

October 1, 2011

VITA

PERSONAL

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BIRTHDATE: October 27, 1943

BIRTHPLACE: Lexington, KY

MARITAL STATUS: Married, 2 *children*

CITIZENSHIP: U.S.

EDUCATION

Ph.D., Texas A&M University, 1971
M.S. in Civil Engineering, University of Kentucky, 1967
B.S. in Civil Engineering, University of Kentucky, 1966

PROFESSIONAL EMPLOYMENT

Professor of Civil Engineering, University of Kentucky, 1988-present

Associate Professor of Civil Engineering, University of Kentucky, 1977-1988

Assistant Professor of Civil Engineering, University of Kentucky, 1971-1977

Research Engineer, Kentucky Department of Highways, Division of Research, 1971,
Summer 1972

Research Assistant in Civil Engineering, Texas A&M University, *sponsored* by the
Federal Highway Administration and the Texas Highway Department through the Texas
Transportation Institute, 1969-1970

Research Engineer, Gripstop Corporation, Brownsville, Kentucky, 1968

Research Assistant in Civil Engineering, University of Kentucky, *sponsored* by the Gripstop Corporation, 1966-1967

PROFESSIONAL ACTIVITIES

Professional Engineer in the branch of Civil Engineering, Commonwealth of Kentucky Reg. No. 7558, dated July, 1970
American Society of Civil Engineers, Affiliate Member
Transportation Research Board of the National Academy of Sciences, Individual Associate Member
The Association of Asphalt Paving Technologists, Active Member
American Railway Engineering and Maintenance of Way Association, Member
Chi Epsilon National Honorary Civil Engineering Fraternity, Member
Examination Staff, Commonwealth of Kentucky State Board of Registration for Professional Engineers and Land Surveyors, 1971-1985
Instructor, Refresher Course for Professional Engineering, Office of Continuing Education, University of Kentucky, 1972-1985
Paper Reviews, ASCE Highway Division, 1978-1986

AWARDS AND HONORS

Industry Achievement Award, National Asphalt Pavement Association, 1982
Howard Roberts Special Service Award, Kentucky Ready Mixed Concrete Association, 1990
Distinguished Service Award, Asphalt Institute, 1990

AREA OF RESEARCH SPECIALIZATION

Transportation Engineering with emphasis on Railway Engineering
Civil Engineering Construction Materials & Construction Methodology

PROPOSALS UNDER REVIEW

Principal Investigator, 2012-2013, Continuation of Project 5-39848, Norfolk Southern Railroad Engineering Program, sponsored by Norfolk Southern Corp., \$30,000.

Principal Investigator, 2011-2013, Continuation of Project 4-4-68111, Developing a Recommended Standard for Highway/Railway At-Grade Crossing Management Practices, sponsored by Kentucky Transportation Cabinet, \$85,109.

GRANTS AND CONTRACTS

Principal Investigator, 2011-continuing, Project 5-50178, BNSF Railway Educational Enhancement, sponsored by BNSF Railway Co., \$10,000.

Principal Investigator, 2010-2011, Project 5-39848, Norfolk Southern Railroad Engineering Program, sponsored by Norfolk Southern Corp., \$20,000.

Principal Investigator, 2010-2013, Project 3038107859 (FRT 183), Optimizing Highway/Railway At-Grade Crossing Management Practices, sponsored by Kentucky Transportation Cabinet, \$50,000.

Principal Investigator, 2005-continuing, Project 5-38744, "Railroad Engineering Advancement," sponsored by G.N. Nichols, \$61,386.

Principal Investigator, 2004-2009, Project 4-68111, "Optimum Design and Installation Practices and Performance Evaluations for Highway-Railway At-Grade Crossings," sponsored by Kentucky Transportation Cabinet, \$189,047.

Principal Investigator, 2002-2007, Project 4-65772, "Heavy-Haul Railroad Trackbed Evaluations and Design Practice Optimization" sponsored by CSX Transportation, \$120,000.

Co-Principal Investigator, 2000, Project 4-63659, "Asphalt Trackbed Tests and Performance Evaluations" sponsored by the Association of American Railroads Transportation Technology Center, \$29,639.

Principal Investigator, 1996-2002, Project 5-36944, "CSX Railroad Engineering Education Support" sponsored by CSX Transportation, \$330,000.

Principal Investigator, 1993-95, Project KTC 4-32636 & 4-32890, "Evaluation of Superior Performing Portland Cement Concrete Pavements in KY" sponsored by the Kentucky Transportation Cabinet, \$112,300,

Principal Investigator, 1994-95, Project KTC 4-32904, "Effect of Ballast Size Along Railroad Trackbeds and Walkways on the Safety of Railroad Workers," sponsored by the Kentucky Transportation Cabinet, \$9,100.

Principal Investigator, 1991, Projects KTC 4-31693 and CAER 2-05482, "Kentucky Rock Asphalt (Kyrock) Road Surfacing Material" sponsored by the Kentucky Transportation Cabinet and the Center for Applied Energy Research, \$23,933.

Investigator, 1991-1994, Project KTC 4-25427, "Evaluation of Low Strength Concrete (Flowable Fill) for Trench Backfill" sponsored by the Kentucky Transportation Cabinet, \$79,000.

Co-Principal Investigator, 1987-1992, Project KYHPR 4-31672, "Utilization of Fossil Fuel Related By-Product Materials for Highway Construction," sponsored by the Kentucky Transportation Center, (\$441,100).

Co-Principal Investigator, 1987-1988, Project 4-22361, "Coal and Ash-Related Waste Materials in Roadway Construction," sponsored by the Kentucky Transportation Cabinet and the Tennessee Valley Authority, (\$50,522).

Principal Investigator, 1987-1988, Project 421966, "Durability Aspects of Concrete Mixtures Containing AFBC Spent Bed Residue," sponsored by the Tennessee Valley Authority, (\$31,050).

Principal Investigator, 1986-1987, Project 421668, "Utilization of AFBC Waste in the Production of Line Brattice Blocks," sponsored by the Kentucky Center for Energy Research Laboratory and the University of Louisville, (\$11,630).

Principal Investigator, 1981-1987, Projects 122-05-SH300-TO201 (TO340), (TO393), (TO477), "Hot-Mix Asphalt Railroad Trackbeds," sponsored by the National Asphalt Pavement Association and The Asphalt Institute, (\$280,000).

Principal Investigator, 1983-1986, Project 201-65-8H300-S5118, (S5620), "Entry Support Using Coal-Crete Grouted Auger Holes," sponsored by the Tennessee Valley Authority, (\$183,400).

Principal Investigator, 1981-1983, Projects 201-65-8H300-S4721, S4767, S4951, "Investigation of the Utilization of Coal Refuse and Fluid Bed Waste for Auger-Hole Filling and Underground Coal Mining Structural Pillar Support," sponsored by the Institute for Mining and Minerals Research, (\$44,704).

Principal Investigator, 1978, Project 201-65-SH300-T4]71, "Evaluation of IBM Waste Treatment Sludge as a Component in Concrete Block Mix," sponsored by International Business Machines Corp., (\$3,000).

Co-Principal Investigator, 1975-1977, Projects 201-65-8H300-T3D10 and T3E96, "Estill County Coal Mine Refuse Study," sponsored by the Appalachian Regional Commission through the Bluegrass Area Development District, Inc., (\$157,772).

Principal Investigator, 1975, Projects 201-65-8H300-S3344 and T3FO8, "A Preliminary Study of the Utilization of Coal Refuse as an Aggregate in Low Cost Concrete," sponsored by the Commonwealth of Kentucky, Office of the Secretary for Development, Institute for Mining and Minerals Research and Island Creek Coal Company, (\$8,000).

Principal Investigator, 1974-1981, Project 201-65-8H300-S3268, S3411, S3619, S4043, S4196, S4313, S4523, "Utilization of Kentucky's Coal Mine and Classification Plant Wastes and Mine Overburden as Useful and Economic Building Materials," sponsored by the Commonwealth of Kentucky, Office of the Secretary for Development, Institute for Mining and Minerals Research, (\$146,963).

Principal Investigator, 1973-1974, Project 201-65-8H300-T3B46, "Testing and Evaluation of Concrete," sponsored by the Proctor & Gamble Company, (\$2,850).

Co-Principal Investigator, 1971-1972, Project KYHPR 71-66, "Correlation of Pavement Skid Resistance with Qualities of Sand," sponsored by the Federal Highway Administration and the Kentucky Department of Highways, (\$23,000).

Research Assistant, 1969-1970, Project HPR-1 (8), 2-8-69-138, "The Vehicle-Pavement Interaction Study," sponsored by the Federal Highway Administration and the Texas Highway Department through the Texas Transportation Institute, (\$150,000).

PUBLICATIONS

REFEREED JOURNAL AND PROCEEDINGS ARTICLES:

- Rose, J.G., Trella, M.C., and N.K. Agarwal, "Structural Design of Railway Trackbeds – Relative Effects of Various Factors," ASME/ASCE/IEEE Joint Rail Conference, Paper JRC 2011-56016, Pueblo, CO, March 2011, 20 pages.
- Rose, J.G., "Rehabilitation Techniques to Improve Long-Term Performances of Highway-Railway At-Grade Crossings," ASME/ASCE/IEEE Joint Rail Conference, Paper JRC 2011-56015, Pueblo, CO, March 2011, 13 pages.
- Rose, J.G., Teixeira, P.F., and P. Veit, "International Design Practices, Applications, and Performances of Asphalt/Bituminous Railway Trackbeds," Railway Geotechnical Engineering International Symposium, GeoRail 2011, Paris, France, May 2011.
- Rose, J.G. and D.R. Uzarski, "A Performance-Based Railway Trackbed Structural Design and Analysis Program," Railway Geotechnical Engineering International Symposium, GeoRail 2011, Paris, France, May 2011.
- Rose, J.G., Agarwal, N.K., Brown, J.D., and N. Ilavala, "Kentrack, A Performance-Based Layered Elastic Railway Trackbed Structural Design and Analysis Procedure – A tutorial." ASME, IEEE, ASCE, AREMA, & TRB 2010 Joint Rail Conference, Paper JRC 2010-36067, Urbana, IL, April 2010, 38 pages.
- Rose, J.G., Teixeira, P.F., and N.E. Ridgway, "Utilization of Asphalt/Bituminous Layers and Coatings in Railway Trackbeds – A Compendium of International Applications," ASME, IEEE, ASCE, AREMA, & TRB 2010 Joint Rail Conference, Paper JRC 2010-36146, Urbana, IL, April 2010, 17 pages.
- Lei, X., Zhang, B., and J.G. Rose, "Analyses of Dynamic Behavior of Track Transition with Vehicle and Track Elements," ASME, IEEE, ASCE, AREMA, & TRB 2010 Joint Rail Conference, Paper JRC 2010-36044, Urbana, IL, April 2010, 12 pages.
- Rose, J.G. and L.S. Bryson, "Optimally Designed Hot Mix Asphalt Railway Trackbeds – Test Measurements, Trackbed Materials, Performance Evaluations, and Significant Implications," 2009 International Conference on Perpetual Pavements, Ohio Research Institute for Trans. and Envir., Columbus, OH, October 2009.
- Bryson, L.S. and J.G. Rose, "Railway Trackbed Pressure/Deflection Measurements and Structural Design Methodology," 8th International Conference on the Bearing Capacity of Roads, Railways, and Airfields, University of Illinois, June 2009, 16 pages.
- Rose, J.G., Swiderski, M.G., and J.S. Anderson, "Long-Term Performances of Rail/Highway At-Grade Crossings Containing Enhanced Trackbed Support," TRB Annual Meeting Compendium of Papers DVD, Washington, DC, January 2009, 36 pages.
- Anderson, J.S. and J.G. Rose, "In-Situ Test Measurement Techniques Within Railway Track Structures," 2008 ASME/IEEE/ASCE Joint Rail Conference PROCEEDINGS, Wilmington, DE, April 2008, 21 pages.

- Rose, J.G. and H.M. Lees, "Long-Term Assessment of Asphalt Trackbed Component Materials' Properties and Performance," 2008 AREMA Annual Conference PROCEEDINGS, Salt Lake City, UT, September 2008, 28 pages.
- Lei, X. and J.G. Rose, "Track Vibration Analysis for Railways with Mixed Passenger and Freight Traffic," PROCEEDINGS of the IMECH E Part F, Journal of Rail and Rapid Transit, 2008 222(4), pages 413-421.
- Lei, X. and J.G. Rose, "Numerical Investigation of Vibration Reduction of Ballast Track with Asphalt Trackbed over Soft Subgrade," Journal of Vibration and Control, 2008, 14(12), pages 1885-1902.
- Lei, X. and J.G. Rose, "Studies on Assessment and Reduction of Ground-Borne Vibrations Induced by Railway Traffic," PROCEEDINGS of First International Symposium on Innovation & Sustainability of Modern Railway (ISMR 2008), pages 2-13.
- Stith, J. and J. Rose, "Validating Theoretical Models of Railroad Track Life Using In-Situ Measurement Techniques," International Conference on Civil Engineering Infrastructure PROCEEDINGS, Beirut, Lebanon, June 2006, 12 pages.
- Rose, J.G. and J.S. Anderson, "Long-Term Performance of Asphalt Underlayment Trackbeds for Special Trackbed Applications," American Railway Engineering and Maintenance-of-Way Assoc. 2006 Annual Conference PROCEEDINGS, Louisville, KY, September 2006, 27 pages.
- Rose, J.G. and K.C. Konduri, "KENTRACK—A Railway Trackbed Structural Design Program," American Railway Engineering and Maintenance-of-Way Assoc. 2006 Annual Conference PROCEEDINGS, Louisville, KY, September 2006, 31 pages.
- Rose, J.G., Su, Bei, and F. Twehues, "Comparisons of Railroad Track and Substructure Computer Model Predictive Stress Values and In-Situ Stress Measurements," American Railway Engineering and Maintenance-of-Way Assoc. 2004 Annual Conference PROCEEDINGS, Nashville, TN, September 2004, 17 pages.
- Rose, J.G. and J.C. Stith, "Pressure Measurements in Railroad Trackbeds at the Rail/Tie Interface Using Tekscan Sensors," American Railway Engineering and Maintenance-of-Way Assoc. 2004 Annual Conference PROCEEDINGS, Nashville, TN, September 2004, 21 pages.
- Zhong, X.G., Zeng, X., and J.G. Rose, "Shear Modulus and Damping Ratio of Rubber-Modified Asphalt Mixes and Unsaturated Subgrade Soils," ASCE Journal of Materials in Civil Engineering, Vol. 14, No. 6, Nov./Dec. 2002, pages 496-502.
- Rose, J.G., Brown, E.R., and M.L. Osborne, "Asphalt Trackbed Development: The First Twenty Years," Journal of the Transportation Research Board, Record No. 1713, 2000, pages 1-9.
- Zeng, X., Rose, J.G., and J.S. Rice, "Stiffness and Damping Ratio of Rubber-Modified Asphalt Mixes: Potential Vibration Attenuation for High-Speed Railway Trackbeds,"

Journal of Vibration and Control, Vol. 7, No. 4, May 2001, pp. 527-538.

Rose, J.G., "Turnout Rehabilitation with Underlayments," *TRANSPORTATION RESEARCH RECORD* 1341, Transportation Research Board, 1992, pp. 75-82.

Rose, J.G. and Hensley, M.J., "Performance of Hot-Mix Asphalt Railway Trackbeds," *TRANSPORTATION RESEARCH RECORD* 1300, Transportation Research Board, 1991, pp. 35-44.

Huang, Y.H. and Rose, J.G., "Kentrack, A Computer Program for Design of Railroad Trackbeds," *Computers in Railway Installations, Track and Signaling*, Computational Mechanics Publications, 1987, pp. 159-174.

Huang, Y.H., Rose, J.G. and Khoury, C.J., "Thickness Design for Hot-Mix Asphalt Railroad Trackbeds," *Proceedings of the Association of Asphalt Paving Technologists Technical Sessions*, Vol. 56, 1987, pp. 427-453.

Rose, J.G., "Railroad Civil Engineering Education - A Renewed Interest," *Civil Engineering Education*, American Society for Engineering Education, Vol. VII, No. 2, Fall 1985, pp. 11-14.

Huang, Y.H., Rose, J.G. and Khoury, J. "Hot-Mix Asphalt Railroad Trackbeds," *TRANSPORTATION RESEARCH RECORD* 1095, Transportation Research Board, 1986, pp. 102-110.

Rose, J.G., Huang, Y.H. and Drnevich, V.P., "Hot-Mix Asphalt Underlayments for Heavy-Haul Trackbeds," *Proceedings of the Third International Heavy Haul Railway Conference*, 1986, pp. 615-625.

Huang, Y.H., Rose, J.G. and Lin, C. "Structural Design of Hot Mix Asphalt Underlayments for Railroad Trackbeds," *Proceedings of the Association of Asphalt Paving Technologists Technical Sessions*, Vol. 54, 1985, pp. 502-528.

Rose, J.G., Lin, C. and Dmevich, V.P., "Hot Mix Asphalt for Railroad Trackbeds-Construction, Performance, and Overview," *Proceedings of the Association of Asphalt Paving Technologists Technical Sessions*, Vol. 53, 1984, pp. 19-50.

Huang, Y.H., Lin, C. and Rose, J.G., "Asphalt Pavement Design: Highway Versus Railroad, Technical Note - *Journal of Transportation Engineering*, American Society of Civil Engineers, Vol. 10, No. 2, 1984, pp. 276-282.

Rose, J.G., "More Progress on HMA Track Stabilization," *Railway Track and Structures*, Vol. 79, No. 6, 1983, pp. 32-36.

Rose, J.G., "Processing and Material Properties of Energy-Efficient Sintered Coal Refuse Lightweight Aggregate," *Resources and Conservation*, Elsevier Scientific Publishing Co., Vol. 9, August 1982, pp. 119-129.

- Rose, J.G. "New Uses for Coal Refuse as Construction Materials," Mining Congress Journal, American Mining Congress, Vol. 66, No. 9, September 1980, pp. 38-43.
- Rose, J.G. "Use of Energy Efficient Sintered Coal Refuse in Light-weight Aggregate," TRANSPORTATION RESEARCH RECORD 734, Transportation Research Board, December 1979, pp. 7-16.
- Rose, J.G. and Howell, R.C. "Proposed Coal Pillaring Procedures Using Concrete Containing Coal Refuse (Coal-Crete)," Mining Engineering, Society of Mining Engineers of AIME, Vol. 31, No. 3, March 1979, pp. 290-298.
- Bland, A.E., Robl, T.L. and Rose, J.G. "An Evaluation on Interseam and Coal Cleaning Effects on the Chemical Variability of Past and Present Kentucky Coal Refuse," Technical Note, Transactions of the Society of Mining Engineers of AIME, Vol. 262, No. 4, December, 1977, pp. 331-334.
- Rose, J.G. and Gallaway, B.M., "Water Depth Influence on Pavement Friction," Transportation Engineering Journal, American Society of Civil Engrs., Vol. 103, No. TE4, Proc. Paper 13063, July, 1977, pp. 491-506.
- Rose, J.G. and Decker, D.S., "Sintered Coal Refuse Lightweight Aggregate for High Friction Bituminous Surface Courses," Proceedings, Association of Asphalt Paving Technologists Technical Sessions, February, 1977, Vol. 46, pp. 428-451.
- Robl, T.L., Bland, A.E. and Rose, J.G., "The Geochemistry of Shales Associated with Major Coal Seams in Kentucky," Abstracts with Programs, 1976 Annual Meeting of the Geological Society of America, Vol. 8, No. 6, October, 1976, p. 1073.
- Rose, J.G., Hutchinson, J.W. and Gallaway, B.M., "Summary and Analysis of the Attributes of Methods of Surface Texture Measurement," STP 530, American Society for Testing and Materials, 1973, pp. 60-77.
- Gallaway, B.M. and Rose, J.G., "Comparisons of Highway Friction Measurements Taken in the Slip and Skip Modes," RECORD NO. 376, Highway Research Board, 1972, pp. 107-122.
- Gallaway, B.M., Rose, J.G. and Schiller, R.E., "The Relative Effects of Several Factors Affecting Rain Water Depths of Pavement Surfaces," RECORD NO. 396, Highway Research Board, 1972, pp. 59-71.
- Rose, J.G., Gallaway, B.M. and Hankins, K.D., "Macrotecture Measurements and Related Skid Resistance at Speeds from 20-60 miles per Hour," RECORD NO. 341, Highway Research Board, 1970, pp. 33-45.
- Rose, J.G. and Ledbetter, W.B., "Summary of Surface Factors Influencing the Friction Properties of Concrete Pavements," RECORD NO. 357, Highway Research Board, 1971, pp. 53-63.

PROCEEDINGS: (Review based on Abstracts)

- Rose, J.G., "Test Measurements and Performance Evaluations of In-Service Railway Asphalt Trackbeds," PROCEEDINGS of the Transportation Systems 2008 Workshop, Phoenix, AZ, April 2008, 17 pages.
- Rose, J.G., Su, Bei, and F. Twehues, "Railway Track and Substructure Stress – Numerical Prediction versus In-Situ Measurements," PROCEEDINGS of the Railway Engineering 2004 Seventh International Conference, London, UK, July 2004, 17 pages.
- Rose, J.G. and J.C. Stith, "Tekscan Sensors – Rail/Sleeper Interface Pressure Measurements in Railway Trackbeds," PROCEEDINGS of the Railway Engineering 2004 Seventh International Conference, London, UK, July 2004, 21 pages.
- Rose, J.G., "Asphalt Underlayment Trackbeds for Special Trackwork Applications and Long-Term Performances," PROCEEDINGS of the Transportation Systems 2004 Workshop, Ft. Lauderdale, FL, March 2004, 21 pages.
- Rose, J.G., Su, Bei, and W.B. Long, "Kentrack: A Railway Trackbed Structural Design and Analysis Program," American Railway Engineering and Maintenance-of-Way Assoc. 2003 Annual Conference PROCEEDINGS, Chicago, IL, October 2003, 25 pages.
- Rose, J.G. and P.M. Tucker, "Applications and Long-Term Performances of Asphalt Underlayment Trackbeds at Special Trackworks," PROCEEDINGS of the Railway Engineering-2003 Sixth International Conference, London, UK, April 2003, 14 pages.
- Rose, J.G., Su, Bei, and W.B. Long, "KENTRACK: A Structural Analysis Program for Heavy Axle Load Railway Trackbed Design," PROCEEDINGS of the Railway Engineering-2003 Sixth International Conference, London, UK, April 2003, 25 pages.
- Rose, J.G. and P.M. Tucker "Quick-Fix, Fast-Track Road Crossing Renewals Using Panelized Asphalt Underlayment System," American Railway Engineering and Maintenance Association 2002 Annual Conference PROCEEDINGS, Washington, DC, September 2002, 19 pages.
- Rose, J.G., Li, Dingqing, and L.A. Caldwell "Tests and Evaluations of In-Service Asphalt Trackbeds," American Railway Engineering and Maintenance Association 2002 Annual Conference PROCEEDINGS, Washington, DC, September 2002, 16 pages.
- Rose, J.G., Caldwell, L.A., and D.M. Durrett "Panelized Asphalt Trackbed Rail/Highway Crossing Renewals: Procedures and In-Service Test and Evaluations," Railway Engineering – 2002 Fifth International Conference and Exhibition PROCEEDINGS, London, UK, July 2002, 21 pages.
- Rose, J.G., Li, Dingqing, and L.A. Caldwell, "Heavy-Haul Asphalt Trackbeds: Pressures/Deflections/Material Properties Measurements, Railway Engineering - 2002 Fifth International Conference and Exhibition PROCEEDINGS, London, UK July 2002, 18 pages.
- Robertson, R.E., Brown, E.R., and J.G. Rose "Evaluation of Weathering and Oxidation on

Properties of Hot Mix Asphalt (HMA) in Railway Trackbed Environments,” Abstracts, 37TH Annual Petersen Asphalt Research Conference, Western Research Institute, July 17 – 19, 2000, p. 20.

Rose, J.G. “Asphalt Trackbeds: Selection, Design, Installation Practices, Long-Term Performances, and Material Properties” PROCEEDINGS, Railway Engineering – 2000 (Third International Conference), London, England, July 5-6, 2000, 12 pages.

Rose, J.G., “Advances in Asphalt Railway Trackbed Technology,” Proceedings of the 17th Annual High Speed Ground Transportation Association Conference and Expo, Philadelphia, May 2000, 16 pages.

Rose, J.G. and M.J. Hensley, “Design, Construction, and Maintenance Practices for Asphalt Trackbeds,” Proceedings, Transportation Systems 2000 Workshop, United States Army, Air Force, and Navy, San Antonio, February 28 – March 3, 2000, pp. 275-281.

Hensley, M.J. and J.G. Rose, “Design, Construction, and Performance of Hot Mix Asphalt for Railway Trackbeds,” Proceedings, 1st World Conference on Asphalt Pavements, Sydney, Australia, February 20 – 24, 2000, 12 pages.

Rose, J.G., “Rail Reaps Benefits from Asphalt Trackbeds,” International Railway Journal, Vol. XXXVII, No. 9, September 1998, pp. 21 – 25.

Rose, J.G. “Long-Term Performances, Tests, and Evaluations of Asphalt Trackbeds,” PROCEEDINGS of the 1998 American Railway Engineering and Maintenance-of-Way Association Technical Conference, September 1998, 27 pages.

Rose, J.G., “Asphalt Trackbed Development and Typical Practices in the United States,” Proceedings of the American Railway Engineering and Maintenance-of-Way Association Roadbed Stabilization and Ballast Symposium, Ypsilanti, MI, July 1998, 11 pages.

Rose, J.G., “Hot Mix Asphalt Utilization in Railroad Trackbeds,” Abstracts, 34th Annual Petersen Asphalt Research Conference, Western Research Institute, July 1997, p. 14.

Rose, J.G., "Asphalt Applications for Railroad Maintenance and Construction," Proceedings of the Third ASCE Materials Engineering Conference, San Diego, November 1994, pp. 617-626.

Rose, J.G., "Rehabilitating Highway-Railway at Grade Crossings with Asphalt Based Substructures." Proceedings of the 6th International Pavement Management/ Maintenance Exposition and Conference, 1992, pp. 93-98.

Rose, J.G. and Huang, Y.H., "Hot-Mix Asphalt Railroad Trackbed Systems," Proceedings of the 1990 ASME/IEEE Joint Railroad Conference, 1990, pp. 85-90.

- Rose, J.G., "Hot Mix Asphalt Railway Trackbeds - Innovations and New Technology, Proceedings of the 3rd International Pavement Management/Maintenance Exposition and Conference, 1989, pp. 126-132.
- Rose, J.G., "Hot Mix Asphalt Utilization in Railway Trackbeds," Creative Applications of Materials Engineering, ASCE, 1989, pp. 33-46.
- Bland, A.E., Jones, C.E., Rose, J.G. and Harness, J., "Ash Management Options for AFBC," Proceedings of the 10th International Conference on Fluid Bed Combustion, San Francisco, April 1989, 26 pages.
- Rose, J.G. and Huang, Y.H., "Hot-Mix Asphalt Stabilized Railroad Trackbeds," Proceedings of the Ohio River Valley Soils Seminar XIX, 1988, pp. 8.1 - 8. 10.
- Bland, A.E., Jones, C.E., Rose, J.G. and Harness, J, "Performance Characteristics of Concrete Produced with Fluidized Bed Combustion Ash Residue," Proceedings of the Materials Research Society Fall 1988 Meeting, Boston, November 1988, 26 pages.
- Rose, J.G., "Design and Construction Schemes for Hot-Mix Asphalt Railroad Trackbeds," Proceedings of the 1987 Roads and Transportation Association of Canada Annual Conference, September 1987, 26 pages.
- Rose, J.G., "Hot-Mix Asphalt Trackbeds - The U.S. Experience," Proceedings of the 1987 Canadian Technical Asphalt Association Conference, November 1987, pp. 178-203.
- Hunsucker, D., Sharpe, G.W., Rose, J.G. and Deen, R.C., "Road Base Construction Utilizing Coal Waste Materials," Proceedings of the Eighth International Ash Utilization Symposium, Vol. 1. 1987, pp. 22.1 – 22.16.
- Jones, C.E., Bland, A.E., Rose, J.G., and Jarrett, M.N. "Utilization of Pulverized Fuel Ash and Fluid Bed Combustion Ash in AFBC Concretes," Proceedings of the Eighth International Ash Utilization Symposium, Vol.2, 1987, pp.55.1-55.12.
- Bland, A.E., Jones, C.E., Rose, J.G., and Jarrett, M.N. "Production of No-Cement Concrete Utilizing Bed Combustion Waste and Power Plant Fly Ash," Proceedings of the Ninth International Fluid Bed Combustion Conference, 1987, pp. 947-953.
- Bland, A.E., Jones, C.E., Rose, J.G. and Jarrett, M.N., "Utilization of Fluid Bed Combustion Ash in Construction Applications," Proceedings of the Fourth Pittsburgh Coal Conference, 1987, pp. 319-327.
- Rose, J.G., "Performance and Economic Evaluation of Hot-Mix Asphalt Trackbeds," Proceedings, 98th Annual Conference of the Roadmasters' and Maintenance-of-Way Association of America, 1986, pp. 119-133.
- Rose, J.G., "Hot-Mix Asphalt Trackbed Construction," Proceedings, 95th Annual Conference of the Roadmasters' and Maintenance of Way Association of America, 1983, pp. 61-81.
- Rose, J.G. and Smith, R.W., "Hot-Mix Asphalt in Railway Trackbeds - We Think We Can, We

Know We Can," Proceedings, 28th Annual Convention of the National Asphalt Pavement Association, February 1983, pp. 135-177.

Rose, J.G., Lin, C. and Lowe, J.A., "An Engineering Evaluation of Blended Power Plant Ash Materials for Stabilized Base and Highway Construction Application," Proceedings, Sixth International Ash Utilization Symposium, Morgantown Energy Technology Center, U.S. Department of Energy & National Ash Association, DOE/METC/82-52 (Vol. 1) UC 90i, July 1982, pp. 314-357.

Rose, J.G., Lowe, J.A. and Floyd, R.K., "Composition and Properties of Kentucky Power Plant Ash," Proceedings, Fifth International Ash Utilization Symposium, National Ash Association and U.S. Department of Energy, METC/SP-79/10(pt. 1), February 1979, pp. 220-244.

Rose, J.G., "Sintered Coal Refuse Lightweight Masonary Aggregate," Proceedings, North American Masonary Conference, University of Colorado, August, 1978, pp. 8.1 - 8.29.

Rose, J.G. and Stewart, O.W., "Use of an Improved Continuous Sintering Grate for Lightweight Aggregate Production from Bituminous Coal Refuse," Proceedings, 15th Biennial Conference of the Institute for Briqueting and Agglomeration, Montreal, Quebec, Canada, August, 1977, pp. 41-56.

Robl, T.L., Bland, A.E. and Rose, J.G., "Kentucky Coal Refuse: Assessment of its Potential as a Metals Source," Proceedings, NCA/BCR Coal Conference and Expo III, National Coal Association and Bituminous Coal Research, Inc., October, 1976, pp. 152-159.

Bryenton, D.L. and Rose, J.G., "Utilization of Coal Refuse as a Concrete Aggregate (Coal-Crete)," Proceedings, Fifth Mineral Waste Utilization Symposium, U.S. Bureau of Mines and IIT Research Institute, July, 1976, pp. 107-113.

Rose, J.G., Robl, T.L. and Bland, A.E., "Composition and Properties of Refuse for Kentucky Coal Preparation Plants," Proceedings, Fifth Mineral Waste Utilization Symposium, U. S - Bureau of Mines and IIT Research Institute, July, 1976, pp. 122-131.

Bishop, C.S. and Rose, J.G., "Physical and Engineering Characteristics of Coal Preparation Plant Refuse," Proceedings, VII Ohio River Valley Soils Seminar, American Society of Civil Engineers, October, 1976, pp. 4.1 - 4.11.

PROCEEDINGS AND ARTICLES: (Invited)

Rose, J.G., "Asphalt's Stake in Railroading," HMAT, National Asphalt Pavement Association, Vol. 15, No. 2, March/April 2010, pp. 38-44.

Rose, J.G., "Rails Riding on Asphalt in the United States and Elsewhere," ASPHALT REVIEW, Australia Asphalt Pavement Association, Vol. 28, No. 3, Oct/Nov 2009, pp. 54-56.

Rose, J.G., "Hot-Mix Asphalt Underlayment Trackbeds Long-Term Materials Evaluation," ABSTRACTS, 45th Petersen Asphalt Research Conference, Laramie, WY, July 2008.

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Rose, J.G. (Editor) Proceedings, Seventh Kentucky Coal By-Products Seminar, Institute for Mining and Minerals Research, University of Kentucky, Report IMMR 82/065, January 1982. 36 pages.

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- Rose, J.G. (Editor) Proceedings, Second Kentucky Coal Refuse Disposal and Utilization Seminar, Institute for Mining and Minerals Research, University of Kentucky, IMMR 21-PD15-76, September 1976, 114 pages.
- Rose, J.G. (Editor) Proceedings, First Kentucky Coal Refuse Disposal and Utilization Seminar, Institute for Mining and Minerals Research, University of Kentucky, IMMR 9-PD7-75, December 1975, 48 pages.
- Rose, J.G. (Editor) SURFACE TEXTURE VERSUS SKIDDING: Measurements, Frictional Aspects, and Safety Features of Tire-Pavement Interactions, STP 583, American Society for Testing and Materials, 1975, 150 pages.

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PRESENTATIONS (1979-Present)

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- “Structural Design of Railway Trackbeds – Relative Effects of Various Factors,” ASME/ASCE/IEEE Joint Rail Conference, Pueblo, CO, March 2011.
- “Rehabilitation Techniques to Improve Long-Term Performances of Highway-Railway At-Grade Crossing,” ASME/ASCE/IEEE Joint Rail Conference, Pueblo, CO, March 2011.
- “Kentrack, A Performance-Based Layered Elastic Railway Trackbed Structural Design and Analysis Procedure – A Tutorial,” ASME, IEEE, ASCE, AREMA, & TRB Joint Rail Conference, Urbana, IL, April 2010.
- “Utilization of Asphalt/Bituminous Layers and Coatings in Railway Trackbeds – A Compendium of International Applications,” ASME, IEEE, ASCE, AREMA, & TRB Joint Rail Conference, Urbana, IL, April 2010.
- “Rehabilitating Crossing Surfaces,” 2009 National Highway-Rail Grade Crossing Safety Conference, Texas Transportation Institute, New Orleans, LA, Nov. 2009.
- “Hot Mix Asphalt Railway Trackbeds: Trackbed Materials, Performance Evaluations, and Significant Implications,” 2009 International Conference on Perpetual Pavements, Ohio Research Institute for Trans. and Envir., Columbus, OH, Oct. 2009.
- “Pressure Measurements and Structural Performance of Hot Mixed Asphalt Railway Trackbeds,” 8th International Conference on the Bearing Capacity of Roads, Railways, and Airfields, University of Illinois, June 2009.
- “Asphalt Trackbeds – Design, Evaluation, and Utilization,” Workshop, 8th International Conference on the Bearing Capacity of Roads, Railways, and Airfields, University of Illinois, June 2009.
- “Long-Term Performance of Rail/Highway At-Grade Crossings Containing Enhanced Trackbed Support,” Transportation Research Board Annual Meeting, Washington, DC, January 2009.
- “Railway Trackbed Research at the University of Kentucky,” William W. Hay Railroad Seminar, University of Illinois, November 2007.
- “Introduction to Railway Infrastructure,” Railroad Engineering Education Symposium,” University of Illinois, June 2008.
- “Test Measurements and Performance Evaluations of In-Service Railway Asphalt Trackbeds,” Transportation Systems 2008 Workshop, Phoenix, AZ, April 2008.
- “In-Situ Test Measurement Techniques within Railway Track Structures,” 2008 ASME/IEEE/ASCE Joint Rail Conference, Wilmington, DE, April 2008.
- “Hot-Mix Asphalt Underlayment Trackbeds--Long-Term Materials Evaluation,” 45th Petersen Asphalt Research Conference, Laramie, WY, July 2008.

- “Long-Term Assessment of Asphalt Trackbed Component Materials' Properties and Performance,” 2008 AREMA Conference, Salt Lake City, UT, September 2008.
- “Renewal Procedures and Performance Measures for Railway/Highway Crossing Surfaces,” Southeastern Rail-Highway Safety 2007 Conference, Louisville, KY, June 2007.
- “Cooperative Fast-Track Renewal of Rail/Highway Crossings,” 2006 Region IV Rail-Highway Safety Conference, Jacksonville, FL, June 2006.
- “Long-Term Performance of Asphalt Underlayment Trackbeds,” 2006 Annual Conference of the American Railway Engineering and Maintenance-of-Way Assoc., Louisville, KY, September 2006.
- “KENTRACK—A Railway Trackbed Structural Design Program,” 2006 Annual Conference of the American Railway Engineering and Maintenance-of-Way Assoc., Louisville, KY, September 2006.
- “Renewal Procedures and Performance Measures for Railway/Highway Crossing Surfaces,” 2006 Eastern Federal/State Highway-Rail Crossing Conference, Martinsburg, WV, October 2006.
- “Railway/Highway Crossing Surface Performance Measures and Renewal System,” 2005 Midwest Highway/Rail Safety Seminar, Green Bay, WI, May 2005.
- “Asphalt Underlayment Trackbeds for Special Trackwork Applications and Long-Term Performances,” Transportation Systems 2004 Workshop, Ft. Lauderdale, FL, March 2004.
- “Performance Measures & Analysis of At-Grade Railroad/Highway Crossing Structures,” 2004 Southeast Rail-Highway Safety Conference and Workshop, Marietta, GA, June 2004.
- “Comparisons of Railroad Track and Substructure Computer Model Predictive Stress Values and In-Situ Stress Measurements,” AREMA Annual Conference, Nashville, TN, September 2004.
- “Kentrack: A Railway Trackbed Structural Design and Analysis Program,” AREMA Annual Conference, Chicago, IL, October 2003.
- “A Cooperative Fast-Track Rail/Highway Crossing Renewal and Rehabilitation System,” Southeastern Local Roads Conference, Asheville, NC, October 2003.
- “Asphalt Underlayment Trackbeds for Special Trackwork Applications and Long-Term Performances,” Transportation Systems 2004 Workshop, Ft. Lauderdale, FL, March 2004.
- “Performance Measures & Analysis of At-Grade Railroad/Highway Crossing Structures,” 2004 Southeast Rail-Highway Safety Conference and Workshop, Marietta, GA, June 2004.

- “Comparisons of Railroad Track and Substructure Computer Model Predictive Stress Values and In-Situ Stress Measurements,” AREMA Annual Conference, Nashville, TN, September 2004.
- “Design of Long-Life Highway–Rail Grade Crossings,” 2002 Mid-Atlantic Region Federal/State Highway-Rail Crossing Conference, Martinsburg, WV, October 15, 2002.
- “Tests and Evaluations of In-Service Asphalt Trackbeds,” American Railway Engineering and Maintenance Association 2002 Annual Conference, Washington, DC, September 24, 2002.
- “Quick-Fix, Fast-Track Road Crossing Renewals Using Panelized Asphalt Underlayment System,” American Railway Engineering and Maintenance Association 2002 Annual Conference, Washington, DC, September 24, 2002.
- “Heavy-Haul Asphalt Trackbeds: Pressures/Deflections/Material Properties Measurements, Railway Engineering – 2002 Fifth International Conference, London, UK, July 3, 2002.
- “Panelized Asphalt Trackbed Rail/Highway Crossing Renewals: Procedures and In-Service Test and Evaluations,” Railway Engineering – 2002 Fifth International Conference and Exhibition, London, UK, July 3, 2002.
- “Design and Installation of Long-Life Railway/Highway Crossing Substructures,” 2002 Mid-West Region, Federal/State Highway-Rail Crossing Conference, Wichita, Kansas, May 21, 2002.
- “Asphalt Trackbeds: Design Considerations and Application Evaluations” 2000 Roadbed Stabilization and Ballast Symposium, American Railway Engineering and Maintenance-of-Way Association, St. Louis, November 8 – 9, 2000.
- “Evaluation of Weathering and Oxidation on Properties of Hot Mix Asphalt (HMA) in Railway Trackbed Environments,” 37th Annual Petersen Asphalt Research Conference, Laramie, WY, July 17 – 19, 2000.
- “Asphalt Trackbeds: Selection, Design, Installation Practices, Long-Term Performances and Material Properties,” Railway Engineering 2000 Conference, London, England, July 5 – 6, 2000.
- “Design, Construction, and Maintenance Practices for Asphalt Trackbeds,” Transportation Systems 2000 Workshop, San Antonio, February 28 – March 3, 2000.
- “The Use of Bituminous Asphalt as a Sub-Surface Material in Rail Applications: A Ten-Year Study,” 10th Annual FHWA Federal/State/Railroad Workshop, Louisville, KY, June 8 – 9, 1999.
- “Hot Mix Asphalt Railway Trackbeds: Proven Performance for the Future,” National Asphalt Pavement Association’s 44th Annual Convention, San Diego, February 7 – 11, 1999.

- "Asphalt Trackbeds: A Developing Technology and Market," Asphalt Conference and Expo '99, St. Petersburg, FL, January 1999.
- "Long-Term Performances, Tests, and Evaluations of Asphalt Trackbeds," 1998 American Railway Engineering and Maintenance-of-Way Association Technical Conference, Chicago, September 1998.
- "Asphalt Trackbed Development and Typical Practices in the United States," Roadbed Stabilization and Ballast Symposium, AREMA, Ypsilanti, MI, July 1998.
- "Hot Mix Asphalt Utilization in Railroad Trackbeds," 34th Annual Petersen Asphalt Research Conference, Laramie, WY, July 1997.
- "Kentucky's Concrete Performance Record," Kentucky Concrete Pavements Workshop, ACPA, Frankfort, Oct. 1995.
- "Asphalt Application for Railroad Maintenance and Construction, ASCE Materials Engineering Conference, San Diego, November 1994.
- "Asphalt Bound Subballast for Railroad Track Substructures," Second Annual Symposium of the Center for Aggregate Research, College Station, Texas, March 1994.
- "Proportioning Concrete Mixtures: A Workshop," American Concrete Institute Seminars, Minneapolis, Detroit, Ft. Meyers, Boston, 1992-1993.
- "Kentucky Transportation Cabinet Scholarship Program," Kentucky's Twenty-Eighth Forum on Transportation, Lexington, September 1991.
- "Concrete Mix Design Workshop," World of '91 Concrete, Las Vegas, February 1991.
- "Performance of Hot-Mix Asphalt Railway Trackbeds," Seventieth Annual Meeting of the Transportation Research Board, Washington, January 1991.
- "Construction, Performance and Economic Analysis of Hot-Mix Asphalt (HMA) for Highway/Railway Crossing Substructures," National Conference of State Railway Officials, Albuquerque, August 1990.
- "Construction, Performance, Design and Economic Analysis of Asphalt Railroad Trackbeds," Asphalt Institute Seminars, San Jose, Los Angeles and San Diego, June 4-6, 1990.
- "Construction, Performance, and Economic Analysis of Hot-Mix Asphalt (HMA) Underlayments for Crossing Substructures," FHWA Region IV Railway/Highway Workshop, Lexington, May 1990.
- "Hot-Mix Asphalt Railroad Trackbed Systems," 1990 ASME/IEEE Joint Railroad Conference, Chicago, April 1990.
- "Hot-Mix Asphalt Railway Trackbeds - Innovations and New Technology," 3rd International,

Pavement Management/Maintenance Exposition and Conference, Kansas City, November 1989.

"Hot Mix Asphalt Utilization in Railway Trackbeds," ASCE Session on Creative Application of Engineering Materials, New Orleans, October 1989.

"Asphalt in Railroad Construction," Asphalt Institute Seminar, Oakland, July 1989.

"Hot Mix Asphalt Rail-Highway Crossing Substructures," 1989 National Conference on Rail-Highway Safety, San Diego, July 1989.

"Assignment D2-2-89 Report," American Railway Engineering Association Committee 1 Meeting, Spokane, April 1989.

"Construction Performance and Economic Analysis of Asphalt (HMA) Subballast Highway-Railroad Crossing Substructures," American Railway Engineering Association Committee 9 Meeting, Chicago, March 1989.

"Hot-Mix Asphalt Stabilized Railroad Trackbeds," Ohio River Valley Soils Seminar XIX, Lexington, October 1988.

"Hot-Mix Asphalt (HMA) Trackbeds," American Railway Engineering Association Committee I Meeting, California, April 1988.

"Hot-Mix Asphalt Trackbeds - the U.S. Experience," 32nd Canadian Technical Asphalt Conference, Toronto, November 1987.

"Design and Construction Schemes for Hot-Mix Asphalt Railroad Trackbeds," 1987 Roads and Transportation Association of Canada Annual Conference, Saskatoon, September 1987.

"Testing Procedures for Quality Concrete," Twenty-first Kentucky Concrete Conference, Louisville, January 1996.

"Performance and Economic Evaluation of Hot-Mix Asphalt Trackbeds - An Update," Ninety-eighth Annual Conference of the Roadmasters' and Maintenance of Way Association of America, Chicago, September 1986.

"Railroads-Asphalt Market of the Future," 33rd Annual Meeting of the Virginia Asphalt Association, Hot Springs, April 1984.

"Hot Mix Asphalt for Railroad Trackbeds: Construction, Performance, and Overview," 1984 Annual Technical Sessions, Association of Asphalt Paving Technologists, Phoenix, April 1984.

"Design of Hot Mix Asphalt Pavements for Railroad Trackbeds," Pavement Design Workshop, National Asphalt Pavement Association, Columbia, MD, March 1984.

"Use of Hot Mix Asphalt in Track Bed Construction," Twenty-eighth Annual Asphalt

- Contractors' Workshop, Minnesota Asphalt Pavement Association, St. Paul, March 1984.
- "Hot Mix Asphalt Trackbed Construction," Ninety-fifth Annual Conference of the Roadmasters' and Maintenance-of-Way Association of America, Chicago, September 1983.
- "Asphalt Bound Materials in Track Structures," Operating-Maintenance Comm. Meeting, The American Short Line Railroad Assoc., St. Louis, June 1983.
- "Railroad Crossings and Black Base Roadbed," Second Annual Kentucky Asphalt Conference, University of Kentucky, Lexington, April 1983.
- "Overview of Kentucky Coal Refuse Utilization," Twenty-second Annual Kentucky Industrial Coal Conference, University of Kentucky, Lexington, April 1983.
- "Asphalt in Railbed Construction," Third Annual West Virginia Asphalt Paving Conference, Flexible Pavements Council of WV, Charleston, March 1983.
- "Hot-Mix Asphalt in Railway Trackbeds," Twenty-eighth Annual Convention of the National Asphalt Pavement Association, Phoenix, February 1983.
- "Recent Research on Hot-Mix Asphalt Railroad Trackbeds," Monthly Meeting of Bluegrass Branch of ASCE, Lexington, January 1983.
- "Asphalt Railroad Trackbed Construction and Performance," Twenty-ninth Annual Bituminous Conference, Minnesota Asphalt Pavement Association and The Asphalt Institute, St. Paul, November 1982.
- "An Engineering Evaluation of Coal Refuse/Power Plant Ash Blends," Eighth Annual Kentucky Coal Seminar, University of Kentucky, Pineville, May 1982.
- "An Engineering Evaluation of Blended Power Plant Ash Materials for Stabilized Base and Highway Construction Applications," Sixth International Ash Utilization Symposium, Reno, March 1982.
- "L&N Railroad Asphalt Track Bed Construction," Twenty-seventh Annual Convention of the National Asphalt Pavement Association, San Francisco, February 1982.
- "Hot-Mix Asphalt Railroad Track Bed Construction," Seventh Annual Convention of the National Railroad Construction and Maintenance Association, Tucson, January 1982.
- "Processing and Material Properties of Energy-Efficient Sintered Coal Refuse Lightweight Aggregate," Symposium on Resource Recovery and Environmental Issues of Industrial Solid Wastes, U.S. Dept. of Energy, Gatlinburg, October 1981.
- "Manufactured Sand/Fly Ash vs. Natural Sand," Seventeenth Kentucky Concrete Conference, University of Kentucky, Lexington, November 1979.
- "New Uses for Coal Refuse as Construction Materials," 1979 American Mining Congress Convention, Los Angeles, September 1979.

"Composition and Properties of Kentucky Power Plant Ash," Fifth International Ash Utilization Symposium, Atlanta, February 1979.

"Energy Efficient Sintered Coal Refuse Lightweight Aggregate," Fifty-eighth Annual Meeting of the Transportation Research Board, Washington, D.C., January 1979.

OTHER PROFESSIONAL ACTIVITIES (1979-Present)

Thesis Advisor for Graduate Students

Coordinator of Transportation Scholarship Program

Director of Civil Engineering Materials Testing Laboratory

Member - Construction Management Planning Committee

Member - College of Engineering Library Committee

Director and Instructor, Kentucky Ready Mix Concrete Assoc. Certification School,
1975-1998 (Annually)

Director and Instructor, "Railroad Engineering Short Course," University of Kentucky, 1983-
1986

Instructor, Various Short Courses and Seminars for the Kentucky Transportation Center
during the past four years

Presented ten papers at technical meetings during the past six years

Attended fifteen different technical meetings during the past six years in which I was
not directly involved in planning or speaking at the meeting

Served as an expert to evaluate causes of structural failures due to poor quality materials
or poor construction techniques on a consulting basis

Served as evaluator of material properties in the laboratory for conventional and
newly-developed materials on a consulting basis

UNIVERSITY SERVICE

Department: Student Recruitment and Advising Committee, Chairman, 1990 - 1994

Chairman's Advisory, 1990 – 1992

Committee on Research, Independent Study, and Scholarship, Standing, 1983 -
1995

Transportation Scholarship, Chairman, 1984 - 1999

Construction Management Planning, Ad Hoc, 1984 - 1989

Service Team Leader, 1999 – 2008

College: Student Affairs and Recruitment, 1989 - 1995

KSPE Student Chapter Advisor, 1990 - 1991

Engineering Library Committee, 1986 - 1989

Advisory Committee for Women Engineering Students, 1986 - 1988

Safety Committee, 1990 - 1993

Attend an average of six technical meetings each year during which I am not directly involved in planning or speaking.