

# Structural Engineers of NH September 2003 Newsletter



*Serving New Hampshire*

## **Next Meeting**

Thursday

September 25, 2003

**Welding**

**of**

**Structural Steel**

**At The Highlander Inn,  
Manchester, NH**

## **SENH PRESIDENT'S LETTER...**

Well, where does the summer go? Hopefully all of you have had an enjoyable and safe summer and are looking forward to seeing your SENH colleagues as we move into the fall. In addition to the upcoming September meeting (meeting announcement enclosed), SENH has the following tentative meeting topics in the planning stages:

- ❖ November—Portsmouth, NH - Synthetic Fiber Reinforcement for Concrete
- ❖ January - Concord, NH - NHDOT Bridge Project Presentation
- ❖ March - A joint meeting with SEAVT is being discussed.

### **New Members**

At the August 12, 2003 SENH Board of Directors meeting the following applications were approved for SENH Membership:

- ❖ Mr. Stephen R. Gilman, P.E.
- ❖ Mr. Reuben F. Hull, Jr., P.E.

Congratulations and welcome to SENH!



### **Articles of Agreement Revisions**

The Articles of Agreement by which SENH was incorporated in the State of New Hampshire require revision due to SENH's change of address which occurred nearly two (2) years ago. The amendment is required by the State of New Hampshire, Secretary of State. Per the Articles of Agreement, the membership is hereby notified that the SENH Board of Directors, as required by Article 10, intend to vote and approve amending Article 11— Place of business to our current address of P.O. Box 226, Manchester, NH 03105. The SENH Board of Directors plans to meet and vote on this amendment at a meeting of the Board on September 25, 2003, prior to the dinner meeting planned for later that evening.

Should any voting Member of SENH have any questions or concerns regarding this amendment, please contact any member of the Board.

### **Inside this issue:**

Presidents Letter	1-2
May 20, 2003 Meeting Minutes	3 - 4
September Meeting Announcement	5



Member of

## SENH Members on the Go

SENH Members Steve Johnson, P.E., Thomas Kendrick, P.E. and myself are currently serving on a committee organized by ACEC-NH and the NHDOT as part of the Consult Quality Initiative program to streamline the consultant design process on NHDOT projects. Specifically, our committee will be evaluating the bridge design and plan production process to attempt to eliminate redundancy, reduce design effort, clarify bid documents and ultimately reduce costs where possible. Should any SENH bridge designers wish to share your thoughts on this topic, contact Tom, Steve or myself.

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## Joel Fisher Nominated for State Building Code Review Board

SENH member Ray Cowan, P.E., has decided to relinquish his duties as the structural engineering representative to the State Building Code Review Board. After careful consideration at the August 12, 2003 Board Meeting, the SENH Board has voted to nominate Joel B. Fisher, P.E. of RFS Engineering to fill the vacancy. Joel was the first President of SENH and his expertise in the design of buildings and knowledge of the applicable codes will be a vital asset to the Board. SENH will forward his nomination to the P.E. Board for action. The Board wishes to thank Joel for stepping up to the plate.

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## Special Inspections Committee

The Special Inspections Committee is working to organize a half-day seminar in mid-October to be attended by structural engineers, architects and building officials. Contact Committee Chairperson, Art Rose, P.E. or Board Liaison Alex Azodi, P.E. for additional information in the near future.

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## NCSEA Annual Conference

The NCSEA 11th Annual Conference will be held this year in Denver CO. The conference runs from Thursday evening, October 23, 2003 to Saturday, October 25, 2003. The theme and main technical topic for this years conference is "Earth, Wind and Snow: Challenges from Mountain and Plain"

SENH member Jeff Tirey is part of a distinguished group of engineers scheduled to lead a panel discussion on snow loads, on Friday, October 24th. Jeff has been invited to participate in this panel based on the work completed by the SENH Snow Load Mapping Committee. More information on the conference program and registration information can be found at the NCSEA website at [www.NCSEA.org](http://www.NCSEA.org).

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## NCSEA Awards Competition

For the past few years, SENH has offered the opportunity to sponsor projects designed by SENH members in the NCSEA Awards Competition. This year, SENH sponsored the \$250 application fee for the Slate Covered Bridge, designed by Sean T. James, P.E. and Robert H. Durfee, P.E. We are please to report that the project has been selected as a finalist in the "Under 150 Span" category for bridges. The winners of each category will be announced at the Awards Banquet at the NCSEA Annual Conference in Denver, CO on October 25, 2003. Good luck to Sean and Bob!

That's all for now, hope to see you all in September.

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:** May 20, 2003

**PLACE:** Fratello's Ristorante Italiano, Manchester, NH

**RE:** Bracing of Pre-Engineered Wood Trusses  
(2.0 PDH Assigned)

NAME	ORGANIZATION	NAME	ORGANIZATION
Dana Michael Adams, P.E.	Opechee Construction Corp.	Paul Kirby, P.E.	Wright-Pierce Engineers
Matthew Allen, P.E.	JSN Associates, Inc.	Dave Konieczny, P.E.	Pyramid Engineering, P.C.
Jason M. Ayotte	Hoyle, Tanner & Assoc., Inc.	Dennis R LaBombard, P.E.	LaBombard Engineering, LLC
Josh Bartlett	Wood Structures	Johnathan, M. Longchamp, P.E.	Daigle Engineers, Inc.
Daniel J. Bjorkman	Rist-Frost-Shumway Engineering	Matthew J. Low, P.E.	Hoyle, Tanner & Assoc., Inc.
Jason Blais, P.E.	Opechee Construction Corp.	Robert D. Madore	WR Grace & Co.
Robert S. Busby, P.E.	Kalwall Corporation	Frederick Marchione	Rist-Frost-Shumway Engineering
John Byatt, P.E.	Louis Berger Group	Kenneth G. Marshall, P.E.	Foley & Buhl Engineering, Inc.
Lou Cote	Steffensen Engineering Assoc., Inc.	Chad Monterose, P.E.	Rist-Frost-Shumway Engineering
Normand G. Cote, Jr., P.E.	NGC Structural, LLC	Cynthia A. Mrazik	Kimball Chase
Tony Coviello	JSN Associates, Inc.	Keith F. Najjar, P.E.	Foley & Buhl Engineering, Inc.
Ray S. Cowan, P.E.	SFC Engineering Partnership, Inc.	Jeffrey S. Nawrocki, P.E.	JSN Associates, Inc.
Dave Denoncourt	Steenbeke & Sons, Inc.	Steve Noon	Sampson String Tire
Erin Darrow	Provan & Lorber	Linda McNair Perry, P.E.	Hexaport International Ltd
Kathy J. Dougherty, P.E.	---	Stephen Richard	Steffensen Engineering Assoc., Inc.
David F. Emanuel	Emanuel Engineering, Inc.	Tom Rigg, P.E.	SFC Engineering Partnership, Inc.
Fred Emanuel, P.E.	Emanuel Engineering, Inc.	Richard E. Roberts, P.E.	Foley & Buhl Engineering, Inc.
George Fallet, M.S., P.E.	Consulting Engineer, Inc.	Arthur W. Rose, P.E.	---
Joel Fisher, P.E.	Rist-Frost-Shumway Engineering	Kyle Roy, P.E.	Kimball Chase
Thomas, A French, P.E.	Hoyle, Tanner & Assoc., Inc.	Hossein Salehkhrou, P.E.	JSN Associates, Inc.
Jason L. Gallant, P.E.	Jesseman, Gallant & Associates	Paul Sbacchi, P.E.	Kimball Chase
Roger W. Gayer, P.E.	Structures Unlimited, Inc.	Timothy L. Schaal, P.E.	Schaal Engineering, P.C.
Martin Gorham, P.E.	JSN Associates, Inc.	Stan Sias	
Robert Gould	Emanuel Engineering, Inc.	Peter Steffensen, P.E.	Steffensen Engineering Assoc., Inc.
Timothy L. Grant, P.E.	TL Grant Engineering Consulting	Robert B. Tarquinio, P.E.	Parkview Consulting, Inc.
Robert S. Hartford, P.E.	Kalwall Corporation	Dennis Tewksbury, P.E.	Consultant
Steve W. Johnson, P.E.	Vanasse Hangen Brustlin, Inc.	Benjamin E. Tirey, P.E.	Str. Eng Consultant
Michelle L. Juliano, P.E.	NH Dept of Transportation	Jeffrey L. Tirey, P.E.	Tirey & Associates, P.C.
James Karmozyn, P.E.	H.E. Bergeron Engineering	Jeffrey S. Trexler, P.E.	Trexler Engineering
Tom Kilrain	Kimball Chase	Andrew D. White	Tirey & Associates, P.C.

## SENH May 20th Meeting Minutes

**I. BUSINESS MEETING:** The meeting began at 6:45 pm, after the social time and dinner, and ended at 7:05 pm.

1. Matt Low preceded the Board of Directors election by thanking Dave Konieczny and Ben Tirey. The SENH Board of Directors nominated Roger Gayer, P.E., Alex Azodi, P.E. and Steve Johnson, P.E. for the Board of Directors. No other nominations were received. The members present elected these three structural engineers to the Board of Directors. Matt announced that SENH Board of Directors officers will be elected at the next Board of Directors meeting.
2. SENH Treasurer Jim Karmozyn gave a treasurer's report of \$9,212 in the SENH account.
3. Art Rose provided an update on the RSA 508:4 & 4b Statutes of Limitations and Repose, respectively. The State Supreme Court described both statutes as intertwined. The Court decision was a positive one for the design professions and the construction industry. Legal action may be brought within 8 years (repose). Claims must be commenced within 3 years of discovery of an act or omission (limitations), but within the 8 year repose period. At some point in time, the building owner must take responsibility for maintaining the building.
4. Matt Low presented NCSEA Delegate Bob Durfee's written report. The 11th Annual NCSEA Conference is in Denver this year in late October with topics within the Earth, Wind and Snow theme. SENH will sponsor applications for the NCSEA Excellence in Structural Engineering Awards program. None have been received to date. The SENH Roof Collapse Forum email discussion has been forwarded to NCSEA. The AISC Steel Manual survey is in an email link.
5. Norm Cote, QBS Coalition solicited another SENH representative on the committee. No negative feedback has been received from the engineering community by the committee.
6. Ray Cowan, Structural Engineering representative on the NH State Building Code Review Committee, spoke about the Review Board. The Board is part of the new State Building Code. The Board is moving slowly. The Board has no authority to enforce the State Building Code. Some new State of NH buildings are not designed by IBC 2000 and these situations have been turned over to the Attorney General's Office. Height/area tables differing from IBC have been adopted per the State Fire Marshall's Office. The Review Board maintains a website with meeting minutes, actions, etc. under state, safety and building code addresses. Ray asked if SENH is willing to help organize a seminar on Chapter 17 Special Inspections with the Building Code Enforcement group. The provisions of the chapter are not applied consistently if at all.
7. Matt Low announced that the Board of Directors voted this evening to form a Specialty Committee for Special Inspections with Art Rose as Chairman. Volunteers are needed for the Committee to look into the issue, interpret the chapter and organize a seminar.
8. Matt Low described the formation of a NHOEM/SENH alliance as moving slowly. SENH continues to work with OEM to create a reservist training program. The Memorandum of Understanding between OEM and SENH is under review by the Attorney General's Office.
9. Matt Low announced the SSFNE seminar at WPI on Thursday, May 22.
10. Matt Low reiterated to the meeting attendees that late reservations for dinner meetings are a hardship for organizing meetings.

## II. TECHNICAL PRESENTATION

Josh Bartlett, Wood Structures, gave a presentation on Bracing & Handling of Wood Trusses. In attendance to facilitate the discussion were Stan Sias, Wood Truss Council of America, Dave Denoncourt, Steenbeke & Sons and Steve Noon, Simpson Strong-Tie Northern New England Representative. Bracing has become a very big issue in the truss industry recently. Josh covered Standard Design Responsibilities & Authority and Techniques & Methods of Bracing Metal Plated Wood Trusses.

Design requirements are determined by ANSI, TPI and WTCA and by project specifications by the building designer which can override industry organizations. The American National Standards Institute, Truss Plate Institute and Wood Truss Council of America establish quality control standards and design requirements.

Josh reviewed WTCA 4-2002, National Standard and Recommended Guidelines on Responsibilities for Construction Using Metal Plate Connected Wood Trusses - ANSI/TPI/ WTCA 4-2002, a handout for the presentation. The publication describes the responsibilities of the Building Designers. TPI also defines the responsibilities of the manufacturer and of the contractor. Chapter 2, Definitions, of WTCA 4-2002 differentiates the responsibilities of the designer, manufacturer and contractor. The designer is responsible for loading definition, permanent bracing and load transfer mechanisms between building structure systems. The manufacturer is responsible for compression member bracing requirements, labeling, component design and fabrication. The contractor is responsible for installation, handling and erection (or temporary) bracing. WTCA 4-2002 provides standard guidelines for assigning these responsibilities but does not override project specifications.

Bracing types were reviewed: compression member bracing, temporary bracing and permanent bracing. The designer has the option to designate that permanent bracing design be done by the truss manufacturer. The designer has the option to specify that truss design include no compression member bracing although this may not be practical design in all cases. HIB-91 is to be revised soon by B51-2003 Building Safety. T-bracing is an alternate type of compression member bracing. Temporary bracing must hold trusses plumb and must brace compression members. HIB-91 covers only truss spans up to 60'. Spans over 60' require design of temporary bracing by a P.E. Permanent bracing is part of the overall lateral load transfer system and anchors the compression member bracing. Josh stressed the importance of communication (pre-bid conference) between owner, designer, supplier and contractor/framer.

Josh showed a video on trusses and bracing.

The IRC building code does not include unbalanced snow loading but used Pg as roof snow load. The IRC rafter tables include 1.3 unbalanced snow. ASCE 7-98 uses 1.5 unbalanced snow factor.

For literature on permanent bracing design refer to John Meeks' book which can be found on WTCA's website: [www.woodtruss.com](http://www.woodtruss.com).

The meeting went on to discuss on-site review of permanent truss bracing and whether this should fall under the responsibility of the Structural Engineer of Record, the truss supplier or Special Inspections. There was discussion of manufacturers applying tags to trusses to identify lateral bracing locations, anchorage locations and point load locations. Tagging should not be used in lieu of referring to truss design drawings.

An option for designers to maintain control of the truss system as installed was suggested by Stan Sias, that the designer could specify the company that manufactures the trusses.

Meeting adjourned at 8:45 pm.

Minutes Approved: 6/12/03 Respectfully submitted, Benjamin E. Tirey, P.E., Secretary, SENH

**SEPTEMBER MEETING ANNOUNCEMENT**

- NEXT MEETING:** Thursday, September 25, 2003
- SUBJECT:** Welding of Structural Steel - **Mr. Brendon McLellan** of Lincoln Electric, Waltham, MA will discuss proper electrode specification and erector compliance, with an emphasis on seismic design. **Mr. Emile Troup** will display and discuss weld defects and visual weld examination (bring your money as we intend to raffle off a set of weld defects). **Mr. Rob Parecharian** will discuss weld symbols and proper plan presentation.
- PLACE:** The Highlander Inn Banquet Room, 2 Highlander Way, Manchester
- DIRECTIONS:** From I-93 take I-293 West to Exit 2 Brown Avenue. Travel south Brown Avenue and take the Airport Entrance on the left. Follow Airport Road and take a right onto Highlander Way.
- From Route 3 / F.E. Everett Tpk. take I-293 east over the Merrimack River to Exit 2 Brown Avenue. Travel south Brown Avenue and take the Airport Entrance on the left. Follow Airport Road and take a right onto Highlander Way.
- AGENDA:**
- 5:00 Social Hour
  - 6:00 Dinner
  - 6:45 Business Meeting
  - 7:00 Presentation and Discussion
  - 9:00 Adjourn
- DINNER:** Buffet-having Soup, Salad, Baked Stuffed Chicken, Roast Top Round, Fresh Vegetables and Dessert.
- COST:** Member: \$32.00 Non-Member: \$34.00 Full Time Student: \$25.00
- RSVP:** September 19th (all reservations must be honored, no shows will be invoiced)
- Please send check payable to "Structural Engineers of New Hampshire" with list of attendees 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 dinner meeting.
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