

SEAU NEWS

The Newsletter of the Structural Engineers Association of Utah

Volume III- Issue VII April 1999

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.

*If you wish to submit articles for publication, please contact:
Scott Adan, the Editor
at (801) 486-3883 or*

E-mail sadan@reaveley.com



*The New Brigham Apartments, Salt Lake City Utah., Structural Design
By ARW Engineers Inc.*

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APRIL EVENT

SEMINAR:

“Concrete Y2K: FAQ’s for Engineer

Seminar Date:
Thursday, April 15, 1999
2:30 - 7:30 p.m.

Presented Jointly By:
SEAU and ACI

Location:
University Park Marriott
University Research Park
480 Wakara Way
Salt Lake City, Utah

MESSAGE FROM THE BOARD

PRESIDENT’S MESSAGE



By Kelly Calder, SEAU President

It’s elections time again and the Nomination Committee has presented us with an excellent field of candidates for our new officers. Please review the enclosed resumes’ of our nominees and be sure to **VOTE**. Ballots will be sent to each voting member later this month.

This year’s elections have an added incentive to get a good voter response. Our By-Laws Committee has done extensive revisions to the SEAU by-laws

and the proposed revisions must be voted on in this election. A copy of the proposed revisions was presented in last month’s newsletter. You can also review the revisions on the SEAU website. The easiest way to log on to our site is through www.seaint.org, and click on Utah in the menu. Some of the revisions made to the by-laws include: a major reworking of the MEMBERSHIP section with the substitution of PROFESSIONAL grade for the current MEMBER grade; clarification of the Dues section, particularly with respect to new members approved late in the fiscal year; and minor clarifications to the other sections. Brent Maxfield, the By-Laws Committee chairman, was the main mover on these issues and we want to thank him for his efforts.

On another note, Eric Kankainen and Carl Erikson attended the 2000 IBC Conference in Costa Mesa, California last month. They represented SEAU as well as other interests in the long and arduous

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:

Martin/Martin - Utah, Inc.

Martin/Martin - Utah, Inc. combines the background and experience of two nationally recognized structural engineering firms: KKBNA (est. 1945) and John A. Martin and Associates (est. 1953). The Salt Lake office opened in 1979 and has practiced structural engineering continuously since then.

M/M has a current staff of five engineers, two drafters and one administrative assistant. M/M provides structural design, evaluation and investigation services for all types of structures.

Some of our more noteworthy landmark efforts include:

Marriott Mountainside (pictured on cover of March SEAU newsletter)

The Marriott Mountainside project is the largest (square footage) and tallest structure in Park City. The base is comprised of a one-to-two story parking garage constructed out of mild steel reinforced cast-in-place concrete. Over the garage rises a nine story steel framed residential facility with concrete filled metal pan floors. The lateral system combines concrete shear walls and a field bolted S.M.R.F. - a dual system. The structure is founded on drilled piers due to a portion of the property having large

areas of poorly consolidated soil with organic material which overlays the bedrock.

Broadway Centre



The Broadway Centre complex includes a low-rise, 15-story, 200,000 square foot office, a 6-plex cinema. The office structure is founded on a 22,000 square foot, 4'-0" thick mat. The lateral system is comprised of a 'perimeter' S.M.R.F. combined with an Eccentric Braced Frame (EBF) System at the base. The Broadway Centre EBF is thought to be the first use of that relatively new system in Utah. The plaza level is comprised of seven separate and distinct diaphragms that step and slope, transitioning more than a total of six feet from one corner of the project to the opposite corner. The two story cinema 'box' utilizes concentric braced frames and masonry shear walls for lateral stability. The cinema 'box' and the low-rise office are linked by a bridge with a trailer hitch style connection combining slide bearings and a large single-pin pivot connection.

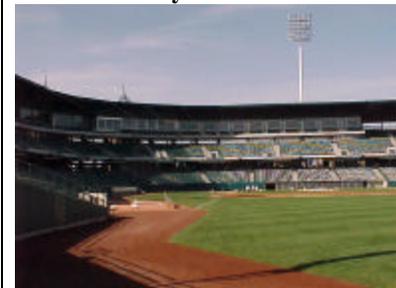
Marriott Library Addition



The library addition is a 200,000 s.f., two-story underground facility comprised of mild steel reinforced cast-in-place concrete. The

structure is over 600' long (with no expansion joints-problematic for underground structures) and wraps around three sides of the existing Marriott Library. Shrinkage problems were minimized/eliminated by the use of strategically placed pour strips with long curing periods before typing the pours together. The roof structure supports open plaza areas designed for fire truck loading, planting areas and individual tree planters. The roof slab is a 12" two-way slab with drop panels and the floor is a 10" flat slab with drop panels. Columns are on a 28' X 28' grid. The project includes two 27' tall cantilevered retaining walls on the far north and far south sides of the building to allow natural light into the lower level of the library. Three sky lights and two large area-ways also add natural light to the lowest level.

Franklin Covey Field



Franklin Covey Field is a 12,000 seat outdoor stadium comprised of a mild steel reinforced cast-in-place concrete substructure and a structural steel and precast superstructure with some masonry thrown in for good measure. The facility includes large storm drain sumps under the lower deck bleachers, indoor pitching and batting cages, and an open concession concourse from which the field of play can be seen while waiting in line to buy food. Half of the lower bowl seating and all of the upper bowl seating are multi-riser precast concrete elements. The upper bowl precast is connected in a manner that allows thermal movement in each 2-bay wide sub-

diaphragm, but has sufficient strength to resist the in-plane seismic forces. These semi-rigid type connections were developed based on strength design concepts. The facility includes two expansion joints to allow the first and third base 'wings' to be independent of the home plate section. The key to

making this outdoor facility a long term, low maintenance structure was to design for and adequately accommodate movement due to thermal gradients. The office manger, Mr. Steve Judd, is currently serving as Historian-Secretary Elect of SEAU and has participated in presentations to

SEAU on concrete mix design reviews and the Broadway Centre project. Mr. Judd has also participated in several nominating committees for officers and board members of SEAU.

MESSAGE FROM THE BOARD (continued from page 1)

discussions concerning code provisions and proposed revisions to the IBC. We appreciate the efforts of the SEAU committees

involved in reviewing the IBC, the Codes, Seismic and Technical committees, as well as Eric and Carl in representing our views.

We'll keep you informed as evolution of the IBC continues..

BULLETIN BOARD

CLASSIFIED

STRUCTURAL ENGINEER

Established architectural firm with in house structural engineering department seeking engineer with minimum 8 years experience in structural design of buildings in seismic zones 3 and 4. Bachelor's degree in architectural or civil engineering and professional registration preferred. Work includes framing concept, engineering calculations, and supervision of engineering and drafting staff through design and construction. Competitive salary and benefit package, friendly office environment bayside in San Diego's Gaslamp District. Reply in confidence to SLA, Attention: M. Romanowski, 363 5th Ave, #300, San Diego, CA 92101

CLASSIFIED

STRUCTURAL ENGINEER

Greene Structural Engineering, Inc. Position available for a Structural Engineer (2-10 years experience). Excellent opportunity for growth. Send Resume or call:

Green Structural Engineering, Inc.
Attention: Duane K. Greene
307 West 200 South , #2050
Salt Lake City., Utah 84101
Phone: (801) 532-2503
Fax: (801) 532-1348

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 very select group of professionals.

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

Please have advertisements delivered to Mike Buehner, c/o Reveley Engineers & Associates, Inc., 1515 South 1100 East, SLC, UT 84105, Phone 486-3883, Fax 485-0911, Email: mbuehner@reveley.com.

May Deadline: May 7, 1999

APRIL EVENT

▼
SEMINAR:
"Concrete Y2K; FAQ's for Engineers"
▼
Joint Meeting Sponsored By:
SEAU and ACI
▼
Thursday April 15, 1999
230 p.m. - 7:00 p.m.
▼
Location:
University Park Hotel
500 Wakara Way

Salt Lake City, Utah
▼
Registration:
\$30 Per Person. Includes break, dinner, and technical handouts. Look for upcoming registration materials.
▼
The seminar will cover a variety of concrete topics including:
The Feasibility of Concrete Moment Frames,
Seismic Concerns for Concrete Tilt-up Buildings,
& Performance Materials for the 21st Century.
▼
For additional questions call:

Rich Warren (801)891-6882
Kristin Beckstead (801) 250-3444

UPCOMING EVENTS

MAY MEETING & SEMINAR

Title: "Utah Division of Occupational & Professional Licensing (DOPL) Presentation"

Presented By:

David Fairhurst, DOPL

Thursday May 20, 1999

5:30 p.m. Social

6:00 p.m. Membership Meeting & Presentation

Location:

University of Utah

Engineering and Mines Classroom Bldg.

Room: TBA

To aid DOPL in discussing areas of concern that SEAU members may have in regards to licensing we are asking members to submit questions that they would like DOPL to discuss. Please submit these questions to Stephen Cohen by April 30, 1999. These questions may be sent by fax at (801)328-0278 or by e-mail at sdcohen@allen-bailey.com.

APRIL CARTOON



SEISMIC COMMITTEE UPDATE

REPORT FROM THE SEISMIC COMMITTEE

by **Ken Willmore, Committee Chairperson**

In late January, the seismic committee was asked to review and make recommendations on proposed changes to the 2000 IBC. Copies of the document were mailed to committee members in early February for review. On March 2, we met at Ron Dunn's office and reviewed 60 proposed changes form Chapter 16. The collective consensus of our efforts was 49 "agrees", 5 "disagrees", and 6 "no

comments" on the proposed 60 changes. This information was given to and used by Carl Eriksson (a member of the committee) for the March IBC Code Change meeting. Carl is a voting member of that body.

We have been meeting regularly once a month and are currently in the process of developing a position paper defining appropriate design requirements for the upgrading of existing buildings. We are open to any information or comments the SEAU membership may have to offer on this or other seismic concerns.

Our committee currently consists of the following members:

- Ron Dunn – Board Member
- Carl Eriksson
- Mark Harris
- Jeff Miller
- Steve Powell
- Kent Rich
- Leon Tanner
- Barry Welliver – Secretary

Barry Welliver volunteered to be committee secretary in January and is making a great contribution. Appreciation is given to all committee members for their time and efforts.

SEAU OFFICER NOMINEES

This serves a notification to all SEAU members, of the SEAU 1999 Officer Nominees. In the March SEAU general membership meeting, Brent Maxfield, Brent White, Ron Weber, and Steve Judd were elected by the Members to serve along with Parry Brown, Chairman, as the nominating committee.

Up to the April general membership meeting, additional nominations may be made by petition of at least 5% of the PROFESSIONAL grade members.

Before May 1, all PROFESSIONAL grade members shall be sent a ballot listing the nominees for the various offices. The signed ballot shall be sealed and returned to the Association office before noon of the day of the regular meeting in May. The ballots shall then be counted and those receiving the highest votes shall be declared elected at the May meeting. In case of a tie, the President-Elect shall cast the deciding vote.



President -Elect Nominee

Name: Stanely W. Crawley.

Current Employment: Professor Emeritus, School of Architecture, University of Utah. Self Employed, Consulting Engineering, Part Time, ARW Engineers

Education: B.S. General Engineering, Rensselaer Polytechnic Institute
M. Architecture, Rensselaer Polytechnic Institute

Engineering Specialties:
Structural Engineering

Past SEAU Assignments:
Founding Member
Board of Directors 1983-1985
Program Committee Member 1986-1987
Seismic Committee Member 1986-1987

Representative Projects:
Snowbird Fire Station & Community Center
Winnemucca Jail, Winnemucca, NV.

Publications:
STEEL BUILDINGS, 4 Editions, John Wiley, Publishers
DESIGN FOR WIND FORCES, AIA Publishers
SEISMIC AND WIND LOADS IN ARCHITECTURAL DESIGN, AIA Publishers

Important Issues for SEAU:
New International Building Code and it's implications.
Continuing registration for structural engineers.



President -Elect Nominee

Name: Stephen Cohen, P.E., S.E.

Current Employment: Allen and Bailey Engineering
Education: B.S. Civil Engineering, Utah State University, 1985
M.S. Civil Engineering, Utah State University, 1986

Engineering Specialties:
Structural Engineering, including new construction and seismic retrofits

Past SEAU Assignments:
Codes Committee, 1996-1998
Secretary/Treasurer, 1995-1996
Board of Directors, 1994-1995
Membership Committee, 1992-1993
Structural Licensing Committee Chairperson, Current

Representative Projects:
Scott M. Matheson Courthouse
Widtsoe Chemistry Building, USU
Skywest Concourse/F.I.S. Facility - Salt Lake International Airport
Talmage Building, U of U, Seismic Retrofit

Important Issues for SEAU:
Increase public understanding of our profession
Continue to provide high quality technical sessions
Encourage more committee participation
Insure that SEAU has a voice in regulating the profession



**Board Member
(Secretary/Treasurer)**

Nominee

Name: David Pierson, S.E.

Current Employment: ARW Engineers
Education: B.S. Civil Engineering, Utah State University, 1988
 M.S. Civil Engineering, Utah State University, 1989

Engineering Specialties:
 Structural Engineering

Past SEAU Assignments:
 Technical Committee, 1992 to Present
 Technical Committee Chairman, 1994 to Present

Representative Projects:
 R.C. Willey Warehouse / Distribution Center
 Swire Coca Cola Complex
 Weber County Office Building
 IOMEGA Corporate Offices

Important Issues for SEAU (My Top Three List):
 #3: I would like SEAU to Continue / Increase Cooperation with other technical associations, i.e. ACI, AISC, etc.
 #2: I think a major role of the Board should be to identify and prioritize current issues affecting our membership, (i.e. the IBC, DOPL issues, proposed legislation, etc.) and then make specific assignments to committees, so committee members can contribute in a substantial way even with limited available time to contribute.
 #1: Three Words - SEAU Golf Tournament



Board Member (Secretary-Treasurer) Nominee

Name: Jay Adams

Current Employment: J. M. Williams & Associates
Education: B.S., Civil Engineering, Brigham Young University, 1994
 M.S., Civil Engineering, Brigham Young University, 1995

Engineering Specialties:
 Structural Engineering

Past SEAU Assignments:
 Membership Committee Chairman, 1996 - 1998

Representative Projects:
 Thanksgiving Point
 Exotic Imports
 Atlantis Resort, Bahamas
 Jurassic Park, Universal Studios

Important Issues for SEAU:
 Benefits for all member grades
 Insufficient penalties for practicing without a license
 Inspiring and educational meetings, as in the past



Name: David Alter, P.E.

Board Member (UEC Delegate) Nominee

Current Employment: Ensign
Engineering & Land Surveying, Inc.

Education: B.S. Civil
Engineering, University of Utah,
1986

Engineering Specialties:
Structural Engineering

Past SEAU Assignments:
Codes Committee, 1990-
1991
Nominating Committee,
1999-Current

Representative Projects:
Layton Cineplex Theatre
Salt Lake Regent
Retirement Center
Utility Trailer Sales of Utah
Hudson General, Leucadia,
and Keystone Hangars
WordPerfect Office
Buildings II, III, and V

Important Issues for SEAU:
Promote continuing
education
Encourage increase in
structural design fees



Board Member (UEC Delegate) Nominee
 Name: Jeff Miller, S.E.

Current Employment: Reaveley Engineers & Associates, Inc.
Education: B.S. Civil Engineering, Brigham Young University, 1981
Engineering Specialties:
 Structural Engineering
Past SEAU Assignments:
 Secretary/Treasurer 1989-90
 Board of Directors 1990-91
 Current Seismic Committee Member
Representative Projects:
 Huntsman Cancer Institute
 Joseph Smith Memorial Building
 One Sandy Center
 Wasatch County Hospital
 Noyes Building Renovation & Seismic Upgrade (Snow College)
Important Issues for SEAU:
 Continue to provide opportunities for professional development through quality membership meetings.

PROFESSIONAL PRACTICES AND ETHICS COMMITTEE UPDATE

REPORT FROM THE PROFESSIONAL PRACTICES AND ETHICS COMMITTEE

by Brent White, Committee Member

“Design Build”. When you as a structural engineer hear or read this phrase, what is your immediate response? Have your design build experiences been good, bad or neither? The Professional Practices Committee has had several discussions regarding this issue and we are curious about the membership’s views in general. This article is not intended to be an opinion piece about design build, but only to raise several issues that confront those members of SEAU that participate in design build projects. The design build method of project delivery has been around in one form or another for some time, however in recent years the number and types of projects constructed utilizing design build has increased. It will not go away (and should not), but when dealing with it we should make sure that our interests are considered.

Since the competition in the design build arena seems to have intensified, the pressure on all parties involved has also increased.

This seems to be particularly evident in the pre-award competition phase. In times past it seemed that roughing out some framing sizes, footings, schematic lateral system, etc. was all that the design build prime (usually the contractor) would need prior to the awarding of the project. The contractor used the preliminary information, projected a unit cost, included a contingency and the up front effort was complete. With intense design build competitions, more design build players, and more owners with the desire to see exactly what they are getting before the project begins, the pressure to provide documents up to at least the design development level, or beyond has intensified. Should professional services to this extent be provided simply as good marketing strategy? Client courtesy? Good will? Loyalty to established clients? Do our clients know the effort that is required to design to the point that there are few unknowns in the design that will affect construction cost? Providing a significant amount of design prior to being awarded a project can be a significantly bigger Ahit@ for consulting engineers of all disciplines than for others on the design build team. This is an

important fact that others on the team need to be aware of.

Should SEAU address any of the issues related to design build projects? The Professional Practices Committee would like to know. Consider some of the following:

- Should SEAU develop a position paper?
- Should participants in design build insist on contracts for services rendered unrelated to successful award of the design build project?
- Are our up front designs and services being “shopped” around to others?
- Are we all interested in how others in SEAU deal with some of the problems with design build projects?

These and other issues are items that should be able to be discussed without the fear of losing a competitive edge. Discussing and dealing with some of these issues may also keep structural engineering a profession where quality services are provided for fair compensation instead of becoming a commodity to be traded and bartered at a less than a professional level..

SEAU & ACI Present:
***Concrete Y2K: FAQ's for
Engineers***

Thursday, April 15, 1999
2:30 - 7:00 p.m.

University Park Marriott
University Research Park
480 Wakara Way
Salt Lake City, Utah

Registration Materials Are Available
For additional questions call:
Rich Warren (801)891-6882
Kristin Beckstead (801) 250-3444

STRUCTURAL ENGINEERS ASSOCIATION OF UTAH

P.O. Box 58628
Salt Lake City, Utah 84158-0628



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Ron Dunn