or communities.
- Train local citizens around the world - more than 250,000 thus far - to become skilled craftspeople, thus improving their job capabilities and strengthening the local economy.

## **THE AWARDS:**

In October 2008 Fluor Corporation was chosen by the Occupational Safety and Health Administration (OSHA) as the newest participant in the Voluntary Protection Programs (VPP) Corporate Pilot. Fluor joins an elite group of only six other companies and organizations that participate in the VPP Corporate Pilot.

The VPP Corporate Pilot is designed to recognize companies and organizations that demonstrate a strong commitment to employee safety, health and VPP. The corporate pilot designees have established, standardized corporate-level safety and health management systems that are effectively implemented organization-wide as well as internal audit and screening processes that evaluate their facilities for safety and health performance.

"At Fluor, safety is one of our bedrock corporate values and it impacts the lives of every one of our employees on a daily basis. We are honored to have been chosen to participate in OSHA's elite Corporate Voluntary Protection Program," said Alan Boeckmann, Fluor Corporation's Chairman and Chief Executive Officer. "The cooperative relationship between our two organizations will certainly help drive improvements in our own health, safety and environmental performance and add value for our clients. We are proud of our employees who have worked so diligently to achieve such exemplary safety performance." ●

# DEMAND LEAN

When Was the Last Time Your Contractor  
Wrote **YOU** a Check?

Project Savings Belong to **YOU**.



## Collaboration "Best for Project" Behavior 3D BIM Enabled

Today's business environment is forcing owners to look at costs more than ever... demanding more reliable outcomes. Our Lean Project Delivery approach has proven to deliver lower costs and shortened project schedules...\$450 million of construction in place.

**Barton Malow deliver solutions that give your firm  
a competitive advantage... Guaranteed!**

For more information, contact:  
**John A. Raimondo, P.E.** at 248.436.5096 or  
[john.raimondo@bartonmalow.com](mailto:john.raimondo@bartonmalow.com)

**Barton  
Malow**  
Design/Construction Services

[www.bartonmalow.com](http://www.bartonmalow.com)

# Associated General Contractors of America

## THE ASSOCIATION:

The Associated General Contractors of America

## THE WEBSITE:

www.agc.org

## THE HISTORY:

The Associated General Contractors of America (AGC) was established in 1918 after a request by President Woodrow Wilson. President Wilson recognized the construction industry's national importance and desired a partner with which the government could discuss and plan for the advancement of the nation. AGC is the largest and oldest national construction trade association in the United States, and operates in partnership with 96 nationwide chapters. AGC represents 33,000 leading firms, including general contractors, specialty contractors and service providers and suppliers.

## THE RIGHT NOW:

"We pride ourselves on providing a voice for our members and educational resources to help their businesses thrive," says Stephen E. Sandherr, Chief Executive Officer of AGC. That means serving as an advocate for the construction industry on Capitol Hill, before the federal agencies and in the courts. In addition, AGC offers countless tools—from local courses and seminars, scholarships and charter schools, books and instructional DVDs and safety training—to help their members maintain a strong, educated work force while planning for the future of the industry.

## THE FUTURE:

As Sandherr explains, "We are already gearing up for our 90<sup>th</sup> Annual Convention in San Diego in March 2009, and are looking forward to celebrating these many years serving the construction industry."

AGC will also continue monitoring the construction economy, particularly materials prices, with the guidance of Ken Simonson, AGC's Chief Economist. In addition, they will continue working with their ConsensusDOCS partners to grow the database of contract documents designed for the project's best interest and will also continue to educate their members on cutting-edge technologies such as Building Information Modeling.

## THE SOCIAL COMMITMENT:

AGC and its chapters are committed to helping communities across the United States. Some examples include raising money for causes such as women's shelters and helping the American

troops, to using their skills to help rebuild schools, monuments and cities after disasters such as Hurricane Katrina.

AGC also gives awards each year to recognize community service, safety and educational programs and outstanding projects.

## THE AWARDS:

AGC and its nationwide network of chapters are the proud recipients of the National Building Museum's 22<sup>nd</sup> annual Honor Award. The award recognizes AGC's leadership in shaping, defining and advancing the construction industry for 90 years. The award distinguishes AGC as a leader in construction, overseeing the construction of the highway system to the Hoover Dam to the nation's monuments and buildings. ●



AGC 2008 Aon Build America Grand Award Winner, the I-580/880 Emergency Repair by C.C. Myers, Inc., in Oakland and Emeryville, CA.



AGC 2008 Aon Build America Award Winner, Bowen Engineering Corporation. This photo showcases the Central Energy Plant Indianapolis Maintenance Center Utility Connector, Indianapolis, IN.



## Build a Better Foundation for Your Project's Success

As an owner, you have the most to gain—or lose—in a project, so starting the construction process with a fair and thorough contract is key. **ConsensusDocs**™ are the premier, widely-used construction contracts written and endorsed by owner organizations, with your best interests in mind. **ConsensusDocs**™ takes the hardest part out of negotiating, and provides you with the tools you need to reach a fair agreement, giving you more control over your project, saving you time and money, and providing superior results.

*ConsensusDocs™ are proudly endorsed by the following:*



To subscribe, please visit  
[www.ConsensusDOCS.org](http://www.ConsensusDOCS.org)  
use promo code ASC100

*Ad placement provided by Associated Specialty Contractors*



# An Introduction to Local User Councils and the Western Council of Construction Consumers

By **Andrew C. Wiktorowicz, P.E. Executive Director**

The character and missions of Local User Council (LUC) organizations vary but they all represent the interest of the plant and facility owner in the construction process. Owners belonging to their local councils have a unique advantage in that they can participate in networking opportunities, personnel development, convey a strong influence on resolving common construction and maintenance issues and present single voice to other local stake holders. The Western Council of Construction Consumers (WCCC) is one of the original Local User Councils in the United States. As an example of the many activities of LUCs, here is a profile of the Western Council:

Since 1972 the Western Council has been serving the construction industry and fulfilling its mission to:

*"Provide resources and support to assist our membership in professional development, improved operations and maintenance; emphasizing safety, quality, and cost-effective construction."*

Membership of the Western Council consists of plant and facility owners serving both the private and public sector of the economy. Associate membership is also available to service providers ranging from contractors to consultants to legal firms. The Western Council provides many educational programs ranging from project and facility management and legal workshops to dinner programs featuring owner's upcoming capital construction programs. Our programs are offered throughout the Western United States in California, Arizona and Nevada.

Membership for both owners and associates is effective on a company-wide basis; therefore all company employees qualify as members and receive the valuable benefits that we have to offer. These benefits include:

- Access to owners representing \$100 plus billion in construction over the next 5 to 7 years;
- Website access ([www.wccc.org](http://www.wccc.org)) with events, a career center and relevant articles;
- Participation on WCCC's committees to gain and share knowledge and experiences on best project practices, project management, contract management, safety, legal and regulatory issues;
- Committees: Forums of owners and service provider experts who address critical industry issues on behalf of the Council to explore and share best practices:
  - o Project and Construction Management Committee;
  - o Legal and Legislative Advisory Committee;
  - o Safety Committee; and
  - o Maintenance, Turnaround and Shutdown Committee.
- Workshops and training programs:
  - o Safety;
  - o Turnaround Management;
  - o Advanced Project Management; and
  - o Legal issues relating to construction.
- Presentation opportunities to share and demonstrate organizational talents, innovations and capabilities;
- Reduced fees for Western Council programs and workshops for all employees (over 300 programs and workshops during the last 7 years);
- Reduced fees for Lorman programs and workshops for all employees;
- Forum discussions with other members including owners, service providers and construction suppliers on industry issues and concerns;
- An Annual Leaders Forum to define issues and concerns and networking with industry professionals. This year it was held on October 28, 2008 in San Diego (see our [www.wccc.org](http://www.wccc.org) for details);
- An Annual Conference. The construction industry standard in the West presenting the latest technology and techniques for effective efficient project delivery;
- A golf tournament. The premier networking event of the year;
- The Distinguished Projects Awards recognizing the most outstanding project performances showcasing excellence in design and construction;
- Construction Law Anthology. A compilation of case studies and construction articles;
- A comprehensive Membership Directory listing over 2,000 individuals involved in construction in the West;
- Third Party Advocacy providing representation of our industry up to the State Supreme Court;
- The *Western Construction Executive*, our annual journal; and
- A complimentary subscription to California Construction Magazine.



*This \$8.4 million dollar project was a winner of one of the WCCC's 2007 Distinguished Project Awards. It is the American River College Learning Resource Centre, located in Sacramento, CA., and was completed in 2005. Photo by Todd Quam, Digital Sky Aerial Imaging.*

Over the last few years the Western Council has also undertaken several initiatives and programs on behalf of our members. A partial list of these process/industrial programs are:

**Industrial Owners Council:**

- Established to encourage development of a Southern California workforce development and crafttraining program.
- Identification of critical craft skills and shortages.
- McGraw-Hill Construction Research and Analytics group has developed a methodology for forecasting the hour demand for construction trades. This produces estimates and forecasts for trade employment hours by state or region for specific project types, and is available to Western Council members at a discounted rate.

**Project and Construction Management Committee:**

- Collection and dissemination of information related to construction contract and project management

for capital projects involving the planning, design, construction and commissioning of new or renovated plans and facilities.

- Analyzing and evaluating the various CM and PM certifications.
- Presenting programs on fundamentals of PM (scheduling methods, percentage complete analyses, etc.).
- Reviewing reverse auctions and other bidding and contracting methods.
- Electronic design and documentation issues.

**Safety Committee:**

- Established both northern and southern California branches.
- Successful implementation of safety training reciprocity initiative saving hundreds of man-hours for both owners and contractors.
- Tackling workers compensation issues.

**Turnaround Committee:**

- Presented four successful three-day turnaround planning seminars over the last seven years.

- Seminars brought together maintenance, construction and operations personnel from both owner and contractor organizations

**Legal and Legislative Advisory Committee:**

- Composed of construction industry professionals— litigators, consultants and specialists and develops programs to address construction issues.
- Looks at both contract issues as well as environmental issues (mold, workers comp, etc.).
- Produces the Construction Law Anthology.

**Distinguished Projects Awards:**

- Established to encourage excellence in project execution.
- Has become the premier industry event in the Western United States.

As you can see, The Western Council is committed to our mission statement. For more information, or to learn about upcoming classes or events, go to [www.wccc.org](http://www.wccc.org).

Providing a **heat-tracing system** means more than just supplying a heat source for your application

# WE DO IT ALL

- **Pre-Project Planning**
- **Engineering & Design**
- **Procurement & Fabrication**  
Heat-tracing system, control & monitoring, insulation
- **Site Services**  
Supervision/management, installation/construction, project controls, materials management
- **Post-Installation Services**  
Audits, maintenance, training
- **3D Plant Model Interface Capabilities**  
New TRACER LYNX™ 3D Plant Model heat management system software  
IDF and PCF file compatibility  
Fully integrated software using a single model database

To see how WE DO IT ALL, visit [www.tycothermal.com/curt](http://www.tycothermal.com/curt) or call 800-545-6258

**tyco Thermal Controls**

Raychem Pyrotech DigiTrace TRACER TRACER LYNX

WARM PIPE WARRANTY  
ZERO INCIDENTS tyco BELIEVE IT!

Tyco, DigiTrace, Pyrotech, Tracer, and TRACER LYNX are trademarks of Tyco Thermal Controls LLC or its affiliates. ©2008 Tyco Thermal Controls LLC HSB063 09/08

# OPCMIA A Partnership That Works For You



DELIVERING PEAK PERFORMANCE  
TO BOOST YOUR BOTTOM LINE

PROVIDING A QUALITY PRODUCT

HANDS-ON EDUCATIONAL  
TRAINING AT NO COST TO YOU

SAFER WORK ENVIRONMENT

**OPERATIVE PLASTERERS' AND CEMENT MASONS'  
INTERNATIONAL ASSOCIATION OF THE  
UNITED STATES AND CANADA**

11720 Beltsville Drive, Suite 700, Beltsville, Maryland 20705

Phone: (301) 623-1000 • Fax: (301) 623-1032

Web: [www.opcmia.org](http://www.opcmia.org)

# The 2008 National Co

## “Strategies for a Sustainable Future: The Next Generation of Construction”



### MONDAY AFTERNOON, NOVEMBER 10

2:00 – 2:15 PM

#### **Welcome & Opening Remarks – General Session**

- Jocelyn Scott, DuPont, Conference Chairperson

2:00 – 3:00 PM

#### **Three Shades of Green: Different Technological Pathways to Sustainability**

- Joel Barker, Futurist, Author and Filmmaker, Infinity Limited, Inc.

3:00 – 3:45 PM

#### **The State of the Industry: FMI Owner Survey**

- Mark Bridgers, Senior Consultant, FMI Corporation
- Jeff Lukowski, Consultant, FMI Corporation
- Jerry Klint, Vice President of Construction, Ameristar Casinos Inc.
- Harold Helland, Manager of Project Management, Abbott
- James Breen, Vice President Worldwide Engineering, Johnson & Johnson

3:45 – 4:15 PM

BREAK

4:15 – 5:00 PM

#### **Owner Strategies for a Sustainable Future: The CURT Perspective**

- Egon Larsen, Air Products & Chemicals, CURT President

### MONDAY EVENING, NOVEMBER 10

6:30 – 9:00 PM

Welcome Reception (casual)

### TUESDAY MORNING, NOVEMBER 11 *Exhibits Open 6:30 AM – 12:30 PM & 3:00 PM – 4:30 PM*

6:30 – 7:30 AM

Breakfast

7:30 – 7:45 AM

#### **Welcome & Opening Remarks – General Session**

- Jocelyn Scott, DuPont, Conference Chairperson

7:45 – 9:15 AM

#### **Into 2009: How the Economy Will Affect You**

- David Wyss, Chief Economist, Standard & Poors
- Nariman Behravesh, Chief Economist, Global Insight

9:15 – 10:00 AM

#### **Leading in the New Reality**

- Chad Holliday, Chairman of the Board & CEO, DuPont

10:00 – 10:30 AM

BREAK

# Conference Agenda



## 2008 CURT NATIONAL CONFERENCE SPONSORS

CURT would like to thank all of the companies who helped make the CURT 2008 National Conference such a success!

- Aker Construction, Inc.
- Alberici Constructors
- ALSTOM Power
- American Institute of Architects
- Associated Builder and Contractors
- AGC of America
- Austin Maintenance and Construction
- Baker Concrete Construction
- Banker Steel Company, LLC
- Barrick Gold
- BE&K
- Bradley Arant Rose & White LLP
- Brandenburg Industrial Service Company
- Casey Industrial, Inc.
- CH2M Hill
- Day & Zimmerman International, Inc.
- FCURT
- Fluor
- GEM
- IMPACT
- Jacobs
- JH Kelly
- Lauren Engineers & Constructors
- MC Industrial (A McCarthy Company)
- National Steel Constructors, LLC
- NAWIC Education Foundation
- NECA-IBEW NLMCC
- Primavera Systems
- RIL Properties
- Rudolph/Libbe Companies
- Sheet Metal Workers International Association
- Skaska USA Building
- Tetra Tech EC
- Turner Construction Company
- Turner Industries Group
- Tyco Thermal Controls
- Zurich

10:30 – 11:15 AM

### Concurrent Educational Sessions

- The Owners' Roadmap to Successful BIM Implementation
- High Flying Safety: Training and Certification
- LEAN and Green Legally: Avoiding Pitfalls LEAN Construction and Green Building
- High Flying Safety: The Industry Responds to Crane Accidents
- CWDC: A Sustainable Approach to Workforce Development
- Scheduling for Productivity Improvement: "WorkFace" Planning
- What You Ought to Know About New Legal Developments Before Your Next Project
- LEAN and Green Legally: Avoiding Pitfalls, LEAN Construction and Green Building

11:15 – 11:30 AM

Transition Break

11:30 AM – 12:15 PM

Concurrent Educational Sessions – Repeat of previous sessions and locations.

12:15 – 1:30 PM

Luncheon

## TUESDAY AFTERNOON, NOVEMBER 11

1:30 – 2:15 PM

### Innovative Design for Next Generation Building: CISCO Intelligent Building

- Dave Clute, Customer Solution Manager, CISCO

2:15 – 3:30 PM

### Embracing Tomorrow's Emerging Construction Professional

- Robert Wendover, Managing Director, The Center for Generational Studies
- Natasha McCurry, Manager of Project Support Services, BE&K Construction Co.
- Bryan Beischel, Engineer, Turner Construction Company
- Julia Nicolae, Project Manager, U.S. General Services Administration

2008 CURT NATIONAL CONFERENCE EXHIBITORS

CURT would like to welcome all of the exhibitors who are participating in the 2008 CURT National Conference:

- Associated Builders and Contractors
- AGC of America
- American Institute of Steel Construction
- American Society of Professional Estimators
- AT&T
- Bigge Crane & Rigging Company
- Brandenburg Industrial Service Company
- CareerSmith, Inc.
- ClickSafety
- CMiC
- Crowell & Moring LLP
- DBO2 Inc.
- e-Builder, Inc.
- FTI Consulting Inc
- Hill International, Inc.
- Houston Area Safety Council
- Hydra-Stop
- Industrial Info Resources
- International Masonry Institute/ International Union of Bricklayers
- JH Kelly
- Latista Technologies
- Lauren Engineers & Constructors
- Mammoet USA
- Marvel Union Office Furniture
- MOST
- MWG Apparel Corp.
- Navigant Consulting
- National Association of Women In Construction
- National Commission for the Certification of Crane Operators
- NCCER
- NECA-IBEW NLMCC
- Nooter Construction Company
- NorthStar Consulting
- Painter & Allied Trades LMCI
- Primavera Systems
- Process Industry Practices (PIP)
- Safety Council of LCA
- SensorSwitch Inc.
- Siemens Building Technologies
- Skire, Inc.
- Turner Construction Company
- Tyco Thermal Controls
- United Association of JAPPI of the United States and Canada

3:30 – 4:00 PM  
4:00 – 5:00 PM

BREAK

**Concurrent Educational Sessions**

- Extreme Makeover: Attracting the Best New Talent
- Retaining Top Notch Professionals: The Millennials Speak
- The Emerging Craft Worker...Recruiting and Developing: Three Perspectives
- Safety Problem Projects: How to Turn Them Around

**TUESDAY EVENING, NOVEMBER 11**

6:00 - 6:45 PM  
7:00 – 9:00 PM

Awards Gala Reception (Coat & Tie)

**CURT/CIF Awards Gala Dinner**

- *R.K. Stewart, American Institute of Architects Past President, Master Of Ceremonies*
- *Safety Awards Presentation: Art Goehry, Johnson & Johnson, Safety Committee Chairman*
- *Workforce Development Committee : Gerry Sprentall, Intel Corporation, Workforce Committee Chairman*
- *Nova Awards Presentation: Tim Alter, Rudolph/Libbe Companies, Nova CIF Chairman*

**WEDNESDAY MORNING, NOVEMBER 12 Exhibits will be open 7:00 – 11:00 AM**

7:00 – 8:00 AM  
8:00 – 8:15 AM

Breakfast

**Welcome & Opening Remarks – General Session**

- Jocelyn Scott, DuPont, Conference Chairperson

8:15 – 9:00 AM

**Strategies for a Sustainable Future: The Jacobs Approach**

- Craig Martin, President & CEO, Jacobs Engineering Group

9:00 – 9:45 AM

**ConsensusDOCS 300 Multi Party Collaborative Agreement: The Finer Details**

- Teresa Magnus, CEO, Vulcan Insulation
- Edward Parrott, Attorney, Watt Tieder Hoffar & Fitzgerald
- Jim Frey, Senior Vice President, Alberici Constructors
- Jeff Fuchs, President and Founding Partner, DELTA Consulting Group

9:45 – 10:15 AM  
10:15 – 11:00 AM

BREAK

**Concurrent Educational Sessions**

- AIA Contract Documents and ConsensusDOCS...Helping You Decide Which is Best for Your Company
- Sustainability: The Owners' Role from the Architects Perspective
- LEAN Project Delivery: Effects on Workforce, Behavior and Contracting
- A Creative Approach to Workforce Development: 2008 Workforce Award Winners

11:15 – 12:15 PM

**Creating a Culture and Process for Ideas to Emerge**

- Howard Putnam, Former CEO, Southwest Airlines

12:15 – 12:30 PM

**Closing Remarks & Critiques**

- Jocelyn Scott, DuPont, Conference Chairperson

**WEDNESDAY AFTERNOON, NOVEMBER 12**

12:30 – 2:30 PM  
2:00 – 4:00 PM

Farewell Luncheon

**CURT Committee & Task Force Meetings**

*CURT Members & Invited Guests Only*

# The Construction Workforce Development Center: Fighting the Perfect Storm

By Daniel Groves, Workforce Program Director, CURT

The outlook for industrial construction signals at least another decade of growth and prosperity. Yet the demand for skilled labor is increasing more rapidly than the supply. Craft workers are retiring and efforts to recruit new workers are hampered by a lack of understanding of current craft career opportunities.

Some argue that they aren't responsible for the problem because shortages are not affecting their current projects. In reality, everybody in the industry owns this problem because eventually it will impact everyone's ability to meet the business needs of industry.

This perfect storm presents the best opportunity for the industry to change the approach to recruiting—if owners take the lead. For many years, owners have required effective safety programs and, in the future, they must require that contractors participate in qualified training programs and in the Construction Users Roundtable (CURT) initiative with the Construction Workforce Development Center (CWDC).

About fifteen months ago, CURT engaged the non-profit CWDC to execute a three-pronged approach, supported by industry funding, to resolving workforce shortages:

1. A secure, reliable web-based supply/demand forecasting model;

2. A contemporary marketing campaign to improve industry's image and recruit new workers; and
3. A industry-wide partnership with existing organizations to train, place and retain workers.

## Labor forecasting

In November 2008, CWDC will launch [www.cwdcforecasting.com](http://www.cwdcforecasting.com), designed to collect information on major industrial capital and maintenance projects and turnarounds. The objective is to provide a comprehensive database of craft labor supply and demand by state, region and nationally. The tool will also enable the user to develop predictive forecasting models to eliminate the typical "going out of business" curves that frustrate the ability to adequately plan.

The CWDC Forecasting Model's summary information will be available without subscription cost to the industry and is patterned after Canada's successful Labor Market Link. Access to comprehensive data and analysis tools will be available to those that participate by inputting supply and/or demand data on their projects for the model.

Benefit to owners:

- Reliable web-based tracking system;
- Ability to view regional summary information;

- Easy access to provide the latest information on a regular basis;
- Secure interface to ensure confidentiality of data;
- Common methodology for all projects and regions; and
- Lower cost than conducting regional surveys.

Benefit to contractors:

- Timely data to assist with recruiting and training strategies; and
- Reliable web-based tracking system to understand labor supply and demand.

Benefits to training organizations:

- Data to implement future training programs to meet the needs of industry.

Benefit to Local User Councils (LUC):

- LUC's can provide more timely data than annual surveys;
- Data will be comprehensive and include information for inside and outside the LUC region;
- LUC's can provide regional forecasting data to members without incurring the cost of a survey; and
- The supply/demand database will be a service that could enhance membership growth potential.

The database will start with industrial projects and later add commercial projects and other economic data to provide a comprehensive picture of the U.S. construction market.

# Need More Space? National Portable Storage Association **YOUR STORAGE SOLUTION**



Can't find any where to put your stuff?

Let the National Portable Storage Association help you with all your organizing needs. We assist people all over the world find storage containers, trailers and even mobile offices.

The NPSA, with over 400 members offer portable storage solutions throughout North America and even the world.

Contact us today to find a provider near you.



National Portable Storage Association

**866.777.0635**

**joel@npsa.org**

**www.npsa.org**

**BIG J**  
SEAMLESS

**BIG J ENTERPRISES, LLC**  
8440 Washington Street  
Albuquerque, NM, 87113  
**505.821.1500**  
bigjllc.com

## Marketing and recruiting

In the first quarter of 2009, CWDC will launch a long-term, contemporary marketing campaign that captures the attention of its target audience—individuals already in the workforce, students preparing for the workforce and the influencers of those students—and delivers quality, employable candidates for training. The campaign will portray industrial construction in a way that draws promising, talented candidates to the industry and dispels outdated perceptions of construction as an undesirable career option.

## Training/placement/retention

There are training and outreach programs already in place and most need more candidates in the seats. CWDC will be recruiting new candidates for them and will partner with them to promote the benefits of the existing qualified training programs.

Benefit to industry:

- Effective training through existing qualified programs;
- Collaboration with contractors to place candidates in real jobs in the industry;
- Tracking of candidates to help ensure their retention;
- Coordination of numerous silo efforts into a single network for delivering skilled crafts; and
- Access to a network of qualified training programs.

The project reflects no labor preference and has an unprecedented level of support through the endorsement and alliance of CURT, ABC, AGC, NCCER, the Alabama AFL-CIO and others.

If industry expects to find and train a sufficient number of workers, owners must lead by requiring contractors to actively engage in qualified workforce development programs and in CWDC's initiatives.

A solution is at hand. The time to act is now. ●

# Whose Job Is It To Train Construction Workers?

By **Tim Horst, Program Manager of the Gulf Coast Workforce Development Initiative**

With a forecast for steady job growth and worker retirements in the United States, the construction industry expects an increased demand for new entrants into the construction industry. The Bureau of Labor Statistics reports that the 7.7 million construction industry workforce will grow by 10.2 percent to 8.5 million by 2016. Coupled with this job growth, the industry expects a significant number of retirements. Over the next 20 years, up to 10,000 people a day will be leaving the workforce as the 79 million baby boomers born between 1946 and 1964 move toward retirement.

The question which the industry must address is who will train the workers required to satisfy this demand. Under the nation's old education model, high schools provided students with basic industrial skills through vocational training programs. Students who completed these programs were well prepared to enter the manufacturing and construction industries. In recent decades, high school vocational training programs have dramatically declined which has left a significant void in worker preparatory training.

While there are some exceptions, today's typical high school curriculum places its emphasis on preparing students for college rather than preparing them for a career that does not require a college degree. Students who are not college bound very often see no relevance in their high school experience and drop out. In U.S. public schools, one of every four students who start high school do not make

it to graduation in four years. Students from low income families are four times as likely to drop out.

Those who do not complete their high school education are very often relegated to low income non-skilled jobs. Construction companies routinely receive expression of employment interest from people who are unable to read a tape measure, to add or subtract fractions, or to demonstrate basic reading skills. In a tight labor market, construction companies must sort through the many interested in employment to find the few who are qualified or trainable.

The construction industry is not alone in this challenge to attract and train qualified new workers. Similar worker shortfalls also exist in the advanced manufacturing, health care, automotive, hospitality, energy, retail, and transportation industries. As a consequence, the construction industry is forced to compete with other industries to staff a growing workforce from a shrinking labor pool. While this is not a preferred position, it is where the industry finds itself today.

Long-term, the only effective solution to this problem is to reform the public education system by introducing employer driven relevance in the curriculum and by enhancing education delivery to retain student interest. Without these reforms, the nation will perpetuate the existence of an alienated workforce without the skills required to compete in today's job market.

Failing a long-term solution, there are two immediate concerns for the construction industry. The first is to make construction a more attractive career option for young

people with the skills needed to be successful. And, the second is to find more effective training methods to rapidly educate those who did not obtain basic skills in their formal education.

Since no single construction company, trade union or association has the depth of resources or agency to develop comprehensive solutions to these concerns, a unity of industry action is required. While unified action has not been commonplace in the construction industry, it has never been more important than it is today. Every segment of the industry has a critical need for skilled workers and independent action is not getting the job done.

Given the industry's forecast for growth, an aging workforce, and the failings of our current public education system, the construction industry has no recourse but to accept the challenge of attracting and training needed workers. Without a unified approach, however, the industry will fail to make a significant impact on the problem. This is why CURT's Construction Workforce Development Center is such an important concept. By leveraging the influence of the owner community and by providing a rallying point, CWDC has the opportunity to unify the many divergent elements of the construction industry in developing a common approach to attracting and training entry level construction workers. Everyone with a stake in the success of the construction industry needs to support the CWDC and its mission. Working together, we can reshape the industry and ensure our collective success. ●

The opinions and ideas expressed in the BACK AT YOU SECTION are not necessarily those of CURT. If you would like to contribute to our BACK AT YOU SECTION please send topic ideas/completed articles to [editor@matrixgroupinc.net](mailto:editor@matrixgroupinc.net) for review.



# PRIDE PERFORMANCE PROFESSIONALISM

## THESE ARE THE DEFINING VALUES OF AMERICA'S BUILDING TRADES UNIONS.

And they are the driving force behind our mission to implement a new 21st century ideal centered upon our desire to become reliable, value-added partners for end-users and contractors throughout North America.

So, when you seek the safest, most highly trained and productive workforce known to man, look no further than the skilled men and women of America's Building Trades Unions.

International Association of Heat and Frost Insulators

International Brotherhood of Boilermakers, Iron Ship Builders, Blacksmiths Forgers & Helpers

International Brotherhood of Electrical Workers

International Brotherhood of Teamsters

International Brotherhood of Bricklayers and Allied Craftworkers

International Union of Elevator Constructors

International Union of Painters and Allied Trades

International Association of Bridge, Structural, Ornamental & Reinforcing Ironworkers

Laborers' International Union of North America

Operative Plasterers and Cement Masons International Association

United Union of Roofers, Waterproofers and Allied Workers

Sheet Metal Workers International Association

United Association of Journeymen and Apprentices of the Plumbing and Pipefitting Industry

Visit us online at [www.bctd.org](http://www.bctd.org)

# CURT Welcomes New Members

## IN THE LAST QUARTER OF 2008 THE CONSTRUCTION USERS ROUNDTABLE (CURT) WELCOMED AT&T AND BARRICK GOLD CORPORATION AS OWNER MEMBERS!


**AT&T**, which is headquartered in Dallas, TX, is best known for providing innovative, reliable and high-quality communication products and services. Over 300,000 employees worldwide fulfill this vision by creating new solutions for consumers and businesses, and by driving innovation in the communications and entertainment industry. The success is evident in the numbers: AT&T finished 2007 as the largest telecom company in the world based on revenue with more than 100 million customers. They also

ranked No. 1 in nearly every segment—wireless, broadband, business, voice and directory—and are positioned to continue leading the industry as technologies converge and the Internet continues to drive growth in communications services.

Twenty-five years ago a small, determined group of people came together in a boardroom in Toronto, Canada to create **Barrick Gold Corporation**. Today Barrick Gold is the world's preeminent gold company, respected for its financial strength

and its ability to identify and act on opportunities. Barrick Gold has a portfolio of 27 operating mines and many advanced exploration and development projects that are located across five continents. The company also has the largest reserves in the industry, with 124.6 million ounces of proven and probable gold reserves, 6.2 billion pounds of copper reserves and 1.03 billion ounces of contained silver within gold reserves as at December 31, 2007.


## Welcome to CURT!



### SATTERFIELD & PONTIKES CONSTRUCTION, INC.


GENERAL CONTRACTOR | CONSTRUCTION MANAGER | DESIGN BUILDER

Hector Garcia Middle School




11000 Equity Drive


Jack Evans Police Headquarters



Harris County  
Juvenile Justice Center




Laredo Community College




Harris County Juvenile Justice Center

*Delivering*  
**CERTAINTY and  
SUSTAINABILITY**  
*through People, Service  
and Technology*

- DALLAS / FT. WORTH
- HOUSTON
- NEW ORLEANS
- SAN ANTONIO





[www.satpon.com](http://www.satpon.com)



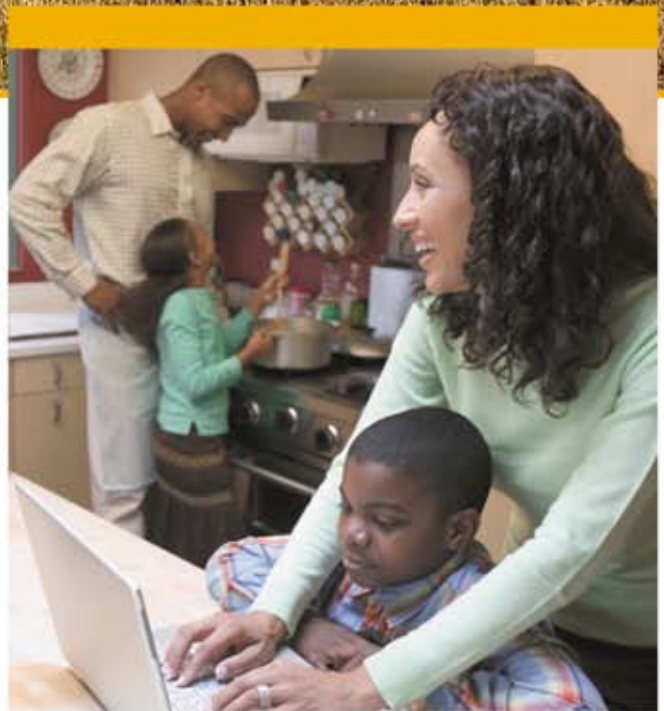
## Water Scarcity Energy Assurance Environmental Impact

Every day, Black & Veatch Construction & Procurement works to provide our clients with sustainable solutions to help them meet the needs of the people they serve and improve the ability of future generations to meet their own needs.

Black & Veatch has been providing construction services to the infrastructure industry for nearly a century. Through Overland Contracting Inc., Black & Veatch Construction, Inc. and Black & Veatch International, our subsidiary companies, we assemble the right teams with the right experience, using the right technologies to deliver reliable solutions, project by project.

We put people first, *Building A World Of Difference* for our clients and our environment.

For more information, contact us at (913) 458-2000 or visit [www.bv.com](http://www.bv.com)



Our extensive construction capabilities help clients bring vital infrastructure to communities worldwide, improving and sustaining the quality of life for millions.



**BLACK & VEATCH**  
Building a world of difference.®



**Accommodations**

The Westin Mission Hills ..... 49

**Associations**

American Institute of Architects  
 (AIA) ..... inside back cover  
 Associated Builders and Contractors (ABC) ..... 5  
 The National Centre for Construction Education and  
 Research (NCCER) ..... 12  
 The National Portable Storage Association ..... 72

**Building Information Modeling Software**

Tekla USA..... 39

**Construction Consulting Services**

Navigant Consulting..... 25

**Construction Contracting & Design Build Firms**

Aker Solutions, Inc. .... 58  
 Barton Malow ..... 62  
 Black & Veatch ..... 76  
 Burns & McDonnell..... 3  
 EGIZII ..... 77  
 Engineered Constructors Inc. .... 44  
 McCarthy Building Companies Inc./MC Industrial .... 26  
 Satterfield & Pontikes Construction, Inc. .... 75

Skanska USA..... 33  
 Structure Tone..... 35  
 Teton Industrial Construction ..... 52  
 Turner Construction Co..... 6

**Construction Equipment**

Terex Corporation ..... 38

**Construction Labor/Management Website**

National Maintenance Agreements  
 Policy Committee (NMAPC) ..... 22

**Construction Project Management**

CMiC ..... 46

**Contract Documents**

ConsensusDocs ..... 64  
 American Institute of Architects ..... inside back cover

**Contractors and Laborers Resource Guide**

N.W. Laborers & Employers  
 Co-Op Fund..... inside front cover

**Cranes/Aerial Platforms/Heavy Rigging**

Manitex..... 42

**Your Industry is  
 Our Specialty**

If your association would like  
 a magazine like  
 The VOICE, call  
 (866) 999-1299  
 for more information.

**EGIZII ELECTRIC INC.**  
**ELECTRIC CONTRACTORS**

**DESIGN BUILD**

- INDUSTRIAL • COMMERCIAL
- INSTITUTIONAL • TRAFFIC CONTROL
- TRANSMISSION DISTRIBUTION
- TELEPHONE/DATA

**(217) 528-4001**

Call for Offices Outside Illinois  
 700 N. MacARTHUR BLVD. - SPRINGFIELD, IL 62702



**Fall Protection Products**

Miller Fall Protection..... 15

**Heat Tracing and Heat System Management**

Tyco Thermal Controls..... 66  
 Superheat FGH Inc..... 21

**Heavy Industrial Lifting/Heavy Transporting**

Bigge Crane & Rigging Co..... 17  
 Mammoet..... 8

**Industrial Wall, Roofing and Insulation**

The Young Group Inc. .... 57

**Labor Management Trust**

Impact..... 34, 48

**Legal Services**

Watt, Tiedler, Hoffar & Fitzgerald LLP ..... 54

**Mechanical Contracting & In-Plant Services**

Big J Enterprises, LLC..... 72

**Power Generation Asset Services**

Alstom Power Service..... 60

**Project Construction Management Software**

Skire Inc. .... 31

**Steel Construction Services**

Midwest Steel Inc. .... 20

**Unions**

Building Construction Trades Department ..... 74  
 International Union of Bricklayers/IMI ..... 10  
 International Union of Painters and Allied Trades ..... 27  
 LECET ..... 53  
 National Electrical Contractors Association  
 (NECA/IBEW/NLMCC ..... outside back cover  
 Mechanical Allied Crafts Council (MAC) ..... 40, 41  
 Operative Plasterers and Cement Masons International  
 Association (OPCMIA) ..... 67  
 United Association..... 51

**Women's Construction Education Courses**

The National Centre for Construction Education  
 and Research (NCCER)..... 78

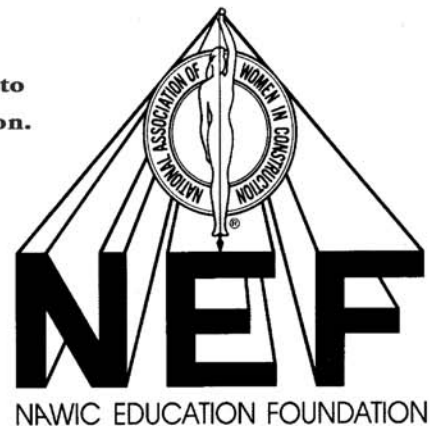
**Workforce Development**

The International Brotherhood of Boilermakers..... 4

*Educating the Construction Industry Today...and Tomorrow*

- **“CONSTRUCTION INDUSTRY TECHNICIAN”** The NEF course to educate entry level employees about the business side of construction.
- **An approved Quality Education Provider by American Council for Construction Education (ACCE).**

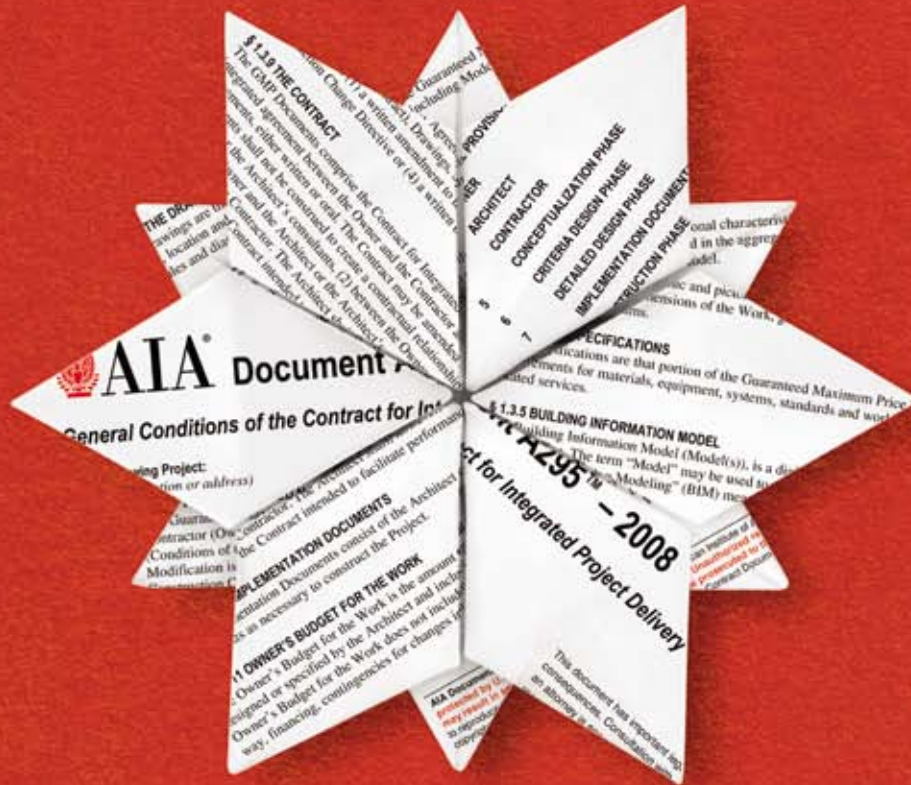
Visit [www.nawiceducation.org](http://www.nawiceducation.org) for course details  
 Toll Free 866-277-2883



~New~



THE AMERICAN  
INSTITUTE  
OF ARCHITECTS



## ~Integrated~

Since 1888, the AIA has been leading the industry in design and construction contracts.

In 2008, there's a new standard—Integrated Project Delivery (IPD). IPD encourages intense collaboration among owners, architects, engineers, and contractors—right from a project's inception. Maximize efficiency and build on the strengths of your design and construction team using the AIA's new IPD Agreements.

To learn more, visit [www.aiacontractdocuments.org/v2](http://www.aiacontractdocuments.org/v2) to download your free copy of *Integrated Project Delivery: A Guide*, and to purchase the IPD Agreements today.

**AIA Contract Documents®**

A NEW INDUSTRY STANDARD.

The American Institute of Architects

1735 New York Avenue NW

Washington, D.C. 20006-5292



**The bank  
prequalified  
you.**

**Did you  
prequalify  
the electrical  
contractor?**

**Good question.** The answer could mean the difference between a job well done and a job done well over budget. The NECA/IBEW apprenticeship and training program invests more than \$100 million annually to develop the highest quality electrical workforce. At the end of their on-the-job and classroom training, we know exactly what we're getting. And so will you.

Contact your local NECA chapter or IBEW local union for more information.

[www.thequalityconnection.org](http://www.thequalityconnection.org)

