

RICHARD JON (R.J.) PORTER

Assistant Professor of Civil and Environmental Engineering (beginning July 2009)
University of Utah
122 South Central Campus Drive
Suite 104
Salt Lake City, UT 84112

EDUCATION

Doctor of Philosophy, Civil Engineering, 2007
The Pennsylvania State University, University Park, PA

Master of Engineering, Civil Engineering, 2000
The Pennsylvania State University, University Park, PA

Bachelor of Science, Civil Engineering, 1999
The Pennsylvania State University, University Park, PA

RESEARCH AND TEACHING INTERESTS

- Transportation safety
- Highway geometric design
- Traffic operations
- Human factors and driver behavior; and
- Statistical and econometric modeling of transportation data

SPONSORED RESEARCH (recent selected projects)

1. NCHRP 3-88, Guidelines for Ramp and Interchange Spacing, sponsored by National Cooperative Highway Research Program through a subcontract with Kittelson & Associates, Inc., October 2008 – present
2. Improved Positive Protection Guidance for Work Zones, sponsored by Texas Department of Transportation, September 2008 – present
3. Pavement Marking Demonstration Projects: State of Alaska and State of Tennessee, sponsored by Federal Highway Administration, August 2007 – present
4. Guidelines for Ramp Terminal Spacing for Freeways, sponsored by Texas Department of Transportation, August 2007 – present
5. Establishing Advisory Speeds on Non-Direct-Connect Ramps, sponsored by Texas Department of Transportation, August 2007 – September 2008
6. Developing a Work Zone Safety and Mobility Performance Monitoring Plan for Texas, sponsored by Texas Department of Transportation, August 2007 – September 2008
7. NCHRP 3-69: Design of Construction Work Zones on High-Speed Highways, sponsored by National Cooperative Highway Research Program, August 2003 – October 2006

8. Evaluation of Highway Safety Treatments on Operational Characteristics, sponsored by Pennsylvania Department of Transportation and Federal Highway Administration, January 2002 – March 2003
9. Enhanced Night Visibility: Evaluation of Discomfort Glare, sponsored by Federal Highway Administration, August 2001 – December 2001
10. Night Driving and Highway Lighting Requirements for Older Drivers, sponsored by Federal Highway Administration, June 2000 – December 2001
11. Development of Functional Specifications for the Multi-lane Rural Highway Policy Review Module of the Interactive Highway Safety Design Model, sponsored by Federal Highway Administration, January 2002 – July 2002
12. Informational Guide for Understanding Speed-Related Concepts, sponsored by Federal Highway Administration, August 2006 – July 2007
13. Headlight Glare Countermeasures, sponsored by AAA Foundation for Traffic Safety, May 1999 – December 2000
14. Evaluation of On-Premise Signs Under Real-World Conditions, sponsored by United States Sign Council, May 1999 – December 2000

SELECTED PUBLICATIONS

1. Porter, R.J. and Mason, J.M. "Modeling Speed Behavior of Passenger Cars and Trucks in Freeway Construction Work Zones: Implications on Work Zone Design and Traffic Control Decision Processes," In *Journal of Transportation Engineering*, Vol. 134, No. 11, 2008, pp. 450-458.
2. Porter, R.J., Mahoney, K.M. and Mason, J.M. "Seemingly Unrelated Regression Model of Car Speeds and Speed Deviations in Freeway Work Zones," In *Transportation Research Record, Journal of the Transportation Research Board No. 2023*, 2007, pp. 44-51.
3. Taylor, D.R., Muthiah, S., Kulakowski, B.T., Mahoney, K.M. and Porter, R.J. "An Artificial Neural Network Speed Profile Model for Construction Work Zones on High Speed Highways," In *Journal of Transportation Engineering*, Vol. 133, No. 3, 2007, pp. 198-204.
4. Porter, R.J., Mahoney, K.M. and Ullman, G.L. "Development of Temporary Concrete Barrier Placement Guidance for Construction Work Zones using Roadside Safety Analysis," In *Transportation Research Record, Journal of the Transportation Research Board No. 1984*, 2006, pp. 21-30.
5. Porter, R.J., Donnell, E.T. and Mahoney, K.M. "Evaluation of the Effects of Centerline Rumble Strips on Lateral Vehicle Placement and Speed," In *Transportation Research Record, Journal of the Transportation Research Board No. 1862*, 2004, pp. 10-16.
6. Venglar, S.P., Porter, R.J., Obeng-Boampong, K.O. and Kuchangi, S. "Establishing Advisory Speeds on Non-Direct Connect Ramps," Report No. FHWA/TX-09/0-6035-1, Texas Transportation Institute, College Station, TX, 2009.
7. Mahoney, K.M., Porter, R.J., Taylor, D.R., Kulakowski, B.T. and Ullman, G.L. "Design of Construction Work Zones on High Speed Highways [stand-alone work zone design guidance]," *NCHRP Report 581*, National Cooperative Highway Research Program, Transportation Research Board, Washington, D.C., 2007.

8. Mahoney, K.M., Porter, R.J., Taylor, D.R., Kulakowski, B.T. and Ullman, G.L. "Design of Construction Work Zones on High Speed Highways [research methodology and findings]," *NCHRP Web Only Document 105*, National Cooperative Highway Research Program, Transportation Research Board, Washington, D.C., 2007.
9. Porter, R. J., Hankey, J. M., Binder, S. C. and Dingus, T. A. "Enhanced Night Visibility Series, Volume VII: Phase II—Study 5: Evaluation of Discomfort Glare During Nighttime Driving in Clear Weather," *Report No. FHWA-HRT-04-138*, Federal Highway Administration, U.S. Department of Transportation, Washington, D.C., 2005.
10. Hankey, J. M., Blanco, M., Neurauder, M. L., Gibbons, R. B., Porter, R. J. and Dingus, T.A. "Enhanced Night Visibility Series, Volume XII: Overview of Phase II and Development of Phase III Experimental Plan," *Report No. FHWA-HRT-04-143*, Federal Highway Administration, U.S. Department of Transportation, Washington, D.C., 2005.
11. Mahoney, K.M., Porter, R.J., Donnell, E.T., Lee, D. and Pietrucha, M.T. "Evaluation of Centerline Rumble Strips on Lateral Vehicle Placement and Speed on Two-Lane Highways," *Report No. FHWA-PA-2002-034-97-04 (111)*, Pennsylvania Department of Transportation, Harrisburg, Pennsylvania, 2003.
12. Garvey, P.M., Zineddin, A.Z., Porter, R.J. and Pietrucha, M.T. "Real World On-Premise Sign Visibility: The Impact of the Driving Task on Sign Detection and Legibility," United States Sign Council Foundation, Inc., Bristol, Pennsylvania, 2002.
13. Mace, D.J., Garvey, P.M., Porter, R.J., Schwab, R. and Adrian, W. "Countermeasures for Reducing the Effects of Headlight Glare," The AAA Foundation for Traffic Safety, Washington, D.C., 2001.
14. Mace, D.J. and Porter, R.J. "Night Driving and Highway Lighting Requirements for Older Drivers," Federal Highway Administration, U.S. Department of Transportation, Washington, D.C., In process.

UNIVERSITY TEACHING

1. Introduction to Highway Engineering, Department of Civil and Environmental Engineering, Pennsylvania State University
2. Transportation Design, Department of Civil and Environmental Engineering, Pennsylvania State University
3. Traffic Operations, Department of Civil and Environmental Engineering, Pennsylvania State University

PROFESSIONAL SERVICE

Transportation Research Board Standing Committee and Task Force Membership:

1. Chair, Subcommittee on Performance-Based Analysis of Geometrics [AHB65(2)], 2007 – present
2. Member, Operational Effects of Geometrics [AHB65], 2004 – present
3. Member, Subcommittee on Speed Effects of Geometrics [AHB65(2)], 2007 – present
4. Member, Strategic Planning Subcommittee for Operational Effects of Geometrics, 2007
5. Friend, Geometric Design [AFB10], 2004 – present

6. Friend, Development of the Highway Safety Manual Task Force [ANB25T], 2007 – present
7. Friend, Future Directions Subcommittee of the Highway Safety Manual Task Force, 2008 – present

Institute of Transportation Engineers:

1. Vice President, Brazos Valley Section, January 2009 – present
2. Secretary/Treasurer, Brazos Valley Section, June 2008 – December 2008

PROFESSIONAL SOCIETY MEMBERSHIP

1. Member, American Association for the Advancement of Science, November 2008 – present
2. Member, Institute of Transportation Engineers, May 2008 – present
3. Leadership Fellow, Eno Transportation Foundation, May 2005 – present
4. Member, Tau Beta Pi National Engineering Honor Society, May 1998 – present
5. Member, Chi Epsilon Civil Engineering Honor Society, December 1997 – present