



INSIDE

Page

New President's Message	1
Lateral Task Group	1
Chapter Started in West	2
Wind Load Resources	4
CFSEI Chapter Updates	4
Mid-Rise Technical Note	5
Promotions & Transitions	6

Upcoming Events

CFSEI West Chapter

Seminars: Changes from the 1997 UBC to the 2006 IBC for Lateral Design with Cold-Formed Steel
L.A./Orange County, CA June 17
San Diego, CA June 18
San Francisco, CA June 19
www.CFSEI.org

CFSEI Atlanta/S.E. Chapter June 19

Lunch Meeting: It's All Green. Are You? LEED®, The New National Green Building Standard and Green Globes
Atlanta, GA
www.CFSEI.org

METALCON International Oct. 1-3

Baltimore, MD
www.metalcon.com

CCFSS Specialty Conference Oct. 14-15

St. Louis, MO
www.ccfssonline.org

NCSEA Annual Conference Oct. 23-25

Cleveland, OH
www.NCSEA.com

NEW PRESIDENT: "On The Right Track"



Jeff Klaiman P.E.
CFSEI President

"If it ain't broke, don't fix it." A good rule to live by, albeit rarely stated by an engineer. Well, this is the philosophy I have adopted as I take the honored position of President of the Cold-Formed Steel Engineer's Institute for 2008-2009.

Why am I applying this quote to the Institute? The answer is multifaceted, yet simple. For the past two years, we have been acting on the eight key strategies of the Operating Plan that we have talked about so much in previous CFSEI Quarterly Newsletters and at Annual Meetings. Over this short period, tremendous effort has been put in by the Institute's Board of Directors and

many other volunteers and the results are really starting to show. The Plan and the efforts are paying off. We are building, growing and being successful. So again I ask, "why fix it?" I intend on using my term to continue the momentum we have begun. Sure, we will review these strategies and look for ways to become even more effective, and may even reprioritize a little if the need arises, but basically, our mission, our vision, remains the same.

Publishing technical documents is CFSEI's number one priority, and the success of 2007, publishing five Tech Notes, should be easily exceeded this year, with more new Technical Notes published in the first half of 2008 than in all of 2007. All the efforts of the past couple years to increase the frequency of published technical resources on topics of

Continued on page 3

CFSEI FORMS LATERAL TASK GROUP

CFSEI has formed a new Lateral Task Group to address technical issues related to the lateral design of cold-formed steel construction. The Lateral Task Group met for the first time in April and will continue to meet via monthly or bi-monthly conference calls. CFSEI's Lateral Task Group will make recommendations on research priorities and marketplace needs in the area of lateral design, and help design technical and educational resources to meet these needs.

During the Task Group's first meeting, discussions focused on identifying needs the Task Group might seek to initially address, such

as Overstrength Factor, distributing details to the marketplace, and existing needs for new Technical Notes to disseminate information.

"Increasing the number of resources that address lateral design issues and making them available to engineers who are using cold-formed steel is important to both the steel framing industry and the structural engineering community," David Garza, P.E., S.E., Lateral Task Group chairman said. "Effectively managing lateral issues is critical to growing the use and acceptance of cold-formed steel-framed construction."

Continued on page 2

NEW CFSEI WEST CHAPTER LAUNCHES SEMINARS

CFSEI founded CFSEI West Chapter this spring to meet the needs of engineers in seven Western states. CFSEI West Chapter will offer programs and events in the region to enable and aid engineers in the structural design of safe and cost-effective cold-formed steel framed structures. CFSEI's newest chapter will conduct programming in California, Arizona, Nevada, Oregon, Washington, Idaho and Utah. The Chapter will kick-off its activities in California with a three-city seminar tour on the new lateral design requirements in the state's recently adopted California Building Code.

California's new code adopts the 2006 International Building Code (IBC), which sets new provisions for cold-formed steel framing. Several new framing standards are adopted in the new code, including the American Iron and Steel Institute's "Standard for Cold-Formed Steel Framing - Lateral Design, 2004 edition." California's expired building code was based on the 1997 Uniform Building Code (UBC) prior to

the adoption of the new code.

CFSEI West Chapter will host an evening seminar and dinner meeting in Orange County, June 17, San Diego, June 18 and San Francisco, June 19. The featured guest speaker for each seminar location will be Jeff Ellis, P.E., S.E., Senior Engineering Project Manager for Simpson Strong-Tie Co. and the author of CFSEI Technical Note L000-08, "Changes from the 1997 UBC to the 2006 IBC for Lateral Design with Cold-Formed Steel Framing" which was published in April 2008. He serves as chairman of the AISI Committee on Framing Standards' Lateral Design Subcommittee, which developed the 2004 Standard adopted into the California Building Code.

"Many engineers and designers in California would benefit by not only learning about the lateral design provision changes in the state's new code and how they affect their designs, but also with familiarizing themselves with the AISI Standards," Ellis said. "The CFSEI West Chapter seminars along with the

new Technical Note on this topic should prove to be invaluable resources for those engineers who already have some familiarity in this area as well as those being exposed to it for the first time."

CFSEI West Chapter's lateral design code changes seminar, which includes dinner, is \$35 for CFSEI members and \$40 for non-members in advance. Tickets purchased on-site will cost an additional \$10. CFSEI West is planning additional presentations on important topics affecting cold-formed steel design in the western U.S.

"There's been a need for an engineers organization focused on cold-formed steel design issues particular to the unique environments found in the Western states," Lou Zylstra, interim president of CFSEI West Chapter said. "After significant planning and organizing, the West Chapter is officially established and rolling out events. Hopefully, engineers will appreciate the informative discussions, networking and resources offered by the Chapter, and

Continued on page 4

Lateral Task Group

Continued from page 1

Garza, appointed chairman of the Lateral Task Group by the CFSEI Board of Directors, is the president of Garza Structural Engineers, Inc., a structural engineering firm in Southern California specializing in cold-formed steel. He has more than 20 years combined experience in engineering and construction, and has managed and designed many projects using cold-formed steel.

"I am very pleased that CFSEI has formed a Lateral Task Group," said Bonnie Manley, P.E., regional manager for AISI and technical staff liaison to the new Task Group. "This group will be a very valuable resource to the industry overall, and will also be able to provide valuable input to

CFSEI's Lateral Task Group is tasked with developing strategies and research projects to meet the industry's needs, including:

- Developing a long-range and short-range strategic plan proposal for addressing lateral issues.
- Recommending and evaluating funding for research needs and projects.
- Serving as a technical resource and advisory group to the AISI Committee on Framing Standards (COFS) and staff working with code groups, including ICC-ES, ASCE 7 Main Committee, and others.
- Identifying activities and documents to disseminate information to the industry.
- Providing technical input to SFA and CFSEI in the development of technical resources and presentations.

AISI code staff on the code and standard development process."

To learn more about the CFSEI Lateral Task Group, or to become a

member, visit www.CFSEI.org or contact Brian Berger, CFSEI Manager at bberger@cfsei.org.



Newsletter for the
Cold-Formed Steel
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New President's Message

Continued from page 1

interest, without sacrificing quality and rigorous review, are being realized. Momentum often obscured is becoming more visible to CFSEI members, and I want to keep this momentum going. Also, aside from publishing new documents, we are embarking



CFSEI's recently elected vice president John Matsen, left, president Jeff Klaiman, board member Mike Pellock, center, and new board members Rick Haws, second from right, and Bill Babich, right, at the CFSEI Annual Meeting, Apr. 1.

on an ambitious program to review, update, rebrand and reissue old LGSEA Tech Notes that have become outdated over the past several years. CFSEI's Technical Document Committee is working with the AISI Committee on Framing Standards to identify more topics for future Tech Notes and design guides for the near future.

National success of the organization depends largely on the grassroots efforts of local chapters. These local groups help identify issues that are specific to certain geographic areas and help to resolve them. Last year saw the continued success of the Atlanta/Southeast and Hawaii chapters, as well as the rapid development of the Florida chapter. In recent months, a newly formed CFSEI West chapter has been developed, and thanks to an energetic and ambitious group of volunteer organizers, CFSEI West is hosting its first dinner seminars in June to educate engineers in California about the change from the UBC97 code directly to IBC2006. We are always looking for the next area that may have enough interested engineers to start a local chapter, so speak up if you are interested and let us know.

Another exciting new venture that we are embarking on this year is development of a Web site specifically

designed as an educational resource on cold-formed steel framing for college and university students.

Finally, this year CFSEI will present the first-ever Award for Innovative Design at an Steel Framing Alliance banquet at METALCON International in October. This promises to be a great new program that we hope will grow and expand every year.

In conclusion, I cannot help but thank those who have helped bring us to this point. As the Institute's Vice President during the past year, I worked with and learned from Past President, Jeff Ellis. I endeavor to follow the examples set by Jeff and fellow Past President, Ben Schafer. I must also thank all the previous and current board members, staff and other volunteers that have worked very hard to get us to this point. And, of course, I must thank each and every one of you, our members, for your continued support and efforts.

It is my goal to increase and expand the value of your CFSEI membership during my term, and I encourage you to share your thoughts and suggestions with the Board of Directors and staff. And consider becoming actively involved in the Institute's committees and programs.

Let's keep the momentum going.

CFSEI CHAPTER UPDATES



CFSEI Hawaii Chapter new and recent board members gather at the Chapter's 12th annual Installation Banquet at Honolulu Country Club, Mar. 7. Pictured from left, front row: Will Wong, Albert Fobel, Jeoffrey Cudiamat, Adrian Lee, Allison Agapay, Jason Emoto. Second row: Marvin Mestanza, Tim Waite, Brian Enomoto. Not pictured: Akira Usami and Paul Silen.

Chapters Round-Up

Hawaii Chapter. New officers and board members were installed in March. The Chapter is organizing a stud manufacturing plant tour for CFSEI members June 10. A seminar on TechNote L000-08, "Changes from the 1997 UBC to the 2006 IBC for Lateral Design with Cold-Formed Steel" presented by Jeff Ellis is planned for July. The Chapter has commenced work on a CFS specification specific to local needs.

Florida Chapter. The Chapter hosts a May 29 dinner seminar on the "Code of Standard Practice." A Fall meeting in late September is being planned with several possible topics including "LEED®, The New National Green Building Standard and Green Globes." The nominating process for new Chapter Board members begins this Fall. Anyone interested in serving on the Board should contact Kenny Pagano at kpagano@scostacorp.com.

Atlanta/Southeast Chapter. The Chapter hosts a June 19 luncheon meeting on "It's All Green. Are You? LEED®, The New National Green Building Standard and Green Globes."

CFSEI West Chapter

Continued from page 2

will want to get involved."

Membership in the CFSEI West Chapter is open to any CFSEI member in the Western region and there are no chapter dues for those who join in 2008. Licensed engineers and architects who qualify may join both CFSEI and the CFSEI West Chapter for \$100 in 2008, and receive all benefits of those memberships.

Location venue and registration information for the June dinner seminars is available on the CFSEI West Chapter's Web page at www.CFSEI.org.

Wind Loads Considered in Institute Resources

Engineers and interested professionals who attended the CFSEI Annual Meeting in April heard a seminar on Developing Wind Loads presented by guest speaker Sam Hensen, P.E., Branch Engineering Manager for Simpson Strong-Tie Co.'s Southeastern facilities. Hensen's presentation covered load path, code requirements, in-depth consideration of ASCE 7 wind uplift calculations, connections and continuous path considerations.

Part of the presentation forms the basis of a Technical Note Hensen is presently developing as an important new resource for CFSEI members.

The Technical Note will address uplift forces calculated on roof framing to wall connections that are often determined using Components and Cladding (C & C) level forces as opposed to Main Wind Force Resisting System level forces. It defines the two levels of force and discusses the effects of using C & C loads versus Main Wind Force Resisting Systems calculated uplift



Sam Hensen, left, receives a certificate and recognition for his efforts to educate engineers on wind load issues from Don Allen, CFSEI Secretary.

loads. Design examples will be provided as guidance on which level is appropriate or required. Furthermore, mainstream reference standards and quotes from field experts will be cited when discussing the appropriate levels for calculating the uplift forces.

Further discussion will be provided regarding the responsibility of the Engineer of Record and Truss Engineer to calculate the roof to wall uplift forces. Finally, an outline discussing the measures to ensure the appropriate uplift forces are used will be provided.

TECH NOTE TO DETAIL CFS STUD WALLS AND PRECAST HOLLOWCORE PLANK FLOORS IN MID-RISE PROJECTS

There is an evident increasing trend among engineers to consider cold-formed steel (CFS) framing as the gravity load bearing element in mid-rise construction. The use of load bearing CFS framing in mid-rise construction brings the value of faster construction schedules, less field labor cost, less building mass-related design requirements (shear walls and foundation) and ultimately meeting budget limitations for many projects. CFS framing has become a major competitor to traditional framing systems, such as reinforced masonry, reinforced concrete and structural steel, for buildings of 4 to 8 stories high. One major reason for the increased attention to CFS framing is the development of several design standards and design guides by the American Iron and Steel Institute (AISI) covering the design and use of several essential framing elements. Another reason is the development of several innovative products, techniques, and construction details that resolved design and construction issues typically faced by engineers and contractors when CFS material is used in load bearing applications.

A CFSEI Technical Note currently under development will introduce the system of CFS stud walls as the gravity load bearing element in mid-rise construction in conjunction with precast hollowcore concrete planks as the floor slab (see photo). This system is suitable for a wide range of building usage, including apartment buildings, health care facilities, hotels, schools, and dormitories. Design layout for those building usages often includes load bearing separation walls, with corridors maintaining the same direction with lentsils spanning the corridors at the ends of the bearing wall locations. The corridor walls and exterior walls are then non load

bearing walls with the exterior framing supporting lateral wind pressure only.

Precast hollowcore concrete slabs provide the advantages of high stiffness-to-weight ratios and rapid field installation. The hollowcore planks can be installed at a rate up to 5,000 square ft. in a single day. The planks are typically produced in 6, 8, 10, 12, and 16 inch depths. Hollowcore concrete plank floor system provides relatively longer design spans compared to other floor systems. e.g., an un-topped 8-inch hollowcore plank that weighs, in average, about 60 psf can span up to 30 feet for a typical live load of 40 psf (Reference; PCI Design Handbook, Precast and Prestressed Concrete 6th Edition, 2004). Sound Transmission Class (STC) rating and fire resistance rating typically meet the design criteria. However, factors such as concentrated loads and large openings can affect the span capabilities. Also plank camber at erection and long term camber need to be taken into consideration.

The forthcoming CFSEI Technical Note will address the primary structural design aspects of the CFS stud walls and hollowcore concrete slab system. These design aspects include required axial strength of load bearing studs, use of live load reduction allowed by the building code, required strength and stiffness of lateral bracing (bridging), stud/track gap limitations, track/plank gap limitations, minimum seating of hollowcore planks on stud walls, grouting of cells of hollowcore plank at high compressive load areas, bearing strength of hollowcore planks, lateral shear force transfer from floor diaphragm to shear walls and



The six story Hilton Garden Inn, Durham, NC, pictured in February, provides an example of a structure built with cold-formed steel load bearing walls and precast hollowcore slabs.

structural integrity of the system. The Technical Note will also address the minimum requirements of temporary wall bracing during construction.

Special attention will be given in the technical note to connection details between the floor slab and stud walls, including locations at corridor posts, at exterior walls and at shear wall locations. A worked example problem for the design of a load bearing stud wall will illustrate calculations for the design loads of a typical stud and lateral bracing member along with the reference design clauses in AISI Standards “North American Specification for the Design of Cold-Formed Steel Structural Members,”(AISI S100-07), “Standard for Cold-Formed Steel Framing - General Provisions” (AISI S200-07) and “Standard for Cold-Formed Steel Framing- Wall Stud Design” (AISI S211-07).



Nabil A. Rahman, Ph.D., P.E.
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Promotions, Transitions & Appointments

CFSEI announced during the 2008 Annual Meeting in Orlando, Fla. the election of the Institute's 2008-2009 officers and newly elected directors. **Jeff Klaiman**, P.E., principal and vice president of Specialty Engineering for ADTEK Engineers Inc. in Fairfax, Va., was installed as the new CFSEI president. **John Matsen**, P.E., Matsen Ford Design Associates, Inc., was elected vice president.

Klaiman joined CFSEI's Board in 2005 and served as vice president from 2007-08. He follows **Jeff Ellis**, P.E., S.E., Simpson Strong-Tie Co., Inc., who continues to serve as immediate past president.

CFSEI members elected three new Directors to serve two-year terms on the Institute's Board:

Bill Babich, P.E., chief engineer of the TrusSteel Division of ITW Building Component Group, Inc. in Haines City, Fla.

Richard B. Haws, P.E., department manager of Technical Services for NUCONSTEEL in Denton, Texas.

Sutton Stephens, Ph.D., P.E., S.E., associate professor at Kansas State University in Manhattan, Kan.

CFSEI's Board of Directors has appointed the judges for the inaugural Award for Innovative Design to be presented in October. The judges include:

• **Greg Greenlee**, P.E., Director of Engineering, USP Structural Connectors (Burnsville, Minn.).

• **Frank Laux**, S.E., RA, Structural Systems Engineer, USG Corporation (Deer Park, Ill.).

• **Troy Monier**, Territory Representative, Simpson Strong-Tie Co. (San Francisco, Calif.).

• **Isaac Kim**, P.E., Innovative Design and Engineering Associates, Inc. (Hayward, Calif.).

• **Gregory Kulpa**, P.E., Swartz and Kulpa Engineering, Inc. (Tustin, Calif.).

• **Kevin Greer**, Project Executive, KHS&S Contractors (Anaheim, Calif.).

• **Richie Chisholm**, Lacerte Builders (Pompano Beach, Fla.).

• **Reynaud L. Serrette**, Ph.D., Center for Light Frame Structural Research, Department of Civil Engineering, Santa Clara University (Santa Clara, Calif.).

Share your Expertise. Use your Knowledge to Help Others. CFSEI is Information Sharing.

Volunteer to write a Technical Note. Be a peer reviewer of technical resources. Participate in industry committees. Contact Brian Berger, CFSEI Manager, at bberger@CFSEI.org to find out how you can get involved.

Cold-Formed Steel Engineers Institute



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