

# **International Bridge Conference**

## **(IBC 2013)**

**Pittsburgh, Pennsylvania, USA**  
**2 - 6 June 2013**

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## IBC 2013 Technical Program by Session

### Keynote

Monday, June 3, 2013

Chair: William J. (Jay) Rohleder, Jr., P.E., S.E.  
International Bridge Conference® 2013 General Chair  
FIGG Bridge Engineers, Inc. Exton, PA

#### WELCOME REMARKS "V"

Thomas E. Donatelli, P.E., ESWP President, Michael Baker Jr., Inc., Pittsburgh, PA  
Rich Fitzgerald, Allegheny County Chief Executive, County of Allegheny, Pittsburgh, PA

#### THE WAY FORWARD "V"

Frank DePaola, P.E., MassDOT Highway Administrator, Massachusetts DOT, Boston, MA

#### TRANSPORTATION FINANCE "V"

Barry J. Schoch, P.E., Secretary of Transportation, Commonwealth of Pennsylvania,  
Harrisburg, PA

#### IMPACT OF MAP-21 ON BRIDGES AND TUNNELS "V"

M. Myint Lwin, P.E., S.E., Director, Office of Bridge Technology, FHWA, Washington, DC

#### DESIGN-BUILD PROCUREMENT AND BEST PRACTICES "V"

Michael Flowers, P.E., President and CEO, American Bridge Company, Coraopolis, PA

#### THE FEDERAL ROLE IN TRANSPORTATION "V"

The Honorable Bill Shuster, Chairman, U.S. House Transportation & Infrastructure  
Committee (PA 9<sup>th</sup> District), Hollidaysburg, PA

#### TRANSPORTATION AT A CROSS ROADS-MAP 21 AND BEYOND "V"

Michael P. Lewis, Director, Rhode Island Department of Transportation, 2013 AASHTO  
President, Providence, RI

<b>Featured Agency - Massachusetts Department of Transportation</b>
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Monday, June 3, 2013

Chair: Alex Bardow, P.E., Massachusetts DOT State Bridge Engineer

SUCCESSFULLY IMPLEMENTING INNOVATION, A PRESENTATION INCLUDING  
ACCELERATED BRIDGE CONSTRUCTION CASE STUDIES & LESSONS LEARNED''V °  
Thomas P. Donald, P.E., Director of Bridge Project Management

INNOVATIVE BRIDGE SOLUTIONS IN MASSDOT'S NEW BRIDGE MANUAL''V °  
Alexander K. Bardow, P.E., Massachusetts State Bridge Engineer

COMMUNICATING ABOUT ACCELERATED BRIDGE CONSTRUCTION — CASE STUDIES AND  
RESOURCES''V °  
Eliza Partington, Bridge Technical Coordinator

MANAGING ACCELERATED BRIDGE CONSTRUCTION''V °  
Victoria Sheehan, Accelerated Bridge Program Manager

MASSDOT'S MAJOR PROJECTS''V °  
Joe Pavaio, MassDOT Project Manager

## Proprietary Session

Monday, June 3, 2013

Session Chair: Rachel Stiffler, Vector Corrosion Technologies, McMurray, PA

- IBC 13-01** ACCELERATED RAILROAD BRIDGE CONSTRUCTION TO SUPPORT HISTORICAL TRANSPORTATION MODES'''  
Quentin Rissler, P.E., Larson Design Group, Lititz, PA  
Stephen Weaver, Strasburg Rail Road Company, Strasburg, PA  
Jeffrey Given, P.E., Loftus Construction, Inc., Cinnaminson, NJ  
Kevin Grant, CONTECH Engineered Solutions LLC, Denver, PA
- IBC 13-02** THE QUEST FOR 100 YEAR BRIDGE COATINGS IN JAPAN'''  
Winn Darden, AGC Chemicals Americas, Exton, PA
- IBC 13-04** SCOUR AND SHM ON THE FRONTERA BRIDGE'''  
Stephen Schorn, E.I.T., Advitam Inc., Sterling, VA  
Francois Callewaert, Advitam Inc., Sterling, VA  
Gilles Hovhanessian, Advitam Inc., Sterling, VA
- IBC 13-05** UNDERSTANDING BUCKLING BEHAVIOR AND USING FE IN DESIGN OF STEEL BRIDGES'''  
Stephen Rhodes, Beng, MSc, Ceng, MICE, LUSAS, New York, NY  
Terry Cakebread, BSc(Hons), CEng, MICE, LUSAS, New York, NY
- IBC 13-89** VERIFICATION OF QUALITY AND PERFORMANCE OF MODULAR EXPANSION JOINTS – AMERICA'S LEADING ROLE IN FULL-SCALE PRODUCT TESTING'''  
Thomas Spuler, Mageba SA, Bulach, Switzerland  
Gianni Moor, Mageba USA LLC, New York, NY  
Colm O'Suilleabhain, Mageba SA, Bulach, Switzerland

## Construction, Part 1

Tuesday, June 4, 2013

Session Chair: M. Myint Lwin, P.E., S.E., Federal Highway Administration, Washington, DC

**IBC 13-06** THE INNOVATIVE DESIGN AND CONSTRUCTION OF NEW STEEL TRUSSES WITHIN THE EXISTING ICONIC WASHINGTON AVENUE BRIDGE IN MINNEAPOLIS, MN'''  
John Milius, P.E., AECOM, Philadelphia, PA  
Mike Pamperin, P.E., Ames Construction, Inc., Burnsville, MN

**IBC 13-07** INCREMENTAL LAUNCH METHOD FOR STEEL TRUSS BRIDGE ERECTION'''  
Jerry M. Pfuntner, P.E., S.E., FINLEY Engineering Group, Inc., Tallahassee, FL

**IBC 13-08** NCHRP REPORT 725: RECOMMENDATIONS FOR CURVED AND SKEWED STEEL GIRDER BRIDGE CONSTRUCTION ENGINEERING'''  
Brandon Chavel, Ph.D., P.E., HDR Engineering, Inc., Cleveland, OH  
Domenic Coletti, P.E., HDR Engineering, Inc., Raleigh, NC  
Donald White, Ph.D., Georgia Institute of Technology, Atlanta, GA  
Andres Sanchez, Ph.D., E.I.T., HDR Engineering, Inc, Pittsburgh, PA

**IBC 13-09** INTEGRATED JACKING & SHORING SUPPORT SYSTEM FOR THE REHABILITATION OF ALEXANDER-HAMILTON BRIDGE'''  
Gary M. Dinmore, P.E., Halmar International, LLC, Nanuet, NY  
Genguo Ju, China Construction America, Inc., Jersey City, NJ  
Kaizan Huang, Ph.D., P.E., China Construction America, Inc., Jersey City, NJ  
John Deerkoski, P.E., John S. Deerkoski, P.E. & Associates, Warwick, NY

**IBC 13-10** ALEXANDER HAMILTON BRIDGE REHABILITATION OF APPROACH SPANS SUPERSTRUCTURE'''  
Roger Haight, P.E., Parsons Brinckerhoff, New York, NY  
Gary Dinmore, P.E., Halmar International, Pearl River, NY  
Michael Abrahams, P.E., Parsons Brinckerhoff, New York, NY

**IBC 13-11** MNDOT APPROVED SUPPLIER PROGRAM'''  
Todd Niemann, Minnesota DOT, Oakdale, MN  
Anna Petroski, DOT Quality Services, Chicago, IL  
**NOT AVAILABLE AT TIME OF PUBLICATION**

## Design, Part 1

Tuesday, June 4, 2013

Session Chair: Gerald J. Pitzer, P.E., Consultant, Pittsburgh, PA

- IBC 13-12** THE BENEFITS OF USING SEISMIC ISOLATION BEARINGS ON THE SR 520 WEST APPROACH BRIDGE'''  
Greg Knutson, P.E., S.E., HDR Inc., Seattle, WA
- IBC 13-13** PENNSYLVANIA'S SEGMENTAL BRIDGES''' '''  
William Johnson, IV, P.E., S.E., FIGG, Exton, PA  
Ken Heil, P.E., FIGG, Exton, PA
- IBC 13-14** BRANCHING OUT FROM CONVENTIONAL DESIGN: HARBOURSIDE WEST PEDESTRIAN OVERPASS'''  
Schaun Valdovinos, M.S., P.Eng., Hatch Mott MacDonald, Vancouver, British Columbia, Canada
- IBC 13-15** 800' CONTINUOUS STEEL GIRDER STRUCTURE – CURVED AND FULLY JOINT-LESS'''  
Michael Liona, P.E., Hardesty and Hanover, New York, NY  
Rasmin Kharva, P.E., Hardesty and Hanover, New York, NY  
Zhi Wen, P.E., Hardesty and Hanover, New York, NY
- IBC 13-16** SEISMIC DESIGN OF BRIDGES FOR INCREASED RELIABILITY'''  
Roy Imbsen, Earthquake Protection Systems, Inc., Vallejo, CA  
Anoop Mokha, Earthquake Protection Systems, Inc, Vallejo, CA  
Victor Zayas, Earthquake Protection Systems, Inc., Vallejo, CA  
Stanley Low, Earthquake Protection Systems, Inc., Vallejo, CA
- IBC 13-17** US ROUTE 29 GAINESVILLE, VA INTERCHANGE'''  
Christopher Lowe, P.E., Virginia DOT, Richmond, VA  
Mark Unterkofler, P.E., Dewberry, Inc., Fairfax, VA

## Rehab/Preservation, Part 1

Tuesday, June 4, 2013

Session Chair: Jeremy Shaffer, Ph.D., PMP, Bentley Systems, Incorporated, Pittsburgh, PA

- IBC 13-18** REHABILITATION OF THE PENNDOT STRUCTURES SURROUNDING AMTRAK'S 30TH STREET STATION'''  
Joseph Sullivan, P.E., Ammann & Whitney, Philadelphia, PA  
Joseph L. Sirignano, P.E., Alfred Benesch & Company, Allentown, PA  
David P. Didier, P.E., AECOM, Philadelphia, PA  
Henry Berman, P.E., PennDOT, King of Prussia, PA
- IBC 13-19** WEARING SURFACES FOR ORTHOTROPIC STEEL DECKS IN THE UNITED STATES'''  
Charles Seim, P.E., Consulting Bridge Engineer, El Cerrito, CA
- IBC 13-20** INVESTIGATION AND REPAIR OF THE DIEFENBAKER BRIDGE FRACTURE'''  
Reed M. Ellis, Ph.D., P.E., Stantec Inc., Edmonton, Alberta, Canada  
Robert Connor, Ph.D., P.E., Purdue University, West Lafayette, IN
- IBC 13-21** A BRIDGE INSPECTORS GUIDE TO NDT'''  
Jason Stith, Ph.D., P.E., S.E., Michael Baker Jr., Inc, Louisville, KY  
Michael Baron, P.E., Michael Baker Jr., Inc., Louisville, KY  
George Gorrill, P.E., S.E., Michael Baker Jr., Inc., Chicago, IL
- IBC 13-22** SOUTH STREET BRIDGE RECONSTRUCTION – A MULTI-MODAL LINK TO UNIVERSITY CITY, PHILADELPHIA, PA'''  
Richard Kemper, Gannett Fleming, Inc., Audubon, PA  
William E. Gural, P.E., City of Philadelphia, Philadelphia, PA  
Thomas Piotrowski, AIA, SARP, H2L2, Philadelphia, PA  
Bruce Chamberlin, H2L2, Philadelphia, PA
- IBC 13-23** M2 MOTORWAY UPGRADE, SYDNEY, AUSTRALIA: BRIDGE LENGTHENING, WIDENING AND OTHER MODIFICATIONS UNDER TRAFFIC'''  
Henry E. Ah-Cann, Ph.D., B.E., MIEAust, AECOM Australia, Sydney, New South Wales, Australia  
Darrell Meyers, B.E., MIEAust, NPER3, MIABSE, AECOM Australia, Sydney, New South Wales, Australia



## Evaluation & Analysis, Part 1

Tuesday, June 4, 2013

Session Chair: Kenneth J. Wright, P.E., HDR Engineering, Inc., Pittsburgh, PA

- IBC 13-24** IMPROVED ANALYSIS OF STEEL I-GIRDER BRIDGES USING 2D-GRID MODELS'''  
Andres Sanchez, Ph.D., HDR Engineering, Inc., Pittsburgh, PA  
Donald White, Ph.D., Georgia Institute of Technology, Atlanta, GA
- IBC 13-25** EXPERIMENTAL EVALUATION OF HYBRID FRP-CONCRETE BRIDGE TRUSS GIRDERS OF DIFFERENT SPANS'''  
Mamdouh El-Badry, Ph.D., P.Eng., University of Calgary, Calgary, Alberta, Canada  
Mohammad Hadi Aghahassani, University of Calgary, Calgary, Alberta, Canada  
Mohammad Hossein Moravvej Hamedani, University of Calgary, Calgary, Canada  
**NOT AVAILABLE AT TIME OF PUBLICATION**
- IBC 13-26** LOAD RATING ANALYSIS OF THE HISTORIC ALBERTUS L. MEYERS BRIDGE'''  
Eric Martz, P.E., KCI Technologies, Mechanicsburg, PA  
James McGee, P.E., PennDOT, Allentown, PA  
Richard Schoedel, P.E., Michael Baker Jr., Inc., Moon Township, PA
- IBC 13-27** -†° Qy° u@V\7O° ) k° u@8" ' O° ) °° V) k-ou° V#- 7° #u\k k° u@8'''  
Wagdy Wassef, Ph.D., P.E., Modjeski and Masters, Inc., Mechanicsburg, PA  
Vanessa Storlie, E.I.T., Modjeski and Masters, Inc., Mechanicsburg, PA  
Mark Mlynarski, P.E., Michael Baker Corporation, Moon Township, PA
- IBC 13-28** A PROPOSED MARKUP LANGUAGE FOR FINITE ELEMENT ANALYSIS DATA EXCHANGE'''  
Lubin Gao, Ph.D., P.E., FHWA, Washington, DC  
M. Myint Lwin, P.E., S.E., FHWA, Washington, DC
- IBC 13-29** RE-EVALUATING THE EFFECT OF CONNECTION LENGTH IN RIVETED STEEL CONNECTIONS'''  
Bo-Shiuan Wang, Ph.D., University of Washington, Seattle, WA  
Jeffrey W. Berman, Ph.D., University of Washington, Seattle, WA  
Saura Jost, E.I.T., Meyer Borgman Johnson, Minneapolis, MN  
Charles W. Roeder, Ph.D., P.E., University of Washington, Seattle, WA  
Dawn E. Lehman, Ph.D., University of Washington, Seattle, WA

## Rail

Tuesday, June 4, 2013

Session Chair: James Dwyer, Advanced Rail Management Corporation, Wexford, PA

- IBC 13-30** I-90 TRACK BRIDGE – THE CHALLENGE OF TAKING LIGHT RAIL VEHICLES ON TO THE HOMER M. HADLEY FLOATING BRIDGE'''  
Thomas Cooper, P.E., P.Eng., Parsons Brinckerhoff, Denver, CO  
Andy Foan, BSc, C.Eng., FIMechE, FPWI, Andy Foan, LTD, Sandiacre, Nottingham, UK  
Travis Thornstad, University of Washington, Seattle, WA
- IBC 13-32** REPLACEMENT OF THE BNSF APPROACH SPANS OVER THE MISSISSIPPI RIVER'''  
David Rogowski, P.E., Genesis Structures, Kansas City, MO  
Josh Crain, Genesis Structures, Kansas City, MO  
Kevin Becker, Walsh Construction Company, Chicago, IL
- IBC 13-33** FOUNDATION DESIGN AND CONSTRUCTION CHALLENGES OF 100-YEAR OLD SAUGUS RIVER RAILROAD BRIDGE EMERGENCY REHABILITATION'''  
Aravinda Ramakrishna, P.E., Hardesty & Hanover, LLC, West Trenton, NJ  
Andrew Coates, P.E., Hardesty & Hanover, LLC, New York, NY  
Raymond Mankbadi, P.E., Hardesty & Hanover, LLC, West Trenton, NJ
- IBC 13-34** DETAILED ENGINEERING FACILITATES RAPID CONSTRUCTION OF HYBRID ROAD/RAIL GRADE SEPARATION IN TIGHTLY CONSTRAINED URBAN SETTING WITHOUT INTERRUPTION TO ROAD OR RAIL TRAFFIC'''  
John Stephenson, M.Eng., P.Eng., P.E., Region of Waterloo, Kitchener, Ontario, Canada  
Peter Johnson, P.Eng., AECOM, Mississauga, Ontario, Canada  
Ted Brumfitt, P.Eng., IBI Group, Toronto, Ontario, Canada  
Michael Sampson, IBI Group, Waterloo, Ontario, Canada

## Long Span

Tuesday, June 4, 2013

Session Chair: Herbert M. Mandel, P.E., GAI Consultants, Inc., Homestead, PA

- IBC 13-35** HIGHWAY 61 MISSISSIPPI RIVER BRIDGE DESIGN & CONSTRUCTION'''  
David Dahlberg, P.E., Minnesota DOT, Oakdale, MN  
Todd Niemann, P.E., Minnesota DOT, Oakdale, MN  
Nancy Daubenberger, P.E., Minnesota DOT, Oakdale, MN
- IBC 13-36** CONTRACTOR PROPOSED DESIGN AND VECP CHANGES – IRONTON RUSSELL  
CABLE-STAYED BRIDGE OVER THE OHIO RIVER'''  
Craig Finley, Jr., P.E., FINLEY Engineering Group, Inc., Tallahassee, FL  
Thomas M. Hesmond, P.E., Brayman Construction Corporation, Ironton, OH
- IBC 13-37** COMPLETE STAY CABLE REPLACEMENT FOR THE LULING BRIDGE, FIRST OF ITS KIND IN  
NORTH AMERICA'''  
Armin Mehrabi, Ph.D., P.E., MBA, Bridge Engineering Solutions, Lewiston, NY  
Paul Fossier, Louisiana DOT and Development, Baton Rouge, LA
- IBC 13-38** KATUN RIVER BRIDGE - DEVELOPMENT OF AERODYNAMIC SOLUTIONS TO CONTROL  
VORTEX-SHEDDING, GALLOPING AND FLUTTER'''  
Pierre-Olivier Dallaire, M.A.Sc., ing., RWDI, Bromont, Québec, Canada  
Stoyan Stoyanoff, Ph.D., ing., P.Eng., RWDI, Bromont, Québec, Canada  
Evgenii Timofeev, Transmost, Saint Petersburg, Russia  
Vladimir Verholina, Transmost, Saint Petersburg, Russia
- IBC 13-39** COMPARISON OF LONG-SPAN GIRDER BRIDGES VERSUS EXTRADOSED BRIDGES BUILT IN  
BALANCED CANTILEVER'''  
Juan Sobrino, Ph.D., P.E., P.Eng., PEDELTA Inc., Coral Gables, FL  
Javier Jordan, P.E., PEDELTA Inc., Coral Gables, FL

## Testing & Instrumentation

Tuesday, June 4, 2013

Session Chair: Donald W. Herbert, P.E., Pennsylvania Dept. of Transportation, Uniontown, PA

- IBC 13-40** DEMONSTRATION OF FIBER OPTIC INSTRUMENTATION SYSTEM FOR PRESTRESSED CONCRETE BRIDGE ELEMENTS'''  
Kent Harries, Ph.D., F.ACI, P.Eng., University of Pittsburgh, Pittsburgh, PA  
Andrew Holford, exp Global Inc., Kitchener, Ontario, Canada  
David F. Stevens, STRAEN Inc, Chicago, IL
- IBC 13-42** FIELD MEASUREMENTS OF PA ROUTE 30 WRIGHTS FERRY BRIDGE DURING PASSAGE OF SUPER LOAD'''  
Sougata Roy, Ph.D., Lehigh University, Bethlehem, PA  
**NOT AVAILABLE AT TIME OF PUBLICATION**
- IBC 13-43** DEVELOPMENT OF VIRTUAL BRIDGE INSPECTION COMPUTER BASED TRAINING'''  
Mary Rosick, P.E., Michael Baker Jr., Inc., Moon Township, PA  
Douglas Blades, P.E., FHWA, Washington, DC  
Thomas Ryan, P.E., Michael Baker Jr., Inc., Moon Township, PA  
Eric Mann, P.E., Michael Baker Jr., Inc., Moon Township, PA
- IBC 13-44** USE OF INSTRUMENTATION TO QUANTIFY DYNAMIC MOVEMENTS OF BRIDGE SUBSTRUCTURES'''  
Matthew Pavelchak, Walter P Moore and Associates, Houston, TX  
Mark Williams, Ph.D., P.E., S.E., Walter P Moore and Associates, Houston, TX

## Rehab/Preservation, Part 2

Tuesday, June 4, 2013

Session Chair: Matthew P. McTish, P.E., McTish, Kunkel & Associates, Allentown, PA

- IBC 13-45** TIE-DOWN REPLACEMENT FOR WEIRTON-STEUBENVILLE VETERANS MEMORIAL BRIDGE \*\*\*  
Gregor Wollmann, Ph.D., P.E., HNTB, Blacksburg, VA  
James D. Simpson, P.E., HNTB, Scott Depot, WV  
Rober L. Blosser, P.E., WVDOH, Charleston, WV
- IBC 13-46** EXTERNAL POST-TENSIONING OF EXISTING STEEL BRIDGES \*\*\*  
Clyde Ellis, VSL, Haute Court, VA
- IBC 13-47** ROUTE US 190 MISSISSIPPI RIVER BRIDGE REHABILITATION DESIGN, CLEANING, AND PAINTING \*\*\*  
John Richard, P.E., TRC Engineers, Inc., Baton Rouge, LA  
Durk Krone, P.E., TRC Engineers, Inc., Baton Rouge, LA  
Chris Guidry, P.E., Louisiana DOT and Development, Baton Rouge, LA
- IBC 13-48** MAJOR BRIDGE REHABILITATION USING DESIGN-BUILD DELIVERY \*\*\*  
Matthew Lengyel, P.E., S.E., David Evans & Associates, Inc., Olympia, WA
- IBC 13-49** DETERIORATION OF WEATHERING STEEL BOX CHORD MEMBERS OF THE NEWBURGH-BEACON BRIDGE - SOUTH SPAN \*\*\*  
Thomas Cole, P.E., Modjeski and Masters, Inc., Poughkeepsie, NY  
William Moreau, P.E., New York State Bridge Authority, Highland, NY

## ABC, Part 1

Wednesday, June 5, 2013

Session Chair: Ronald D. Medlock, P.E., High Steel Structures, Inc., Lancaster, PA

**IBC 13-50 & 51** MILTON MADISON BRIDGE: DESIGN AND PROCUREMENT INITIATIVES BRING COST BENEFITS AND MINIMIZE TRAFFIC INTERRUPTION'''

Nedim Alca, P.E., Buckland & Taylor, Ltd., North Vancouver, British Columbia, Canada

Tom Bolte, P.E., Burgess & Niple, Inc., Columbus, OH

Murray Johnson, P.Eng., Buckland & Taylor Ltd., North Vancouver, British Columbia, Canada

Peter Taylor, P.E., Buckland & Taylor Ltd., North Vancouver, British Columbia, Canada

Brian Hoppel, P.E., Walsh Construction Company, LaPorte, IN

Douglas Vanslambrook, P.E., Walsh Construction Company, Chicago, IL

Aaron Stover, P.E., S.E., Michael Baker Jr., Inc., Louisville, KY

Terrence Tiberio, P.E., Michael Baker Jr., Inc., Louisville, KY

**IBC 13-52** DESIGN AND CONSTRUCTION OF THE BRONCO ARCH BRIDGE'''

Gregg Reese, Summit Engineering Group, Inc., Littleton, CO

**IBC 13-53** RAPID BRIDGE REPLACEMENTS USING LATERAL SLIDES'''

Jeffrey Smith, P.Eng., McCormick Rankin, Mississauga, Ontario, Canada

Matthew Bowser, P.Eng., McCormick Rankin, Mississauga, Ontario, Canada

James Sherlock, P.Eng., McCormick Rankin, Mississauga, Ontario, Canada

**IBC 13-54** RAPID REPLACEMENT OF US 6 BRIDGE OVER KEG CREEK'''

Bala Sivakumar, HNTB Corp, New York, NY

**IBC 13-55** PRECAST INTEGRAL ABUTMENTS AND SUPERSTRUCTURE BRIDGE: A MASSDOT ABC CASE STUDY'''

Yihui Wu, P.E., CDR Maguire Inc., Providence, RI

Thomas Donald, P.E., Massachusetts DOT, Boston, MA

Morteza Tayarani, P.E., Massachusetts DOT, Boston, MA

Brian Guzas, P.E., CDR Maguire Inc., Providence, RI

## Construction, Part 2

Wednesday, June 5, 2013

Conference Session Chair: Lisle E. Williams, P.E., PLS, Consultant, Pittsburgh, PA

Pre-Conference Session Chair: Calvin Boring Jr., Trumbull Corporation, Pittsburgh, PA

**IBC 13-56**      MULTI-FACETED CONSTRUCTION PROJECT: A UNIQUE APPROACH TO SUPPORTING CONSTRUCTION PHASE SERVICES'''

Christopher Hylas, P.E., H.W. Lochner, Inc., Rocky Hill, CT

Dean A. Bagdasarian, P.E., H.W. Lochner, Inc., Rocky Hill, CT

Roy Merritt, P.E., H.W. Lochner, Inc., New Haven, CT

Mathew Briggs, Connecticut DOT, New Haven, CT

Ghazi Alsaqri, Connecticut DOT, New Haven, CT

**IBC 13-57**      CONSTRUCTION OF THE Q-BRIDGE: NEW HAVEN'S EXTRADOSED CABLE-STAYED SIGNATURE BRIDGE'''

Wade Bonzon, P.E., FIGG, New Haven, CT

John Dunham, P.E., Connecticut DOT, New Haven, CT

**IBC 13-58**      UNCONVENTIONAL GIRDER ERECTION ON THE MOSES WHEELER BRIDGE'''

Douglas Whittaker, McNary Bergeron and Associates, Old Saybrook, CT

Joseph Zwain, PCL Civil Constructors, Inc., Tampa, FL

**IBC 13-59**      CONSTRUCTION OF THE US 281 BRIDGES OVER THE COLORADO RIVER'''

Robert A. Alonso, P.E., S.E., FINLEY Engineering Group, Inc., Orlando, FL

Eric Hiemke, Archer Western Contractors, Marble Falls, TX

**IBC 13-60**      TRI-LEVEL INTERCHANGE'''

Amish Bhatt, AECOM, Chicago, IL

Dan Manojlovski, P.E., AECOM, Chicago, IL

## Design, Part 2

Wednesday, June 5, 2013

Session Chair: William J. (Jay) Rohleder, Jr., P.E., S.E., FIGG Bridge Engineers, Inc. Exton, PA

- IBC 13-62** BRIDGING FROM LAND TO LIGHT'''  
Tammy Heffron, P.E., HDR Engineering, Inc., Denver, CO  
Darin Freeman, P.E., HDR Engineering, Inc., Denver, CO
- IBC 13-63** CHALLENGES OF DESIGNING AND BUILDING BRIDGES IN ALASKA'''  
Leslie Daugherty, P.E., Alaska DOT & Public Facilities, Juneau, AK
- IBC 13-64** INTEGRATING CULTURAL SYMBOLISM INTO BRIDGE DESIGN'''  
Schaun Valdovinos, M.S., P.Eng., Hatch Mott MacDonald, Vancouver, Canada
- IBC 13-65** DESIGN AND CONSTRUCTION OF THE RICH STREET BRIDGE IN COLUMBUS, OH'''  
Frederick Gottemoeller, P.E., AIA, Bridgescape, LLC, Columbia, MD  
John Shanks, P.E., Burgess and Niple, Columbus, OH  
Travis Butz, P.E., Burgess and Niple, Columbus, OH
- IBC 13-66** PERMANENT JACKING AND LENGTHENING OF TWIN STEEL BOX GIRDER BRIDGE'''  
Simon Simon, P.E., Stantec, Laurel, MD  
Fred Ochoa, P.E., Florida DOT, Fort Lauderdale, FL  
Missak Sisserian, P.E., Stantec, Mechanicsburg, PA
- IBC 13-67** COST-EFFECTIVE WELDED CONNECTIONS FOR A MOVABLE BRIDGE ORTHOTROPIC DECK'''  
Sougata Roy, Ph.D., Lehigh University, Bethlehem, PA  
Xudong Zhao, Lehigh University, Bethlehem, PA  
Soham Mukherjee, Lehigh University, Bethlehem, PA  
Ronald Medlock, P.E., High Steel Structures, Inc., Lancaster, PA  
**NOT AVAILABLE AT TIME OF PUBLICATION**



## Evaluation & Analysis, Part 2

Wednesday, June 5, 2013

Session Chair: John C. Dietrick, P.E., S.E., Michael Baker Jr., Inc., Cleveland, OH

- IBC 13-68**      3D ANALYSIS AND STRUCTURE REHABILITATION OF TDOT'S SR56 DECK TRUSS OVER CANEY FORK RIVER'''  
Todd Stephens, E.I.T., Modjeski and Masters, Inc., Mechanicsburg, PA  
Adnan Kurtovic, P.E., Modjeski and Masters, Inc., Mechanicsburg, PA  
Michael Irwin, P.E., Modjeski and Masters, Inc., Mechanicsburg, PA  
Edward Wasserman, P.E., Modjeski and Masters, Inc., Nashville, TN  
John Kulicki, Ph.D., P.E., S.E., Modjeski and Masters, Inc., Mechanicsburg, PA
- IBC 13-70**      LOAD RATING STEEL BOX GIRDER BRIDGES WITH LRFR: SPECIAL CONSIDERATIONS'''  
Lubin Gao, Ph.D., P.E., FHWA, Washington, DC
- IBC 13-71**      ESTIMATION OF THE MAXIMUM VON MISES STRESS IN STEEL TRUSS BRIDGE GUSSET PLATE CONNECTIONS'''  
Bo-Shiuan Wang, Ph.D., University of Washington, Seattle, WA  
Jeffrey W. Berman, Ph.D., University of Washington, Seattle, WA  
Charles W. Roeder, Ph.D., University of Washington, Seattle, WA  
Dawn E. Lehman, Ph.D., University of Washington, Seattle, WA
- IBC 13-72**      QUICK SCAN METHOD - DUTCH APPROACH FOR THE SHEAR ASSESSMENT OF REINFORCED CONCRETE SLAB BRIDGES'''  
Eva Lantsoght, Delft University of Technology, Delft, The Netherlands  
Cor van der Veen, Ph.D., Delft University of Technology, Delft, The Netherlands  
Joost Walraven, Ph.D., Delft University of Technology, Delft, The Netherlands  
Ane de Boer, Ph.D., Ministry of Infrastructure and the Environment, Utrecht, The Netherlands
- IBC 13-73**      INFLUENCE LINE BASED LOAD RATINGS FOR OKLAHOMA DOT TRUCK ROUTING AND PERMITTING'''  
Rachel Sharp, P.E., Michael Baker Jr., Inc., Moon Township, PA  
William Edberg, Ph.D., P.E., HNTB Corporation, Boston, MA  
Kenneth Wilson, P.E., S.E., Michael Baker Jr., Inc., Moon Township, PA  
Wes Kellogg, P.E., Oklahoma DOT, Oklahoma City, OK

## ABC, Part 2

Wednesday, June 5, 2013

Session Chair: Louis J. Ruzzi, P.E., Pennsylvania Dept. of Transportation, Bridgeville, PA

- IBC 13-74**      A SHORT-SPAN TIED ARCH BRIDGE'''  
Robert Hong, P.E., S.E., P.Eng., H.W. Lochner Inc., Chicago, IL  
Soliman Khudeira, Ph.D., P.E., S.E., Chicago DOT, Chicago, IL
- IBC 13-75**      CONSTRUCTION AND MOVEMENT OF THE TORRENCE AVENUE TRUSS BRIDGE'''  
John Boschert, P.E., S.E., Genesis Structures, Kansas City, MO  
Damian Gronsky, P.E., Sarens / Rigging International, Alameda, CA  
Curtis Luecke, P.E., Walsh Construction, Chicago, IL  
Leonard Kapovich, S & J Construction Co. Inc., South Holland, IL
- IBC 13-76**      EGGNER'S FERRY BRIDGE: INNOVATIVE APPROACH TO THE EMERGENCY REPLACEMENT  
OF A VITAL CROSSING OVER KENTUCKY LAKE'''  
Chou-Yu Yong, P.E., Michael Baker Jr., Inc., Louisville, KY  
Terrence Tiberio, P.E., Michael Baker Jr., Inc., Louisville, KY  
Jason Stith, Ph.D., P.E., S.E., Michael Baker Jr., Inc., Louisville, KY  
Dennis Baron, P.E., Michael Baker Jr., Inc., Louisville, KY
- IBC 13-77**      ALTERATION OF GALVESTON CAUSEWAY RAILROAD BRIDGE OVER THE GULF  
INTRACOASTAL WATERWAY, GALVESTON, TX'''  
Kamal Elnahal, Ph.D., P.E., U.S. Coast Guard, Washington, DC  
Arvind Patel, P.E., PMP, U.S. Coast Guard, Washington, DC  
Ralph Eppehimer, P.E., Modjeski & Masters, New Orleans, LA
- IBC 13-78**      IMPLICATIONS OF THE FUNDING GAP: A NEW LOOK AT EFFICIENCIES'''  
David Cook, STRAEN, Inc, Chicago, IL  
**NOT AVAILABLE AT TIME OF PUBLICATION**

## Foundations

Wednesday, June 5, 2013

Session Chair: Richard L. Connors, P.E., PMP, Bureau Veritas North America, Inc., Pittsburgh, PA

- IBC 13-79** APPLICATION OF GRS-IBS BRIDGE DESIGN IN MASSACHUSETTS \*\*\*  
Thomas Pechillo, P.E., Collins Engineers, Inc., Dedham, MA  
Richard Tobin, P.E., GEI Consultants, Inc., Woburn, MA
- IBC 13-81** NON-DESTRUCTIVE TESTING OF DRILLED SHAFTS - CURRENT PRACTICE AND A NEW METHOD \*\*\*  
George Piscsalko, P.E., Pile Dynamics, Inc., Solon, OH  
Garland Likins, P.E., Pile Dynamics, Inc., Solon, OH  
Ben White, P.E., GRL Engineers, Solon, OH
- IBC 13-82** FORT STREET BRIDGE OVER THE ROUGE RIVER, MOVABLE BRIDGE – MOVABLE FOUNDATION \*\*  
Jeff Routson, P.E., S.E., F.ASCE, Hardesty & Hanover, Okemos, MI  
Jose Garcia, P.E., Michigan DOT, Lansing, MI  
Rick Wianecki, P.E., Hardesty & Hanover, Okemos, MI  
Anne Zweibel, P.E., Hardesty & Hanover, Defiance, OH
- IBC 13-83** FULL SCALE TEST PROGRAM FOR SUPPORT OF MSE WALLS USING RIGID INCLUSIONS / CONTROLLED MODULUS COLUMNS IN NEW JERSEY \*\*\*  
Frederic Masse, DGI-MENARD, Bridgeville, PA  
Alex Potter-Weight, DGI-MENARD, Pittsburgh, PA  
Sherif Aziz, The Reinforced Earth Company, Vienna, VA  
Mike Walker, GEI Consultants, Woburn, MA

## Rehab/Preservation, Part 3

Wednesday, June 5, 2013

Session Chair: Stephen G. Shanley, P.E., Allegheny County, Department of Public Works, Pittsburgh, PA

- IBC 13-03** LIGHT, SOLID-SURFACE DECKING FOR HISTORIC AND MOVEABLE BRIDGES'''  
Maria Lopez de Murphy, Ph.D., Penn State University, University Park, PA  
Amjad Aref, Ph.D., University at Buffalo, Buffalo, NY  
Stephen Ayers, Ph.D., P.E., LeTourneau University, Longview, TX  
Jerome O'Connor, P.E., BridgeComposites, LLC, Hornell, NY
- IBC 13-84** REHABILITATION OF THE HISTORIC RIEGELSVILLE SUSPENSION BRIDGE'''  
Joseph Riley, P.E., M.ASCE, Ammann & Whitney, Inc., Philadelphia, PA  
Ron Lamb, P.E., Pickering, Corts & Summerson, Inc., Newtown, PA  
Kevin Skeels, P.E., Delaware River Joint Toll Bridge Commission, Morrisville, PA
- IBC 13-85** EXTENDING THE SERVICE LIFE OF BRIDGES USING SEAMLESS PAVEMENTS'''  
Steve Griffiths, AECOM Australia, Sydney, New South Wales, Australia  
Geoff Bowmaker, AECOM Australia, Beecroft, New South Wales, Australia
- IBC 13-87** RECONSTRUCTION OF THE NEW JERSEY TURNPIKE AUTHORITY'S EASTERLY HACKENSACK RIVER BRIDGE'''  
Richard Schaefer, P.E., HNTB, Inc., Parsippany, NJ  
S. Andrew Kamilaris, P.E., Dewberry Engineers, Inc., Bloomfield, NJ  
Kevin Healy, P.E., New Jersey Turnpike Authority, Woodbridge, NJ