

Structural Engineers of NH

September 2004



Serving New Hampshire

SENH PRESIDENT'S LETTER...

Next Meeting:

Wednesday
September 15, 2004

PCI New England
Total Precast
Building Systems

Martha's Exchange
Nashua, NH

Greetings! It seems like the summers get shorter every year; how could we possibly be approaching September? Although the summer is passing, we can now look forward to getting together with our Structural Engineering colleagues as we begin our fall membership meetings.

Our September meeting is set for Nashua (check out the full details in this newsletter). In October, we will co-host a joint meeting with the New Hampshire section of ASCE. This meeting is tentatively scheduled for October 21st, and will include a tour of the "Fisher Cats" new stadium in Manchester, followed by a dinner meeting with a presentation on the civil and structural design of the facility. We are planning to meet in the Portsmouth area in November on a technical topic to be announced later, and in January, we are planning a bridge topic meeting to be held in the Concord area.

As you can see there is a lot to look forward to. I hope everyone takes advantage of the opportunities presented by the organization and I hope to see everyone at the September meeting.

SENH Officers

The Board of Directors met on June 16th and assumed the following office positions for the coming year:

- ◆ President – Steve W. Johnson, P.E.
- ◆ Vice President – Alex Azodi, P.E.
- ◆ Director-at-Large – Roger W. Gayer, P.E.
- ◆ Treasurer – James Karmozyn, P.E.
- ◆ Secretary – Linda McNair Perry, P.E.

The Board wishes to thank Matthew Low, P.E. for his four years of service on the SENH Board including three years as president. Matt has worked tirelessly for the organization and now takes a well deserved rest. SENH is a more prominent organization in New Hampshire in large part due to Matt's efforts. Please take the opportunity to thank Matt for his efforts when you see him next.

New Members

SENH would like to welcome Kenneth Milender as a new associate member in our Organization .

NCSEA Annual Conference

The NCSEA 12th Annual Conference will be held this year in New Orleans, LA. The conference runs from Thursday evening, September 23, 2004 to Saturday, September 25, 2004. The theme and main technical topic for this year's conference is "**Designing for the Coastal Environment**". Topics include driven piles, designing in flood plains, hurricane engineering and marine engineering.



Member of



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NCSEA Annual Conference (continued from page 1)

Robert H. Durfee, P.E., our NCSEA delegate will be attending the conference. Members who work in coastal regions should consider attending this conference. More information on the conference program and registration information can be found at the NCSEA website at www.NCSEA.com.

Professional Development Committee

Each of us appreciates the dinner meetings and the SENH sponsored seminars. They help us keep abreast of new information and provide continuing education credits without having to travel to Boston or beyond. Putting these events together requires planning, time, and effort. That is why we should all thank the members of the newly reformed Professional Development Committee:

- ◆ Rich E. Roberts, P.E. Chairman
- ◆ Paul Goldberg, P.E.
- ◆ Tony Coviello, P.E.
- ◆ David Langlais, EIT
- ◆ Derek J. Gilbert, EIT

If you have any ideas or suggestions for upcoming dinner presentations or seminars that you think would interest our membership, please pass them along to one of the committee members.

Administrative Assistant Opening

Deb Coon, who works for Hoyle, Tanner and Associates, Inc., has been serving as our administrative assistant for the past three years. She has decided to step down and spend some additional free time pursuing her other interests. Those of us that have worked with her have always been impressed with her professionalism and cheerful demeanor; she will truly be missed. Deb has agreed to stay on for a short time until a new administrative assistant can be found.

The Board is actively seeking a replacement for the part-time Administrative Assistant position. If you know of someone who would be an asset to our organization, please contact one of the Board members. Some of the duties of the position include:

- ◇ Maintain the Membership list and ensure that Webmaster has current member information.
 - ◇ Maintain and update member name tags.
 - ◇ Prepare and distribute the newsletter.
 - ◇ Take reservations for organization meetings/seminars and the prepare attendance list, nametags, and PDH certificates, if applicable.
 - ◇ Handle/distribute general correspondence received through the SENH website.
 - ◇ Prepare miscellaneous outgoing correspondence for the organization.
-

PCI Plant Tours

As part of its 50th Anniversary promotion, PCI is presenting "50 Days of Precast" - a special time for the national and local "Celebration of Precast." This celebration will consist of tours of precast plants and projects all across the country. Locally, plant tours will be held at the Unistress facility in Pittsfield, MA on September 14th and at the J. P. Carrara & Sons facility in Middlebury, VT on September 16th. Online registration is available at www.pci.org/50th_tours.

Engineer of the Year/Young Engineer of the Year

Nominations are due for the Engineer of the Year/Young Engineer of the Year. If know someone who has contributed significantly to the engineering profession in New Hampshire, please contact one of the Board members prior to September 15th.

As always, if you have any questions regarding SENH, what's planned for the future, or suggestions on how to improve our organization, please don't hesitate to contact any member of the Board of Directors.

Sincerely, **Structural Engineers of New Hampshire**

Steve W. Johnson, P.E.

Steve W. Johnson, P.E.
President



Structural Engineers of New Hampshire Meeting Attendance

DATE: May 19, 2004

PLACE: The Common Man Inn, Plymouth, NH

RE: HILTI Inc., Structural Anchors
(2.0 PDH Assigned)

NAME	ORGANIZATION	NAME	ORGANIZATION
Matthew Allen, P.E.	JSN Associates, Inc.	Robert S. Hartford, P.E.	Kalwall Corporation
David Amara	HILTI	Sean James, P.E.	Hoyle, Tanner & Assoc.,
Jason M. Ayotte	Hoyle, Tanner & Assoc., Inc.	Steve W. Johnson, P.E.	Vanasse Hangen Brustli
Alex Azodi, P.E.	Emanuel Engineering, Inc.	James Karmozyn, P.E.	H.E. Bergeron Engineeri
Josiah, H. Bartlett	Wood Structures Inc.	Stephen Kiss, P.E.	SAK Engineering
Roland J. Boucher, P.E.	Boucher Engineering Consultant	Dave Konieczny, P.E.	Pyramid Engineering, P.
Robert S. Busby, P.E.	Kalwall Corporation	Matthew J. LaBrecque, P.E.	PCI Architecture
William A. Capone, P.E.	SFC Engineering Partnership, Inc.	Matthew J. Low, P.E.	Hoyle, Tanner & Assoc.,
Cheryl W. Coviello, P.E.	Appledore Engineering, Inc.	Raymond G. Morin, P.E.	Raymond G. Morin, P.E.
Tony Coviello, P.E.	JSN Associates, Inc.	Linda McNair-Perry, P.E.	GV Engineering, LLC
Mark Cunningham	HILTI	Dave Raiche	PCI Architecture
Kathy J. Dougherty, P.E.	---	Tom Rigg, P.E.	SFC Engineering Partne:
Robert H. Durfee, P.E.	Hoyle, Tanner & Assoc., Inc.	Arthur W. Rose, P.E.	Arthur W. Rose, P.E., PL
Fred Emanuel, P.E.	Emanuel Engineering, Inc.	Bill Saffian	
George Fallet, M.S., P.E.	Consulting Engineer, Inc.	Peter Steffensen, P.E.	Steffensen Engineering /
Joel Fisher, P.E.	Fisher Engineering, P.C.	Bruce D. Stewart, P.E.	Stewart Structural Engin
Thomas A. French, P.E.	Hoyle, Tanner & Assoc., Inc.	Jeffrey L. Tirey, P.E.	Tirey & Associates, P.C.
Roger W. Gayer, P.E,	Structures Unlimited, Inc.	Eric Truebe	Lakeside Engineering, Ir
Paul Goldberg, P.E.	PCI Architecture	Johnathan B. Truebe, P.E.	Lakeside Engineering, Ir
Martin Gorham, P.E.	JSN Associates, Inc.	Andrew D. White	Tirey & Associates, P.C.
John Goudreault			

SENH May 19th Meeting Minutes

I. BUSINESS MEETING:

The meeting was called to order by President Matt Low at 7:15 pm, after the social time and dinner.

1. The first order of business for the meeting was election of Board members. There were two openings on the Board; Matt Low is leaving the board after serving four years and Jim Karmozyn's term is up this year. The Board nominated Jim Karmozyn and Linda McNair Perry to fill the two vacancies. No other nominations were received. Jim Karmozyn and Linda McNair Perry were elected to the SENH Board of Directors by a show of hands. Jeff Tirey asked for a show of appreciation for Matt Low's service. Returning Board members include Roger Gayer, Steve Johnson, and Alex Azodi.
2. Treasurer, Jim Karmozyn, reported that the SENH account had a balance of \$11,712. We still need to pay our NCSEA dues for the year and will have expenses for the NCSEA conference later in the year.
3. Bob Durfee, our NCSEA delegate, reported that NCSEA had sent an email survey requesting responses on the structural engineering profession's relationship with clients past and present. He encouraged one member to respond from each firm. The survey can be found at structuralmag.org.
4. SENH approved applications for one new associate member: Joseph Miller, with Yankee Barns.
5. Engineer of the Year and Young Engineer of the Year nominations are due from each member organization by October 31st. Members were encouraged to provide nominations to the Board.
6. Fred Emanuel attended the IBC Seminar May 18, 2004. He noted that there are differences in the wind loads between IBC 2000 and IBC 2003 as well as differences in the load factors for Steel and Concrete design.
7. Matt Low indicated that we are still looking for volunteers for the Professional Development Committee. A few members have indicated an interest and we still looking for additional experienced members to step forward.
8. Matt noted that the next meeting would be in September, the time and location would be announced in a newsletter later.

II. TECHNICAL PRESENTATION

Mark Cunningham and Dave Schmille from Hilti Corporation gave a presentation on the latest information for the design of anchorages in concrete.

He described three basic types of post-installed anchors. These include Expansion Anchors – which rely on friction; Under Cut Anchors – which rely on keying action; and Adhesive Anchors – which rely on bonding to the anchor and the concrete. There are also anchors available that act in combinations of the above.

Some of the factors that go into the selection of the correct anchor include:

- Type of load - static or dynamic (if dynamic, is the load seismic or fatigue related)
- Anchor diameter required
- Concrete strength (increased strength provides an almost linear decrease in embedment length)
- Embedment length available (capacity increases exponentially with embedment length)
- Edge distance and spacing of bolts
- Base material thickness (splitting of the concrete if too thin)
- Corrosion resistance requirements

He noted that ACI 318-02, Appendix D has criteria for the concrete capacity design. The concrete design now uses a truncated pyramid versus the previously used truncated cone. Appendix D applies to anchors up to 2" in diameter and up to 25" of embedment. It does not apply to adhesive anchors. ACI also has a standard for "Evaluating the Performance of Post-Installed Mechanical Anchors in Concrete" (ACI 355.2-01).

Hilti will offer a software program on-line in September for concrete anchorages. It will be available at www.us.hilti.com. You must register to download from the site. The website also includes a "System Advisor" to assist with the correct anchorage selection and an overview of the various anchorage systems.

He described some of the Hilti products available and gave a pull out demonstration comparing their HIT T2 anchor, which works in improperly cleaned holes, to a conventional adhesive anchor. He noted that Hilti supplies some adhesives that will cure at -10° F. Various anchor samples were passed around and he discussed the availability of powder actuated fasteners for steel deck attachment (Hilti also provides a diaphragm design program on their website for their powder actuated fasteners).

Meeting adjourned at 9:00 pm.

Respectfully submitted, Steve W. Johnson, P.E., Secretary, SENH

SEPTEMBER MEETING ANNOUNCEMENT

NEXT MEETING: Wednesday, September 15, 2004

SUBJECT: Rita L. Seraderian, P.E., Executive Director of the Precast/Prestressed Concrete Institute, New England Region will present an overview of "Total Precast Building Systems" including:

- Load Bearing Architectural Facades
- Examples of recent projects
- Framing systems and details

PLACE: Martha's Exchange, 185 Main St., Nashua, NH

DIRECTIONS: From west: Rt 101A east, right on Main St., Restaurant on right between High St. and Pearl St.
From north: Everett Tpk. Exit 7E, Amherst St. (101A), right on Main St., after 3 lights on right.
From south: exit 5E off Rt. 3, Kingsley St. (111A) to left on Main St., on left after 2 lights.
From east: Rt. 111 west, right on Main St. Restaurant is on left after 1 light.

AGENDA: 5:30 pm-6:30 pm Social Hour
6:30 pm-7:00 pm Dinner
7:00 pm-7:15 pm Business Meeting
7:15 pm-8:15 pm Presentation

DINNER: **Choice of:** Top sirloin of beef with mushroom gravy **Or** Baked stuffed breast of chicken w/ salad, rolls, potato, vegetable, and dessert

COST: Member: \$25.00 Non-Member: \$30.00 Full Time Student: \$15.00

RSVP: Thursday, September 9, 2004

Please send check payable to "Structural Engineers of New Hampshire" with list of attendees **AND meal choice** to:

SENH
P.O. Box 226
Manchester, NH 03105-0226
Contact: Deb Coon, Administrative Assistant, (603) 669-5555

NOTE: 2.0 PDH's have been assigned for attendance to this program. Attendees are responsible for ensuring their check-in on the attendance list upon arrival at the meeting.



**STRUCTURAL ENGINEERS
OF NEW HAMPSHIRE**

P.O. Box 226
Manchester, NH 03105-0226

WE'RE ON THE WEB!
WWW.SENH.ORG

