

David C. Thornburg

Collision Reconstructionist Emeritus

Thorn Consulting Services

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<https://collisionrecon.com>

SUMMARY OF QUALIFICATIONS AS COLLISION RECONSTRUCTIONIST

Relevant Experience

30 years of experience investigating and/or reconstructing collisions.

Personally investigated, reconstructed, and/or consulted on approximately 3,000 collisions during career, ranging from minor property damage to multiple fatality type crashes.

Accreditation Commission for Traffic Accident Reconstruction (ACTAR) accredited, Reg. #1502 (2004 – 2013).

Formal Education

2018 – Bachelor of Science (Mechanical Engineering) from Eastern Washington University

- ABET Accredited Program
- Graduated *Cum Laude*
- Track Emphasis – Materials & Computational Mechanics
- Capstone Project – Designed and fabricated drag sled to test roadway coefficients of friction & co-authored research article on effect of magnesium chloride de-icer on roadway friction

2009 – Associate of Science (Physics) from Spokane Falls Community College

1990 – Associate of Applied Science (Security Administration) from the Community College of the Air Force

Specialized Training

1993 – *Basic Collision Investigation*, Washington State Patrol, 40 hours

1998 – *Advanced Collision Investigation*, WA Criminal Justice Training Commission, 80 hours

1999 – *Technical Collision Investigation*, WA Criminal Justice Training Commission, 120 hours

1999 – *Highway-Rail Grade Crossing Collision Investigation*, Burlington Northern, 16 hours

Specialized Training Cont.

- 2000** – *Occupant Kinematics*, Robert Kaufman, Harborview / CIREN, 12 hours
- 2000** – *Collision Investigation Reconstruction*, Washington State Patrol, 132 hours
- 2002** – *Crash Data Retrieval (CDR) System Operator*, Collision Safety Institute, 16 hours
- 2002** – *Ped/Bike Crash Investigation*, Institute of Police Technology and Management, 40 hours
- 2002** – *Heavy Truck Reconstruction*, Washington State Patrol, 36 hours
- 2004** – *Applied Physics for the Traffic Crash Investigator*, Institute of Police Technology and Management, 40 hours
- 2004** – *Excel for the Accident Reconstructionist*, Accident Analysis & Reconstruction, 40 hours
- 2005** – *WA State Traffic Control Flagger*, Spokane County, 8 hours
- 2005** – *WA State Traffic Control Technician*, Evergreen Safety Council, 20 hours
- 2006** – *Crash Data Retrieval Technician Course Instructor*, Collision Safety Institute, 16 hours
- 2006** – *Crush Energy Analysis*, Accident Analysis & Reconstruction, 40 hours
- 2009** – *Crash Data Retrieval Technician Course (CDR)*, Collision Safety Institute, 8 hours
- 2009** – *Crash Data Retrieval (CDR) Data Analyst Course*, Collision Safety Institute, 32 hours
- 2009** – *Officer Involved Collision Prevention and Investigation*, Collision Investigation Solutions, 16 hours
- 2010** – *Arson Investigation for Patrol and Fire Officers*, Remedy Resource Group, 22 hours

Specialized Seminars & Conferences

- 2001** – *Motorcycle Collision Analysis Seminar*, John Hunter, Investigative Training Service, 8 hours
- 2001** – *Crush Analysis Seminar*, John Hunter, Investigative Training Service, 8 hours
- 2002** – *Crash Testing*, FARO Conference, 16 hours
- 2002** – *Occupant Kinematics*, FARO Conference, 8 hours
- 2002** – *Truck Rollover & Newton's Laws of Motion*, Dr. Frank Navin, WATAI Conference, 8 hours
- 2004** – *Accident Reconstruction Formulas*, WATAI Conference, 8 hours
- 2004** – *Code of Federal Regulations*, WATAI Conference, 8 hours
- 2004** – *ARC-CSI Crash Conference*, 28 hours
- 2005** – *ARC-CSI Crash Conference*, 28 hours
- 2006** – *Crash Data Retrieval User's Conference*, ARC-CSI, 16 hours
- 2006** – *Crash Testing*, WATAI Conference, 8 hours

Specialized Seminars & Conferences Cont.

2007 – *Applied Physics and Momentum & Energy Analysis*, Dr. Bruno Schmidt, WATAI Conference, 8 hours

2008 – *Crash Data Retrieval User's Conference*, ARC-CSI, 16 hours

2010 – *iWitness Photogrammetry Workshop*, DeChant Consulting Services, 32 hours

2011 – *3D Diagramming with CAD Zone Software Workshop*, Spokane Community College, 16 hours

2017 – *Advanced Crash Investigation*, John Daily, MSME, Jackson Hole Scientific Investigations, 16 hours

Work Experience

December 2021 to Present – Bodily Injury Liability Claims Adjuster for Farmers Insurance Company

January 2001 to November 2021 – Established Thorn Consulting Services in 2001 providing forensic expert witness services in motor vehicle accident investigation and reconstruction.

January 1996 to November 2021 – Sergeant (8+ years), Spokane County Sheriff's Office, assigned to the Patrol Division as a platoon supervisor. Previously assigned to the Traffic Unit as a traffic deputy (5 years) and traffic detective (4 years), which responsibilities included investigating and reconstructing serious injury and fatality collisions. ACTAR accredited reconstructionist within the region. Certified instructor through WSCJTC and instructed for the department and other agencies throughout the State of Washington in accident investigation and reconstruction.

March 1992 to December 1995 – State Trooper with the Washington State Patrol responsible for general patrol duties and collision investigations.

September 1988 to December 2010 – Security Police with the United States Air Force responsible for general military police operations on Air Force installations. Also served as a First Sergeant and Human Resource Advisor with the Washington Air National Guard at the 141st Air Refueling Wing (700+ personnel), Fairchild AFB, WA. Retired from the military with an Honorable Discharge as a Senior Master Sergeant (E-8).

Related Instructor Experience

Certified instructor through the Washington State Criminal Justice Training Commission (WSCJTC) to teach in the following areas: Collision Investigation and Collision Reconstruction.

Guest lecturer for Engineering Senior Seminar at Eastern Washington University (2016-2019).

Guest lecturer in Applied Physics at Spokane Falls Community College (2008-2009).

Related Instructor Experience Cont.

Adjunct Instructor for Spokane Community College in Traffic Investigation (2005).

Over 1,000 hours of classroom teaching in the following areas of crash investigation:

Basic Collision Investigation, Advanced Collision Investigation, Technical Collision Investigation, Pedestrian Collision Investigation, Motorcycle Collision Investigation, Collision Reconstruction, Momentum and Vector Analysis, Crush Analysis, Vehicle Dynamics, Occupant Kinematics, Skidmark Analysis, Human Factors, Time and Distance, Airborne Scenarios, Newton's Laws of Motion, Lamp Analysis, and Equation Derivation.

Previous certified Standardized Field Sobriety Test (SFST) instructor, Drug Recognition Expert (DRE) instructor (1998 – 2006), and BAC Datamaster – breathalyzer instructor (1999 – 2016).

Professional Associations

2001 to 2021: Member of the Washington Association of Technical Accident Investigators (WATAI)

2002 to 2021: Member of the Society of Automotive Engineers (SAE)

2002 to 2021: Member of the Accident Reconstruction Communications Network (ARC)

2003 to 2021: Member of the International Network of Collision Reconstructionists (INCR)

2018 to 2021: Member of the National Association of Professional Accident Reconstruction Specialists, Inc. (NAPARS)

2010 to 2020: Member of the American Society of Mechanical Engineers (ASME)

2001 to 2012: Member of the Forensic Accident Reconstructionists of Oregon (FARO)

Expert Testimony

2004 – *Robert Forster v. Shawn Lyons*, Spokane County Superior Court, WA, civil trial

2005 – *State of Washington v. Ricky Knokey*, Grays Harbor County Superior Court, WA, criminal trial

2006 – *Darlene Edwards v. Joan Miner*, Superior Court of the Virgin Islands, Cause No. SX-05-SM-541, civil trial

2008 – *State of Idaho v. Dominick Salois*, Kootenai County District Court, ID, criminal trial

2009 – *State of Washington v. Kevin Burton*, Grays Harbor County Superior Court, WA, Cause No. 08-1-525-1, criminal trial

2009 – *Conrad Pierce v. Farmers Insurance*, Spokane County Superior Court, WA, Cause No. 06-2-03748-5, mediation hearing

Expert Testimony Cont.

- 2009** – *Nachtigal v. FICW*, Spokane County Superior Court, WA, Spokane County Superior Court, WA, Cause No. 06-2-03939-9, deposition
- 2010** – *State of Washington v. Greg Cedell*, Pacific County Superior Court, WA, Cause No. 09-1-00198-5, criminal trial
- 2010** – *Joshua Arleth v. Keree Jens & Brian Wilson*, Spokane County Superior Court, WA, Cause No. 08-2-05575-7, deposition
- 2010** – *Angelique Thomas v. Chris Sonnabend*, Spokane County Superior Court, WA, Cause No. 09-2-02590-2, deposition
- 2010** – *Christopher & Drew Rynning v. Spokane Kia*, Spokane Superior Court, WA, Cause No. 09-2-03945-8, deposition
- 2010** – *Estate of Kevin Lewis v. WA State Department of Transportation*, Spokane County Superior Court, WA, Cause No. 09-2-01041-7, deposition
- 2010** – *Mary Arndt v. Spokane County*, Spokane County Superior Court, WA, Cause No. 09-2-03156-2, deposition
- 2011** – *State of Washington v. Michael Bourgette*, Grays Harbor County Superior Court, WA, Cause No. 10-1-00072-3, criminal trial
- 2011** – *State of Washington v. Thomas Olsen*, Spokane County Superior Court, WA, Cause No. 09-1-02073-7, criminal trial
- 2011** – *State of Washington v. Jonathon Bales*, Spokane County Superior Court, WA, Cause No. 10-1-03004-3, criminal trial
- 2011** – *Warn Wilson v. Thomas Birge*, Spokane County Superior Court, WA, Cause No. 11-02-02721-4, arbitration hearing
- 2011** – *Linda Bays v. Teresa Herrick & Peggy Regnier*, Spokane County Superior Court, WA, Cause No. 11-2-00027-8, deposition
- 2012** – *State of Washington v. Richard Harwood*, Spokane County District Court, WA, Case No. C00119251, criminal trial
- 2012** – *State of Idaho v. Lisa Calbick*, Kootenai County District Court, ID, criminal trial
- 2013** – *Michael Abney v. Edwin Andrews*, Spokane County Superior Court, WA, Cause No. 11-2-02189-5, deposition
- 2013** – *State of Washington v. Jeffrey Williams*, Spokane County Superior Court, WA, Cause No. 12-1-02575-5, criminal trial
- 2013** – *Jilanne Westley v. Jack Goodwin*, Spokane County District Court, WA, Cause No. 11-01-02694-3, civil trial
- 2013** – *Michael Richardson v. Lake Pend Oreille School District #84*, Bonner County District Court, ID, Case No. CV-2011-01618, deposition
- 2013** – *State of Washington v. Richard Lee-Waddell*, Whitman County Superior Court, WA, Cause No. 12-1-00147-7, criminal trial

Expert Testimony Cont.

- 2013** – *State of Washington v. Christopher Arnold*, Spokane County Superior Court, WA, Cause No. 12-1-01971-2, criminal trial
- 2013** – *Conrad Malinak v. Spokane County*, Spokane County Superior Court, WA, Cause No. 13-2-01216-7, deposition
- 2015** – *Walter Hartley v. Peggy Griffin*, Chelan County Superior Court, WA, Cause No. 13-2-00775-9, deposition
- 2015** – *Laurie Jenks v. Toyota Motor Sales, U.S.A., Inc.*, King County Superior Court, WA, Cause No. 13-2-23366-5, deposition
- 2016** – *Vickie Eastridge v. Bernard Anson*, Yakima County Superior Court, WA, Cause No. 13-2-03923-0, deposition
- 2016** – *James Haddox v. James Shaffer*, Benton County Superior Court, WA, Cause No. 15-2-01473-5, civil trial
- 2016** – *State of Washington v. Grigoriy Kravtsov*, Spokane County District Court, WA, Case No. IN539612, infraction hearing
- 2017** – *Paul Olkowski v. Skylar Frederickson*, Adams County Superior Court, WA, Case No. 15-2-04157-1, deposition
- 2018** – *Xavier Acuna v. Karolina Shvets*, Benton County Superior Court, WA, Case No. 16-2-00191-1, deposition
- 2019** – *Bryce Giffing v. Kurt Goe*, Spokane County Superior Court, WA, Case No. 18-2-01547-7, mediation hearing
- 2019** – *Angelica Perez v. Maria Casillas & Atkinson Staffing Inc*, Franklin County Superior Court, WA, Case No. 18-250086-11, deposition

Publications

“The Speed Triangle – Momentum, Energy and PCM Data”, Collision: The International Compendium for Crash Research, Spring 2011, Volume 6 Issue 1.

“The Effect of Magnesium Chloride De-Icer on Roadway Friction”, Accident Reconstruction Journal, Volume 28, No. 4, July/August 2018.