

Structural Engineers of NH

November 2003



Serving New Hampshire



Next Meeting:

Tuesday

November 11, 2003

Synthetic Fibers

in

Concrete

**At The Red Hook
Brewery, Portsmouth,
NH**

SENH PRESIDENT'S LETTER...

There's an ominous nip in the air and SENH's technical programs are again in full swing. Meetings are planned for November and January and our recent September meeting and October Special Inspections Forum were well attended.

November Meeting—November 11, 2003

Our next dinner meeting will be Tuesday November 11, 2003 at the Red Hook Brewery in Portsmouth, NH. The technical topic for the evening will be Synthetic Fibers in Concrete presented by W.R. Grace. See the meeting announcement in this newsletter for additional meeting and registration information.

January Meeting—Date TBA

In January, SENH and SEAVT will have a joint meeting, tentatively in Lebanon, NH with discussion on the Chesterfield/Brattleboro steel arch bridge being presented by the NHDOT. We are looking forward to this presentation on this unique and challenging project. It has been nearly two years since we met with our friends from the NHDOT, so this is an exciting opportunity.

Engineer of the Year / Young Engineer of the Year Nominations

The SENH Board of Directors is seeking nominations from the membership for Engineer and Young Engineer of the Year award candidates. Candidates should be licensed professional engineers who have shown exceptional commitment to their profession and their community. As the application process for these awards requires that candidates be unaware of their nomination, we ask that any nominations from the membership be provided to the Board of Directors without knowledge of the nominee. Applications will be due to the Joint Committee of Engineering Societies from the SENH Board of Directors in December. Please forward any nominations to the SENH Board by November 10, 2003.

Special Inspections Forum—October 15, 2003

Approximately 60 structural engineers, architects, and building code officials attended the intriguing discussion on IBC Chapter 17—Special Inspections at the Yard Restaurant recently. It appears, as a result of this discussion, that education and coordination between building owner, architect, structural engineer, building code official, and contractor is required to ensure the requirements of Chapter 17 are being met. Structural Engineers and architects must be working together to include contractual language and fees for Special Inspections and explaining the value and necessity of these services to the owner.



Member of



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The SENH Board of Directors wishes to thank Linda McNair-Perry, Arthur Rose, and Ray Cowan for their assistance in organizing this event.

SENH Member Drive

As I mentioned at the September meeting, SENH's membership seems to have plateaued over the last couple of years. In order to ensure the continued success and presence of our organization, it is important to continue to encourage new engineers or engineers new to the state to join SENH. An application for membership can be found on the SENH website at <http://www.senh.org/membershipapplication.pdf> or by contacting Deb Coon, SENH Administrative Assistant at dcoon@hta-nh.com.

AT SENH We Can Help.....

With the recent downturn in the economy, from time to time we hear about SENH members who have become unemployed due to company downsizing for a variety of reasons. Many of our members know that SENH routinely advertises available positions posted by our members, but we can also help people who need to find employment. If you find yourself in this position and would like to post your resume on the SENH website or would simply like the SENH Board to keep their eyes open for opportunities, let us know. This has worked in the past and we would be glad to assist SENH members in whatever method we can.

Joke of the Month

An engineer at my company learned shortly before quitting time that he had to attend a meeting. He tried unsuccessfully to locate his car-pool members to let them know that he would not be leaving with them. Hastily he scribbled a message to one fellow and left it on his desk: "Last-minute meeting. Leave without me. Ted." At 6:30 p.m., the engineer stopped at his desk and found this note: "Meet us at the bar across the street. You drove."

We look forward to seeing you on November 11th at the Red Hook Brewery.

Very Truly Yours

Structural Engineers Of New Hampshire

Matthew J. Low, P.E.

Matthew J. Low, P.E.

President



Structural Engineers of New Hampshire Meeting Attendance

DATE: September 25, 2003

PLACE: Highlander Inn, Manchester, NH

RE: Welding of Structural Steel
(2.0 PDH Assigned)

NAME	ORGANIZATION	NAME	ORGANIZATION
Dana Michael Adams, P.E.	Opechee Construction Corp.	Paul Kirby, P.E.	TFMoran, Inc.
Matthew Allen, P.E.	JSN Associates, Inc.	Stephen Kiss, P.E.	SAK Engineering
Jason M. Ayotte	Hoyle, Tanner & Assoc., Inc.	Dave Konieczny, P.E.	Pyramid Engineering, P.C.
Alex Azodi, P.E.		Dennis R LaBombard, P.E.	LaBombard Engineering, LLC
Paul M. Becht, P.E.	H. L. Turner Group	Ryan Lawler	JSN Associates, Inc.
H. Edmond Bergeron, P.E.	HE Bergeron Engineers	Steve Long, P.E.	Opechee Construction Corp.
Mark Beroney	Hexaport International Ltd	Johnathan, M. Longchamp, P.E.	Daigle Engineers, Inc.
Jason Blais, P.E.	Opechee Construction Corp.	Matthew J. Low, P.E.	Hoyle, Tanner & Assoc., Inc.
Gerard R. Blanchette, P.E.	H. L. Turner Group	Josh Lund, P.E.	Vollmer Associates
Roland J. Boucher, P.E.	Boucher Engineering Consultant	David A. Macolini, P.E.	JSN Associates, Inc.
Robert S. Busby, P.E.	Kalwall Corporation	Daniel W. McCarthy	Consultant
Robert R. Bussiere, P.E.	Bussiere Engineering	Raymond G. Morin, P.E.	Raymond G. Morin, P.E.
Robert Champagne	Kimball Chase	Cynthia A. Mrazik	Kimball Chase
Normand G. Cote, Jr., P.E.	NGC Structural, LLC	Rob Parecharian	
Cheryl W. Coviello, P.E.	Kimball Chase	Joseph W. Patusky, P.E.	NHDOT
Tony Coviello, P.E.	JSN Associates, Inc.	Linda McNair Perry, P.E.	Hexaport International Ltd
Jason Doody	Lincoln Electric	Larry Rolwes	Parsons Transportation Group
Kathy J. Dougherty, P.E.	---	Kyle Roy, P.E.	Kimball Chase
Robert H. Durfee, P.E.	Hoyle, Tanner & Assoc., Inc.	Bill Saffin	
Fred Emanuel, P.E.	Emanuel Engineering, Inc.	Hossein Salehkhrou, P.E.	JSN Associates, Inc.
George Fallet, M.S., P.E.	Consulting Engineer, Inc.	Timothy L. Schaal, P.E.	Schaal Engineering, P.C.
Roger W. Gayer, P.E.	Structures Unlimited, Inc.	Peter E. Stamnas, P.E.	NHDOT - Bureau Of Bridge Design
Martin Gorham, P.E.	JSN Associates, Inc.	Peter Steffensen, P.E.	Steffensen Engineering Assoc., Inc.
Robert S. Hartford, P.E.	Kalwall Corporation	Roger M. Thibodeau, P.E.	Twin State Engineering
William Hickey	H. L. Turner Group	Veronica E. Thibodeau, P.E.	Weston & Sampson Engineers
Steve W. Hodgdon	Vanasse Hangen Brustlin, Inc.	Benjamin E. Tirey, P.E.	Str. Eng Consultant
Yong Hong	Hexaport International Ltd	Jeffrey S. Trexler, P.E.	Trexler Engineering
Tracy Houghton	H. L. Turner Group	Emile Troup	
Sean James, P.E.	Hoyle, Tanner & Assoc., Inc.	Eric Truebe	Lakeside Engineering, Inc.
Steve W. Johnson, P.E.	Vanasse Hangen Brustlin, Inc.	Johnathan B. Truebe, P.E.	Lakeside Engineering, Inc.
James Karmozyn, P.E.	H.E. Bergeron Engineering	Christopher M. Vick, P.E.	Concrete Systems, Inc.
Tom Kilrain	Kimball Chase	Edward Weingartner, P.E.	McFarland-Johnson, Inc.

SENH September 25th Meeting Minutes

BUSINESS MEETING: The meeting began at 6:50 pm, after the social time and dinner.

1. Matt Low started the meeting by thanking Emile Troupe for putting together the presentation on Welding Structural Steel.
2. SENH Treasurer Jim Karmozyn treasurer's report gave a balance of \$7,400 in the SENH account after payment of NCSE dues.
3. Bob Durfee, our NCSEA delegate, reported that the NCSEA Certification Committee has been working for the past two years to create a structural engineering certification program. This program and certification for structural engineers would be separate from the State Licensing Boards. NCSEA is requesting feedback comments from the member organizations on their report on the certification program. The subject will be discussed at the annual convention in October and a ballot vote of the member organizations will be held in November on whether to continue with the program. Bob emailed the information on the certification program to the membership and requested input from membership prior to the November ballot.
4. The next SENH meeting will be held November 11 at the Red Hook Brewery in Portsmouth. The topic will be embedded fibers in concrete.
5. Ray Cowan will be stepping down as the structural engineer representative for the NH Building Code Review Committee. Joel Fisher has been nominated as a replacement.
6. The SENH sponsored application for the NCSEA award in the under 150' bridge category, the Slate Covered Bridge, is a finalist in the category. Awards will be presented at the October NCSEA meeting.
7. SENH in conjunction with the AIA and New Hampshire Building Officials will sponsor a Round Table Forum on Special Inspections on October 15. The discussion will occur in the afternoon with a dinner following.
8. Jeff Tirey, a member of SENH, will be participating in an NCSEA panel discussion on snow load mapping at the October conference in Denver.
9. Matt Low announced that the membership in SENH has leveled off at about 160 members. He asked members to encourage younger engineers to join the organization.

II. TECHNICAL PRESENTATION : The presentation on Structural on Welding of Structural Steel included three speakers:

- Jason Doody with the Lincoln Electric Company
- Emile Troup with the Structural Steel Fabricators of New England
- Rob Parechian from Megquier & Jones, Inc. fabricators in Maine

Jason Doody presented information with regard to the FEMA 353 code which addresses requirements for moment frame connections in seismic zones. FEMA 353 requires that the weld electrode materials meet toughness requirements (Charpy V-notch of 20'-lb at -20° F). Massachusetts has adopted the FEMA 353 requirements. FEMA 353 requires that products be tested and certified to meet the toughness requirements, alternately, the Engineer of Record can allow uncertified materials from recognized manufacturers (certified materials are more expensive). Lincoln Electric provides information and answers questions relative to the FEMA 353 code at the website FEMA353@LincolnElectric.com or at 888-921-353. He also indicated that welding electrodes should be specified as E7xxx rather than E70xx since the E70xx electrodes are only allowed for flat position welding while E71xx electrodes are required for vertical weld positions.

Emile Troup gave a brief presentation on visual weld inspection and raffled off a set of weld defect samples. Matthew Allen from JSN won the weld defect samples.

Rob Parechian presented information on coordination between the engineer, detailer and fabricator in order to achieve the desired results in the finished product. The coordination occurs during two phases - Phase I coordination that occurs prior to fabrication and includes:

- Design drawings – the Engineer should specify in the plans if the connections are seismic connections.
- Erection drawings – should have proper weld symbols and notes.
- Shop drawings – should show all the weld symbols and should have the access hole sizes detailed (AISC provisions have access hole size requirements and the access holes must be ground smooth). The shop drawings should show the proper bevel and root opening size.
- Welding procedure specifications and certificate of conformance for the weld electrodes should be submitted to the Engineer of Record for approval with the shop drawings.

Phase II coordination occurs during fabrication and includes the following:

- The Engineer of Record should review the qualifications of the welding inspectors (especially inspectors for seismic connections).
- The inspectors should inspect the fabrication fit up prior to welding.
- The inspectors should verify that the written welding procedures are being followed.
- The inspectors should visually inspect the welds after the weld has cooled.
- The inspector should perform any required nondestructive inspection of the welds.
- Any repairs should have written procedures for repair approved by the Engineer of Record.

If welds are prequalified, no PQR is required. If a non-prequalified weld is used, a PQR and testing back up must be submitted. He noted that approximate testing costs for AWS D1.1 can run \$400, for D1.5 tests can be \$3000, and each CVN test runs about \$95 (5 are required).

Mr. Parchean noted several other items to be aware of are:

- Brass, copper, or ceramic backer bars are not prequalified and require prequalification testing if they will be used.
- Be careful if E7018-A1 electrodes are submitted because there are no mechanical requirements and they are not allowed in seismic connections.
- Be careful with specifying flare bevel welds since the effective throat is much less than the size. Look at the AWS effective throat requirements prior to specifying a flare bevel weld.

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



Structural Engineers of New Hampshire Meeting Attendance

DATE: October 15, 2003

PLACE: The Yard, Manchester, NH

RE: IBC Chapter 17—Special Inspections
(3.0 PDH Assigned)

NAME	ORGANIZATION	NAME	ORGANIZATION
Ken Andrews	Town of Hooksett	Donald F. Mayo, P.E.	Donald F. Mayo, P.E., Inc.
Alex Azodi, P.E.		Bill McKenny	Town of Milford
Josiah, H. Bartlett	Wood Structures Inc.	Karl McKinster	Sherman, Greiner, Halle
Shawn Bergeron	Bergeron Technical Services	Chad Monterose, P.E.	Rist-Frost-Shumway Engineering
H. Edmond Bergeron, P.E.	HE Bergeron Engineers	Keith F. Najjar, P.E.	Foley & Buhl Engineering, Inc.
Mark Beroney	Hexaport International Ltd	Monica Nann-Smith	Town of Allenstown
Roland J. Boucher, P.E.	Boucher Engineering Consultant	Ed Neveu	Town of Goffstown
Ted Buczek	Town of Barrington	Donald Peach, P.E.	Daigle Engineers, Inc
Richard Canuel	Town of Londonnery	Linda McNair Perry, P.E.	Hexaport International Ltd
Robert Champagne	Kimball Chase	Tom Rigg, P.E.	SFC Engineering Partnership, Inc.
Lou Cote	Steffensen Engineering Assoc., Inc.	Arthur W. Rose, P.E.	---
Normand G. Cote, Jr., P.E.	NGC Structural, LLC	Kyle Roy, P.E.	Kimball Chase
Scott Coulombe	Hexaport International Ltd	Hossein Salehkhrou, P.E.	JSN Associates, Inc.
Tony Coviello, P.E.	JSN Associates, Inc.	Mike Santa	City of Nashua
Paul R. Duquette, P.E.	Dufresne-Henry	Paul Sbacchi, P.E.	Kimball Chase
Joel Fisher, P.E.	Rist-Frost-Shumway Engineering	David A. Senecal	Town of Ossipee
Roger W. Gayer, P.E.	Structures Unlimited, Inc.	Jim Smith	Town of Londonnery
Bill Godin	Oak Point Associates	Peter Steffensen, P.E.	Steffensen Engineering Assoc., Inc.
Paul Goldberg, P.E.	PCI Architecture	Clifford Stockman	PMR Architects, PC
Carl L. Goldknopf, P.E.	GV Engineering, LLC	Bill Supino	Scadd, Inc.
Marcus Hann, P.E.	SFC Engineering Partnership, Inc.	Jerry Tepe	JRT AIA Architect
Robert Jones	Town of Atkinson	Jeffrey L. Tirey, P.E.	Tirey & Associates, P.C.
Jason Karlin	Oak Point Associates	Jeffrey S. Trexler, P.E.	Trexler Engineering
James Karmozyn, P.E.	H.E. Bergeron Engineering	Rimas Veitas	Veitas & Veitas Engineers
Jim Loft, AIA	PCI Architecture	Daniel Vincent	Town of Newmarket
Matthew J. Low, P.E.	Hoyle, Tanner & Assoc., Inc.	Andrew Walters	GV Engineering, LLC
Kevin Lynch	Town of Milford	Andrew D. White	Tirey & Associates, P.C.
Kenneth G. Marshall, P.E.	Foley & Buhl Engineering, Inc.	Karl Winchester, AIA	Banwell Architects
Rob Martel	Berard Martell Architecture	Jack Wood	Veitas & Veitas Engineers
Lisa M. Martin, P.E.	Quantum Construction Consultants, LLC		

NOVEMBER MEETING ANNOUNCEMENT

- NEXT MEETING:** Tuesday, November 11, 2003
- SUBJECT:** Synthetic Structural Fiber for use in Concrete - Rob Madore of WR Grace will present a program that includes: a description of Synthetic Structural Fibers physical properties, ASTM Fiber Testing, benefits to concrete properties, designing tools used to specify the appropriate dosages and a look at several projects in New England and elsewhere.
- PLACE:** Red Hook Brewery, Pease Trade Port, Portsmouth, NH
Phone: 430-8600
- DIRECTIONS:** Rte. 101 East, 95 North, take Exit 4 (left exit-Rte. 16 North), take 1st Exit for Pease Tradeport-Gosling Rd., left at lights at base of ramp, left at 2nd lights onto International Dr., left at stop sign, 2nd left driveway.
- Rte. 4 to Rte. 16 South, take Pease Tradeport Exit (Gosling Road), right at lights at base of ramp, left at 2nd lights onto International Dr., left at stop sign, 2nd left driveway.
- AGENDA:** 5:00 Social time
6:30 Dinner
7:15 Business Meeting
7:30 Technical Presentation and discussion
9:00 Adjourn
- DINNER:** Buffet including grilled southwestern chicken, barbecue tenderloin tips, salad, rolls, vegetable, oven roasted potatoes, dessert, coffee
- COST:** Members: \$25.00 Non-member: \$30.00 Full time student: \$15.00
- RSVP:** by Thursday, November 6, 2002 - All reservations must be honored.
- 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 dinner meeting.
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