



CHRISTOPHER L. BREHMER, P.E.
PRINCIPAL ENGINEER

EDUCATION

- Master of Science in Civil Engineering, Texas A&M University, 1996
- Bachelor of Science in Civil Engineering, Clarkson University, 1995
- Associate of Science in Engineering Science, Fulton-Montgomery Community College, 1993

PROFESSIONAL STATUS

- Licensed Professional Civil Engineer, State of Oregon, License No. 62836 PE
- Licensed Professional Civil Engineer, State of Washington, License No. 37571
- Licensed Professional Civil Engineer, State of Nevada, License No. 15593
- Licensed Professional Civil Engineer, State of Missouri, License No. 2014007259

PROFESSIONAL ASSOCIATIONS

- Transportation Research Board Committee on Tort Liability & Risk Management, AL070
- Institute of Transportation Engineers (ITE)
- Chi Epsilon, National Engineering Honor Society

PROFESSIONAL EXPERIENCE

KITTELSON & ASSOCIATES, INC.

1997-Present

Responsible for a wide spectrum of traffic operations, planning, and design projects. Experience covers all aspects of transportation impact analyses including field data collection, sight distance review, traffic volume forecasting, transportation system modeling, intersection operational analyses, access and circulation assessment, parking lot access and circulation review, arterial traffic signal coordination issues, report preparation, and public presentations. Managed development of roadway corridor plans considering capacity, access management, safety, and operations. Managed preparation of 20-year transportation system plans for communities considering pedestrian, bicycle, automobile, freight, rail, and transit needs. Served as engineer of record for traffic signal, signing and striping, and street lighting design plans. On a national level, served as a research engineer investigating protected/permissive left-turn signal displays as part of National Cooperative Highway Research Program Project 3-54.

EXPERT WITNESS ACTIVITIES

Assisted attorneys in private practice, insurance companies, and government attorneys in tort cases pending or filed in the states of California, Illinois, Missouri, Oregon, and Washington. Analyzed the design and operation of traffic control devices, including traffic signals and railroad crossing devices, to determine if their presence or absence contributed to or caused an accident. Assisted attorneys in private practice and government attorneys for eminent domain and administrative permit approvals.

SELECTED PUBLICATIONS

With co-authors M. Knodler, D. Noyce, and K. Kacir. “*An Evaluation of Driver Comprehension of Solid Yellow Indications Resulting from Implementation of the Flashing Yellow Arrow.*” Transportation Research Board 2007 Annual Meeting CD-ROM Paper #07-2293, TRB, Washington D.C. 2007.

With co-authors J. Kuhn and A. Ooms. *The Kohl’s Hard Facts: Kohl’s Department Store Trip Generation Characteristics.* WesternITE. Institute of Transportation Engineers District 6. May-June 2006.

With co-authors M. Knodler, D. Noyce, and K. Kacir. “*Potential Application of Flashing Yellow Arrow Permissive Indication in Separated Left-turn Lanes.*” Transportation Research Record No. 1973. Transportation Research Board. 2006.

With co-authors M. Knodler, D. Noyce, and K. Kacir. “*Analysis of Driver and Pedestrian Requirements for Permissive Left-turn Applications.*” Transportation Research Record No. 1982. Transportation Research Board. 2006.

With co-authors M. Knodler, D. Noyce, and K. Kacir. “*Evaluation of Flashing Yellow Arrow in Traffic Signal Displays with Simultaneous Permissive Indications.*” Transportation Research Record No. 1918. Transportation Research Board. Washington D.C. 2005.

With co-authors M. Knodler, D. Noyce, and K. Kacir. “*An Evaluation of Traffic Signal Displays for Protected-Permissive Left-Turn Control Using Driving Simulator Technology.*” Journal of Transportation Engineering, Volume 131 No. 4. American Society of Civil Engineers. April 2005.

With co-authors K. Kacir, D. Noyce. “*Flash & Arrow.*” Transportation Management + Engineering. April 2004.

With co-authors K. Kacir, D. Noyce, M. Manser. *NCHRP Report 493: Evaluation of Traffic Signal Displays for Protected/Permissive Left-Turn Control.* National Cooperative Highway Research Program. Transportation Research Board. 2003.

With co-authors K. Kacir, D. Noyce. “*A Recommended Display for Protected/Permissive Left-Turn Control.*” ITE Journal. Institute of Transportation Engineers. December 2003.

With co-author M. Butorac. “*Trip Generation Characteristics of Discount Supermarkets.*” ITE Journal. Institute of Transportation Engineers. November 2003.

With co-authors M. Knodler, D. Noyce, and K. Kacir. “*Driver Understanding of the Green Ball and Flashing Yellow Arrow Permitted Indications: A Driver Simulator Experiment.*” Wisconsin Traffic Operations and Safety Laboratory. University of Wisconsin-Madison, Department of Civil and Environmental Engineering. 2001.

With co-authors J. Carvell, K. Balke, J. Ullman, K. Fitzpatrick, and L. Nowlin. *Freeway Management Handbook.* Research Report FHWA-SA-97-064. U.S. Department of Transportation. Federal Highway Administration. August 1997.

With co-authors K. Balke and K. Rao. *Guidelines for Implementing Traffic Responsive Mode in TxDOT Closed-Loop Traffic Signal Systems.* Research Report 2929-3F. Texas Transportation Institute, College Station, Texas, August 1997.

With co-authors K. Balke and K. Rao. *Results of Simulation Studies Relating to the Operation of Closed-Loop Systems in a Traffic Responsive Mode*. Research Report 2929-2. Texas Transportation Institute, College Station, Texas, January 1997.

“*Addressing Security Issues in ITS/ATMS.*” Compendium: Graduate Student Papers On Advanced Surface Transportation Systems. Texas Transportation Institute. Report Number SWUTC/96/72840-00003-1. August 1996.

SELECTED LECTURES & PRESENTATIONS

2007 – 2013 – University of Portland

- Traffic Impact Studies and the 4-Step Process
- Traffic Impact Studies – Beyond the 4-Step Process (System development charges, Land use rules & policy, case study)

2011 – Transportation Research Board, 50th Annual Workshop on Transportation Law, (July 19, 2011)

- The Continuing Evolution of Transportation, Standards & Guidebooks: An Engineer’s Perspective

2009 – Law Seminars International, Land Use in Southwest Washington (February 3, 2009)

- Transportation Issues: Economic Impacts on Current Projects on the Table

2007 – Portland State University

- Traffic Impact Studies and the 4-Step Process

2007 – Lorman Education Services, The Development Approval Process Seminar (December 11, 2007)