CONSTRUCTION INNOVATION FORUM®

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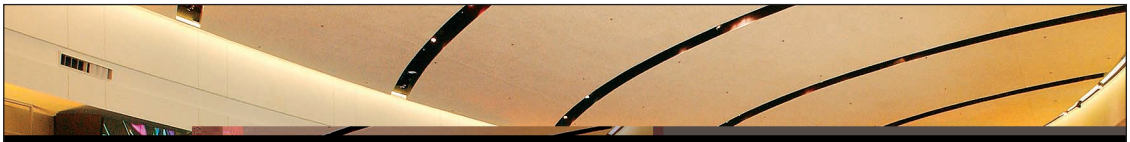
Editor in chief:
Rasha Stino, Ph.D.

Contributors:
Robert I. Carr, Ph.D., P.E.
Ihab Ismail
Christine Miller
Brenda Romano

Graphic Designer:
Chris Collins

Advertising Sales:
Tel 248-409-1500
info@cif.org

NOVA Awards 2003



The Ford Event and Conference Center, Dearborn, Michigan

By Robert I. Carr, Ph.D., P.E.

The Construction Innovation Forum held its 14th Annual NOVA Awards Banquet last April at the Ford Event and Conference Center in Dearborn, Michigan to honor industry innovators in fulfilling its purpose of recognizing and encouraging construction innovation. The event was notable for its magnificent new venue, record number of NOVA Award Winners, attendance by national Construction Users Round Table members, and induction of new Construction Innovation

Continued on page 10

CIF is now accepting nominations for the 2004 NOVA Awards. The deadline is October 1, 2003. See page 2 for complete details.

Edwin D. Hill, International President of the International Brotherhood of Electrical Workers was the keynote speaker for NOVA 2003.

CONSTRUCTION INNOVATION FORUM®

NOMINATION FORMS CAN BE DOWNLOADED AT WWW.CIF.ORG

The Construction Innovation Forum, established to annually identify and honor construction innovations worldwide,is accepting nominations for the 2004 NOVA Awards. The NOVA Award honors innovations that improve construction quality, productivity and cost effectiveness.
All sectors of the construction industry are eligible. No fees. Nominations are due **October 1, 2003.**

CONSTRUCTION INNOVATION FORUM
43636 Woodward Ave., Suite 300
Bloomfield Hills, MI 48302
Phone: 248-409-1500
Fax: 248-409-1503
E-mail: info@cif.org
Website: www.cif.org

CONSTRUCTION INNOVATION FORUM®

CIF Elects New Officers

The Construction Innovation Forum (CIF) has elected new officers for 2003/04.

Larry P. Jedele, P.E., M.ASCE, Principal Manager of Geotechnical Services for Soil & Materials Engineers, Inc., of Plymouth, Michigan has been elected Chairman of the Board. Jedele brings nearly 30 years of experience in civil engineering to his new position. He earned his undergraduate and graduate degrees in Civil Engineering from the University of Michigan.

Timothy A. Alter, President & Chief Executive Officer or Rudolph/Libbe Companies, Inc., in Toledo, Ohio has been named Chair of the Executive Committee. Tim Alter has been with Rudolph|Libbe Companies Inc. since 1983. He is past-chair of CIF's Membership Committee; and also a member of the Ford Motor Company Supplier Council and the Toledo Organization of Management.

Kevin P. Carroll, AIA, of OneShere, Inc., Sylvania, Ohio has been elected to the position of Vice Chairman. Carroll is a registered Architect and co-founder and principal of OneSphere, an Ohio-based firm dedicated to seamless project integration. Carroll received his Bachelor of Science degree in Architectural Engineering from the University of Cincinnati, and a Master of Architecture degree from the University of Michigan.

Sandra L. Cybulla, Vice President of Operations & Chief Financial Officer for the Construction Association of Michigan in Bloomfield Hills, Michigan has been named Treasurer. The Construction Association of Michigan represents over 4,000 commercial contractors, sub-contractors, suppliers and service providers, and is the oldest and largest regional construction association in North America. Cybulla holds a Bachelor of Science degree in Business Administration from the University of Detroit.

Robert P. Washer, Vice President of Business Development for MICCO, LLA, Pontiac, Michigan will serve as Secretary. In his 30-year career, Washer has worked in numerous capacities, including project management, purchasing, and project engineering. Washer received his Bachelor of Science degree in Civil Engineering from Clarkson University of Technology in Potsdam, New York.

CHAIRMAN'S MESSAGE

Roger Lane, Bob Carr, Dave Hamilton and John Doherty were presented NOVA Award statues in recognition of their work as founders and leaders of CIF.

By Larry P. Jedele, P.E.

At the Nova Awards celebration last April, we acknowledged our deep appreciation to Roger Lane, Dr. Robert Carr, Dave Hamilton and John Doherty for their valuable contributions to CIF, innovation and the construction industry. These individuals were largely responsible for the formation and growth of CIF from its inception. Without their vision, leadership, dedication and passion for innovation, CIF and the NOVA Awards would not exist. Because of their immeasurable contributions to CIF, they were presented NOVA Award statues as a token of appreciation.

The new team of officers is poised to carry on the vision, and mission of this organization to advance and recognize innovation in the construction industry. This transition began about two years ago and has progressed in a careful and deliberate manner, with the support and encouragement of CIF's founding officers. Although the founding officers will no longer be serving as officers of this organization, each will be taking on important new roles, allowing us to expand the scope of CIF and expand interest from the various segments of the construction industry. I look forward to serving as your Chairman of this prestigious organization along with Vice-Chair, Kevin Carroll; Chair of the Executive Committee, Tim Alter; Secretary, Bob Washer and Treasurer, Sandy Cybulla.

"These individuals were largely responsible for the formation and growth of CIF from its inception. Without their vision, leadership, dedication and passion for innovation, CIF and the NOVA Awards would not exist."

Larry P. Jedele, P.E., CIF Chairman

The 2003 NOVA Award Winners

AUTOMATIC REBAR TYING MACHINE REPLACES MANUAL TASK OF TYING REBAR

Tying steel reinforcing bars has always been tough, manual labor, as reinforcing ironworkers spend much of the day hunched over tying rebar. To address this issue, in 1994 the Bentac Company of Japan introduced the U-Tier automatic rebar tying machine. This was the first fully automatic machine to tie rebar. In an independent, but parallel effort, the Max Company of Japan introduced the automatic Re-Bar-Tier. Both machines are uniquely designed to replace the manual and backbreaking process of tying rebar. The machine holds the crossed reinforcing bars, feeds the tie wire, winds, cuts, and ties in one action. The result is a strong, single strand, double wrap tie. The automatic rebar tying machine can be used in numerous applications including highways, roads and bridges, concrete slabs, precast/prestress, electrical vaults, foundations, cages, and manholes. Advantages of the rebar tying machine include saving time through productivity improvements, reduction of on-the-job injuries, consistent results, and reduction of material costs by decreasing wire consumption

Tony Orr, Product Manager for Hahn Systems of Indianapolis, Indiana, a distributor of MAX machines, accepted the NOVA award from CIF Chairman Roger Lane.

Contact: U-Tier/A Division of Toyojamco, Ltd.
(915) 595-8825 ext. 22-23 • www.u-tier.net
MAX USA Corporation
(800) 223-4293 • www.maxusacorp.com

"A very, very well done event! As a CURT (Construction Users Round Table) member, thanks for allowing me to attend!"

Jack Buttrum, Egizii Electric Co.

OPEN CONTROL NETWORK TECHNOLOGY ON A CHIP IS BROADLY ACCEPTED FOR SMART FACILITIES

Traditional control systems require the involvement of multiple trades for installation, require multiple network cabling and conduit systems, and ultimately require that the control software for multiple systems be laboriously programmed to "talk together" in order to function properly. In the 1990s, Echelon Corporation created the LonWorks chip. Smaller than a paperclip, the chip is non-proprietary and enables equipment from different manufacturers to communicate with one another. The LonWorks chip is used to create building automation systems where a single device control network monitors and controls all of the building's functions, including lighting, HVAC, security access, backup generators, elevators, etc. LonWorks guarantees the interoperability of thousands of manufacturers' products across almost every vertical industry. LonWorks has benefited manufacturers and end users by creating an open market, simplifying control systems, design, construction, and installation; and reducing initial/running/management costs. LonWorks has countless successful application in commercial buildings, industrial settings, transportation systems, homes, and utilities.

Receiving the NOVA Award on behalf of LonWorks was Michael Tennefoss, Vice President of Product Marketing, Training, and Customer Relations for Echelon Corporation. NOVA Award Chairman Robert Carr presented the award.

Contact: Steve Nguyen, Echelon Corporation
550 Meridian Ave., San Jose, CA 95126
Ph: 408-938-5272

HOLISTIC "GREEN" OFFICE BUILDING USES 1/10 ENERGY OF COMPARABLY SIZED BUILDING

In 2000, the U.S. Green Building Council, an association of owners, architects, builders, and "green" specialists, adopted the Leadership in Energy and Environmental Design (LEED) Certification which established industry benchmarks to qualify environmentally responsible buildings. In the year 2000 only one such project was certified and it epitomizes the use of the term "green architecture." Awarded at the highest "platinum" level, the 32,000 sf Phillip Merrill Environmental Center in Annapolis, Maryland boasts numerous "green" innovations The Chesapeake Bay Foundation spent an extra $1.5 million on its $6.3 million headquarters, but estimates it will recover costs in energy and water savings over the next 10 years. It uses 2/3 the energy of a comparably sized office building and includes composting toilets, recycled materials, photovoltaic cells, geothermal heating and cooling, and rainwater collection. The center uses less than 100 gallons of water per day and releases 60 gallons of wastewater per day to the public sewage treatment plant.

Mary Tod Winchester (second from right), Vice President of Administration and Operations of the Chesapeake Bay Foundation accepted the NOVA Award on behalf of Green Building.

Contact: Michael Shultz
(410) 268-8816 • www.cbf.org
US Green Building Council
(202) 828-7422 • (202) 82-USGBC
www.usgbc.org

"Wonderful location. It gets better each year."

John Marek, Boilermakers Local 169

DIGITAL CLOSE-RANGE PHOTOGRAMMETRY HELPS CREATE ACCURATE 3D MODELS

Photogrammetry, measuring objects from photographs, has been used since the late 1800s, most commonly for mapping large areas from aerial photographs. Digital Close-Range Photogrammetry (CRP) accurately measures objects directly from photographs or digital images captured with a camera at close range. Accurate as-built 3D models of facilities and plant equipment are produced from multiple overlapping images taken from different perspectives. BE&K As-Built Services created CRP software and processes it has widely used in its consulting services. Vexcel developed and markets FotoG CRP software that is broadly used for exacting measurements. EOS Systems developed and widely markets PhotoModeler, less expensive CRP software and hardware for a variety of uses. The James W. Sewall Company of Old Town, Maine, nominated close range photogrammetry for the NOVA Award after using it for a dimensional inspection survey of the Waldo-Hancock Bridge across the Penobscot River in Maine.

Accepting the NOVA Award for Digital Close-Range Photogrammetry was Phil Zicarelli, President of As Built Data of Birmingham, Alabama, and Dr. Jason Szabo, Manager of Close Range Engineering for Vexcel of Boulder, Colorado.

Contact: Phillip Zicarelli
(205) 972-7800 • www.asbuilt.com
Jason Szabo, Ph.D.
(303) 444-0094 • www.vexcel.com
Alan Walford
(604) 732-6658 • www.photomodeler.com

PRESTRESSED CFRP REPLACES STEEL REINFORCING IN PRE AND POST TENSIONED BRIDGE CONCRETE

Steel reinforcement used in concrete bridge decks and beams corrodes when exposed to de-icing chemicals and is a major cause for bridge repair and replacement. The premature failure of reinforced concrete components on the Bridge Street Bridge prompted the City of Southfield, Michigan to try something different. A task force of city, state, and federal officials, including engineer Hubbell, Roth & Clark, CFRP Material Manufacturers, and representatives from Lawrence Technological University, and the University of Windsor was created to develop the concept. Two concrete bridges were built in parallel. One used conventional steel reinforcing, and the other was solely reinforced with carbon fiber reinforced polymers (CFRP), including internal pre-tensioned tendons and external post-tensioned cables. CFRP is composed of long fibers woven together and encased in epoxy. Its light weight, high tensile strength, and corrosion resistance can increase the potential service life of bridges, which reduces safety hazards and maintenance costs. This is the only bridge of this type in the world.

Those identified as primarily responsible were: Dr. Nabil F. Grace, P.E., Professor and Chairman of the Civil Engineering Department at Lawrence Technological University, Southfield, Michigan; Dr. George Abdel-Sayed, P.E., Professor Emeritus of Civil and Environmental Engineering at the University of Windsor, Ontario, Canada; Loris Collavino, P.E., President of Hollowcore Prestressed Systems of Detroit, Michigan; George E. Hubbell, P.E., Vice President and Treasurer of Hubbell, Roth, & Clark, Consulting Engineers of Bloomfield Hills, Michigan. Wayne Bonus, P.E., Administrative Engineer, City of Southfield, Michigan accepted the award.

Contact: Frederick C. Navarre, P.E.
(248) 454-6300 • www.hrc-engr.com

Nabil F. Grace, Ph.D., P.E.
(248) 204-2556 • www.ltu.edu/engineering

"We were thrilled with the level of quality, attention to detail, as well as the high level of honor to have received the NOVA Award. It is a beautiful award, and is displayed and highlighted in the grand entrance of our headquarters facility."

Mary Tod Winchester, Chesapeake Bay Foundation, Inc.

PAVEMENT QUALITY INDICATOR MEASURES ASPHALT PAVEMENT DENSITY

Measuring density of asphalt during compacting operations is critical to a contractor's success. Density has been proven to be an important variable in the construction of durable, longer-lasting asphalt pavement surfaces. TransTech Systems' Pavement Quality Indicator (PQI) makes instantaneous, in-situ measurement of the field pavement density. This contrasts with the traditional destructive and time consuming methods of measuring asphalt pavement density by either coring samples or using a portable nuclear density gauge. PQI was developed by TransTech Systems in 1995 under the New York State Energy Research and Development Authority Agreement. It makes innovative use of a constant voltage, low frequency, electrical impedance approach that measures compaction level or density by measuring the change of the electrical impedance of the material matrix through the use of a flat sensing plate. The accurate, immediate in-situ field measurements help achieve better quality and longer service life pavements. It offers easy portability, ease of use, accuracy, speed of results, safety, and lower operating costs compared to both coring and nuclear density gauges.

Two representatives were on-hand to receive the award: Alan Gilbert, and David Apkaria.

Contact: TransTech Systems, Inc.
(518) 370-5558 • www.transtechsys.com

The Reload Classic is a scramble format with innovative twists that award "reloads" (second shots) based on hole difficulty and golfer ability.

Please choose from the following:

- **Golf Sponsor - $10,000**
  Green's fees for all players
  (Signs at registration/assembly/all holes)

- **19th Hole Reception Sponsor - $5,000**
  Drinks and hors d'oevures following the event
  (Signs at reception areas)

- **Golf Cart Sponsor - $3,000**
  Golf carts for all players
  (Signs at assembly and on all golf carts)

- **Course Refreshments Sponsor - $2,000**
  Refreshment cart drinks and snacks on course
  (Signs on refreshment cart/s)

- **Lunch Sponsor - $1,500**
  Lunch at the turn
  (Signs at lunch area)

- **Golf Ball Sponsor - $1,000**
  Sleeve of 3 balls with your logo to all players
  Named a primary sponsor of the event
  Custom signs as described above
  Name listed in all press releases
  Special recognition at reception at 19th hole
  Named in program at Innovation Celebration
  Lunch tickets
  Reception drink tickets
  Chances in Special Gifts Drawing

- **Eagle Sponsor - $1,000**
  Named a primary sponsor of the event
  Name listed in all press releases
  Custom signs at the tee or green of choice
  Four golf tickets
  Four lunch tickets
  Special recognition at reception at 19th hole
  Refreshments on the course
  Eight reception drink tickets
  Gift for each player
  Four chances in Special Gifts Drawing

- **Birdie Sponsor - $800**
  Four golf tickets
  Four lunch tickets
  Refreshments on the course
  Eight reception drink tickets
  Gift for each player
  Four chances in Special Gifts Drawing

- **Program Sponsor - $500**
  Full page ad back cover of program
  One lunch ticket
  Two reception drink tickets
  Gift received by players
  Chance in Special Gifts Drawing

- **Closest to the Pin/Longest Drive Sponsor - $250**
  Custom sign at green or tee
  One lunch ticket
  Two reception drink tickets
  Gift received by players
  Chance in Special Gifts Drawing

- **Individual Golfers - $200**
  One golf ticket
  One lunch ticket
  Refreshments on the course
  Gift for player
  Two reception drink tickets
  Chance in Special Gifts Drawing

- **Tee or Green Sponsor - $150**
  Custom sign at tee or green
  One lunch ticket
  Two reception drink tickets
  Gift received by players
  Chance in Special Gifts Drawing

Schedule of Events - September 16, 2003

9 am	Registration/Warm-up
10 am	Shotgun start. Scramble begins
12 noon	Lunch on the turn
3 p.m.	Cocktail reception, Hors d'oeuvres
	Awards Program and Recognition
	Special Gifts Drawing
5 p.m.	Conclusion

Name: _____

Company: _____

Address: _____

City: _____ **State:** _____ **Zip:** _____

Phone: _____ **Fax:** _____

Players: _____
_____
_____
_____
_____

All sponsors are listed in the program

Please fax to (248) 409-1503

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InNOVAtor
Newsletter Staff

Editor in chief:
Rasha Sitou, Ph.D.

Contributors:
Robert I. Carr, Ph.D., P.E.
Rub Ismail
Christine Miller
Brenda Romano

Graphic Designer:
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Advertising Sales:
Tel 248-409-5500
info@cif.org

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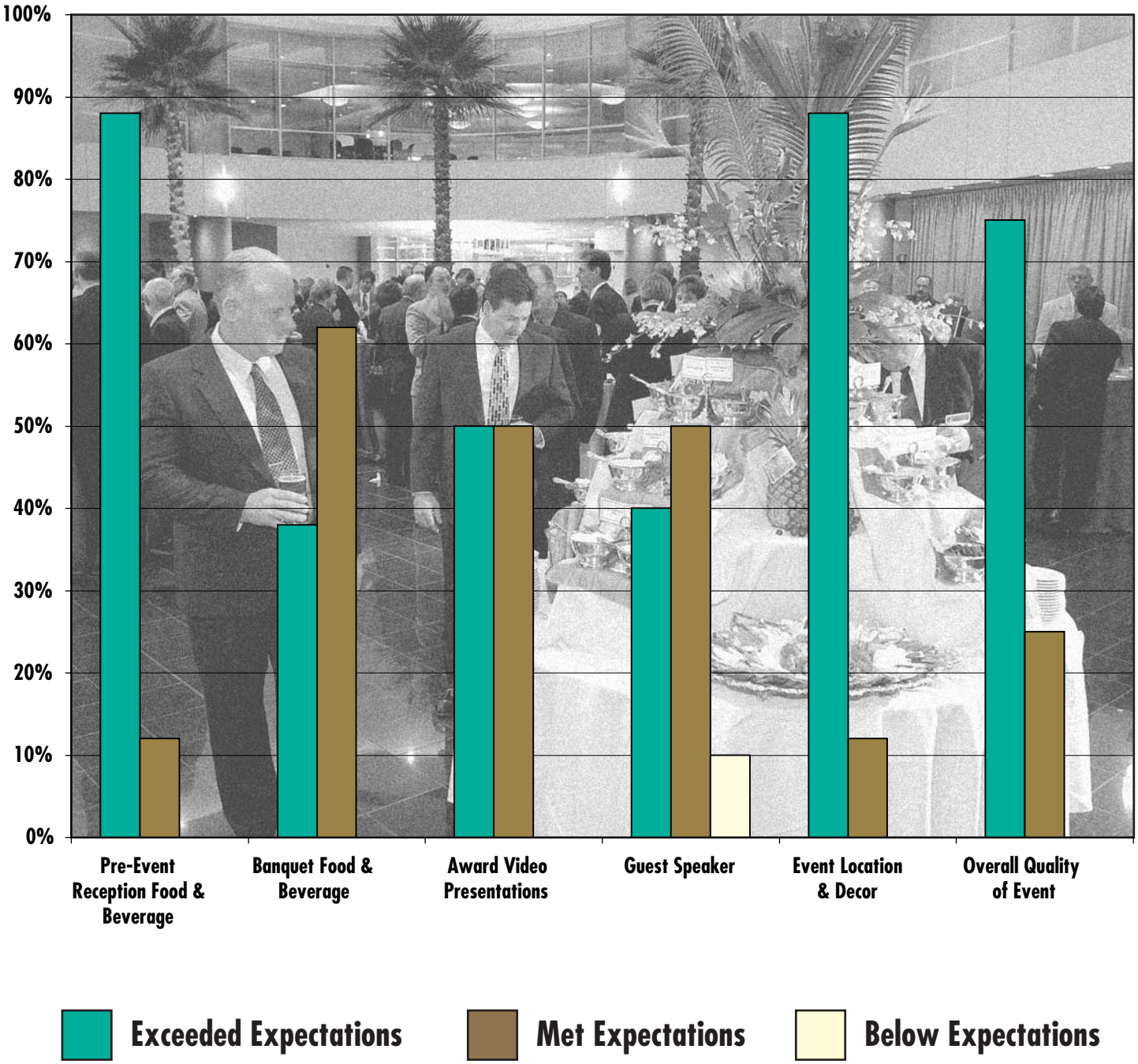
What attendees thought of the 2003 NOVA Awards



Thanks to the following sponsors and attendees for supporting the 2003 NOVA Awards program:

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Architectural Contractors Trade Association

Associated Builders & Contractors, West Michigan

Associated General Contractors of America, Greater Detroit Chapter

Associated General Contractors of America, Michigan Chapter

Ayers Limited

Baker Concrete Construction

BE & K

Beacon Electric

Boilermakers, Local #169

Commercial Construction Inc.

Construction Association of Michigan

Construction Users Round Table

Consumers Power

Daimler Chrysler Corp.

Detroit Building Trades Council

Dickinson, Wright

Doeren Mayhew

Dow Chemical

DTE Energy

DTE Supply Chain

Dumas Concepts in Building

Edison Electric

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International Brotherhood of Electrical Workers, Local 131

International Brotherhood of Electrical Workers, Local 219

International Brotherhood of Electrical Workers, Local 252

International Brotherhood of Electrical Workers, Local 275

International Brotherhood of Electrical Workers, Local 445

International Brotherhood of Electrical Workers, Local 498

International Brotherhood of Electrical Workers, Local 557

International Brotherhood of Electrical Workers, Local 665

International Brotherhood of Electrical Workers, Local 692

International Brotherhood of Electrical Workers, Local 557

International Brotherhood of Electrical Workers, Local 948

International Brotherhood of Electrical Workers, Local 1070

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Jacobs Engrs.

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Michigan Regional Council of Carpenters

Michigan State University

Monarch Welding & Engineering, Inc.

National Association of Women in Construction

Reserve your Sponsorship for NOVA 2004!

- ❑ Event Sponsor. $50,000
- ❑ Winner Video Presentations $15,000
- ❑