



SEAU NEWS

The Newsletter of the Structural Engineers Association of Utah

Volume V- Issue IV January 2001

This newsletter is a monthly publication of the Structural Engineers Association of Utah.

Articles or advertisements appearing herein may be submitted by anyone interested in expressing a viewpoint on structural engineering.

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sadan@reaveley.com
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Utah Governors Mansion Retrofit, structural work performed by WCA Structural Engineering formally Willmore Cole & Associates.

IN THIS ISSUE

- Message From The Board..... p 1
- Member Forum..... p 2
- Upcoming Events p 4
- January Meeting p 5
- Bulletin Board p 5
- By-LawsCommittee p 7

JANUARY EVENT

Changes and Trends in Solid Sawn and Engineered Wood Products

Presented by:
Von Behunin and Toni Van Wolput

Program Date:
Thursday January 18, 2001
5:30 p.m. Social
6:00 p.m. Meeting and Program

Location:
University of Utah
Engineering and Mines Building
Room 104

MESSAGE FROM THE BOARD

THREE STATIONARY NICKELS (A SEQUEL TO "SHIFTING PARADIGMS")



By A. David L. Pierson, SEAU Secretary Treasurer

So the discussion at board meeting went something like this --

Some Director: "I make a motion that Dave Pierson write the article for the January newsletter".

Me: "I object - that motion has completely yielded to the Second

Law of Thermodynamics" (*think about it*).

Another Director: "I second the original motion - It's Dave's turn"

Me: "I object - that is also out of order".

President Cohen: "The motion is in order. Any debate"

Me: "How about if we just publish a bunch of lawyer jokes instead of having an article from the Board"

President Cohen: "That is out of order. All in favor that Dave Pierson write the January newsletter article say 'aye'" (*Pause*) "Any opposed" (*Pause*). The motion carries five in favor, one opposed". (The amended re-count total was 6 to 1 - David Alter had a dimpled chad.)

So, have you heard the one about the guy who bought a brass monkey from the antique shop. It seems this man enjoyed collecting various unique decor for his home. When he saw the brass monkey he asked the clerk how much it was. The clerk said it was \$25 for the
CONTINUED ON PAGE 3

MEMBER FORUM

FOCUS

Utah Structural Engineers provide a significant contribution to a wide variety of projects for commercial, government, industrial, and residential clients. Each month, SEAU would like to focus attention on the accomplishments, successes, and hard work of our Utah Structural Engineering firms. This month the focus is on:

Weber Engineering

Established in 1972, Weber Engineering (originally called Ronald H. Weber Associates) has provided the structural engineering for projects which include schools, health care facilities, jails, municipal complexes, office buildings, apartments, condominiums, shopping centers, warehouses, manufacturing plants, and special use structures.

A unique early project was the analysis and design of the pedestrian bridge over 6th South Street in SLC between the parking lot and Trolley Square (featured on the cover of the November newsletter). The truss was originally an Anaconda Copper Company conveyor truss with a mid-span support. The developer purchased this surplus truss from Anaconda and it was delivered to the site in two separate parts, having been cut in half for transportation convenience. Weber Engineering was asked to put it back together again. This task involved field measuring all member and rivet sizes and dimensions, analyzing its capacity (graphically at that time) and designing a mid-span splice so that it could be hoisted into place with two cranes and span over the street without its original mid-span support.

The Broadway Tower Apartments is a twelve-story structure with 8" thick

floor slabs spaced at 8'-8" o.c. floor to floor with a 30" thick, continuous



Broadway Tower Apartments

poured, post-tensioned concrete foundation mat. Lateral stability is achieved with concrete shear walls.



Powder Run Condominiums

The Powder Run Condominiums at Deer Valley, UT are 3-story wood-framed shear-wall structures which resist significant lateral earth loads along the back side.



R.C. Willey Warehouse

The R.C. Willey Warehouse and Showroom is a 450,000 s.f. building which actually is three separate structures; the large, high rack warehouse area, the heavy storage mezzanine floor area and the three story showroom area. The mezzanine floor structure is steel moment-resisting frame, while the warehouse and showroom structures are

concrete and masonry shear-wall structures. The three structures are supported on a combination of spread footings and piles. High-rack storage areas require super-flat concrete slabs so that the narrow track, hard-tired forklifts remain vertical when hoisting to the high shelves. The perimeter walls are precast, pre-tensioned concrete elements cast by Buehner Concrete Co. and delivered to the site.

An interesting irrigation engineering project of Ron Weber's consisted of the design and construction of 10,000 lineal feet of 6" and 8" PVC buried mountain pipeline and 5,000 l.f. of main irrigation line on the remote west slope of the Deep Creek Mountain range in western Utah.



Deep Creek Irrigation Line

The mountain line conveys water from two remote streams to a small reservoir which gravity feeds to the main line. The main line in turn supplies water to 4" by 1/4 mile long wheeled aluminum sprinkler lines, which are moved from station to station along the main line at 60 foot intervals. Mr. Weber was awarded the 1996 Shambib Soil District Farmer of the Year award for soil and water conservation. He is also one of the persons featured in the recent book "People of the West Desert". His suggestion for ameliorating the angst of marginal structural engineering fees is - "try farming and ranching for a while".

Ron Weber is a founding member and past president of SEAU, a past member of the Salt Lake City Board of Appeals, and former Lecturer and Adjunct Assistant Professor, having taught structures, at the University of Utah Civil Engineering Department and Graduate School of Architecture.

MESSAGE FROM THE BOARD (continued from page 1)

monkey, but another \$375 for the story that goes along with it. The man thought the monkey was cool, but had no interest in the story. So he gave the clerk \$25 and took the monkey under his arm and started walking for his home. He had gone a couple of blocks when he heard something behind him. He glanced over his shoulder and noticed that a couple of monkeys were following him and chattering rapidly. He picked up his pace a little. A block later the noise behind him was getting louder. Another quick glance informed him that it was now a small group of monkeys following him, and gaining on him. He now grew concerned and started jogging. The noise behind him grew, and he could hear that the group of monkeys was now large and closing the gap on him. He broke into an outright run, and started over the river across the bridge that lead to his neighborhood. As he approached the middle of the bridge he could tell that he wasn't going to make it. In a sudden flash of inspiration, he stopped and heaved the brass monkey over the side of the bridge into the swiftly flowing river below. Immediately the monkeys following him turned and jumped over the edge of the bridge, following each other like lemmings to their fate below.

After the man was able to re-compose himself, he walked back to the antique shop. As he opened the door, the clerk looked up and recognized him. With a knowing look, the clerk said: "I knew you would be back. Have you got the \$375 for the story?" The man replied: "I didn't come back for the story. What I want to know is, do you have a brass statue of a lawyer?"

Okay, so I wasn't supposed to do lawyer jokes, but I figured just one wouldn't hurt. It really has nothing to do with the subject of my article, which, as you may have noticed, has nothing to do with U.S. coinage.

There actually is a bit of news from the Board this month:

First, to the delight of the Association, the Board has approved an agreement for Peggy Ogzewalla to perform the duties of Executive Director for SEAU. SEAU will now have a permanent office (more than just the filing cabinet at the offices of Allen & Bailey), and we will be getting a telephone number. This will provide much-needed continuity between Boards. The new address and phone number will be made available to all as soon as it is in place (probably in February).

The most important result of this will be that the limited number of volunteer hours provided by the Board Members can now be focused towards important things that will make a difference to our profession. For example, instead of the secretary spending 40 or 50 hours in June and July figuring out how to invoice (and

getting the appropriate software to be compatible with last years secretary), the secretary will be able to spend those hours doing committee work on issues such as the 2000 IBC adoption, or the existing buildings code issue, or the NFPA code issue, or the 2003 NEHRP Provisions, etc. The same applies to the president, who will now be able to focus energy on the things that will give our organization and profession more exposure.

In my view, this takes SEAU from a "self-survival" mode of operation (where many volunteer hours were spent just keeping the organization running) to a true "profession-enhancement" mode of operation.

Now, just an update on the code situation. As most of you know, NFPA is now preparing a family of codes, including structural provisions, to compete directly with the IBC. California has delayed adoption of the IBC because of this. However, in Utah we are still on schedule to adopt the IBC in January 2002. Several committees have spent many hours (the seismic committee alone has spent well over 100 man-hours) in reviewing and critiquing the code. There are varying opinions as to whether or not Utah should adopt it. The Board is presently in support of the adoption.

If you have an opinion on this or anything else related to SEAU, please let us know. **We want to hear from you, and as such we have made it easy to contact us.** Simply download off our web page the request for opinion notification (In .pdf format, but only works with Adobe Acrobat version 1.01 or earlier.) Fill that out, then e-mail it to a friend in html format. Have him e-mail it back to you as an attachment using Uuencode instead of MIME. Then print it out using WordStar (any version). It can then be faxed to any one of the Board members, who will immediately request that an opinion form be mailed to you via certified mail. Upon receipt of such, you will have 16 hours to fill it out and fax it to a different Board Member, whereupon he or she will promptly mail it to SEAU's P.O. Box, and it will be picked up whenever convenient. Once that mail is opened, the opinion will be noted and put onto the agenda for the Board Meeting three months following. We feel that this is the best way to keep in close contact with you, the association members. **In lieu of that, you could just call any of us (our phone numbers are even included in this edition of the newsletter.)**

Finally, I hope you enjoyed the holidays. Thank goodness the world didn't come to an end at midnight on New Years Eve. I was worried about Y2K.01.

Auf Wiedersehen

UPCOMING EVENTS

**STRUCTURAL ENGINEERING WINTER
INSTITUTE****Environmental Loads on Structures:
Wind, Snow, and Seismic**

Sponsored By:

National Council of Structural Engineers Associations
NCSEA

January 21-24, 2001

Location:

Phoenix, Arizona

Visit the NCSEA website at www.NCSEA.com for more
information on the program and on Phoenix.**2001 STRUCTURES CONGRESS****2001 Structures Congress &
Exposition**
“A Structural Engineering Odyssey”

Presented By:

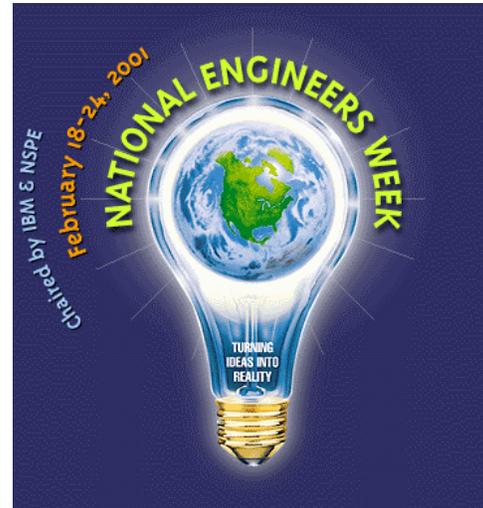
The Structural Engineering Institute of the American
Society of Civil Engineers presents:

May 21-23, 2001

Location:

Washington Renaissance Hotel
Washington, D.C.

For more information, check

www.asce.org/conferences/structures2001**FEBRUARY NEWSLETTER AND MEMBERSHIP
MEETING**There will be no SEAU newsletter in February. In
addition, there will be no general membership meeting inFebruary. Please support Engineers Week and the events
associated with it.**FEBRUARY ENGINEERS WEEK**National Engineers Week is celebrated across the
country each year at the time of George Washington's
birthday. Prior to becoming our nation's first president,
Washington was a military engineer and a land surveyor.
During the week of February 18-24, 2001, engineers
around the country will visit K-12 classrooms to talk
with students about what engineers do and show practical
applications of math, science and engineering. Many of
the national events will take place in Washington D.C.
Information on national events and on how you can
develop local events (for this year and for future years)
can be accessed at <http://www.eweek.org>.**ENGINEERS WEEK BANQUET****“ENGINEERING WEEK AWARDS
BANQUET”**The Engineer of the Year 2000 award and the
Engineering Educator of the Year 2000 award will be
announced at the Banquet. Please come and support
SEAU's Nominees:**DATE:** Thursday, February 22, 2001**TIME:** 6:00 p.m. Reception and Exhibits
6:30 p.m. Dinner**LOCATION:** Abravanel Hall
123 West South Temple
Salt Lake City, UT**COST:** \$30 General Admission

For tickets please contact Dave Alter at 255-0529.

JANUARY MEETING

***Changes and Trends in Solid Sawn
and Engineered Wood Products***


Sponsored By:
SEAU

Presented By:

Von Behunin, Lam-Wood Systems, Inc. and Toni Van
Wolput, Willamette Industries, Inc.

Thursday January 18, 2001

5:30 p.m. Social

6:00 p.m. Meeting and Program

Location:

University of Utah

Engineering and Mines Classroom Building

Room 104

The presentation will focus on a number of topics associated with the use of solid sawn lumber and engineered wood products (EWP). A variety of literature will be available.

BULLETIN BOARD

BULLETIN BOARD OLYMPIC FEATURE

Each month from this issue to the 2002 Winter Games, the SEAU News will be highlighting an Olympic venue, particularly with respect to the structural engineering aspects of the venue. This month's feature is Rice -Eccles Stadium, site of the opening and closing ceremonies:

Rice-Eccles Stadium


The University of Utah's Running Utes had been playing football in Rice Stadium for over 70 years. The facility severely lacked the technical support, space and broadcast facilities required to accommodate the increasingly popular program. The awarding of the 2002 Winter Olympic Games to Salt Lake City required a venue with a capacity for 50,000 for the opening and closing ceremonies, providing the perfect opportunity for the University to obtain a state of the art facility to house its highly rated team. Reaveley Engineers & Associates Inc. designed the press box tower to bear on a structural steel diagonal brace frame, which extends to the concrete foundation system below the concourse level. To facilitate construction sequencing, the tower's lateral system is uniquely design to perform as an independent structure, then become compatible with the

completed rigid concrete shear walls. In addition, consideration was given to account for thermal expansion and contraction of the structure due to variations in temperature. FFKR Architects maximized the elevated position of the site, which is visible from the entire Salt Lake Valley. The full height glazing system on the west facade, framed by twin concrete access towers, supported by the diagonal braced frames, provides users of the facility spectacular views of the Wasatch front. Site lines and vibration sensitivity were given priority for the press box and seating framing systems. Alternating columns were discontinued at the suite level, creating clear spans of 50 feet. The stiffness of the long spans and the design of the cantilevered bent floor framing, which protrude over the upper bowl, give this stadium the required capacity to host a myriad of events with varying technical and staging requirements.

Rice Eccles Stadium will be the venue for the opening ceremonies on February 8, 2002 and also for the closing ceremonies on February 24, 2002. Ticket prices for the opening and closing ceremonies are as much as \$885 for each ceremony.

ENGINEERS WEEK 2001

National Engineers Week February 18-24, 2001



Governor Mike Leavitt and other distinguished officials sign an official proclamation for Engineers Week 2001.

Presidential Message for National Engineers Week 2001

Warm greetings to all those observing National Engineers Week.

As we begin a new century, it is an ideal time to recognize and give thanks for the many contributions America's engineers have made to the life of our nation. From putting men on the moon to developing our interstate highway system, from cleaning our air and water to prolonging our health, engineers have been involved in many of our century's most extraordinary and enduring accomplishments. With a passion for discovery, engineers have worked tirelessly to make our lives safer, easier, and more fulfilling.

For half a century, National Engineers Week has helped to promote awareness of the engineering profession and to encourage young people to consider a career in engineering. I am confident that, with interesting hands-on activities and exciting competitions sponsored at schools and community centers around the nation, this year's observance will help to influence a new generation of young Americans to pursue their study of science and math – the foundation of a career in engineering.

I commend the organizers, volunteers, and supporters of National Engineers Week for your dedicated efforts to advance the field of engineering, and I am especially pleased that you have decided to focus on the environment and sustainable development during this year's observance. You can take pride in the knowledge that your hard work is helping to ensure the prosperity of our nation and to build a brighter, healthier future for our children. Best wishes for a successful week.

SEAU MEMBERSHIP APPLICANTS

The following individuals have submitted applications for approval by the SEAU membership committee for new members:

1. Jason Ball, *Associate*
2. R. Scott Messersmith, *Associate*

SEAU ENGINEERING EDUCATOR OF THE YEAR 2000 NOMINEE

Congratulations Daryl Thorpe., Professor, Department of Civil & Environmental Engineering, Utah State University, this years SEAU Engineering Educator of the year 1999 nominee.

SEAU ENGINEER OF THE YEAR 2000 NOMINEE



Congratulations to Mr. Parry Brown, P.E., S.E., Vice President of Reaveley Engineers and Associates and past president of SEAU, as this years SEAU Engineer of the Year 2000 nominee.

On a side note, Mr. Ron Reaveley, P.E., S.E., President of Reaveley Engineers and Associates has been nominated by CECU for Engineer of the Year 2000.

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NEWSLETTER SUBMITALS

This SEAU Newsletter is designed to keep you informed of events and

activities that affect our association and your involvement with SEAU. In addition, the newsletter can be a forum for you to share your views with your fellow engineers, post advertisements, or target a select group of professionals.

February Deadline: Not Published
 March Deadline: March 1, 2001
 April Deadline: April 5, 2001
 May Deadline: May 3, 2001

Please have articles delivered to Scott Adan, c/o Reaveley Engineers & Associates, Inc., 1515 East 1100 East, SLC, UT 84105, Phone 486-3883, Fax 485-0911, Email: sadan@reaveley.com.

SEAU BY-LAWS COMMITTEE UPDATE

REPORT ON THE SEAU BY-LAWS COMMITTEE

by Brent Maxfield, Committee Chair

I would like to hear from you, the membership, on a specific issue.

Some in the Association have expressed to me a thought about how we elect our officers. We currently have a nomination committee which selects two individuals to run for each office. Some have suggested that the nomination committee should only nominate one person for each office instead of two. The name of this person would then be put on the

ballot for the May election. You can see that without considerable effort by the someone else, the nominated person most likely would then be "elected" to the position.

What do you think? Should the By-Laws committee pursue this idea. I would like your input on this issue. If I don't receive any positive comments, the issue will probably not be pursued. If there is some positive input, I would like time to have a few months of debate on the issue prior to the May elections. Let me know what you think. I would like to put some of your comments in the next issue of the SEAU Newsletter. My email address is: maxfieldba@ldschurch.org.

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SEAU Presents:

Changes and Trends in Solid Sawn and Engineered Wood Products

Thursday January 18, 2001

5:30 p.m. Social

6:00 p.m. Meeting and Program



Location:

University of Utah

Engineering and Mines Classroom Building

Room 104



STRUCTURAL ENGINEERS ASSOCIATION OF UTAH

P.O. Box 58628

Salt Lake City, Utah 84158-0628



Board of Directors

Stephen Cohen, *President*

James M. Williams, *Vice Pres./Pres. Elect*

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David P. Brown, *Member of the Board/UEC Delegate Elect*