

SEAONC 2006 Spring Seminar

CONCRETE & STEEL - NEW 2005 AND BEYOND CODE EDITIONS

Dates: Wednesday, March 22 & 29, 2006
 Location: PG & E Auditorium
 245 Market Street, San Francisco

Registration: 5:15 p.m. - 6:00 p.m.
 Seminar: 6:00 p.m. - 9:00 p.m.

Topics: EVENING 1
 Joe Maffei, Ph.D., S. E. - 2005 ACI-318
 Jack Moehle, Ph.D., P.E. - Future Changes Beyond the 2005 ACI-318

EVENING 2
 Jason Ericksen, S.E. - 2005 AISC Material Specifications
 Jim Malley, S.E. - 2005 AISC Seismic Provisions



* Beverages will be available during registration, and dessert will be available at the break.

DIRECTIONS TO THE PG&E AUDITORIUM

From the North
(Golden Gate Bridge)

- Cross Golden Gate Bridge
- Exit into Lombard Street
- Turn right at Gough Street
- Turn left at California Street
- Turn right at Davis Street
- Go straight into Beale Street

From the South
(Highway 101)

- Merge into Interstate 80
- Exit at 4th Street
- Go straight into Bryant Street
- Turn left at 2nd Street
- Turn right at Folsom Street
- Turn left at Main Street

From the East
(Oakland Bay Bridge)

- Exit at Fremont Street
- Go one block north
- Turn right at Howard Street
- Turn left at Main Street

PG&E is on your left between Mission and Market Street

REGISTRATION FORM

IMPORTANT: Registration will be confirmed via e-mail.

No cancellations after 12:00 noon, March 17, 2006.

* Payment required by first evening of the seminar.

No shows are still responsible for full payment.

Remit registration form with payment to:

SEAONC

575 Market Street, Suite 2125

San Francisco, CA 94105

Telephone: 415-974-5147, Fax: 415-764-4915

E-mail: office@seaonc.org

Name _____

Firm _____

Address _____

City/State/Zip _____

Phone _____

E-mail _____

If paying by credit card please provide the following information:

(SEAONC accepts VISA, Mastercard & AMEX)

Credit Card #: _____

Expiration Date: _____

Signature: _____

Request for Certificate of Completion

(Certificates will be provided if requested, and attendee must be present at both sessions.)

_____ SEAOC member \$180

_____ Non-member \$300

_____ Student (bring a copy of your student ID or class schedule to registration) \$60

_____ Late Registration (all registrations after March 17, 2006) Add \$30

Total Enclosed:

\$

2006 Spring Seminar

Professor Jack Moehle of U.C. Berkeley and Dr. Joe Maffei of Rutherford & Chekene will present the first session covering recent changes to building codes applicable to concrete construction. This session will also cover potential future changes and directions for the seismic design of concrete structures.

The following changes related to seismic design that have been adopted into the **2005 ACI-318** will be addressed:

- Shear reinforcement at slab-column connections as a function of seismic deformations.
- Bar splicing, development, and bar cut-offs in concrete walls.
- Splice lengths for diaphragms, and the 0.2 f'c criterion for collectors.

Additional changes to ACI-318, some of which will be discussed, include the following:

- Revised and consistent notations throughout code Bar splicing, development, and bar cut-offs in concrete walls.
- Design of post-installed anchors used in cracked and uncracked concrete, and effect of multiple edges.
- Unified design provisions for reinforced and prestressed concrete flexural and compression members.
- Application of unified crack control criteria to flexural tension reinforcement as well as skin reinforcement in deep beams.
- Alternate torsion design procedure for L-shaped solid beams that have a large height-to-width ratio.

Since the speakers are currently involved in ACI committees developing the **2008 ACI-318**, they will also discuss planned changes and future directions, including the topics of:

- Design of post-installed anchors used in cracked and uncracked concrete, and effect of multiple edges.
- Design of floor and roof diaphragms.
- Shear versus flexure behavior in walls.
- Reorganization and improvement of requirements for moment frame columns.
- Harmonization with ASCE 7-05 and IBC 2006.

Mr. James Malley of Degenkolb Engineers and Mr. Jason Erickson of AISC will present the second session covering recent changes to the AISC Specifications and AISC Seismic Provisions.

The **2005 AISC Specification for Structural Steel Buildings** includes updated design provisions, and incorporates both allowable stress design (ASD) and load and resistance factor design methods (LRFD), and the design provisions for hollow structural sections and single angles. This new specification supersedes the following five existing AISC specifications:

- *Load and Resistance Factor Design Specification for Structural Steel Buildings* dated December 27, 1999;
- *Specification for Structural Steel Buildings – Allowable Stress Design and Plastic Design* dated June 1, 1989, including Supplement No. 1;
- *Specification for Allowable Stress Design of Single Angle Members* dated June 1, 1989;
- *Load and Resistance Factor Design Specification for Single-Angle Members* dated November 10, 2000; and
- *Load and Resistance Factor Design Specification for the Design of Steel Hollow Structural Sections* dated November 10, 2000.

In addition, important revisions and updates have been made throughout the standard including an expanded scope, stability design and analysis provisions, a new section on design for fire conditions, etc. User Notes have also been added throughout the document to ease interpretation and application.

Like the Main AISC Specification, the **2005 AISC Seismic Provisions** combine ASD and LRFD into a unified format. The seminar will present new design provisions for various elements and connections two new systems, Buckling Restrained Braces and Steel Plate Shear Walls. The presentation will address quality assurance and special welding requirements for steel seismic systems, which have been significantly simplified from those in FEMA 353. The **2005 AISC Moment Frame Prequalified Connection Standard** - the first national consensus standard to replace FEMA 350 for the design of moment frame prequalified connections will also be introduced. The **2005 AISC Seismic Design Manual** - a newly developed resource to help the structural engineer apply the 2005 Seismic Provisions for various systems will also be outlined.