



# JANUARY GENERAL MEETING

## Schedule

Mark Your Calendar  
(2006)

### General Membership Meetings

(Breakfast 7:30 a.m.)  
January 26  
March 16  
May 18  
July 20  
September 21

### Business Practice Committee Meetings

(Breakfast 7:30 a.m.)  
February 9  
April 13  
June 8  
August 10  
October 12

### SEAC Board of Directors Meetings

(7:30 a.m.)  
January 5  
February 2  
April 6  
June 1  
August 3  
October 5

### Annual Dinner Meeting

November 2  
6 - 9 p.m.

**H**ow are your diaphragm design skills and analysis methods? Do they account for methods involving LRFD design? SEAC invites you to attend our January breakfast meeting for the latest information on Steel Deck Diaphragm Design.

**Walt Schultz** with Nucor Research and Development will make a presentation on steel deck diaphragms. The presentation will include general diaphragm issues along with highlights of the 3<sup>rd</sup> Edition of the Steel Deck Institute Diaphragm Design Manual which was published in September 2004. Additional topics will include issues such as code changes, ASD and LRFD, and allowable stress increases.

Walt is a graduate of the University of Iowa and has worked for Nucor

Corporation for 26 years. He began as a design engineer for Vulcraft and has been a Structural Research Engineer for Nucor Research and Development for 20 years. Walt is a member of the Steel Deck Institute Diaphragm Committee as well as chairman of the SDI Floor Deck Committee. In addition, Walt is a member of several Steel Joist Institute committees including the Seismic and Fire Resistance committees.

*January meeting will be held on January 26, 2006 (4th Thursday)*

## Don't Miss Out - January General Meeting

**Date:** Thurs. January 26, 2006  
**Speaker(s):** Walt Schultz, Nucor Research  
**Location:** Renaissance Denver Hotel  
3801 Quebec Street (south of the I-70 and Quebec intersection)

Please e-mail your reservations to Caryn Bauer at: [cbauer@martinmartin.com](mailto:cbauer@martinmartin.com).  
**Reservations MUST be made By 12:00 noon on Monday, January 23, 2006.**

## Officers & Board Members



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### Submit comments/articles to:

*Ben Nelson*

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**WWW.SEACOLORADO.ORG**

*Information for inclusion in the newsletter must be received one month prior to the next general meeting.*

*Caryn L. Bauer*  
SEAC Executive Assistant

## President's Message

Welcome everyone to the beginning of New Year. I am surprised to remember that it was only a few short years ago that I decided it was time for me to become more actively involved in SEAC. Here I am now serving as President, you'd think I would have learned my lesson long ago that you should be careful what you ask for; you just might get it. I am sure like most past presidents before me I have spent a significant amount of time in contemplation for the upcoming events of this year and the role of SEAC in our professional lives.

We have received many positive suggestions for improvement in the organization and the Board of Directors is well underway in implementing some of these changes. We are currently working on the organization of this year's events, improvements to the newsletter and improving the content and usefulness of the SEAC website along with other items that we'll address in several upcoming events.

This year's events will include a diversity of technical design topics at our breakfast meetings. We found this to be a common suggestion from our fall conference feedback. In January we will have a presentation on diaphragm design

including some of the nuances of designs based on LRFD, which is not well addressed in our current design manuals.

Our newsletter has also seen some new improvements also. We have added a question and answer section designed to instill a small portion of contemplation in all of us and a little sharing of lessons learned. Making its first appearance is a "Vendor's Corner". This new section is not intended to advertise products. The board will maintain control over its content. The Vendor's Corner will be another avenue for membership to share ideas. One of our biggest efforts this year will be working on the content of our website. We would like to see this become the "go to" spot for information regarding SEAC.

Our industry appears to be humming again and I am encouraged by the reports of prosperity in most of our firms. As the busy year continues I encourage all of you to maintain your involvement in SEAC's activities. And for those of you not actively in a SEAC committee, this may be the year to begin. Good luck in all your endeavors this year.

# Questions & Answers

**Q:** It is common to use long slotted holes in steel connections for the interface of steel members to concrete. This can help account for the actual tolerances of concrete construction. Should the eccentricity of the connection be considered in the design of the connection and if so how?

**A:** (response for last newsletter's question)

The current connection schedules published by AISC are based on testing conducted using standard or short slotted holes. We should be aware of this when specifying long slotted holes in connections. For example, current AISC practice for single shear tabs is to account for the local connection eccentricity in the connection by applying a couple to the bolt group in the beam. We should be aware that this approach may or may not be valid when using long slotted holes. Current research has not yet addressed if the bolts will "lock up" and carry the moment. It is up to the Engineer's judgment to decide if the bolts will carry the local connection moment or if the weld and embed plate should carry this moment. This is a good example of how as Engineers we must be diligent to understand and apply general engineering mechanics to the potential limitations of our design codes.

*New Question* Is it always appropriate to consider a metal roof deck as a flexible diaphragm?

## In The Spotlight

The SEAC Board would like to limit any project highlight articles to a brief synopsis of the project with the focus of the article being a technical challenge and its solution. All submissions will be subject to review and editing by **SEAC's Board of Directors** and the **Newsletter Editor**.

*Submit Articles to SEAC President at  
jr@sci-denver.com*

## Vendors Corner

How many times have we all been working on a timber or cold-formed framed building, anticipating using shear wall as our lateral system, only to have the architect attempt to make every exterior wall out of nearly continuous windows? The restrictions of the code on aspect ratios and the limited strength of framed shear walls can often force us to the use of steel braced or moment frames. While working on just such a project I attended a conference and spoke to a vendor of steel shear wall panels. These products have been tested and approved for small aspect ratios not typically allowed by the code. Their lateral resistance strength is significantly higher than can be achieved with framed shear walls and they provide a "middle ground" between wood sheathed shear walls and steel frames. The next time you have all or a portion of the building lacking adequate lateral strength you may want to consider this product. They have full ICC approval. The product and contact information are:

Hardy Frames

Contact Phone Number: 800-754-3030

Web site: [www.hardyframe.com](http://www.hardyframe.com)

For future newsletters we need the help of our engineering membership and our vendor members to provide us with additional helpful tips on products. Again we reiterate, this is not to provide a forum of advertisement, but to share new ideas or products we encounter. We encourage all of our membership to share ideas. Your ideas should be sent directly to the SEAC president at jr@sci-denver.com

# GENERAL NOTES - *Keep them CLASSIFIED!*

Structural Engineers Association of Colorado Newsletter Classified Section  
& Other General Announcements

**S. A. Miro, Inc.** has immediate openings for **structural engineers**. Located in the Denver Tech Center, we are seeking individuals with **Master's degrees or equivalent experience, for entry level positions up to project engineers with 5-8 years' experience.**

S. A. Miro, Inc. is a highly recognized consulting engineering firm in the Rocky Mountain Region. The firm is headquartered in Denver, Colorado with branch offices at Ft. Collins and Summit County, Colorado. Over our 25-year history, we have designed 'showcase' projects requiring sophisticated and complex design problem solving. Examples of our structural engineering work are seen at the Denver International Airport; Denver Central Library; Ocean Journey Aquarium; Convention Center Hotel; and the University of Colorado College of Medicine at Fitzsimons. Currently the firm is engaged in structural engineering design for several hospitals and medical centers throughout the region, including the new Children's Hospital to be located at the Fitzsimons campus and various mixed-use developments across the State. Our 70-person firm has enjoyed long-lasting relationships with clients and has developed a reputation for excellence in both civil (commercial and large residential site development) and structural engineering. The firm's culture is founded on gathering together individuals who possess a passion for engineering and client service and are driven to excel.

We offer an excellent working environment where a positive atmosphere matters. Our compensation package includes a competitive salary/bonus structure and generous benefits through ACEC. As a consulting firm, our working hours are flexible and designed to meet our client needs. We are an equal opportunity employer. Resumes (with reference to FY2005-9.STR) may be submitted to:

**Sue L. Zen, SDA/C, Director of HR & Business Services**

S. A. Miro, Inc.  
4582 S. Ulster St. Pkwy., Ste. 1501  
Denver, CO 80237  
E-mail: [szen@samiro.com](mailto:szen@samiro.com)



Jirsa Hedrick & Associates is a team of progressive, energetic professionals committed to creating value for our clients by using leading edge technology and diverse experience to provide innovative structural engineering solutions.

We are looking for structural engineers and AutoCAD technicians with the vision and creativity to design innovative, cost effective structures. These individuals must be results oriented, have excellent communication skills and a desire to broaden their experience in a changing technical environment. We can offer you an exciting variety of challenges and unique opportunities to create structural design solutions for complex projects working with top architects and builders.

If you work well with clients in a technically challenging environment and have three to five years of experience in the structural design of buildings, Jirsa Hedrick would like to hear from you.

We offer a competitive compensation package and substantial growth opportunities to qualified and motivated engineers and CAD technicians who want a wide-range of design experience and desire to be on a cutting edge team.

Applicants should e-mail a copy of their resume to: [personnel@jirsaheadrick.com](mailto:personnel@jirsaheadrick.com)

## **Classified Adds Policy Statement**

Last year the SEAC board of directors approved the inclusion of classified advertisements in the SEAC newsletter. Since it's approval many firms have taken advantage of this opportunity. The adds provided in this month's newsletter are being included unedited as they have been written by the participating firms. The SEAC board of directors will be discussing this topic in the January Board of Directors meeting. We will be adopting content and size limitations for these advertisements. These limitations will be published to our membership prior to our next newsletter publication.



**Martin/Martin, Inc.** has immediate openings for structural engineers. Clients seek to hire Martin/Martin, Inc. because of our exceptional service, technical innovation and commitment to their projects. **We seek to hire talented individuals with 0-6 year's related experience and BSCE, BSAE, MSCE or MSAE Degree with focus on structures.** If you are highly motivated, possess strong technical and communication skills, and are passionate about your career, we offer an environment in which you can thrive.

Our 175 person firm has a long history of building long-lasting client relationships in many focus areas of general civil and structural engineering. Our 70-person structural department provides a wide range of structural engineering services to our clients throughout the Rocky Mountain region, as well as nationally and internationally. Many of our projects are awarded regional and national recognition and honors.

We are committed to recruiting and retaining the best possible employees. Founded by educator Milo S. Ketchum, the culture of our firm centers around building a collaborative environment that encourages all our employees to develop their expertise in areas of their interest. We invest significantly in continuing education and training for our staff.

Our employees enjoy a competitive salary, incentive bonuses, 401-k contributions and company stock ownership benefits as well as generous vacation and insurance benefits. We offer flexible working hours centered on client focus. Martin/Martin, Inc. is an Equal Opportunity Employer.

Your inquiry will be kept in strict confidence; if you are interested in this exciting opportunity, please email or fax your letter of interest and resume' to: Martin/Martin, Inc.

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# COMMITTEE REPORTS

The SEAC committees are the heart and soul of our organization. We should all be very grateful to the chairs of these committees and those that participate for their dedication and voluntary time spent in advances their purposes. There always appears to be a core group of dedicated individuals that keep these committees active and of service to our entire organization. As this New Year begins, the board encourages all of our membership to become more actively engaged in SEAC committees. We should all make it a goal this year to participate in at least one committee. The following is a list of all of SEAC's committees and their chairs, many of these committees have regular meetings such as the Steel and Precast committees. Others such as membership and education continue work throughout the year. Please take time to review the following list and renew your activation in SEAC by contacting one of the committee chairs below and finding out how you can become more involved. Thank you all for you voluntary service.

	<u>Committee</u>	<u>Chair</u>	<u>Phone</u>	<u>Chair Email</u>
1	Architectural	Julian Lineham	303-558-3145	<a href="mailto:jlineham@studionyl.com">jlineham@studionyl.com</a>
2	Building Dept. Survey	Henry Lopez	303-447-2813	<a href="mailto:hrl-lopez@qwest.net">hrl-lopez@qwest.net</a>
3	Business Management	Wayne Muir	303-399-5154	<a href="mailto:wayne@sci-denver.com">wayne@sci-denver.com</a>
4	Certification			
5	Codes & Standards	Jim Harris	303-860-9021	<a href="mailto:jim.harris@jrharrisandco.com">jim.harris@jrharrisandco.com</a>
6	Computers/Website	Richard Huddleston	303-791-1333	<a href="mailto:rhuddleston@zimkor.com">rhuddleston@zimkor.com</a>
7	Denver Building Dept.	Jerry Maly	720-962-8688	<a href="mailto:jmaly@wje.com">jmaly@wje.com</a>
8	Education	Ben Nelson	303-431-6100	<a href="mailto:bnelson@martinmartin.com">bnelson@martinmartin.com</a>
9	Ethics	Kent Petersen	303-741-1300	
10	Geotechnical	John Reins	720-962-8688	<a href="mailto:jreins@wje.com">jreins@wje.com</a>
11	Legislative	J.C. Moore	303-465-5807	<a href="mailto:jcmooepe@comcast.net">jcmooepe@comcast.net</a>
12	Membership	Jerry Maly	720-962-8688	<a href="mailto:jmaly@wje.com">jmaly@wje.com</a>
13	NCSEA Liaison	Ben Nelson	303-431-6100	<a href="mailto:bnelson@martinmartin.com">bnelson@martinmartin.com</a>
14	Precast Concrete	Richard Mayta		<a href="mailto:maytar@rmpprestress.com">maytar@rmpprestress.com</a>
15	SEER	Brent Norris	303-860-9021	<a href="mailto:brent.norris@jrharrisandco.com">brent.norris@jrharrisandco.com</a>
		Mike Piper	303-431-6100	<a href="mailto:mpiper@martinmartin.com">mpiper@martinmartin.com</a>
16	Seismic Standards	Jim Harris	303-860-9021	<a href="mailto:jim.harris@jrharrisandco.com">jim.harris@jrharrisandco.com</a>
17	Snow Loads	Dick Cunningham	303-741-3737	<a href="mailto:rjc@samiro.com">rjc@samiro.com</a>
18	Standard of Practice	Jim Ness	303-623-4927	<a href="mailto:jness@monroe-newell.com">jness@monroe-newell.com</a>
19	Steel Materials	Bruce Wolfe	303-399-5154	<a href="mailto:bruce@sci-denver.com">bruce@sci-denver.com</a>
20	Wind Loads	Dave Houdeshell	303-444-1951	<a href="mailto:dhoudeshell@jvajva.com">dhoudeshell@jvajva.com</a>

## ETHICS

An added section to the SEAC Newsletter will be a short segment on ethics. "*Ethics is a code of values which guide our choices and actions and determine the purpose and course of our lives*". (Ayn Rand, 20th-century Russian/American novelist and philosopher) The following is an early lesson in basic honesty that should also be followed in our practice of engineering.

Mom takes her three children to the movies on Saturday. At the ticket window, she asks for 2 adult tickets and 2 children tickets. The person running the ticket window says, "It looks

like you need 1 adult and 3 children's tickets." Mom replies "No, Johnny is small for his age but he has recently reached the age that requires an adult ticket. The young man says: "Lady, we'd never know the difference." Mom looks toward her children and says: "but **'they'** would". Sometimes ethics is as simple as this, most of the time is can be much more complicated. "*Values are like fingerprints. Nobody's are the same, but you leave 'em all over everything you do.*" (Elvis Presley 20<sup>th</sup>-century American celebrity entertainer)

# NCSEA UPDATE

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SEAC President, J.R. Barker and I attended the 13th annual conference of the National Council of Structural Engineering Associations (NCSEA) in Kansas City on Oct 28-29, 2005. J.R. attended to interact with other SEA organization leadership and I attended representing SEAC during the business sessions. Through the years, SEAC has attended all thirteen conferences and was a key organization that helped create NCSEA in the first place when our own **Jim Harris** and about twenty others from around the country first met in Denver to discuss its formation.

Highlights from this years conference include:

NCSEA remains a highly effective voice for practicing structural engineers. The organization originates numerous key activities representing structural engineers in ways that ASCE and CASE do not focus on. Our voting 'clout' on several code bodies is significant. Key focus areas: public relations/advocacy for engineers, continuing education, engineering certification, code advocacy, SEERP.

√ The NCSEA Code Activities Committee worked hard this year to replace recently deceased and beloved chair Jim Delahay. David Bonneville assumed chair and among numerous recommendations to various code bodies, is formally recommending all code committees adopt a 5 or 6 year code cycle similar to ASCE-7.

√ The Certification process is slow to gain national acceptance among the profession; look to <http://www.secertboard.org/> for more info.

√ The Structural Engineers Emergency Response Plan Committees (SEERP) in each state are some of the most active on a national basis. Our group in Colorado is no exception.

√ The Advocacy and Membership Committees favor increasing student involvement in NCSEA by creating local student chapters.

√ The NCSEA Winter Institute is upcoming and very worthwhile continuing education; look to <http://ncsea.com/winterinstitute.htm>.

√ The bulk of the NCSEA business sessions were devoted to Strategic Planning for the next 5 and 10 years. More info will be published in future issues.

√ Structure Magazine is a key activity of NCSEA and publishes STRUCTURE monthly in partnership with SEI of ASCE and CASE of ACEC and circulates it free of charge to some 33,000 members of all three organizations. The Editorial Board is responsible for establishing and maintaining the magazine's editorial content, which covers a wide range of subjects, including:

- 1 Specific design and construction techniques and procedures
- 2 Codes and standards development
- 3 Award-winning projects
- 4 Accomplishments of noteworthy engineers
- 5 Structural failures and their causes
- 6 Reports on disasters that affect the built environment
- 7 Professional and career development guidance

All members of NCSEA's Member Organizations to prepare and submit articles for publication in STRUCTURE. This is a great way to get your name, as well as your firm's name, in front of a significant percentage of those who share our profession.

Preferred lengths are 1,500 to 2,100 words for technical articles; 1,200 words for project articles; 750 words for product articles; and 800 to 1,200 words for forum (opinion) articles. Suitable submissions will be informative, timely, and practical for structural engineers. The 2006 editorial calendar is posted at <http://www.structuremag.org/editorialcalendar.htm> (scroll down past the 2005 version) and provides primary and subsidiary themes for each upcoming issue, but these in no way exclude other subject matter. For more information on the publisher's complete requirements, please look through the Author's Handbook, which is posted at <http://www.structuremag.org/forauthorshandbook.htm>.





## MEETING NOTICE

### “Cement Forecast: Colorado, 2006 and Beyond”

Members and guests are invited to join us for a dinner meeting of the Rocky Mountain Chapter. The meeting will convene at The Hotel Denver Tech, 7801 East Orchard Road, Greenwood Village, NW corner of I-25 & Orchard Road. **Edward Sullivan, Chief Economist for the PCA** will present: “Cement Forecast: Colorado, 2006 and Beyond” The presentation will include impacts of hurricane reconstruction on the national and worldwide cement supplies. **Please consider bringing a guest whom could benefit from this presentation.**

**Date:** Thursday, January 19, 2006

**Place:** The Hotel Denver Tech

7801 East Orchard Road, Greenwood Village

NW corner of I-25 & Orchard Road

Parking is free and easy.

**Time:** 5:30pm – Registration & Cocktails (Cash Bar)

6:00pm - Dinner

6:30pm – 8:30pm – Technical Presentation

**Mail, Phone or E-Mail Registration to:**

**Sarah Garnas**

**Aggregate Industries**

**1707 Cole Blvd., Suite 100**

**Golden, CO 80401**

**Office: 303-716-5364**

**FAX: 303-716-5298**

**E-Mail: sarah.garnas@aggregate.com**

**Cost: Members: \$40 per person – Non-Members” \$45 per person. Advance Registration Required.**

#### **Plated Dinner:**

“Grilled Chicken Breast, Red Pepper Coulis & Fresh Artichoke Hearts, Basmati Rice with Pinenuts, Granny Smith Apple Pie”

Please make your reservations by mail or phone by Friday, January 13, 2006. Please help the Chapter and provide your payment in

advance or at the door to avoid invoicing We will provide receipts upon request. It will be necessary to invoice for reservations made and not canceled by 10am, Monday, January 16<sup>th</sup>. Thank You.

Please make checks payable to: **Rocky Mountain Chapter ACI.**

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**SAVE THE DATE: Friday, April 28, 2006, 35<sup>th</sup> Annual Concrete Awards Program, Adam's Mark Hotel**

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