

# 2012 Pacific Northwest **BRIDGE MAINTENANCE** Conference



RIGHT BRIDGE, RIGHT TIME, RIGHT FIX

October 16-18, 2012

Red Lion on the River (Jantzen Beach)  
Portland, Oregon

## Hosted by

Federal Highway Administration, Washington State Department of Transportation, Oregon Department of Transportation, Alaska Department of Transportation and Public Facilities, California Department of Transportation, and Idaho Transportation Department.

## Managed by

Washington State University Conference Management

[cm.wsu.edu/bridge](http://cm.wsu.edu/bridge)

## TUESDAY 10/16

- 11:00 AM** **REGISTRATION**  
Grand Ballroom Foyer
- 1:00 PM** **WELCOME, OPENING REMARKS, AND ATTENDEE CHALLENGE**  
Grand Ballroom  
**Moderators:** Gary Bowling, ODOT and Tim Rogers, FHWA—OR  
**Keynote: The Benefits of Bridge Preservation**  
Anwar Ahmad, FHWA Headquarters
- 2:00 PM** **SESSION 1: BRIDGE PRESERVATION AND BRIDGE MAINTENANCE**  
**Moderators:** Gary Bowling, ODOT and Tim Rogers, FHWA—OR  
**The Shift to Bridge Preservation**  
Bert Hartman, ODOT  
**Bridge Maintenance Training**  
Jeff Bowser, Caltrans
- 3:00 PM** **BREAK: VISIT EXHIBITS**  
Exhibit Hall & Foyer
- 3:30 PM** **SESSION 2: PEER EXCHANGE**  
**Moderator:** Chris Keegan, WSDOT  
Break into peer exchange groups. Each table will have a Moderator and a Note Taker.
- 5:00 PM** **ICE BREAKER GATHERING**  
Exhibit Hall & Foyer

## WEDNESDAY 10/17

- 8:00 AM** **SESSION 3: BRIDGE CLEANING**  
**Moderators:** Dave McCormick, WSDOT and Debbie Lehmann, FHWA—WA  
**Maintenance Washing of Steel Bridge Structures**  
Gregor Myhr, WSDOT  
**Bridge Flushing**  
William Yarbrough, WSDOT
- 9:00 AM** **SESSION 2 (CONT'D): PEER EXCHANGE REPORTS**  
**Moderator:** Chris Keegan, WSDOT  
Each Peer Exchange Group reports out on key items from round table discussions.
- 10:00 AM** **BREAK: VISIT EXHIBITS**  
Exhibit Hall & Foyer
- 10:30 AM** **SESSION 4: JOINTS AND DECKS**  
**Moderator:** Craig Yasuda, WSDOT  
**Traffic Impact Damage Repair**  
Kent Kalsch, ODOT  
**Silicoflex Joint Repairs**  
Jim Henderson and Darin Wilkens, WSDOT  
**Mechanical Rebar Splices for Concrete Deck Patches**  
Mike London and Tom Corrin, WSDOT
- 12:00 PM** **LUNCH: PROVIDED**  
Exhibit Hall & Hayden Room

1:00 PM

### SESSION 5: TIMBER

- Moderator:** Scott Wilcox, WSDOT  
**Cougar Creek Bridge Repairs**  
Jean Singer and David Dolan, Clark County Public Works  
**Mill Creek Cap Replacement**  
Dale Blanken, WSDOT  
**Renton Parks Riverside Trail Bridge Repair**  
Rich Hovde, King County, WA  
**Changing Timber Pile Using Bailey Bridge Parts**  
Steve McIntyre, WSDOT

3:00 PM

### BREAK: VISIT EXHIBITS

Exhibit Hall & Foyer

3:30 PM

### SESSION 6: SUPERSTRUCTURE

- Moderator:** Jeff Swanstrom, ODOT  
**Used Bridge to New Bridge**  
James Stouder, Benton County, OR  
**Hawthorne Viaduct Beam Repair**  
Carl Morgan, Multnomah County, OR  
**High Hit on Steel Girder**  
David Clark and Tom Corrin, WSDOT

5:00 PM

### ADJOURN FOR THE DAY

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## THURSDAY 10/18

- 8:00 AM**     **SESSION 7: SCOUR**  
**Moderator:** *Glenn Scroggins, WSDOT*  
**Debris Removal/Repair/Fish Bypass**  
*Lane McDonald, WSDOT*  
**Fun with Foam – Deep Injection Polymer for Scour Repair**  
*Stephen Cruise, Washington County, OR*  
**Tram System Scour Repair**  
*Ray Perry and Bill Black, WSDOT*  
**Money Creek Scour Repair**  
*Rich Hovde, King County, WA*
- 10:00 AM**     **BREAK: VISIT EXHIBITS**  
*Exhibit Hall & Foyer*
- 10:30 AM**     **SESSION 8:  
BRIDGE REPAIR  
AND/OR REPLACEMENT**  
**Moderator:** *Holly Winston, ODOT*  
**I-5 Bridge Counterweight Roller Guide Repair**  
*Marc Gross, ODOT*  
**Spring Hollow Restoration and Replacement**  
*Burke O'Brien, Morrow County, OR and Werner Arntz, Ferguson Surveying and Engineering, Mt. Vernon, OR*
- 11:30 AM**     **CLOSING SESSION**  
**Moderators:** *Dave McCormick, WSDOT and Debbie Lehmann, FHWA—WA*  
**Award Best Presentation & Door Prizes**
- 12:00 PM**     **CONFERENCE ADJOURNED**

## TUESDAY

10/16

### KEYNOTE THE BENEFITS OF BRIDGE PRESERVATION

**Anwar Ahmad, FHWA**

The presentation discusses some of the national bridge preservation efforts and available resources. It discusses the newly enacted highway bill "Moving Ahead for Progress in the 21st Century" (MAP-21) as it relates to bridges. The presentation also discusses successful bridge preservation practices and strategies.

### SESSION 1 BRIDGE PRESERVATION AND BRIDGE MAINTENANCE

#### The Shift to Bridge Preservation

**Bert Hartman, ODOT**

There is a realization nationwide that we can no longer continue to let bridges deteriorate to the point where they need to be replaced, or require major rehabilitation. It is more cost effective to maintain a bridge in good repair using cost effective investment strategies. While we will continue to address critical and urgent maintenance recommendations, an increasing amount of the maintenance that is programmed will be preventive. This includes cyclical activities such as deck sealing that will be done on bridge decks that are in good condition. While we have done these activities in the past, in the future they will be much more widespread and systematic, and take a greater portion of the funds that are used on bridges in any year.

#### Bridge Maintenance Training

**Jeff Bowser, Caltrans**

A brief presentation on Caltrans Bridge Maintenance training program—a one week, 36 hour training given to all bridge maintenance crews in the state of California. Eighteen hours of class room and 18 hours of hands-on field training. Training subjects include bridge components, types of bridges, disaster preparedness, earthquake, flood, fire and vehicle accidents, concrete deck repairs, joint repair, rail repair, girder bridge jacking, acrow bridge construction, epoxy injection and care of tools and equipment).

### SESSION 2 PEER EXCHANGE

This session will give maintenance practitioners opportunity to discuss topics concerning work they do every day with people they don't work with every day. Tables will be set up to encourage a diverse mix of state and local bridge maintenance personnel, and exhibitors. Topics such as Joints (Expansion/Contraction), Deck Repairs, Superstructure Repairs, Substructure Repairs, Bridge Washing, and Safety Issues will be posed to get the group talking.

## WEDNESDAY 10/17

### SESSION 3 BRIDGE CLEANING

#### Maintenance Washing of Steel Bridge Structures

Gregor Myhr, WSDOT

The accumulation of salt, guano, sand and other debris contributes to an increased rate of corrosion of steel bridge structures. It also hinders the completion of regular bridge inspections and can decrease the paint life of the bridge. WSDOT manages 264 bridges over water statewide and operates under an NPDES permit by Ecology that regulates the discharge of bridge maintenance flushing over water. Due to the restrictive environmental requirements and limited budgets, the majority of bridge washing needs are being deferred. WSDOT has completed with a three year Pilot Study under the NPDES permit that would allow more efficient and less costly method of bridge washing work. For bridges that have been fully painted or flushed using full BMPs, within one year the bridge can be flushed without requiring full hand removal of accumulated debris. This presentation will summarize the method(s) of work and results of the Pilot Study, the cost and time savings associated with this method of work, and characterize how this maintenance activity can benefit the life span of the paint and bridge condition.

#### Bridge Flushing

William Yarbrough, WSDOT

The Olympic Region Bridge Crew has started an annual bridge flushing program. This program is a pilot program to study whether it is environmentally feasible to forgo hand cleaning by flushing the bridges with low-pressure high-volume water.

The bridges that are part of this study were first hand cleaned by manual methods and the water rinsed the first year and then spot checked and water rinsed the next. Now in the third year, we are using water only. Environmental impact is carefully studied by collecting water samples during the operation.

### SESSION 4 JOINTS AND DECKS

#### Traffic Impact Damage Repair

Kent Kalsch, ODOT

Repairing short columns at joints from traffic damage.

#### Silicoflex Joint Repairs

Darin Wilkens, WSDOT

The Silicoflex Joint Sealing System is easy to install and offers long term sealing life. The Silicoflex Joint System consists of inverted 'V' silicone rubber seals to ensure water-tight and continuous seal. We did this in the past but there has been renewed interest in the past year.

#### Mechanical Rebar Splices for Concrete Deck Patches

Mike London and Tom Corrin, WSDOT

A through the deck repair at the North Fork of the Lewis River. We have historically had reoccurring holes in the same location over approximately the past eight years. Every time we would patch it, it would get larger and larger. The last time we repaired it, we used mechanical splices for the rebar. That repair was done last April, and so far we haven't seen any deterioration in the repair. This is something not everyone is doing, and we believe it would be a valuable tool for bridge maintenance crews.

### SESSION 5 TIMBER

#### Cougar Creek Bridge Repairs

Jean Singer and David Dolan, Clark County Public Works

During a routine 24 month bridge inspection in April 2010 significant rot was discovered in the Cougar Creek Bridge #1409 timber deck and end caps. While Clark County planned to apply for bridge replacement funding, a temporary repair was necessary to maintain the bridge's load carrying capacity.



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Clark County Public Works did not have the expertise or equipment to complete the repairs in-house and to conduct a formal bidding process would have been cost and time prohibitive. WSDOT's SW Region Bridge Crew partnered with Clark County to bring together a successful repair project using skills from both agencies.

A team was assembled between Clark County's Engineering & Construction Division as well as Maintenance & Operations, SW WSDOT Region Bridge Crew and Exeltech Consulting Engineers who assisted with the initial inspection and also provided sketches of the temporary repair. Permits were acquired, a schedule was set and lots of meetings were held to discuss logistics such as which crew would be responsible for which materials and equipment, who would lead on different elements, what to do about traffic control, public notification and safety. Construction was scheduled for August 2010 to align with the permitted one month "in water work window", longer daylight hours and better weather, completion prior to school starting and to not affect traffic associated with a National Motocross event which occurs at the end of July.

The removal of the rotten end caps required jacking the bridge deck off of the supports and spanning the bridge loading across steel members brought to the site—while traffic continued to pass in the opposite lane. This operation had been completed by WSDOT Bridge Crews in the past, but not by Clark County. The team worked together to successfully raise the bridge, replace the end caps and reopen the bridge to two way traffic on schedule.

Project challenges also included no general contractor to coordinate crews, materials and work efforts, a limited "in water work window" and strict permit requirements which wouldn't allow for scaffolding/supports in the water, and the road had to be opened safely to two way traffic each night.

## Milk Creek Cap Replacement

**Dale Blanken, WSDOT**

Replacing failing wooden cap on structure with steel cap. This presentation will detail the cap replacement process.

## Renton Parks Riverside Trail Bridge Repair

**Richard Hovde, King County**

This presentation will discuss means and methods of lifting five pile bents simultaneously and replacing rotten timber sills and posts.

## Changing Timber Pile Using Bailey Bridge Parts

**Steve McIntyre, WSDOT**

WSDOT bridge crew changed timber pile while using a section of bailey bridge to support the bridge during the replacement process.

## SESSION 6 SUPERSTRUCTURE

### Used Bridge to New Bridge

**James Stouder, Benton County Public Works**

Moving a Linn County, Oregon used concrete bridge to a new location in Benton County, Oregon as a replacement for a deteriorated wooden structure bridge. Replaced the deteriorated wooden structure with a rehabilitated concrete structure with substantial savings to the county.

## Hawthorne Bridge Viaduct Beam Repair

**Carl Morgan, Multnomah County**

This presentation covers the choreographed plans and steps taken to repair a damaged beam on the East bound Hawthorne viaduct above S.E. Martin Luther King Jr. Boulevard.

This incident occurred in 2010 when a truck transporting a high load struck and damaged one of the viaducts 70' long steel girders. Our crew was immediately on site and began traffic diversion and addressed public safety. Plans for repair were started.

Multnomah County Bridge Engineers were called to assess the damage. Damage was found to the South end of the West bound Pier cap, as well as the girder itself was damaged significantly. In the further investigation it was found that this specific beam had been damaged several times prior. The repairs were completed by a heat straightening method. With this finding it was

determined that this method could not be an option for this incident. The girder integrity would now be compromised. This particular beam girder supported the deck, curb, and parapet wall of the viaduct. The girder and everything it supported had to be replaced.

Throughout this presentation I will include the Bridge Maintenance Teams challenges and use of up to date equipment. This repair was one of the biggest, most complex projects the Bridge Maintenance team has ever taken on. Being a new Supervisor to this team of only several months there was a great deal of trials and learning curves for us all.

This project was new to our team. I knew that this project would lead me to new innovative ways to deal

and solve this repair. Being as this project was our first and may be to other agencies, I think it may be a great way to share this information with them. Learning from other agencies projects can give us all ideas and diverse ways of solving new challenges.

## High Hit on a Steel Bridge

**David Clark and Tom Corrin, WSDOT**

Repairing a high hit on a steel bridge. We fabricated in house some new parts for the bridge, and used a dewey dag bar system to install the new parts.

## THURSDAY 10/18

### SESSION 7 SCOUR

#### Debris Removal / Scour Repair / Fish Bypass

**Lane McDonald, WSDOT**

This presentation is a brief summary of several debris removal and scour repair jobs along with a fish bypass construction project. Emphasis is on design, methods, machinery used and safety. Also covered are environmental steps and total job costs.

#### Fun with Foam: Deep Injection Polymer for Scour Repair

**Stephen Cruise, Washington Co. DLUT-Operations**

High stream flows can erode bridge foundations resulting in subterranean voids and occasional sinkholes that must be repaired to maintain the safety of bridge. Traditional repair methods involve excavation of material around the damaged facility and replacing with material suitable for the structure. As these voids normally occur along regulated waterways, extreme care must be taken to isolate the resource waters from repair activity. Isolation involves construction of several dams, relocating fish away from the work area, and mechanically pumping the stream around the work area. The act of isolation triggers permits that otherwise would be unnecessary

absent the stream isolation. Washington County has been exploring alternatives for scour repair that have a more benign construction approach and a lower budgetary footprint to use as a pilot project.

The county selected a proprietary product (Uretek) and patented deep injection process which employs high density structural grade polymer to fill voids, densify, and stabilize soils and a bridge as a pilot project for scour repair. Expandable foam is often used for concrete leveling and filling voids, however most products & application techniques still require working in the "dry" and do not provide the structural properties of the selected product. The propriety product can be injected underwater without isolation and is environmentally neutral. The demonstration project required no stream isolation and repair was completed in about four hours. The presentation will focus on the pilot project—from initial scour, through repair, and will include monitoring results.

#### Tram System Scour Repair

**Ray Perry and William Black, WSDOT**

The Eastern Region Bridge Crew designed and built a tram system to transport sand bags and rock beneath the bridge structure for scour repair at both abutments under 206/18—Deadman Creek No. 2 at mile post 9.61.

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The system consists of three “H” beams located between abutments, at the outside and in the middle of the bridge span. Hanging from these beams are two 50’ long “H” beams running transverse to the roadway with a bucket trolley attached. The long beams were placed using a crane and cable system to keep them out of the water.

The system took about two days to install. The rock placement took less than 8 hours to complete. The creek banks and substrate were not impacted by equipment at any time. All work was accomplished from the roadway above with the exception of dumping the rock from the tram bucket into the scour areas. The bucket could be dumped by one man even when filled with 600 lbs of rock. The tram system was used to install the sand bags and to remove them after completion.

Safety was paramount in this operation, and there were no injuries of any kind. A safety meeting was conducted each morning. No heavy lifting, twisting, or walking with a load was required. The crew did an admirable job in an efficient, safe manner with virtually no damage to the riparian zone or creek. The invention was credited to the bridge crew from Bill Black, Ron Souza, Ray Perry and Doug Bierce.

## Money Creek Scour Repair

**Richard Hovde, King County**

This presentation will discuss the history of flooding and channel morphology and the subsequent repairs installed. Focus will be on last repair of placing concrete around undermined pile cap and installing riprap. Also discuss future repairs.

## SESSION 8 BRIDGE REPAIR AND/OR REPLACEMENT

### I-5 Interstate Bridge Counter Weight Roller Guide Repair

**Marc Gross, ODOT**

While inspecting the Interstate Bridge this year we discovered the guide rollers on the north west counter weight had derailed from the guide track on the up stream side. ODOT crews have worked diligently to remove and replace the worn rollers and pins with new. After three failed attempts to install and align the new rollers for the counter weight to the track,

ODOT crews have removed all the guide rollers and pins. This has allowed the counter weight to hang freely from the guided protection, and ODOT crews are now in an emergency mode to inspect the counter weight during each lift that occurs. The bridge is now in an emergency repair mode and is awaiting for more contracted technical help. Contractors will help ODOT find a resolve for the issue and finish the repair.

## Spring Hollow Restoration and Replacement

**Werner Arntz, Ferguson Surveying & Engineering  
and Burke O’Brien, Morrow County**

The presentation will cover the restoration of the old Spring Hollow Truss Bridge built in 1908. This includes the new custom made safety railing that allows visitors to walk on the bridge and view its construction. We have a brief history of the bridge and its original cost etc. The presentation will also include the right of way acquired to construct a new bridge next to the old bridge. A lot of information on the design phase as well as the construction phase of the project.

This project was critical to saving the Historic Spring Hollow Bridge. The adjacent property has a homestead that has historic significant as well. With these factors in mind right of way was acquired and a lot of time was involved in preservation of the history of the area. A old wooden grainery even had to be relocated at the homestead site to allow for construction of a new bridge. The new bridge was built with history in mind. It has stamped concrete railing and sits at a lower elevation than the old bridge to allow viewing of the Spring Hollow bridge construction from another elevation. A parking area for visitors was constructed to accommodate visitors. All of this work was done by County forces and ODOT right of way forces. The design work was done by the County contracted engineering firm Ferguson Surveying and Engineering in Mount Vernon Oregon. The project was funded through OTIA III funds that were excess from other projects.

## **Anwar Ahmad**

### **FHWA**

Anwar Ahmad is a 1989 graduate of the University of the District of Columbia. He has joined FHWA in October 2010 as the Bridge Preservation Engineer in the Office of Infrastructure in Washington, DC. In his current role he provides technical assistance to FHWA Division Offices, State DOTs and other stakeholders on bridge management and preservation related activities.

Prior to Joining FHWA, Anwar worked for the Virginia Department of Transportation (VDOT) for more than fifteen years where he held several positions. In his last role with VDOT he served as the Assistant State Structure and Bridge Engineer where he oversaw the statewide bridge inspection, maintenance, and management of the Department's more than 20,000 structures.

Prior to his career with VDOT he worked as a structural engineer with a consulting engineering firm in Northern Virginia for more than six years

A registered professional engineer in Virginia, Anwar is actively involved in various committees within the transportation industry including, AASHTO TSP.2 Bridge Preservation Regional Partnerships; AASHTO Subcommittee on Structures and Bridges; and AASHTO Subcommittee on Maintenance, and the Transportation Research Board.

## **Werner Arntz**

### **Ferguson Surveying & Engineering**

Born in Burns, Oregon on July 9, 1985.

Graduated from Burns High School in 2003.

Attended Linfield College from 2003 to 2007. Graduated with a Bachelors of Science Degree in Applied Physics.

Attended Oregon State University from 2007 to 2010. Graduated with a Masters of Engineering Degree in Civil Engineering.

Began working for Ferguson Surveying & Engineering in July, 2010.

## **William Black**

### **WSDOT**

Eastern Region Maintenance Lead Tech

## **Dale Blanken**

### **WSDOT**

A Maintenance Lead Tech for the South Central Region Trades Crew for the last 4.5 years, 24 years with WSDOT, 13 years on the South Central Region Trades Crew. He leads crews maintaining, repairing, and reconstructing bridges, moveable span bridges, and structures to include deck repair, expansion joints, and replacement/repair of caps, stringers, pilings, bents, and bracing. His duties include facility remodels and improvements.

## **Jeff Bowser**

### **California Department of Transportation**

Training subjects: Bridge components, types of bridges, disaster preparedness, earthquake, flood, fire and vehicle accidents, concrete deck repairs, joint repair, rail repair, girder bridge jacking, acrow bridge construction epoxy injection and care of tools and equipment.

Thirty years in bridge maintenance work with twenty years as Bridge Maintenance Supervisor, District 1 (Caltrans).

## **David Clark**

### **WSDOT**

Dave Clark is a Welder Fabricator. He has been employed by WSDOT Bridge Crew for six years. During part of the year he is a Lead Technician for the RPM Crews.

## **Tom Corrin**

### **WSDOT**

Tom Corrin is a carpenter by Trade. He had 20 plus years experience before he became a WSDOT Bridge Crew employee. He has been working for the Bridge Crew for ten years and is a Bridge Crew Lead Tech.

## **Stephen Cruise**

### **Washington County DLUT-Operations**

Stephen Cruise is an Environmental Resource Specialist for Washington County in the Operations and Maintenance division. For the past 7 years he has worked closely with the maintenance crews in implementing required environmental best management practices while keeping current on local, state, and federal regulatory requirements. Stephen also works with the Operations staff to find soft engineering solutions to stream bank erosion or scour issues that will allow the county to fix the problems while minimizing regulatory permits.

Stephen grew up in Oregon, received his undergraduate degree from Willamette University and then a Master's in Environmental Science and Engineering from OGI-OHSU.

## **David Dolan**

### **Clark County Public Works**

David Dolan is a Civil Engineer in the construction management section of Clark County Public Works. David has over 30 years experience in the construction of roads, bridges and heavy civil projects. He has worked both in public and private sector as a contractor, consultant as well as with Public Works. He has been with Clark County for the last 11 years.



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## **Marc Gross** ODOT

Interstate Bridge Crew Supervisor. 18 years with ODOT in Portland. Roadway maintenance, Bridge repair, and Draw-bridge Operations.

## **Bert Hartman** Oregon Department of Transportation

Bert Hartman, Bridge Program Managing Engineer, Oregon State Department of Transportation. Bert has been an engineer with ODOT for the past 14 years and the last six as the Bridge Program Managing Engineer, with the previous five years divided between Load Rating and Bridge Management. Bert has a BS in Mechanical Engineering from Oregon State University. He is a licensed Mechanical Engineer in Oregon. He did some of the first LRFR load ratings in Oregon and has led the bridge project selection effort for the past four cycles. He currently manages the Bridge Program Unit responsible for bridge planning, project selection, and the Major Bridge Maintenance program. The Bridge Program Unit is also responsible for the load rating for 2,700 state and 4,000 local agency bridges. The Bridge Program Unit has 12 engineers and technicians who are dedicated to bridge management and load rating state wide.

## **Jim Henderson** WSDOT

A Maintenance and Operations Superintendent for the South Central Region, Regional Crews for the past 13 years, 34 years with WSDOT. Jim oversees regional striping, signal, electrical, sign installation, and bridge repair operations for the South Central Region of WSDOT.

## **Richard Hovde** King County

Richard Hovde, P.E. manages and designs bridge repairs for King County and many of the surrounding cities. Masters in Structural Engineering from Saint Martin's University in 2007, employed at King County Bridge Unit since 2009. 20+ years experience with bridges, buildings, and hydraulics working for WSDOT, DOD Fort Lewis, and USACE Seattle District.

## **Kent Kalsch** ODOT

Kent started with ODOT in 1992. He switched to the bridge section in 1995. He has worked on the Dalles ever since.

## **Mike London** WSDOT

Mike London worked industrial Construction as well as Underwater construction before becoming an Employee at WSDOT as a Bridge Tech. Mike has Been with WSDOT for nearly 11 years, and is currently a Bridge Supervisor.

## **Lane McDonald** WSDOT

Lane McDonald has a long history of residential and commercial construction experience in the private sector and has worked for the WSDOT for 19 years. He is currently a Maintenance Lead Tech for the North Central Region Bridge Maintenance Crew.

## **Steve McIntyre** WSDOT

Steve McIntyre has been doing bridge maintenance for the State of Washington for 21 years, and has managed bridge maintenance crews for 16 of those 21 years of service.

## **Carl Morgan** Multnomah County

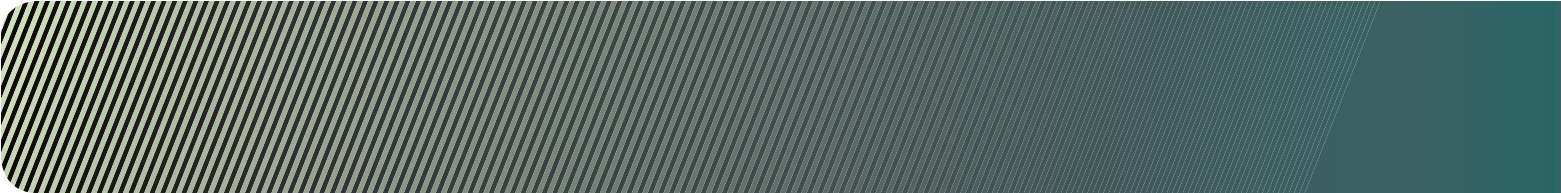
Carl Morgan started with 10 years bridge experience in the US Army where he worked with Bailey Bridges, Floating Ribbon Bridges, and Medium Girder Bridges. He honorably separated as Sergeant in 1994 and came to Multnomah County in 1996, as a Road Maintenance Worker. He was always looking to transfer to the Bridge shop which he did in 2000 as a Bridge Maintenance Worker. Morgan was promoted to Bridge Maintenance Mechanic in 2001, and became Bridge Maintenance Supervisor in 2010.

## **Gregor Myhr** WSDOT

Gregor Myhr has worked for WSDOT since 1998, and currently serves as the Water Quality Compliance Manager for the HQ Maintenance and Operations Division. Gregor manages regulatory coverage for maintenance activities under NPDES, HPA, and ESA.

## **Burke O'Brien** Morrow County

Richard Burke O'Brien was born in Eastern Oregon, graduating from high school in Baker (now Baker City, Oregon) in 1968. He attended college at Blue Mountain College in Pendleton, Oregon earning a Degree in Ag Business, instilling a appreciation for lifelong learning. After college, Burke worked in the field of Agriculture for ten years. Due to financial reasons he began building and maintaining logging roads. He pursued this career for another ten years. After the logging business began to become less profitable he took a management position with Morrow County School District, managing the transportation system for five years. Burke then reassigned to Morrow County and



stepped into the position of Public Works Director. In this capacity, he manages the Airport, Solid Waste Management Program, three County Parks with over 9,000 acres of land, for which he is the Land Manager. Burke also manages the Morrow County Road Department, which cares for close to 1,000 miles of road and 45 bridges. Burke is a past member of the Morrow County School Board and the current incoming President of OACES and a member of NACO. Burke was honored to receive the 2006 Engineer of the Year Award from OACES. He is a member of the Oregon State Parks Association and on the AOC Public Lands Committee. Burke has three grown children and seven grandchildren. He enjoys outdoor recreation and has a nicely equipped wood shop for the cold winter months.

### **Ray Perry** WSDOT

Eastern Region Maintenance Supervisor

### **Jean Singer** Clark County Public Works

Jean Singer, PE has worked for Clark County Public Works as a Capital Project Manager for seven years. She has 13 years experience in engineering and construction, the majority working for public agencies. Jean has a Bachelor's of Science degree in Architectural (Structural) Engineering from Cal Poly-San Luis Obispo as well as Master's coursework in Bridge Design and Dynamics of Framed Structures.

### **James Stouder** Benton County Public Works

[Pending]

### **Darin Wilkens** WSDOT

A Maintenance Specialist 5 for the South Central Region Trades Crew for the past six years, 13 years with WSDOT, nine years on the South Central Region Trades Crew. Darin supervises crews maintaining, repairing, and reconstructing bridges, moveable span bridges, and structures to include deck repair, expansion joints, and replacement/repair of caps, stringers, pilings, bents, and bracing. Additionally his duties include coordinating and supervising crews in facility remodels and improvements.

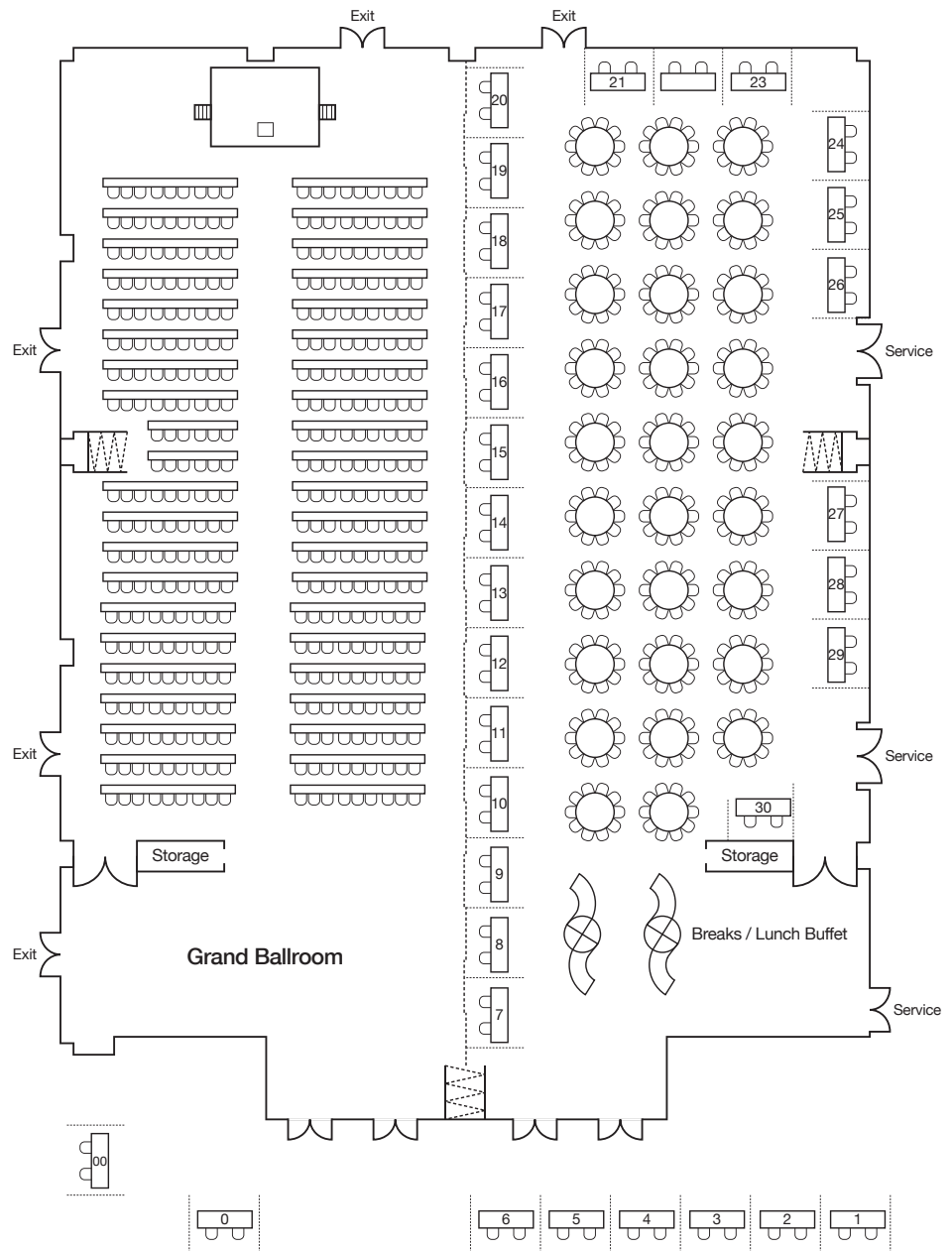
### **William Yarbrough** WSDOT

William Yarbrough has worked for WSDOT in bridge maintenance since 2008. His background is primarily in commercial construction as a carpenter, welder, concrete finisher and equipment operator.

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## Exhibitor Directory

- 0 EMSEAL Joint Systems
- 00 Dayton Superior/Unitex
- 1 LiquidConcrete, Inc.
- 2 B & B Roadway
- 3 Uretex USA
- 4 Dow/Poly-Carb
- 5 Jafco Trenchless, Inc.
- 6 Aspen Aerials Inc
- 7 Slatercom
- 8 Coral Sales Company
- 9 The D.S. Brown Company
- 10 Kwik Bond Polymers
- 11 Phoscrete Concretes
- 12 Four Winds Sales Group, Inc.
- 13 American Concrete Cutting
- 14 SPX Hydraulic Technologies
- 15 Jacking Solutions LLC
- 16 Transpo Industries, Inc.
- 17 Terex Hydra Platforms
- 18 N.E. Bridge Contractors, Inc
- 19 Vector Corrosion Technologies
- 20 Hilfiker Retaining Walls
- 21 Safway Services, LLC
- 23 Bridge Access Specialties
- 24 Public Works Supply, Inc
- 25 Watson Bowman ACME
- 26 Williams Form Engineering Corp
- 27 Barriers Northwest, LLC
- 28 Termarust Technologies
- 29 Galvanizers Co.
- 30 Ceramic Cement Corporation



## PEER EXCHANGE SESSION INSTRUCTIONS

A peer exchange gives the maintenance practitioner some time to discuss a topic or topics concerning work they do every day with people they don't work with every day. The tables are set up to be a diverse mix of state and local bridge maintenance personnel as well as vendors. You get out of these sessions what you put in to them so participate. There are questions posed that serve to get the group talking. You do not need to stick with these questions, but we do ask you to stay on topic.

- Each group will consist of 8 to 10 participants per table depending on the size of the audience.
- The first order of business is to introduce yourselves at the table and tell the others what you do, how long you have been doing it and so on. Take some time on this. Part of the goal is to develop a network of people you can call on if you want to know how your peers do certain bridge maintenance activities, what products they use, what they like and dislike about them.
- Each group will have a facilitator to lead and facilitate the discussion.
- Each group will have a scribe to document key discussion points and action items.
- Each group will have a sheet to record notable practices.
- Each group will have two topics to discuss.
- At the end of the discussion there will be a short 5 minute meeting of table captains with Chris Keegan.
- The table captains will turn in their sheets to Chris.
- Chris will ask for volunteers to report on their table discussions.

### Group Facilitator Duties

- 1 Lead the group in discussion.
- 2 Ensure that the discussion stays within the current topic.
- 3 Each Facilitator will provide a summary of their respective group's discussion during the report out session. Following are suggested format of the information to be provided during the report out:
  - a Provide an overview of the main items discussed,
  - b Provide information on the notable and best practices being used,
  - c Provide information on the action items generated by the group (i.e., need for research topics, synthesis, clarifications, technical assistance, etc.)

### Group Scribe Duties

- 1 Record Facilitator name.
- 2 Record names of participants.
- 3 Record bulleted items of the main points of the discussions.
- 4 Record best (notable) practices.
- 5 Record action items generated by the group.

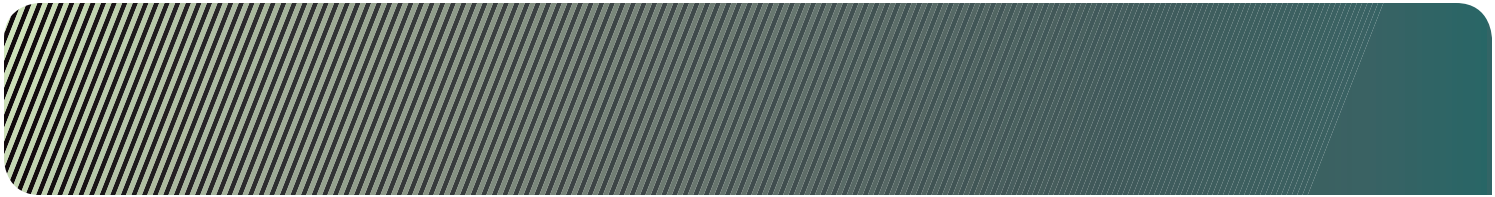


2012 Pacific Northwest

# BRIDGE MAINTENANCE

Conference

## NOTES



## NOTES

A series of horizontal dotted lines for taking notes.



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