

SPEAKERS

All speakers are requested to check in with their Session Moderator at their earliest convenience.

ACKNOWLEDGEMENTS

Seminar Executive Committee wishes to thank the following firms for their valued support.

Sunday Ice Breaker:

Acrow Corporation of America, Carlstadt, NJ
ADSC, Scot Litke, Dallas, Texas

Continental Breakfasts:

Reinforced Earth Company, Vienna, VA (Table J)
Jacobs Sverdrup Civil, Inc., Walnut Creek, Ca
Mezure, Bend, OR (Table E)

Coffee Breaks:

Acrow Corporation of America - Booths 201-202
Watson Bowman Acme Corp.-Table 2 (Exhibit level)
HDR Engineering Inc, Folsom, CA
Agra Foundations, Everett, WA
Friends of Western Bridge Seminar

SPECIAL THANKS TO:

PCMAC

the Precast/Prestressed Concrete Manufacturers
Association of California,
for generously arranging and hosting the special tour of the
Pomeroy Corporation Precast Plant in Petaluma,
the Bay Area construction site,
and tour of the Sumiden Wire Plant.
Also many thanks for the hosted dinner.

SEMINAR EXECUTIVE COMMITTEE

ELDON DAVISSON, Chairman,

California Department of Transportation, Sacramento, CA

WILLIAM C. CRAWFORD, JR.

Nevada Department of Transportation, Carson City, NV

MARK HIROTA, Oregon Department of Transportation, Salem, OR

MATTHEW FARRAR, Idaho Transportation Department, Boise, ID

RICHARD A. PRATT, Alaska Department Transportation, Juneau, AK

ROLAND NIMIS, Federal Highway Administration, San Francisco, CA

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Rick Land

Bob Tanaka

Janice Davisson

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Jean Canfield

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Hasan El Natur

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CONFERENCE MANAGER

JEAN CANFIELD

Canfield & Associates

Post Office Box 135, Olympia, WA 98507

This is
your program
for the 2001

Western Bridge Engineers' Seminar

Innovative Solutions
for Bridge Engineering
Challenges

September 24 - 26

Doubletree Hotel Sacramento
Sacramento, California

WELCOME

The 16th Biennial Seminar is sponsored by the DOT's in the Western States and the Federal Highway Administration.

The seminar provides a forum for the exchange of information between Government Agencies, Consultants, Contractors, Educators, and Industry on subjects of current importance to those engaged in the Design, Construction, and Operation of Highways, Bridges, and Structures.

REGISTRATION HOURS

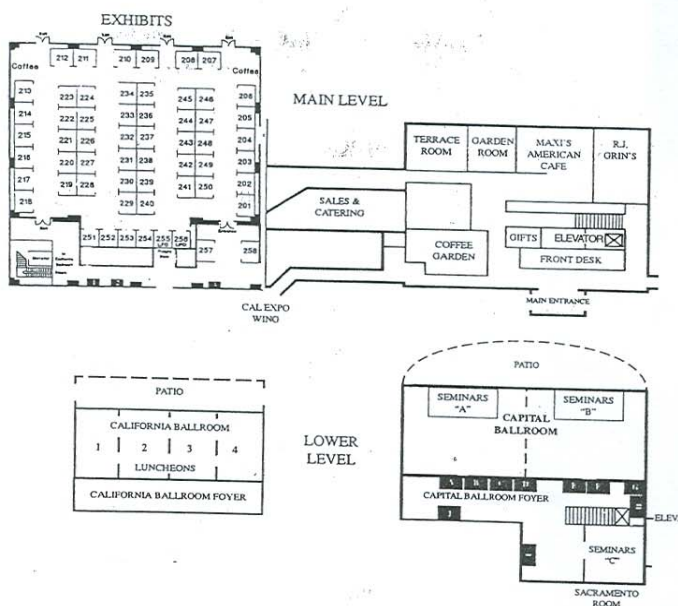
Sunday	September 23	4:00 pm - 8:00 pm
Monday	September 24	7:30 am - 5:00 pm
Tuesday	September 25	7:30 am - 5:00 pm
Wednesday	September 26	7:30 am - 11:00 am

EXHIBITS

Sunday night Ice Breaker Reception 7:00 - 8:00 pm

Monday	September 24	7:30 am - 5:00 pm
Tuesday	September 25	7:30 am - 5:00 pm
Wednesday	September 26	7:30 am - 10:00 am

EXHIBIT BOOTH FLOOR PLAN



WESTERN BRIDGE ENGINEERS' SEMINAR 2001 NUMERICAL BOOTH LIST

Booth #	COMPANY
201 & 202	Acrow Corporation
203	FreeSpan Systems
204	ChemCo Systems
205	Earthquake Protection Systems
206	RJD Industries, Inc.
207	Anatech Corporation
208	American Galvanizers Assoc.
209	Permapost Products
210	Capital Services
211	Seismic Energy Products
212	Lampson International, LLC.
213	Loadtest, Inc.
214	Western Coating, Inc.
215	Transpo Industries, Inc.
216 & 217	The D.S. Brown Company
218	Foundation Technologies, Inc.
219	Burgess & Niple, Limited
220	Dywidag Systems Int'l, USA, Inc.
221	Voss Engineering, Inc.
222	Portland Cement Assn/CA Cement Promotion Council
223	SRS, Silikal Resin Systems
224	Imbsen & Assoc., Inc.
225	Bridge Diagnostics, Inc.
226	Dow Corning/SSI
227	US Bridge
228	Splice Sleeve North America
229	Eriksson Technologies, Inc.
230	Hughes Brothers
231	Pittsburgh Rigging Company
232	Dynamic Isolation Systems, Inc.
233	Erico, Inc.
234	Mabey Bridge & Shore, Inc.
235	SSL
236	R.J. Watson, Inc.
237	Pure Technologies Ltd.
238	Concrete Reinforcing Steel Institute
239	DMJM & Harris
240	Bestech Systems
241	B.E.R. Underbridge Equipment Rentals
242	Schnabel Foundation Company
243	Strain Monitor Systems, Inc.
244	Poly-Carb/BATC
245	Condon-Johnson & Assoc.
246	PCI
247	Malcolm Drilling Co., Inc.
248	KTA-TATOR, Inc.
249	Larsa, Inc.
250	Leap Software, Inc.
251	Sumiden Wire Products
252	Western Wood Structures, Inc.
253	Stelax Industries Ltd.
254	Big R Manufacturing, LLC
255 & 256	Con-Tech Systems, LTD
257	Vermont Fasteners
258	ADSC: The Intl. Assn of Foundation Drilling

Table Tops Exhibit Level:

1. Ivy Steel & Wire
2. Watson Bowman Acme Corp.
3. Con Span Bridge Systems

Table Tops - Meeting Room Level

- | | |
|------------------------------------|-----------------------|
| A. L.B. Foster Company | F. Scougal Rubber |
| B. Schrader Company | G.&H. Automatic Power |
| C. ChemRex, Inc. | I. Reinforced Earth |
| D. Williams Form Engineering Corp. | J. Hydro Conduit |
| E. Mezure | |

Sunday / September 23, 2001

4:00 pm to 8:00 pm **REGISTRATION** (Foyer near meeting rooms)

Sponsored by: Acrow Corporation

ICEBREAKER RECEPTION (in exhibit hall)

Sponsored by: Acrow Corporation

ADSC, Dallas, Texas

Monday / September 24, 2001

7:30 am **REGISTRATION** (Foyer near meeting rooms)

8:00 am **CONTINENTAL BREAKFAST** (Exhibit Areas)

Sponsored by: Reinforced Earth Co., Vienna, VA

8:30 am to 10:00 am **OPENING SESSION** Capitol Ballroom

Moderator: Eldon Davisson, Caltrans

Welcome and Opening Remarks

Introduction of Opening Session Speaker(s)

Eldon Davisson, Seminar Chairman and Bridge and Structures Engineer, Caltrans

8:45 am **KEYNOTE ADDRESS**

James Roberts, CALTRANS - Technical Advisor to the Director

9:15 am

Moderator: Richard Land, Caltrans

SEISMIC DESIGN SPECIFICATIONS NCHRP 12-49 PROJECT

Ian Friedland, Applied Technology Council

Ron Mayes, Consultant

Break - 10:00 am to 10:30 am

Sponsor: Acrow Corporation of America-Booths 201-202

10:30 am to 12:00 noon **GENERAL SESSION**

Moderator: Richard Land, Caltrans

SEISMIC DESIGN SPECS NCHRP 12-49 PROJECT (continued)

Ian Friedland, Applied Technology Council

Ron Mayes, Consultant

CALTRANS SEISMIC DESIGN CRITERIA

Mike Keever, CALTRANS

Luncheon - 12:00 noon to 1:30 pm

1:30 pm to 3:00 pm **TECHNICAL SESSIONS**

Moderator: Myint Lwin, FHWA

1A. BRIDGE AESTHETICS

Origins of Inspiration: An Organic Approach to Modern

Contextual Highway Structures Aesthetics

H. Javier Chavez, CALTRANS

Signature Bridge Developed w/City of St. Paul Art Committee

Thomas A. DeHaven, Figg Bridge Inspection, Inc.

Wes Smith Steel Tied Arch Bridge

Gerald Dorn and Yang Jiang, HNTB Corporation

1B. DESIGN INNOVATIONS

Moderator: Matt Farrar, Idaho DOT

Design and Construction of the National Park Service's

Foothills Parkway "Missing Link"

Ms. Hala Elgaaly, Federal Highway Administration

Shoukry Elnahal, Federal Highway Administration

Design of Curved Steel Girder Bridge with Integral Concrete

Pier Caps, City of Seattle

Mark Johnson & Mike Bartholomew, CH2M Hill

C-Bent Design: Squeezing Braid Bridge into a Congested Site

Stanley Ryter & Yuhe Yang, Parson Brinckerhoff

1C. BRIDGE MAINTENANCE

Moderator: Linda Newton, Caltrans

Stainless Steel Applications for Extended Service Life of a

Reinforced Concrete Arch Bridge in Marine Environment

Jim Bollman, Oregon DOT

Wyoming Overweight Load Analysis Program

Keith Fulton, Wyoming DOT

Economic Impact of Magnesium Chloride on Montana Bridges

Nigel Mends, Montana DOT

Paul Carter, Earth Tech, Inc.

Break 3:00 pm to 3:30 pm

Sponsored by: Watson Bowman Acme Corp., Amherst, NY

3:30 pm to 5:00 pm **TECHNICAL SESSIONS**

2A. INNOVATIVE CONSTRUCTION

Moderator: Jerry Weigel, Washington DOT

Design & Construction of Route 101 Bridge Over Rock Creek

Thomas Barnard, DMJM & Harris

The New Crooked River Gorge Bridge

Norman Smit, T.Y. Lin International

Union Pacific Railroad Johnson Drive Underpass- Precast/

Prestressed Concrete Girder Bridge Erected In Five Days

Glenn Suitor & Louie Caballero, Parson Brinckerhoff

2B. FOUNDATION DESIGN

Moderator: Richard Pratt, Alaska DOT

New Outfall Bridge Structures at Bonneville Dam Design,

Construction, and Lateral Testing

Amir Asaidali, Inca Engineers

Paksey Bridge Design and Construction - Bangladesh

John Bryson, Parson Brinckerhoff Quade & Douglas

Thrust Block Foundation Design for the Galena Creek Bridge

Ryan Moore, J. Muller International

Matt Griggs, CH2M Hill

2C. FRP COMPOSITE MATERIALS

Moderator: George Imbsen, Alaska DOT

Application of Fiber Laminates in Strengthening of Existing Bridges

Amir Malek & Ramin Rashedi, CALTRANS

Design and Installation of Carbon Fiber Shear Strengthening

to the Canyon Road Subway Structure

Scott Nettleton, David Evans Assoc., Inc.

The Use of FRP's on Oregon Bridges

Guido Portier & Lwin Hwee, Oregon DOT

Tuesday / September 25, 2001

7:30 am Registration

8:00 am **CONTINENTAL BREAKFAST** (Exhibit Area)

Sponsored by: Jacobs Sverdrup Civil, Inc., Walnut Creek, CA

8:30 am to 10:00 am **TECHNICAL SESSIONS**

3A. PEDESTRIAN/BICYCLE BRIDGES

Moderator: Sam Grossberg, Oregon DOT

Design of the Berkeley Pedestrian and Bicycle Overcrossing

Mark Ketchum & Vivian Chang, Opac Consulting Engineers

The Mendenhall River Pedestrian Bridge

Elmer Marx, Alaska DOT

Derek Soden, Alaska DOT

Design and Construction of Grants Pass Pedestrian Bridge

Gary Rayer & Dr. Jiri Strasky, OBEC Consulting Engineers

3B. PC/PS GIRDER DESIGN

Moderator: Martha Nevai, FHWA

Designing for Continuity with the Allen Street Bridge

Michael McDonagh & Kevin Hinkley, Entranco, Inc.

Development of Precast "U" Girder Sections for Colorado

Michael McMullen, Colorado DOT

Precast/Prestressed Spliced-Girder Design-The Innovative Solution

David A. Tomley & Toorak Zokaie, Leap Software, Inc.

3C. BRIDGE REHABILITATION

Moderator: Bill Forrester, FHWA

Manette Bridge Composite Rehabilitation - 6 Years Later

Pete Barlow, Contech Systems

Challenging Scour Mitigation Projects by Caltrans

Subhendu Mishra & William Lindsey, Caltrans

Underpinning of the McLeod River Bridge Pier

Dale Serink, UMA Engineering

Break 10:00 am to 10:30 am

Sponsored by: HDR Engineering, Inc., Folsom, CA

10:30 am - 12:00 noon TECHNICAL SESSIONS

4A. PRESERVATION vs REPLACEMENT

Moderator: Barry Brecto, FHWA

Arroyo Seco Bridge Reconstruction and Seismic Retrofit
Dennis Drag, Moffatt & Nichol Engineers

Mosier Tunnel Rehabilitation Project

Thomas J. Cossette & Rudy Ruana, HNTB Corporation

Historic Truss Bridge Restoration

Doug Fredericks, CH2M Hill

4B. LONG SPAN BRIDGES

Moderator: Andre Boutros, Caltrans

Two Medicine River Bridge Type Selection

David Korpi & Paul Bott, Sverdrup Civil, Inc.

The New Carquinez Straight Suspension Bridge

Michael Marques, CALTRANS

Greg Orsolini & Thomas Spoth, Parsons Transportation Group

Bandra Worli Sea Link Project - Connecting Island and Suburbs
of Mumbai, India

Robert Shulock & Paul Bott, Sverdrup Civil, Inc.

4C. PROTECTIVE COATINGS

Moderator: Mike Johnson, Idaho DOT

Epoxy Coated Rebar Performance in Alberta, Canada

Gary Kriviak, Earth Tech Canada, Ltd.

Performance of Hot Dip Galvanized Rebar in Bridge Decks

Thomas Langill, American Galvanizers Assoc.

New Materials and Advanced Construction Application

Methods Promise Longer Bridge Deck Life Expectancy

Paul Pugh, Bay Area Tech-Centers

Luncheon 12:00 noon to 1:30 pm

1:30 pm to 3:00 pm TECHNICAL SESSIONS

LRFD DESIGN

Moderator: Jugesh Kapur, Washington DOT

Warning! LRFD May be Hazardous to Your Bridges' Health

Martin Burke, Jr., Burgess & Niple, Ltd.

LFD vs LRFD: Case Studies of Concrete Superstructures

Sue Hida, CALTRANS, Sacramento, CA

AASHTOWare Virtis and Opis - Project Update

Jeffrey Campbell & James Duray, Michael Baker Jr.

Jay A. Puckett, Bridge Tech, Inc.

Paul Thompson,

5B. SEISMIC RETROFIT

Moderator: Todd Stefanowicz, Nevada DOT

Rocking of Bridge Piers Under Earthquake Loading

Fadel Alameddine, CALTRANS

Seismic Retrofitting Challenges Stimulate New Innovations for
the Benicia-Martinez Bridge

Moe Amini, CALTRANS

Roy Imbsen, Imbsen Associates

Selection of Expansion Joint Systems to Accommodate Large
Seismic Movements

Mark Kaczinski, D.S. Brown

Don Clyde, UC Berkeley

5C. HIGH PERFORMANCE MATERIALS

Moderator: Bill Crawford, Nevada DOT

Designing with High Performance Steels

M. Myint Lwin, FHWA, San Francisco, CA

Challenges of Long-Span Prestressed Girder Bridges Made
With High Performance Concrete

Bijan Khaleghi, Washington State DOT, Olympia

Concrete Bridge Decks Constructed with FRP Stay-in Place

Forms and FRP Mesh Reinforcing

L. Bank, M. Olivia, J. Russell & D. Dieter, Univ. of Wisconsin

Break 3:00 pm to 3:30 pm

Sponsored by: Agri Foundations, Everett, WA

3:30 pm to 5:00 pm TECHNICAL SESSIONS

6A. COMPUTER APPLICATIONS

Moderator: Frank Nelson, Oregon DOT

Supercharging Spreadsheets with the Washington Bridge
Foundation Libraries-Programmable Software Components
for Bridge Engineers

Richard Brice, Washington State DOT, Olympia

CTBridge - Bridge Design Software

Clark Verkler, CALTRANS, Sacramento, CA

Ernst Curto, CALTRANS, Sacramento, CA

NCHRP 12-50 - Bridge Software Validation Update

Mark Mlynarski, Michael Baker Jr., Inc.

Jay A. Puckett, Bridge Tech, Inc.

6B. LOCAL AGENCY BRIDGES

Moderator: Mark Hirota, Oregon DOT

Design, Construction, and Field Performance of the South

Gila Canal Stress Laminated Timber Bridge in Yuma, AZ

James P. Wacker, USDA Forest Service

The Unalakleet Bridge

Elmer Marx, Alaska DOT

Lake Natoma Crossing: Overcoming Communication Problems.

Cost Constraints and High Seismic Performance

Bob Fish & Conrad Bridges, HDR Engineering

6C. BRIDGE JOINTS & BEARINGS

Moderator: Mark Gunert, Nevada DOT

Removable Pipe Seat Extenders for Hinge Retrofits on Box
Girder Bridges

Stephen Sahs, CALTRANS

Performance of Bridge Bearings in the 2001 Olympia Earthquake

John VanLund & Ralph Dornsife, Washington DOT

Shear Inhibited Disc Bearings: A Performance Review After
25 Years of Service on Bridges

Ronald J. Watson, R.J. Watson Inc.

6:00 pm to 7:00 pm No Host Cocktail Hour

7:00 pm to 9:00 pm Banquet & Program (Nice Casual)

Banquet Program: "52 Ways to Have More Fun at Work"

Featuring: Claire Berger, Funny Works, Inc.

Wednesday / September 26, 2001

7:30 am REGISTRATION - CONTINENTAL BREAKFAST (Exhibit Area)

Sponsored by: Mezure Corp., Bend, Oregon

8:00 am to 9:00 am GENERAL SESSION

Moderator: Dan Thomas, Caltrans

7. DESIGN/BUILD-Contractor's View of Design/Build Bridge Construction

Allen Harwood, Construction Consultant

Ted Aadland, Ward, Inc.

Sagadahoc Bridge: Record-Setting Span with Unique Design/
Build Selection Process

R. Kent Montgomery, Figg Bridge Engineers, Inc.

Break 9:00 am to 9:30 am

Sponsored by: Friends of Western Bridge

9:30 am to 11:00 am GENERAL SESSION

Moderator: Eldon Davisson, Caltrans

8. San Francisco-Oakland Bay Bridge East Spans Replacement Project

Brian Maroney, Project Manager, CALTRANS

CLOSING REMARKS

Seminar Chairman, Eldon Davisson,

Chief, Office of Structure Design CALTRANS, Sacramento

INVITATION TO 2003 SEMINAR

Bridge Engineer Chairman for 2003

Tour Information and Instructions

ADJOURNMENT 11:00 am

11:30 am to 8:30 pm

OPTIONAL TECHNICAL TOUR