



President's Letter

It has been 5 long months since I had to assemble a newsletter. It has been a very busy 5 months for me professionally (at my age I was pulling all nighters to meet deadlines) and personally (my only child started college this fall), but not so much on the SENH front. However, we are going to try to make up for the lack of attention with a busy and interesting fall and winter.

To get us started out of the gate fast, the current Board invited the former board members to a meeting at the end of August to get input on the direction the organization has taken and to seek some assistance in keeping many of recent initiatives from overwhelming our organization. We did in fact get great dialog and offers of assistance. One former board member told me after the meeting, "that was fun, when are we going to do that again?"

The NCSEA Regional Representative, Tom DiBlasi, also attended our current and former board meeting to offer a regional perspective and ways that NCSEA can assist SENH. The board has elected to send three representatives to the NCSEA conference in Philadelphia in October. They will be NCSEA Representative, Bob Durfee; *Bureau of Emergency Management Committee Chairperson*, Tom French; and Board of Director's Vice President, Alex Azodi. They will be able to cover more of the multi-track meetings and technical seminars, report back to our member, and to bring back to the Board more ideas to make this organization stronger.

This was a real shot in the arm for the current board, knowing that we have the former board members and NCSEA backing us up and moving us forward. You will hear more ideas that

were banded about in the future.

For now, this newsletter has information about new codes, books to buy, books to borrow, meetings (past, present and future); upcoming seminars and meetings, discussion of UNH internships, NCSEA news, profiles of members and more. We have several contributors of news articles and I thank them. Also check out the website, which has the NCSEA 'Annual' Report summarizing what was a very busy 7 months (since I already acknowledged not much happened in the last 5), job postings, information on public hearing for the 10 year plan and more seminar information than can be fit into this newsletter.

The Board Thanks Rich Roberts

During this long break, we added another new member to the Professional Development Committee (PDC) which allowed Rich Robert to step off of the committee he had served so ably. The Board thanks Rich for his leadership over the last 3 years that established the PDC as a highly efficient committee. Under his direction, the PDC brought new energy, technical topics and changing venues to our meetings that have been appreciated by all of the membership. Don't you worry; we are not going to let Rich slip away that easily. The board anticipates that Rich will soon be involved in some new initiatives on behalf of SENH.

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Special Points of Interest/ Reminders:

- *September Meeting—Joint Meeting with ASCE.*
- *October 2007—1st Annual NH Joint Engineering Societies Conference "Dropping the Borders of Engineering".*

Code Updates

As of August 17, 2007, the "New Hampshire Building Code" is, by reference; the International Building Code 2006, the International Plumbing Code 2006, the International Mechanical Code 2006, the International Energy Conservation Code 2006, and the International Residential Code 2006, as published by the International Code Council, and the National Electric Code 2005.

The Massachusetts Department of Public Safety announced that [*The Seventh Edition of the Code for Single and Two Family Dwellings*](#) was effective on April 1, 2007. The 2003 versions of the International Residential Code (IRC) and the International Building Code (IBC) were models for developing this code. There has been a six (6) month overlap period where a code user may choose to use either the sixth or seventh edition of the code (without mixing provisions). On October 1, 2007, the Seventh Edition will be in full force. Interested parties may place an order for the **official version** of the new code through the Office of the Secretary of State website at www.mass.gov/sec.

Member Profiles

This month we are offering brief profiles of the Professional Development Committee members. Several have been members since its inception 3 years ago and others are recent recruits. These are the folks who work diligently to plan our 5 membership meetings each year and host technical seminars.

Tony Coviello, PE joined the PDC in 2004 and became Chair in 2006. He holds BSCE and MSCE degrees from the University of New Hampshire. After some time working in Boston for a firm specializing in structural investigations, he moved his work closer to home in 2001 and has worked on a variety of project types from wastewater treatment plants to large single family residences. In January 2007, Tony started his own consulting business. He taught a senior and graduate level course on the Design of Wood Structures at UNH last spring. He currently resides in Portsmouth with his wife and two children. Tony also serves on the Portsmouth Planning Board and the NCEES Structural I and Structural II Exam Committee. When he's not working or at a meeting, Tony often can be found running along the streets of Portsmouth pushing at least one of his kids in a jogging stroller.

Derek Gilbert, P.E. joined the PDC in 2004. He graduated summa cum laude from Northeastern University earning a BSCE. He worked for a variety of structural engineering firms in Massachusetts and New Hampshire. He's worked on a wide range of projects, from communication towers and precast, prestressed water storage tanks, to buildings for government, commercial, retail, and industrial clients. He's currently a Structural Applications Engineer for Microdesk in Bedford, NH. At Microdesk, he provides technical support, training, and consulting services with a focus on Autodesk Revit Structure.

Richard Porter recently joined the PDC in 2007. He holds a BSCE from the University of Massachusetts. Coming out of school, he worked as a field engineer, monitoring several geotechnical systems including driven and drilled piles, soil nails, tiebacks, and various ground improvement methods. After some years of field work, Richard concentrated on geotechnical reporting and design of soil nail walls, MSE walls, tiebacks, and deep foundations. Mr. Porter has load tested a multitude drilled mini-piles and pressure injected footings (PIF). In the summer of 2006, Richard started his own geotechnical construction business. In his free time, Richard enjoys playing golf and hiking.

Sean James, PE, SECB joined the PDC in 2007. He holds a BSCE and MSCE from the University of Maine and will receive his MBA from Southern New Hampshire University in May 2008. He has been employed for the past 12 years at Hoyle, Tanner & Associates, Inc. in Manchester and is currently an Associate and project manager. His professional design experience includes a concentration in covered bridge design and rehabilitation, traditional bridge design, parking garages and environmental structures. He currently resides in Candia with his wife Karie and two sons and is an alternate to the Candia Planning Board.

Keith Donington, PE joined the PDC in 2006. He graduated in 1974 with a BSCE honors degree from the City University of London and married a native New Hampshire girl. After designing and building bridges on the London to Dover motorway, he moved to Manchester in 1980 where he has worked predominantly on bridge design and inspection projects throughout the New England area. For the last 17 years he has worked for PB Americas, (formerly Parsons Brinckerhoff), where he is an Assistant Vice President and the New England Structural Department Manager. Over his career, Keith has worked on a variety of projects from large to small including: being on the preliminary design team and subsequently the project manager for the construction of the Zakim Bridge, designer for the Deerfield Elementary School, and even a waterslide on Rte 16 North Conway. Most recently, he led the design of the foundation underpinning system for the Bellows Falls RR tunnel in VT which enabled the tracks to be lowered to accommodate double stacked freight cars, and the 2007 PCI award winning Hanover Rt 10 over Mink Brook bridge.

Paul Goldberg, P.E. joined the PDC in 2004. He received his BS in Structural Engineering from the University of Massachusetts in Amherst and his MS in Geotechnical Engineering in 1967. After starting his career with Stone & Webster, he and Arthur Rose, formed Rose, Goldberg & Associates where he practiced for 13 years. In 1985 he took an interest in the construction side of the business and helped set up the design part of Sepalla & Aho Construction. In 1990 he return to Manchester to be in charge of engineering services with Pro Con, Incorporated and has helped to grow its design department into a staff of 26 people including 7 registered architects and 3 licensed engineers. Two of the most notable projects Paul has been involved are the Sherman Adams Summit Building on Mount Washington and Boston's Rowes Warf. Paul has been involved in the Town of Bedford as a Town Councilor for 12 years, was a founding member and implemented the first municipal sewer system in the Town and is currently the Chairman of the Planning Board. In addition to SENH, Paul is member of AISC, ACI, AGC and Architects, Contractors and Engineers (ACE), where he has served as the chair of the ACE committee. For relaxation, Paul and his wife, Mary Beth retreat to their 48' sailboat. They have sailed across the Atlantic twice, have ventured to Bermuda from New England many times and from there have gone the various islands in the Caribbean.

New Hampshire Technical Institute Library & SENH Collection

The New Hampshire Technical Institute (NHTI) and SENH arranged to expand the SENH collection of books that will be located at the Library of NHTI in Concord. SENH members in good standing may apply to become a community member of the NHTI Library (it's free) and thus have access to all of the patron services available. There is a search feature on their website. Books can be mailed to you or sent to your local library via the inter-library loan system. See www.nhti.edu/library for hours and contact information. The staff is very friendly and helpful.

At this stage, growth of the collection will be primarily accomplished through requests, gifts, and donations. Valuation or appraisals of gifts for tax purposes is the responsibility of the donor. Duplicate books will first be offered for sale to SENH members through the newsletter and website; followed by other engineering organizations, before being discarded through normal library channels. The SENH Board hopes to create a fund from the sale of duplicate or discarded books, and to draw upon the income from this book fund to purchase reference material that updates

the collection.

One of the biggest values of a collection like this is that the older material is just as important a resource as is the new. If you or your firm has any old reference books, design manuals or codes, engineering journals, etc.; please contact Linda McNair-Perry, SENH NHTI Library Liaison, to see about donating them. If you attend a seminar, ask the sponsor if they will consider donating the material/publications related to that seminar to the SENH/NHTI collection.

If books are a secret (or not so secret) passion of yours, contact Linda at 603-283-0300 x 206 or email her at Linda@gvengineeringllc.com. She will put your energy and enthusiasm to good use in growing this collection.

The NHTI collection has a few interesting gems as well as reliable standards. A few of the older books that might peak your interest are the *Sweets Catalog* from 1906 (in one volume); a 1939 *Handbook of Concrete Construction, Building Design Standards* from 1955 and *Recommended Minimum Requirements for Small Dwelling Construction*

from 1932 weighing in at 103 page. Compare that last one to the heavy lifting required for the latest IRC. Newer publications included *Handbook of Bolts and Bolted Joints* from 1998, *Building Codes Illustrated Guide to Understanding IBC 2003*, and *Construction Specification Writing* published in 1999.

On the shelves, you will find assorted books about bridge design from 1949 through 2002 and graphic details spanning from 1927 to 2003. There are standards such as the 5th, 6th, 7th, 8th, and 9th edition of AISC Manual; as well as classics like *Roark's Formulas for Stress and Strain* and structural mechanic books by Timoshenko & Young. For a somewhat lighter read, try borrowing David McCullough's *The Great Bridge: The Epic Story of the Building of the Brooklyn Bridge*.

If you do not see the book you want on the shelves or in the NHTC Library systems, do not fret there are other sources. Ask the librarians at NHTI, they can help you track it down.

Books of Interest:

If you see or hear of a book that you think might be of interest to our members, let us know. I am suggesting that in addition to purchasing the latest 2006 IBC and IRC, the following may be of interest to you. All are available through the International Code Council (ICC)

- ◆ *2006 IBC Special Inspections Understanding and Developing a Special Inspections Program Workbook*
- ◆ *Analysis of Changes, 2000 IBC to 2006 IBC*
- ◆ *2006 IBC Fundamentals Structural Provisions Workbook*

Engineer of the Year and Young Engineer of Year Nominations

The planning for the 2008 Engineers Week banquet has begun and the hallmark moment of that banquet is the recognition and celebration of the best engineers in NH! Each year the Engineer of the Year and Young Engineer of the Year awards are presented to engineers who have made outstanding contributions to the engineering profession, the public welfare and their community.

All engineers are eligible for nomination, provided they are members in good standing of their engineering society, are citizens of the United States, and are licensed Professional Engineers (PE) in the State of New Hampshire or Engineers in Training (EIT). Candidates for the Young Engineer of the Year Award shall be 35 years of age or younger on December 31, 2007.

Please let a member of the Board know of someone that you think warrants consideration by November 1. It is **IMPORTANT** to note that **the candidates should not be informed of their nomination**. The SENH board is prepared to assist you with the preparation of the application package. See the SENH website for more guidelines.

NCSEA Committee Work *Submitted By Robert H. Durfee, P.E., SECB*

NCSEA has several standing committees that perform important activities. These committees usually meet, by teleconference, three (3) to four (4) times per year (NCSEA pays for all telephone/teleconference costs). Committees also meet face to face once a year at the annual conference.

New committee members are being sought. If you are interested in working on any of the NCSEA committees described below, please contact Bob Durfee, P.E., SECB, NCSEA Delegate, at (603) 883-0563 or RDurfee@dubois-king.com.

Advocacy of the Structural Engineering Profession

The Advocacy Committee works to establish NCSEA as the identifiable source for the consensus position on important local and national issues, as well as establish and externally promote NCSEA as the national organization representing structural engineers.

Awards Committee

The Awards Committee is instrumental in NCSEA's program recognizing structural engineering achievement and innovation.

Code Advisory

The Code Advisory Committees operate as four separate subcommittees, structured to work with Model Code and Standards issues and activities, such as generating and responding to code changes, preparation and codification of resource documents, and practical application guidelines. These subcommittees are:

- Existing Buildings
- Seismic Design
- General Engineering
- Special Inspections

Continuing Education

The Continuing Education Committee develops and presents continuing education programs for structural engineers, including Web Seminars and the Winter Institute, and administrates the Diamond Review Program.

- Diamond Review Program – Reviewer or Establish a State Diamond Review Program
- Technical Seminars – on site
- Technical Seminars – on web

Licensing

Through the Member Organizations, the Licensing Committee seeks to influence states, in the interest of public safety, to adopt consistent licensing laws, especially concerning separate licensing of structural engineers.

Membership

The Membership Committee strives to attract Associate, Affiliate, and Sustaining Members of NCSEA. In addition, this committee is available to work with existing Member Organizations and their Executive Directors, on such issues as information exchange and communication, membership attraction and retention, newsletters and seminars.

- Associate, Affiliate, and Sustaining Member Recruitment
- Member Organization communication and interaction

Publications

The Publications Committee coordinates and manages publications produced by NCSEA.

- Publications other than STRUCTURE magazine
- STRUCTURE magazine
- *Structural Connection* (electronic quarterly newsletter)

Structural Engineering Emergency Response Program (SEERP)

The SEERP Committee will help to facilitate establishment of a national SEER network.



NCSEA Update *Submitted By Robert H. Durfee, P.E., SECB, NCSEA Delegate*

SENH has been a member of NCSEA for eleven (11) years. Some of our new members may not realize what NCSEA is or does. I thought it might be beneficial to outline to our new members, and recap for our long standing members, about the organization.

SENH joined NCSEA (National Council of Structural Engineers Associations) in August of 1996. The organization is comprised of forty-three (43) state, regional and territorial member organizations, including SENH. NCSEA is a national organization of structural engineers, for the promotion and improvement of the structural engineering profession.

As a member of NCSEA, the organization offers numerous benefits and activities, some of which include:

- Provides structural engineering expertise in the Code development process and pursues unified, national positions on the Building Code and other issues relevant to structural engineering. There have been recent discussions about code simplification in many venues. The NCSEA Code Advisory Committees have been at the forefront of code simplification and have strenuously worked to streamline the model codes and provide a “level playing field” for the various materials interests. Your continued membership and support allows your NCSEA to continue this vital effort on your behalf.
- Promotes structural engineers and structural engineering to the public and to students looking for a rewarding and deeply satisfying career.
- Publishes STRUCTURE, the leading monthly publication for, by, and about structural engineers and their practice.
- Established a national Structural Engineering Emergency Response (SEER) network to link state SEER groups and help form groups as necessary.
- Develops meaningful, practical and convenient continuing education opportunities.
- Offers coursework, training and certification for ATC-20 and ATC-45.
- Provides national support for pursuing separate licensing on a state-by-state basis.
- Is an identifiable resource for those needing communication with the structural engineering profession.
- Pursues improvement in the level of competence and standard of practice of the structural engineering profession throughout the U.S.
- Encourages communication and interaction between member organizations and their committees.
- Helps in the revitalization and building of state SEAs.

NCSEA maintains several standing committees to promote and advance the structural engineering profession. Within this newsletter is an announcement of the several committees, and an invitation for you to participate. I hope you will consider becoming involved with a committee.

Finally, NCSEA hosts an annual conference. This year the conference will be held from October 11-13 in Philadelphia. A conference announcement, with agenda and other details, is contained in this newsletter. I urge our members to attend the annual conference whenever possible.

To learn more about
NCSEA, visit their
website at
www.ncsea.com

Internships Wonderful Opportunities and Interesting Challenges, *By Jason Whitney, Bethany Cooper and Robert Henry*

Internships are great experiential learning opportunities for students. They can also be quite beneficial for employers who are looking for talented individuals who wish to learn more about a profession and a particular organization.

Over the years the UNH Department of Civil Engineering has developed strong ties with many of the structural engineering firms in the region. This has resulted in many UNH graduates being hired by these firms and there appears to be a desire to hire more. The problem is that the number of Civil Engineering graduates is less than the demand from the industry. One way in which some firms are trying to enhance their recruitment programs is by hiring students as interns after their sophomore year. The students understand the value and benefits of internships which enables them to experience “real world” engineering. More employers are realizing that developing or enhancing an internship program is an excellent investment.

Internships come in a variety of formats. Most common at UNH is an internship during the summer months, working 30-40+ hours, for 10-12 weeks. This full-time employment provides students with real hands-on experiences where they can begin to develop an understanding of what they are learning in the classroom applies to the profession. One suggestion several companies have made is that one should hire the student for 6 to 8 hours a week during the semester prior to their full-time internship. This provides the student to become acclimated to the company and its procedures. It also enables the company to become familiar with the skill set each new intern has.

Another internship format is for a student to intern full-time during the fall and/or spring semester and not attend school for that semester. The college is looking into a formal internship program that would have students working for a company for a full year after their junior year and then return to UNH for their senior year.

For a company to have a successful internship program, the company and its employees must see the intern as a long-term investment. In some cases an intern might have a skill set that allows them to be productive from the very beginning. Other interns might require a significant investment in time and personnel in order to be productive. In either case a company must commit to this process by identifying appropriate staff to serve as mentors and role models, while providing meaningful work experiences to the interns. “This year we worked hard to put together a comprehensive training program for the summer interns and have found that is very important,” comments Mary Persson, Director of Administrative Services at Appledore Engineering in Portsmouth, NH.

Some employers might find the UACC Employer Guide to Developing Internships useful. The guide is a comprehensive resource which outlines some best practices that would help to ensure that good interns are identified, mentored and retained. There are several local companies (i.e. Public Service of New Hampshire, Appledore Engineering, and New Hampshire Ball Bearings) that have developed effective internship programs and are willing to share information with others. These companies provide their interns with staff who have strong communication skills, patience, and a desire to mentor young talent.

Student interns have a strong desire to learn new skills, take initiative and want to prove themselves. Interns who are given projects feel they are contributing to the organization and meeting a real need. In addition, giving interns diverse responsibilities and projects frees up other staff to work on important matters that they could not otherwise get to. Persson at Appledore Engineering points out that “Our interns do true engineering work so they make progress and learn skills they can take with them. They can parlay their experience in the internship to their senior projects which provides an amazing learning opportunity.”

For more information about internships and how to promote your company’s opportunities, please contact, Bethany Cooper, UNH Associate Director of Career Support and Recruiting, internship.office@unh.edu, 603.862.2064.



SENH SEPTEMBER MEETING ANNOUNCEMENT

NEXT MEETING: September 26, 2007

PRESENTATION: “**Overview of Soil Retention and Improvement Techniques**”, by Bob Tinning of Terra Drilling.

Terra Drilling Company, Inc. specializes in the design and installation of drilled mini-piles (also referred to as "micropiles" and "bored-in-piles"), tie-backs, rock anchors, earth support systems with pre-drilled soldier piles and lagging, soil nailing, underpinning, and grouting. Founded in 1984, Terra has performed over 400 contracts to date, ranging from \$10,000 to nearly \$5,000,000 in value. They have worked extensively throughout the New England states, as well as in New York, New Jersey, Pennsylvania, and Colorado. Terra has performed a wide range of projects in both the public and private sectors.



PLACE: **The Backroom Restaurant & Conference Center**
245 Hooksett Road “Daniel Webster Highway”, Manchester, NH
Phone 669-6890
www.puritanbackroom.com

DIRECTIONS: I-93 to exit 9S. The Puritan Backroom is one mile on the left. Conference center is to the right of the main restaurant.

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

DINNER: Buffet choice Fried Chicken Tenders, Vegetarian Lasagna, Ham w/Pineapple, Rice, Mixed Vegetables, Salad.

COST: Member: \$40.00 Non-Member: \$50.00 Full Time Student: \$10.00

RSVP: by Noon Friday, September 21, 2007

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 PDHs 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.

SENH May 3rd Meeting Minutes

Business Portion of the Meeting

The meeting was called to order by President Linda K. McNair-Perry, PE, at 7:15 pm, after the social time and dinner.

Election of Officers: Alex Azodi, Robert Busby, and Steve Johnson have been re-elected to the SENH Board for another term.

Treasurers Report: Jim Karmozyn, PE reported a \$16,518.12 balance for SENH.

NCSEA Representative, Bob Durfee, announced that SENH would sponsor applicants interested in participating in the Annual Excellence in Engineering Award. There are five categories to enter which are listed on the NCSEA website. The application deadline is July 20, 2007.

NCSEA Continuing Education: Several webcast seminars are currently available at a cost of \$250 per site. The topics include joist design, masonry design expert witness, and risk management. It is an opportunity to educate multiple employees for one low fix fee.

Legislative Review: The IBC 2006 Code passed the NH senate and was sent to the NH house. It is expected to be adopted in August 2007.

Public Relation Committee: Matt Low explained the purpose of this committee is to increase awareness of the structural engineer's contributions. Currently the committee is investigating means to achieve this purpose. Some suggestions include; advertising, revising the website, and establishing dialogs with schools and educators. One accomplishment is the UNH scholarship program. This year two \$500 scholarships have been awarded. The committee hopes to find the future means to increase the award.

New Students: If any company is in need of summer help, Jeffery Loring is looking for an internship.

Professional Development Committee: Tony Coviello stated that SENH would not have any more meetings until September. September topic is expected to be on "Driving Piles" and will be held in Manchester. October's meeting will be the Joint Society Seminar. November's meeting is expected to be a steel topic by Emile Troup. It is hoped to present a wind design seminar in February or April of 2008. The committee is looking for volunteers to help with further topics and meetings.

Rich Roberts, PE, of the PDC introduced the speakers:

Technical Presentation: *Dave Denoncourt, Design Manager of Tibo Lumber Truss Manufactures and Josh Bartlett, Engineered Wood Products Manager; North Pacific, BME presented "BCSI Overview and Design Responsibilities"*

David Denoncourt Presentation:

BCSI-2006 supersedes BCSI-03 which replaced the HIB-91 Booklet. The BCSI which was originally designed to fit in the back pocket has been expanded to 10 sections and now fits nicely in a filing cabinet. The book is jointly produced by WTCA (formally the Wood Truss Council of America) and the Truss Plate Institute (TPI). A summary sheet with pictures of each Section is sent to the job site along with the trusses.

Dave briefly provided a summary of the sections.

Section B1, is a "Guide for Handling, Installing, Restraining & Bracing of Trusses" summary sheet replaces the warning contained in HIB-91.

Section B2 covers "Truss Installation and Temporary Restraint/Bracing".

Section B3 pertains to "Permanent Restraint/Bracing of Chords & Web Members".

Section B4 deals with "Construction Loading". Sections B1 to B4 are always included in all jobsite safety packages.

Section B5 concentrates on "Truss Damage, Jobsite Modifications & Installation Errors".

Section B6 is a notice that the former information contained in section B6 (BSCI 1-03) on Gable End Framing has been incorporated in Section B3. The section is now being reserved for a future topic dealing with the specifics of wall panels.

Sections B7 through B11 are more specific than the previous sections. The changes besides the size of the BCSI, is the mandatory language required for inclusion in the Florida Building Code. The word restraint has been introduced to replace the word bracing. Improved graphics and photographs have been added. Other changes include checklist and information on handling the trusses, including crane use, hoisting, bundling and

ground assembly techniques. Also new information on hip set assembly and long span truss installation have been included. Trusses over 60 feet in length have serious problems and require experienced professional engineering assessment. It is standard practice to have the customer sign a release form for huge trusses which instructs them to seek professional engineering help. Historically, lack of proper bracing has been a concern. The liability associated with building and installing wood trusses is extremely high for spans greater than 70 feet. The limit for wood trusses is 102 feet.

Section B7 deals with "Temporary and Permanent Restraint/Bracing for Parallel Chord Trusses".

Section B8 discusses "Using Toe-Nailed Connections to Attach Trusses At Bearing Locations". Building inspectors may select hurricane tie down in lieu of using toe-nailed connections.

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Section B9 is on "Multi-Ply Girders".

Section B10 discusses "Post Frame Installation and Temporary Restraint/Bracing".

Section B11 topic is "Fall Protection and Trusses".

Truss manufacturers have a duty to inform the customer of the safety literature submitted with the truss deliveries. It is important to know and educate the customer on the importance of bracing. The customer has to sign his acknowledgement with regard to the bracing issues with large trusses. It is recommended to have an engineering package with all calculations be included as part of the safety literature submittal.

Josh Barlett Presentation:

Josh discussed the design responsibilities as seen by the code, WTCA, TPI and other official organizations. He also presented a CD entitled "Wood Truss Construction and Fire Performance" which is distributed to fire fighters. He asked what is the standard responsibility in the design process for the 24 foot garage or the 96 foot riding arena?

The structural building component industry which is responsible for the manufacturing of trusses has over 2000 locations in the United States. Sales range from 1 to 250 million per year. Many manufactures are independently owned and operated. Along with trusses, they may sell and distribute other types of building components. Approximately 50% of the manufacturers are members of WTCA. About half of them do not have a PE on staff.

Currently there are seven manufacturers who provide metal connector plate for the wood trusses. They comprise the membership of the Truss Plate Institute (TPI). All the plate manufacturers have Professional Engineers on staff.

How does the Truss Industry Practice Engineering? The Structural Component Manufacturer can provide the sealed Truss Design Drawings (TDD) by employing a PE or by contract. The Truss Design Drawings and Truss Placement Diagrams are submitted by the Truss Manufacturer to

the local building official, owner, building designer or contractor for their review and approval. The truss design drawings include calculations required by TPI rules using input loading and lumber design values. If a PE is employed by the component manufacturer, the design work may be performed by a truss technician that works directly for the Truss Design Engineer (TDE). All truss design drawings are reviewed by a PE.

It is important to note. It is the responsibility of the building owner, individual or organization responsible for the construction, to provide the loads. These loads are usually applied to the truss by the truss technician and given to a professional engineer, employed directly or by contract, to analysis the truss. The Truss Design Engineer has complete control over the lumber values, plate properties and other truss design parameters. Specific design parameters provided by the building designer (Structural Engineer of Record) are communicated from the component manufacturer to the Design Truss Engineer. The Truss Design Engineer is not responsible for the overall building design, footing or load path transmitted by the truss.

Logical (Ideal) Design/Build Process

The owner hires a professional design team to undertake the architectural and structural design.

Structural design team decides to use trusses and gets the component manufacturer involved during the project design phase. Trusses are designed per the loading requirement provided by the Structural Engineer of Record. Completed Truss Design Drawings are returned to the Structural Engineer of Record who takes this information to design the load path for the structure below. Permanent bracing design is also completed by the Engineer of Record. The Contractor takes the set of completed plans from the professional design team and implements them. The Building Official performs the final inspection of the completed building.

Typical Real World Design Process

Money is the main issue. The owner bypasses the Structural Engineer of Record and hires only a General Contractor. The General Contractor gets bids from a variety of Component Manufac-

turers of varying expertise and chooses the cheapest.

The plans and specification for project are highly variable with respect to completeness and detail. The Truss Manufacturer is asked to make them work structurally, define the loads, and make sure that the building as designed meets the expectation of everyone involved.

Key Concept

The standard contract that the Component Manufacturer makes is for the design and supply of the individual trusses. WTCA's position is that the bracing and stability is to be provided by the Engineer of Record and the General Contractor. As an option, trusses can be provided that do not require permanent lateral bracing. These trusses may be a more expensive proposition than having the contractor install the bracing, insures a higher degree of reliability. Note: New spacer struts than can perform bracing are being made available.

The standard design responsibility document is included with the TPI documents which is provided with the truss package. The document includes definitions of terms used in the building design industries and some of responsibilities of individual whose titles are defined. The definitions include, architect, building designer, contractor, engineer, truss designer, truss manufacturer, etc Defined responsibilities include what the Truss Manufacturer, Truss Designer, Building Designer must do.

Some of the stipulated responsibilities are that the Truss Designers must conform to ANSI/TPI 1. The Truss Manufacturer must communicate the design criteria to the Truss Designers. When required, the Truss Design Drawings must be sealed by the Truss Design Engineer. The Truss Manufacturer must make the trusses in accordance with the approved truss design drawings using the quality criteria of TPI 1. The owner is responsible to procure engineered design load for the truss manufacturer. When required, the contractor and building engineer is responsible for providing the permanent brace for the trusses at locations stipulated by the truss designer. The key to successful collaboration of all parties concerned is good communication and understanding.

2.0 PDHs for the technical presentation were earned by attendees.

Respectfully submitted by Robert S. Busby, P.E., Secretary, SENH

Attendance List

BCSI Overview and Design Responsibilities(2 PDH's Assigned)

Portsmouth Sheraton Harborside, Portsmouth, NH May 3, 2007

Name	Organization	Name	Organization
Geoffrey R. Aleva, P.E.	Civil Consultants	Jeffery R. Karam, P.E.	Maguire Group, Inc.
Matthew Allen, P.E.	JSN Associates, Inc.	James Karmozyn, P.E.	H.E. Bergeron Engineering
Josh Bartlett	WTCA's Northeast Chapter	Stephen Kiss, P.E.	SAK Engineering
Stephen Boyington, P.E.	Parsons , Brinckerhoff, Quade & Douglas, Inc.	Dave Konieczny, P.E., SECB	Pyramid Engineering, P.C.
Rebekah Briggs	Parsons , Brinckerhoff, Quade & Douglas, Inc.	Matthew J. LaBrecque, P.E.	Pro Con, Inc.
Robert S. Busby, P.E.	Kalwall Corporation	Stephen R. Langevin	Maguire Group, Inc.
Normand G. Cote, P.E., SECB	NGC Structural, LLC	Jeffery L. Loring	UNH
Cheryl W. Coviello, P.E.	Appledore Marine Engineering, Inc.	Matthew J. Low, P.E., SECB	Hoyle, Tanner & Assoc., Inc.
Tony Coviello, P.E.	Coviello Engineering	David A. Macolini, P.E.	JSN Associates, Inc.
Dave Denoncort	WTCA's Northeast Chapter	Nathan Maher, P.E.	JSN Associates, Inc.
Kathy J. Dougherty, P.E.		Jeffrey S. Nawrocki, P.E.	JSN Associates, Inc.
Khaldoun Doukmak, P.E.	The Stellar Group	Linda McNair-Perry, P.E.	GV Engineering, LLC
Robert H. Durfee, P.E., SECB	Dubois & King, Inc.	Richard J. Porter	Northeast Helical LLC
Fred Emanuel, P.E.	Emanuel Engineering, Inc.	Neil J. Rapoza	Civil Consultants
Joel Fisher, P.E.	Fisher Engineering, P.C.	Stephen Richard	Steffensen Engineering Assoc., Inc.
Derek J. Gilbert, P.E.	Oak Point Associates	Richard E. Roberts, P.E.	Foley Buhl Roberts & Associates, Inc.
Charles "Tut" Gillen, P.E.	Steel Elements Inc.	Kyle Roy, P.E.	TFMoran, Inc.
Paul Goldberg, P.E.	Pro Con, Inc.	Bruce D. Stewart, P.E.	Stewart Structural Engineering
Martin Gorham, P.E.	JSN Associates, Inc.	Robert B. Tarquinio, P.E.	Parkview Consulting Inc.
Richard Greene	Weyerhaeuser	Jeffrey L. Tirey, P.E., SECB	Tirey & Associates, P.C.
Sean James, P.E., SECB	Hoyle, Tanner & Assoc., Inc.	Jeffrey S. Trexler, P.E.	Trexler Engineering
Steve W. Johnson, P.E.	NHDOT	Emile Troup	

Additional Meetings & Conferences

September 20, 2007: “Imagining the Past; Envisioning the Future”

For more information on this upcoming AIANH and NH Preservation Alliance event at the Strawberry Banke Museum in Portsmouth, please [click here for event summary](#) for complete details and online registration.

September 26, 2007: The SENH

September Meeting at the Puritan Backroom in Manchester will have Bob Toning of Terra Drilling offering an “**Overview of Soil Retention and Improvement Techniques**”. This will be a Joint meeting with ASCE. See enclosed meeting announcement.

September 27, 2007:

“**Environmental Engineering Concrete Structures: Design and Details**” This seminar is based on the 2006 provisions of the new ACI 350 Code and ACI 350.3. Instructors will familiarize you with the new Code requirements for environmental engineering concrete structures, and will present design examples to illustrate practical applications. Attend this seminar in Boston, MA and earn 7.5 PDH. Email jane.mowbray@concrete.org or call 248.848.3814. For complete information, click on the following link: [Environmental Engineering Concrete Structures](#).

October 3, 2007: PCI “Basic Prestressed Concrete Design Course”.

The day long seminar is geared toward professionals who have not completed a college-level course on prestressed concrete design but have a basic understanding of reinforced concrete design. The speaker is Sergio F. Breña, who is an Associate Professor in the Department of Civil and Environmental Engineering at the University of Massachusetts– Amherst and a licensed civil engineer. The fee for the seminar, to be held at Unistress Corporation in Pittsfield, MA, is \$150. The fee includes a PCI Design Handbook & CD (6th ed.), lunch, a plant tour, 7.5 PDH, and a free one-year PCI Membership. For more information, call: 888-700-5670 [Registration Form link](#)

October 11, 2007: “Dropping the Borders of Engineering” Joint Engineering Societies Seminar see enclosed flyer.

October 11-13, 2007: “NCSEA Annual Conference” – see enclosed article and flyer.

October 25, 2007 held in Portland, ME & November 6, 2007 in Boston, MA: “2005 Seismic Provisions and Seismic Design Manual” AISC full day Seminar - see [link for more info](#)

October 31, 2007: Emerging System of Building Information Modeling (BIM). SFNE (www.ssfne.org) invites you to attend an October 31st Membership Meeting from 3-7:30 at the Highlander Conference Center in Manchester, NH. The event will provide networking opportunities and the President of Tocci Building Corporation will talk about how his company uses BIM. A BIM enabled fabricator will share his experiences with BIM as well. Members-\$40 · Non Members-\$60 Contact: cflaherty@ssfne.org

November 1, 2007: “UNH/BIA Business, Engineering and Technology Career & Internship Fair” from 11am-3pm. See the [University Advising and Career Center web site](#) for more information.

November 7, 2007: SENH meeting in Portsmouth at Sheraton Harborside. We are going to have a speaker from AISC on “**Prequalified Moment Connections for Intermediate and Special Braced Frames**”. He will touch on R=3 systems. This will be a joint meeting with SEAM.

UNH Professional Development & Training Fall 07 seminars for Engineers follow the following links:

Fall07 workshops main page: <http://www.learn.unh.edu/pcw/index.php>

Engineering Management: <http://www.learn.unh.edu/pcw/pd/sched.php/95>

Surveying : <http://www.learn.unh.edu/pcw/pd/sched.php/50>



American Society of Civil Engineers (ASCE),
Institute of Electrical and Electronics Engineers (IEEE),
New Hampshire Society of Professional Engineers (NHSPE) and
Structural Engineers of New Hampshire (SENH)

NHJES 1st Annual Joint Engineering Societies Conference

Thursday, October 11, 2007

**The Executive Court Banquet Facility at the
Yard**

1199 South Mammoth Road, Manchester, NH



“Dropping the Borders of Engineering”

(Visit www.nhjес.org for additional conference details)

The New Hampshire Joint Engineering Society invites you to our 1st Annual Joint Engineering Society Conference. This year’s Conference theme is “Dropping the Borders of Engineering”. This event is geared to providing a strong informational and educational series of sessions for all disciplines of engineering.

Agenda

7:30 - 8:00	Coffee/Registration
8:30 - 8:45	Opening Address
8:45 - 10:15	Session #1 (1.50 PDH) “Team Building” by Deb Titus of Dale Carnegie
10:15 - 10:30	Break
10:30 - 12:00	Session #2 (1.50 PDH) “Knowledge Management” by Daniel Saroff of BAE Systems
12:00 - 1:00	Lunch “Students without Borders” by Eric Reitter, PE and Jenna Jambeck, PhD of UNH
1:00 - 2:00	Session #3 (1.00 PDH) “Disaster Preparedness and Response” Ms. Kathryn E. Duott, Assistant Director of Homeland Security and Emergency Management for the State of NH.
2:15 - 3:15	Session #4 (1.00 PDH) “Technology and Society” by Professor Ron Sandler of Northeastern University
3:15 - 3:30	Break
3:30 - 4:30	Session #5 (1.00 PDH) “Sales for Non-Selling Professionals” by Judith Carlough of Sandler Sales Institute



Registration Form:

Name(s): _____

Name(s): _____

Address: _____

Company: _____

Phone #: _____ Fax #: _____ Email: _____

Meal Selection: Hot lunch Buffet including Soup, Salad and selection of Chicken or Beef entrée.

Payment: Enclosed _____ Will Send _____ (due by September 28, 2007)

Cost:

\$80 ASCE/IEEE/NHSPE/SENH Member (Circle One) Membership # (If applicable) _____
\$100 Non-Member
\$40 Full-Time Student

Make Checks Payable To:

“NHSPE-NH-JES 2007 Conference”

Note: A total of 6.0 PDH’s will be offered for full attendance at this event.

Contact For Questions:

Deb Coon
Hoyle, Tanner & Associates, Inc.
Phone: (603) 669-5555 x.106
Fax: (603) 669-4168
Email: dcoon@hta-nh.com

Mail Registration Form and Payment To:

c/o Deb Coon
SENH
P.O. Box 226
Manchester, NH 03105

Email To:

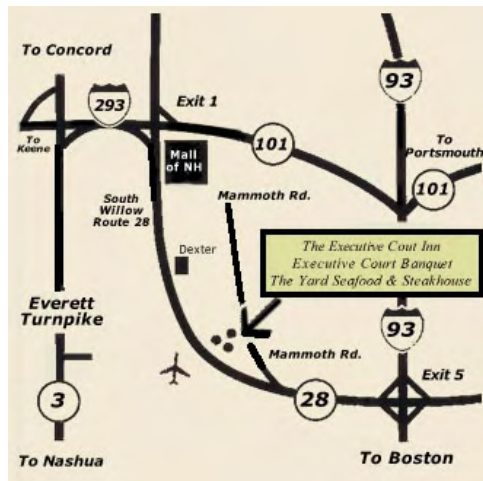
dcoon@hta-nh.com

Fax To:

(603) 669-4168

*Registration Deadline is Noon on Friday, September 28, 2007
No refunds will be offered for cancellations after Noon on Friday, October 5, 2007*

Directions/Parking:



From I-293 & 101

Take exit 1, head south on Route 28 (South Willow Street) and bear left after Dexter Shoe Factory Outlet. Stay on Route 28 South and enter at the Best Western Executive Court Inn on your left.

From I-93

Take Exit 5 (North Londonderry) to Route 28 North for 3 miles. Enter at The Best Western Executive Court Inn on right.

Free parking is available at the site.



**P.O. BOX 226
MANCHESTER, NH 03105-0226**

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