

DAVID B. WOODHAM, P.E.

Education: BSCE, University of Colorado, 1985  
MSCE, University of Colorado, 1993

Position: Principal, Atkinson-Noland & Associates, Inc., Boulder, Colorado

Mr. Woodham is vice president at Atkinson-Noland & Associates in Boulder, Colorado, a consulting engineering firm specializing in evaluation and repair of existing structures. He has worked on numerous research projects in the field of nondestructive testing of civil structures. Past work includes projects with the University of Colorado at Boulder, University of Colorado at Denver, Colorado State University, Colorado Department of Transportation, the Nuclear Regulatory Commission, and the Federal Highway Administration

Mr. Woodham received a Bachelor of Science Degree from the University of Colorado at Boulder in Architectural Engineering and Master of Science Degree from the University of Colorado at Denver in Civil Engineering. He has published or co-authored numerous papers relating to instrumentation of experimental structures, structural behavior of bridge components, corrosion detection in structures, nondestructive evaluation of structures, and evaluation methods for existing buildings.

He has served on the organizational committee of the Third Conference on Nondestructive Evaluation of Civil Structures and Materials held in September of 1996, in Boulder, Colorado and is a coeditor of the proceedings for this conference.

Mr. Woodham is a registered professional engineer in Colorado, New York, Wyoming, New Mexico and Virginia. He is a recipient of a Graduate Research Fellowship presented by the Federal Highway Administration in 1991 for conducting research in nondestructive methods to determine residual stress in bridge steel. Mr. Woodham and his co-authors were presented the Arthur M. Wellington Prize in 1997 by the American Society of Civil Engineers (ASCE) for the best structural engineering paper in the transportation field. Previous industry experience includes employment with the Research Department at the Colorado Department of Transportation, and as a graduate research assistant in civil engineering at the University of Colorado at Denver.

## DAVID B. WOODHAM

### Professional Registrations

Registered Professional Engineer, State of Colorado, No. 27218  
Registered Professional Engineer, State of New York, No. 082589  
Registered Professional Engineer, Commonwealth of Virginia, No. 38055  
Registered Professional Engineer, State of Wyoming, No. 11235  
Registered Professional Engineer, New Mexico, No. 20439

### Membership in the following organizations:

Colorado Preservation Incorporated  
National Trust for Historic Preservation  
Rocky Mountain Masonry Institute  
Historic Boulder  
The Masonry Society  
The International Masonry Society

### Active on the following committees:

Masonry Standards Joint Committee, Prestressed Masonry Subcommittee  
Masonry Standards Joint Committee, Masonry Infills Subcommittee  
The Rocky Mountain Masonry Institute, Technical Advisory Committee

### Professional Awards

1997: Arthur M. Wellington Prize from the American Society of Civil Engineers, for the best structural engineering paper in the transportation field: L. Cao, J.H. Allen, P.B. Shing, D. Woodham, "Behavior of RC Bridge Decks with Flexible Girders," Journal of Structural Engineering, American Society of Civil Engineers, Vol. 122, No. 1, January, 1996.

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### Partial Listing of Publications

1. "Water Vapor Transmission Rates in Common Masonry Construction" (with A. Geister), 11<sup>th</sup> North American Masonry Conference, Minneapolis, Minnesota, 2011.
2. "Improved Load Rating Procedures for Masonry Arch Bridges" (with C. Citto and S. Aschermann), 8<sup>th</sup> International Masonry Conference, Dresden, 2010.
3. "Masonry Construction in Cold Weather" (with M.P. Schuller), Concrete International, November, 2005.
4. "Monitoring Prestress Losses in Post-Tensioned Concrete Masonry" (with H.R. Hamilton III), 9<sup>th</sup> North American Masonry Conference, Clemson, South Carolina, 2003.
5. "Development of a Flexible Flatjack for Quantitative Evaluation of Masonry" (with M.P. Schuller), 9<sup>th</sup> North American Masonry Conference, Clemson, South Carolina, 2003.
6. "Using Infrared Imaging to Evaluate Masonry", Masonry Construction, 15, No. 4, 2002, p. 25-26, 28.
7. "Strengthening a Stone Arch Bridge", Structural Engineer, May 2000.
8. "Evaluation of Inaccessible Elements of a Cathedral using Ground Penetrating Radar" (with L.B. Conyers), 12<sup>th</sup> International Brick and Block Masonry Conference, Madrid, Spain, June, 2000.
9. "Concrete Characterization Using Acoustic Tomography" (with M.P. Schuller), Fall Convention, American Concrete Institute, Los Angeles, October 1998.
10. "Advanced Concepts for Masonry Reinforcement," (with Robert S.K. van der Hoeven and M.P. Schuller), 8<sup>th</sup> Canadian Masonry Symposium, Jasper, Alberta, Canada, June 1998.
11. "Characterization of Concrete Condition Using Acoustic Tomographic Imaging", (with M.P. Schuller), Phase II SBIR Report, U.S. Nuclear Regulatory Commission NUREG/CR-6518, July 1997.
12. "Evaluating Structural Damage and Deterioration Using Tomographic Velocity Reconstruction," (with M.P. Schuller), Proceedings of a Workshop on Structural Reliability in Bridge Engineering, University of Colorado, Boulder, October 1996.
13. "Material Characterization Using Tomographic Velocity Reconstructions," (with M. Schuller and R.S.K. van der Hoeven), Proceedings, 3<sup>rd</sup> Conference on Nondestructive Evaluation of Civil Structures and Materials, Boulder, Colorado, September 1996.
14. Proceedings, Conference on Nondestructive Evaluation of Civil Structures and Materials, (Co-Editor with M. Schuller), Boulder, Colorado, September 1996.
15. "Case Study of Concrete Bridge Deck Behavior Without Top Reinforcing Bars," (with Li Cao, P. Benson Shing, and J. Allen), Proceedings, Fourth International Bridge Engineering Conference, San Francisco, California, August 1995.
16. "A Case Study of Concrete Deck Behavior in a Four-Span Prestressed Girder Bridge: Correlation of Field Test Numerical Results," (with Li Cao, P. Benson Shing, and J. Allen), Report CDOT-DTD-UCB-94-8, Colorado Department of Transportation, September 1994.



7. Michael Schneider v. Vogelman West Associates, Inc.  
District Court, Eagle County, Colorado Case No. 2002 CV 0739  
May 2004  
For the defendant in a claim of defective installation of a natural stone floor. Served as expert witness for defendant's council.
8. Farmington Casualty Company v. Duggan,  
U.S. District Court Case No. 02 X 1205 (CBS)  
March 2004  
For the defendant in a claim regarding defective workmanship and design. Served as expert witness for defendant's council.
9. Rick Duggan v. Masonry Designs, et al  
Denver, Colorado  
January 1999 to July 2002  
For the plaintiff on a claim regarding defective workmanship and design and subsequent failure of the masonry building. Services included non-destructive testing of remaining concrete masonry walls and documentation of defects within the walls. Served as expert witness for plaintiff's council.