

Jeffrey W. Buckholz, PhD, P.E., PTOE

Academic rank: Affiliated Faculty, School of Engineering, University of North Florida

Degrees with fields, institution, and dates:

B.S., Civil Engineering, Magna Cum Laude, University of Toledo, 1976
M.S., Civil Engineering, Transportation Major, University of California at Berkeley, 1977
M.B.A. (Finance), University of Toledo, 1983
Postgraduate Studies in Transportation, Massachusetts Institute of Technology, 1984-1985
PhD, Civil Engineering, Transportation Major/Statistics Minor, University of Florida, 2007

Number of years of service on this faculty, including date of original appointment and dates of advancement in rank: 5.0 years, January 2005 to present

Other related experience--teaching, industrial, etc.:

Buckholz Traffic

President and Chief Engineer, 1989 to present

Sims, Eisman Russo

Senior Traffic Engineer, 1988

Vanasse, Hangen, Brustlin

Senior Traffic Operations Engineer, 1987

Vollmer Associates

Senior Transportation Engineer, 1986-1987

Oakland County Road Commission

Traffic Engineer, 1985

Toledo Metropolitan Area Council of Government

Transportation Engineer, 1980-1983

San Diego County Dept. of Transportation

Transportation Engineer, 1979-1980

McDonnell, Proudfoot & Associates

Traffic Engineer, 1978-1979

Consulting, patents, etc.: Have completed hundreds of professional engineering assignments resulting in signed and sealed plans or technical reports. Retiming of over 300 traffic signals covering 20 major corridors in Northeast and Central Florida

State(s) in which registered:

Registered Engineer in: California, Florida, Georgia, Massachusetts, Michigan and Ohio
Professional Traffic Operations Engineer (PTOE)

Certified Unlimited Electrical Contractor in Florida and Georgia

Certified Fiber Optic Technician, Levels I, II and III & Certified LAN Cabling Technician

Level III IMSA - Certified Traffic Signal Technician

Level II IMSA - Certified Signs & Markings Specialist

IMSA - Certified Traffic Signal Inspector

ATSSA Certified - Florida Advanced Work Zone Traffic Control

Court certified expert witness in the field of traffic engineering (have provided services in 52 cases to date)

Principal publications:

Buckholz, JW, "A Proposed Transportation System for Roadable Aircraft", Paper Accepted for Presentation at Transportation Research Board Annual Meeting, January 2010, Washington, D.C

Buckholz, JW, "Theoretical Bounds for Delay Estimation", Paper Submitted for Consideration at Transportation Research Board Annual Meeting, January 2010, Washington, D.C

Buckholz, JW, Introduction to Traffic Signals, Suncam Continuing Education Course, 2009

Buckholz, JW, Signal Supports, Indications and Signing, Suncam Continuing Education Course, 2009

Buckholz, JW, Planning for Traffic Signals, Suncam Continuing Education Course, 2009

Buckholz, JW, Designing Traffic Signals, Suncam Continuing Education Course, 2009

Buckholz, JW, "LOS for Oversaturated Conditions, A Proposed Solution for Signalized Intersections", ITE Journal, January 2009

Buckholz, JW and Courage, KC, "Microscopic and Macroscopic Approaches to Delay Estimation with Oversaturated Conditions", Transportation Research Record No. 2071, Journal of the Transportation Research Board, 2008

Buckholz, JW, Ph.D. Dissertation, "Real-Time Measurement of Delay at Signalized Intersections", December 2007

Buckholz, JW, "Detector Switching and Detector Calling", IMSA Journal, Vo. 41, No. 3/03 (May/June 2003)

Buckholz, JW, "Clamp-On Single Point Ground Testers", IMSA Journal, March/April 2003

Buckholz, JW, "Choosing Intersection Control (Part II - 3 Case Studies)", IMSA Journal, Jan/Feb 2003

Buckholz, JW, "Choosing Intersection Control (Part I)", IMSA Journal, November/December 2002

Buckholz, JW, "The Future of Traffic Signals", IMSA Journal, September/October 2002

Buckholz, JW, "Limitations of Coordinated Signal Timing Programs", IMSA Journal, July/August 2002

Buckholz, JW, "Ten Common Deficiencies of Signalized Intersections", IMSA Journal, May/June 2002

Buckholz, JW, "Check Timing Values (Construction Timings)", IMSA Journal, November/December 2001

Buckholz, JW, "Fully-Actuated Traffic Signal Control", IMSA Journal, July/August 2001

Buckholz, JW, "Stop Line vs. Upstream Detection (Volume-Density Operation)", IMSA Journal, May/June 2001

Buckholz, JW, "Dilemma Zone Protection", IMSA Journal, March/April 2001

Buckholz, JW, "IMSA Level II Traffic Signal Update (Preventive Maintenance)", IMSA Journal, Jan/Feb 2001

Buckholz, JW, "Lane Discipline in Multi-Lane Roundabouts", IMSA Journal, November/December 2000

Buckholz, JW, "Types of Flashing Operation (Low Volume Flash)", IMSA Journal, July/August 2000

Buckholz, JW, "Improving Driver Education", IMSA Journal, May/June 2000

Buckholz, JW, "The Benefit of Full Time Inspection (Tailored Inspection)", IMSA Journal, March/April 2000

Buckholz, JW, "Stop Line vs. Upstream Detection Areas (Right Turn Slip Lanes)", IMSA Journal, Jan/Feb 2000

Buckholz, JW, "Cabinet Grounding", IMSA Journal, November/December 1999

Buckholz, JW, "The New IMSA Traffic Signal Inspection Manual", IMSA Journal, September/October 1999

Buckholz, JW, IMSA Traffic Signal Inspection Manual, 1999

Buckholz, JW, "Travel Time Runs", IMSA Journal, July/August 1999

Buckholz, JW, "Types of Flashing Operation (Yellow/Red vs. Red/Red Flashing)", IMSA Journal, May/June 1999

Buckholz, JW, "Typical Background Cycle Lengths", IMSA Journal, March/April 1999

Buckholz, JW, "Delay Detection", IMSA Journal, January/February 1999

Buckholz, JW, "Left Turn Phasing", IMSA Journal, November/December 1998

Buckholz, JW, "Traffic Signal Update (Level I and II Test Summary)", IMSA Journal, September/October 1998

Buckholz, JW, "Traffic Signal Update (Australia-New Zealand Traffic Control)", IMSA Journal, July/August 1998

Buckholz, JW, "Troubleshooting", IMSA Journal, March/April 1998

Buckholz, JW, "Current", IMSA Journal, January/February 1998

Buckholz, JW, "Maximum Usable Area of the Conduit", IMSA Journal, November/December 1997

Buckholz, JW, "Check Timing Values (Dual Entry)", IMSA Journal, September/October 1997

Buckholz, JW, "New Level I Signal Manual Arrives", IMSA Journal, July/August 1997

Buckholz, JW, IMSA Level I Traffic Signal Training Manual, 1997

Buckholz, JW, "Fiber Optic Cable", IMSA Journal, May/June 1997

Buckholz, JW, "Railroad Preemption", IMSA Journal, March/April 1997

Buckholz, JW, "Relative Offset", IMSA Journal, January/February 1997

Buckholz, JW, "Basic Signal Timing Concepts", IMSA Journal, November/December 1996

Buckholz, JW, "Required Inductance", IMSA Journal, September/October 1996

Buckholz, JW, "Pedestrian Phasing", IMSA Journal, July/August 1996

Buckholz, JW, "The Detector Test Panel", IMSA Journal, March/April 1996

Buckholz, JW, "Mast Arm Pole Length", IMSA Journal, January/February 1996

Buckholz, JW, "The 10 Major Pitfalls of Coordinated Signal Timing", ITE Journal, August 1993

Contributed Section 36.14 (Traffic Engineering for the Criminal Defense Attorney) to Chapter 36 (Expert Witnesses) of Defense of Drunk Driving Cases: Criminal – Civil, Volume 4, Matthew Bender, 1989

Buckholz, JW, Transportation Resource Decision-Making Framework, University of California Institute of Transportation Studies, December 1977

Scientific and professional societies of which a member:

Institute of Transportation Engineers - Fellow (member since 1983)
 International Municipal Signal Association (member since 1989)

Honors and awards:

ESI 6355 Outstanding Project Award: "Traffic Signal Simulation", University of Florida, 2004
 IMSA Journal Award for Journalistic Excellence, 1997 and 1998
 Ohio Citizens Outstanding Student Award, 1983

Tau Beta Pi Engineering Honor Society, 1975

Institutional and professional service in the last five years:

Academic Service, University of North Florida

Instructor, Advanced Transportation Engineering, Spring 2005, 2006 and 2007

Instructor, Introduction to Transportation Engineering, Fall 2006

Professional development activities in the last five years:

Attended FDOT Quality and Level of Service Workshop, December 2009

Attended Transportation Research Board Annual Meeting, January 2009, Washington, D.C.

Presented Paper at Penn State Transportation Engineering and Safety Conference, December 2008, State College, Pennsylvania, "Common Deficiencies of Signalized Intersections"

Reviewed Paper Submission for 2009 Transportation Research Board Annual Meeting: "Three Dimensional Mapping of Inductive Loop Detector Sensitivity Using Field Measurement".

Presented at 10th International Conference on Applications of Advanced Technologies in Transportation, May 2008, Athens, Greece, "The Real-Time Estimation of Delay at Signalized Intersections"

Reviewed 2 Paper Submissions for 2008 International Conference on Applications of Advanced Technologies in Transportation: "Development of Macroscopic Performance Measures from Traffic Simulation", and "Innovative Traffic Signal System for the Intersections of Under-Crossing Freeways in the Southern California Area".

Presented at Transportation Research Board Annual Meeting, January 2008, Washington, D.C., "Microscopic and Macroscopic Approaches to Delay Estimation with Oversaturated Conditions"

Reviewed Paper Submission for 2008 Transportation Research Board Annual Meeting: "Real-Time Methods for Quantifying Arterial Progression Performance".

Attended Mid-Year Meeting of TRB's Highway Capacity Committee in Charlotte, North Carolina, July 2007

Attended Transportation Research Board Annual Meeting, January 2007, Washington, D.C.

Reviewed Paper Submission for 2007 Transportation Research Board Annual Meeting: "Event Based Data Collection for Generating Actuated Controller Performance Measures".

Attended Transportation Proportionate Fair Share, Concurrency & Financial Feasibility Workshop, May 2006

CCEC Symposium, University of North Florida, April 2006, Presented: "Visible and Non-Visible Delay at Signalized Intersections"

Presented at Transportation Research Board Annual Meeting, January 2006

PhD Progress Report in Transportation Operations and Traffic Control Session

Attended Signal Capacity Analysis Workshop, Aug. 2005

Attended Transportation Research Board Annual Meeting, January 2005