

September 9–11, 2015

PRACTICAL SOLUTIONS TO BRIDGE ENGINEERING CHALLENGES

Peppermill Hotel | Reno, Nevada

Seminar managed by:



Tuesday, September 8

6:00-8:00 pm ICEBREAKER RECEPTION

Wednesday, September 9

7:30 am-5:00 pm **EXHIBIT HALL OPEN**

7:30–8:30 am CONTINENTAL BREAKFAST

8:30–10:00 am WELCOME & OPENING REMARKS

 Opening Remarks
 Rudy Malfabon • Director, Nevada Department of Transportation

 Keynote: I-74 Mississippi River Bridge Norman McDonald • Iowa Department of Transportation

10:30 am-Noon TECHNICAL SESSIONS

2A ACCELERATED BRIDGE CONSTRUCTION

- Utah SR201 Bridge Slide
 Richard Hansen Michael Baker International
- ABC Methods for Replacement SH55, North of Cascade (D)
 Leonard Ruminski • Idaho Department of Transportation
- The Lardo Bridge Slide Brian Byrne • Lochner

2B BRIDGE FOUNDATION SEISMIC DESIGN

 Modeling and Design of the Gilman Drive Overcrossing Foundations Garrett Dekker • Moffatt & Nichol Seismic Design of Adjacent Rail Bridges in Deep Liquefiable Soils
 Kelly Burnell • Kleinfelder

Ebrahim Amirihormozaki • Kleinfelder

 2D Seismic Site Response Analysis in a Subduction Zone Environment Zia Zafir • Kleinfelder

2C BRIDGE DESIGN CONSIDERATIONS

- New Design Provisions for Lightweight Concrete in Bridges
 Reid Castrodale • Expanded Shale Clay and Slate Institute
- FHWA Slide-in Bridge Construction Cost Estimation Tool
 Al Yates • Michael Baker International

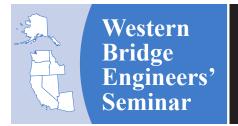
 The Future of Bridge Design, Modeling and Analysis: 3D Modeling from Design to Decommission Barbara Day • Bentley Systems

2D BRIDGE REHABILITATION

- Rehabilitation of Bridges
 Kash Nikzad TranTech Engineering, LLC
- Replacement of Trunnion Bering, 92nd Street Bascule Bridge, Chicago, IL
 Paul Bandlow • Stafford Bandlow Engineering, Inc.
- Slausen Avenue Bridge Over San Gabriel River Bob Fish • AECOM Transportation

Noon LUNCH

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1:30 PM - 3:00 PM TECHNICAL SESSIONS

3A ACCELERATED BRIDGE CONSTRUCTION

- Accelerated Bridge Construction in Alaska Leslie Daugherty • Alaska DOT & PF
- Alaskan Way Viaduct Replacement Program: Pre-cast Concrete Elements for ABC Construction Tim Moore • Washington State Department of Transportation
- Context Sensitive ABC Policy: Adding to the Bridge Design Manual Patrick Gallagher • Washington State Department of Transportation
- Innovative Bridge Designs for Rapid Renewal, SHRP2 RO4, Lessons Learned
 Finn Hubbard • Fish & Associates

3B BRIDGE DESIGN AND CONSTRUCTION

- Design of the Gilman Drive Bridge over I-5 at the University of California, San Diego Gernot Komar • Moffatt & Nichol Tony Sanchez • Moffatt & Nichol
- Hybrid Spliced Girder Concept to Solve Bridge Constructability Challenges
 Sami Megally • Kleinfelder
- Design of a Modern Cable-Stayed Bridge in a High Seismic Zone
 Patrick Montemerlo • David Evans & Associates, Inc.

3C BRIDGE CONSTRUCTION

- Girder Stability in Erection and Demolition Michael Garlich • Collins Engineers, Inc.
- Project Risk Management on the New San Francisco Oakland Bay Bridge Richard Foley • California Department of Transportation
- Response to Falsework Collapse During Bridge Construction
 Mark Creveling • Kleinfelder Jeff Turner • Flatiron

3D BRIDGE REHABILITATION

- In-Service Replacement of Box Girder Bottom Slab WSDOT Bridge 5/537S Span 11
 Craig Boone • Washington State Department of Transportation
- Bridge Deck Replacement on Precast Concrete Bulb-T Girders with Sacrificial Flange Technique Tanarat Potisuk • Oregon Department of Transportation
- Accelerated Bridge Construction, Rehabilitation of the I-280 in San Francisco Ric Maggenti • California Department of Transportation

3:00-3:30 pm COFFEE BREAK/EXHIBIT

3:30-5:00 pm TECHNICAL SESSIONS

4A ACCELERATED BRIDGE CONSTRUCTION

- Accelerated Bridge Construction of the West Humbug Creek Bridge Jason Kelly • OBEC Consulting Engineers
- Prefabricated Bridge Elements and Systems for Accelerated Bridge Construction Greg Banks • BergerABAM
- Seattle's Not-So-Boring SR99 Bored Tunnel Project Tim Moore • Washington State Department of Transportation
- New Development in Accelerated Bridge and Culvert Construction in Washington State
 Patrick Gallagher • Washington State Department of Transportation

4B BRIDGE DURABILITY AND MATERIALS

- Use of Grade 80 Reinforcement in Oregon
 Craig Shike Oregon Department of Transportation
- Durability Design of Bridges Mike Bartholomew • CH2M Hill
- Durability of Lightweight Concrete for Bridges Reid Castrodale • Expanded Shale Clay and Slate Institute

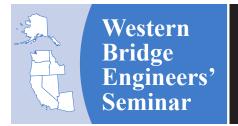
4C BRIDGE CONSTRUCTION

- Lateral Slide of a Historic Warren Truss in Washington State Kevin Dusenberry • Jacobs
- Tower Erection Engineering for the San Francisco-Oakland Bay Bridge Self-anchored Span William Wu • Klohn Crippen Berger LTD David Dowdel • Klohn Crippen Berger LTD
- Design and Construction of the St. Patrick's Island Pedestrian Bridge Brent Whitcomb • Parsons Brinckerhoff

4D BRIDGE REHABILITATION AND REPLACEMENT

- San Elijo Lagoon Bridge Replacement Jeremy Lahaye • T.Y. Lin International
- Tioga Pedestrian Bridge Replacement
 Bob Grubbs Oregon Department of Transportation
- Alexander Avenue Bridge Retrofit Project, Larkspur, California
 Carlos Ramirez • Parsons Brinckerhoff

5:00-8:00 pm EXHIBITOR RECEPTION & POSTER SESSION



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Thursday, September 10

7:30 am-5:00 pm EXHIBIT HALL OPEN

7:30-8:30 am CONTINENTAL BREAKFAST

8:30–10:00 am TECHNICAL SESSIONS

5A ACCELERATED BRIDGE CONSTRUCTION

 Faster Construction and Better Seismic Performance: You Can Have Both Marc Eberhard • University of Washington

- Innovative, Accelerated, and Cost Effective Options for Short Span Bridges Michael Barker • University of Wyoming
- Novel Deconstructible and Resilient Columns for ABC in High Seismic Zones Sebastian Varela • University of Nevada, Reno

5B BRIDGE RESEARCH AND ANALYSIS

- Instrumenting Anchorage Zone of Post-tensioned Box Girder Bridges
 Ahmed Maree • University of Nevada, Reno Marc Friedheim • California Department of Transportation
- Structural Response of Bent Caps in Reinforced Concrete Box-Girder Bridges Mohamed Moustafa • University of California, Berkeley
- Computer Aided Design, Analysis, and Load Rating of Precast-Prestressed Spliced Girder Bridges Rick Brice • Washington State Department of Transportation

5C FOUNDATION DESIGN AND CONSTRUCTION

- Thermal Integrity Profiling as a Drilled Shaft Quality Assurance Tool
 Mark Gaines • Washington State Department of Transportation
- Honolulu Rail Transit Project: Drilled-Shaft Design Considerations and Challenges Ahilan Selladurai • AECOM Transportation Ahmad Abdel-Karim • AECOM
- Sellwood Bridge Perched Box Caisson Design & Construction Garret Ellingson • McGee Engineering Shayne Tennis • McGee Engineering

5D BRIDGE MATERIALS AND MAINTENANCE

- Specialized Post-Tensioning Inspection and Repair Travis Green • Wiss, Janney, Elstner Associates, Inc. Eric Anderson • Wiss, Janney, Elstner Associates, Inc.
- Bridge Materials and Methods
 Hormoz Seradj Oregon Department of Transportation
- Development of National Training for Bridge Maintenance Eric Thorkildsen • Greenman-Pedersen, Inc.

10:00-10:30 am COFFEE BREAK/EXHIBIT

10:30 – Noon TECHNICAL SESSIONS

6A BRIDGE DESIGN AND CONSTRUCTION

- Design and Construction Complexities of the Yerba Buena Island Transition Structures for the New East Span - SFOBB Robert Dameron • Moffatt & Nichol
- Replacement of the Highway 85 Bridge Over the Missouri River Near Williston, North Dakota Michael Marks • KLJ Colin Moran • KLJ
- US-34 Missouri River Pushing the Design and Construction Limits for a Haunched Steel Girder with Substringer Bridge Phil Rossbach • HDR Engineering, Inc.

6B BRIDGE DESIGN AND CONSTRUCTION

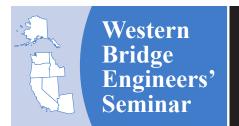
- Maximizing the Flexibility of Precast Concrete to Accommodate Unusual Bridge Geometry in a Constrained Urban Environment Yuling Teo • City of Seattle Hong Guan • CH2M Hill
- Salt Creek Half Viaducts
 Bob Goodrich OBEC Consulting Engineers
- MSS Box Girder Transverse Design of Geral Desmond Bridge Replace Project Sammy Tu • STV Inc.

6C BRIDGE MATERIALS AND DETAILS

- Material Properties of Lightweight Concrete for Bridge Design
 Reid Castrodale • Expanded Shale Clay and Slate Institute
- Good Bridges, Bad Details, and Ugly Cracks:
 A Study in Titanium Alternatives to Fiber
 Reinforced Polymers
 Paul Strauser Oregon Department of Transportation
- Crack-less Bridge Decks
 Craig Knapp California Department of Transportation

6D INVENTORY AND MAINTENANCE

- Utilizing 3D Models for Better Bridge Asset Inspection and Management of Complex Bridges Lee Tanase • Bentley Systems
- Where's the Guidance? An Interim Approach for Load Rating Culverts and Flexible Buried Bridges Joel Hahm • Big R Bridge



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 Developing Risk Assessment Protocols for Six Iconic Willamette River Bridges
 Douglas Lampkin • David Evans and Associates Inc. Ian Cannon • Multnomah County

Noon LUNCH

1:30-3:00 pm TECHNICAL SESSIONS

7A BRIDGE SEISMIC DESIGN

 Seismic Design of Light Rail Transit Bridges with Fault Rupture James Gingery • Kleinfelder

- Ebrahim Amirihormozaki Kleinfelder
- Seismic Design Considerations for Single-Column Piers Supporting Highly Curved Ramp Bridges Greg Griffin • AECOM Transportation
- Sellwood West Approach Interchange Bridge -Design Challenges and Project Delivery Vu Phan • CH2M Hill

7B BRIDGE DESIGNS AND SCOUR CHALLENGES

- Design of the 13th Street Bridge at Vandenberg AFB for Hydraulics, Scour, and Seismic Tony Sanchez • Moffatt & Nichol
- Acquiring and Implementing TIGER Grant Funding for the I-15 Virgin River Bridge #6 Superstructure Replacement and Substructure Widening Rafael Davis • Arizona Department of Transportation
- History of the Oldest Bridge Pons Fabricius Luong Tran • Washington State Department of Transportation

7C BRIDGE SEISMIC DESIGN

- Performance of Bridge Columns Under Long Duration Ground Motions
 Mohammed Mohammed • University of Nevada - Reno
- Maximizing Bridge Value with Advanced Seismic Analysis
 Christopher Pitt • KPFF Consulting Engineers
- Application of Performance Based Earthquake Engineering (PBEE)
 Yeo (Tony) Yoon • California Department of Transportation Toorak Zokaie • California Department of Transportation

7D INSTRUMENTATION AND INSPECTION

- Implementing the Next Generation of Bridge Inspection and Management Systems
 Lee Tanase • Bentley Systems
- Economics of Infrastructure Health Monitoring Brian Westcott • Intelligent Structures, Inc.

 Macro vs. Micro: The Future and Past of Bridge Instrumentation

COFFEE BREAK/EXHIBIT

Shaun Dustin • Campbell Scientific

3:30-5:00 pm TECHNICAL SESSIONS

8A BRIDGE JOINTS AND BEARINGS

3:00-3:30pm

- High Load Multirotational Bearings for the Sellwood Bridge Ron Watson • R.J. Watson, Inc.
- Nenana River Bridge Seismic Retrofit Travis Arndt • Alaska DOT & PF
- Innovations in Bridge Engineering Iman Talebinejad • SC Solutions

8B RAIL AND RETAINING STRUCTURES

- Design Optimization for Sound Transit's Light Rail Lynnwood Extension Yuhe Yang • Parametrix
- Significant Changes for Design and Construction Costs of Earth Retaining Structures Caused by Changes in Recent AASHTO LRFD Design Criteria Ahilan Selladurai • AECOM Transportation Robert Fish • AECOM
- Lightweight Cellular Concrete Fill to Mitigate Railroad Bridge Approach Settlement Nathan Johnson • Kleinfelder Moises Arzamendi • Kleinfelder

8C BRIDGE SEISMIC DESIGN

- Base Isolating the New NY Bridge Nick McDowell • HDR Engineering Ted Bush • HDR Engineering
- 2nd Street Connector, Gateway to Historic Sacramento Ali Seyedmadani • Parsons Brinkerhoff
- Seismic Design of Walnut Avenue Overpass Ali Rejaie • HNTB

8D LOAD RATING

- Methods for Improving Load Rating of Existing Bridges
 Kash Nikzad TranTech Engineering, LLC
- An Innovative Procedure for Load-Rating of Suspension Bridges Hassan Sedarat • SC Solutions
- Snake River Load Test: Addressing Bridge
 Management Issues
 Brice Carpenter Bridge Diagnostics
 Shanon Murgoitio Idaho Transportation Department

5:00 – 9:00 pm **EXHIBITOR MOVE-OUT**



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Friday, September 11

7:30-8:30 am

CONTINENTAL BREAKFAST

8:30-10:00 am

TECHNICAL SESSIONS

9A BRIDGE DESIGN AND CONSTRUCTION

- Hells Canyon Bridge SR89
 Mike Morrison Arizona Department of Transportation
- Design and Construction of an International Airport Bridge between California and Mexico Paul Morel • Kleinfelder
- Seismic Retrofit and Reconstruction of the Historic Georgia Street Concrete Arch Bridge Ebrahim Amirihormozaki • Kleinfelder Nathan Johnson • Kleinfelder

9B BRIDGE ANALYSIS

- Effect of Curved Alignment and Skewed Supports on Bridge Response
 Lucas Miner • Drake Haglan and Associates
- Liveload Distribution on Bridge Abutments
 Toorak Zokaie California Department of
 Transportation
- Impact of Air Pressure Testing on Post-Tensioned Anchorage Ducts
 Brett Allen • Eclipse Engineering

9C BRIDGE DESIGN AND CONSTRUCTION

- Accelerated Scheduling for I-90/Cliff Ave. Bridges
 Hadley Eisenbeisz South Dakota Department of
 Transportation
- Seismic Retrofit of Ogden Siphon Pipe Suspension Bridge Mark Reno • Quincy Engineering, Inc.
- I Didn't Know They Could Do That! Capabilities and Design Considerations for Flexible Buried Bridges Joel Hahm • Bridge R Bridge

9D BRIDGE INSPECTION

- Vertical Clearance Measurements and Posting of VC Signs
 Homer Saidi • Arizona Department of Transportation
- Underwater Inspection of the Golden Gate Bridge: The Image of an Icon Daniel Stromberg • Collins Engineers, Inc.
- Summary of Safety Inspection Practices for Bridges with Fracture Critical Members Brian Leshko • HDR Engineering, Inc.

10:00-10:30 am **COFFEE BREAK**

10:30 – Noon GENERAL SESSION

- Keynote: The Tappan Zee Bridge Jeff Han • HDR Engineering
- Closing Remarks & Invitation to 2017 Conference
- Adjourn