

**JOHN P BUCK**

(414) 840-7487

jbuck@crashteam.com

## **ACCIDENT RECONSTRUCTIONIST**

### **CURRICULUM VITAE**

#### **SPECIALIZED EXPERIENCE**

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- Analysis of low-velocity impacts
- Photogrammetry analysis
- Seat belt usage analysis
- Driver identity analysis ( who was driving? )
- Dynamic analysis of tractor/trailer accidents
- Accident reconstruction cases involving occupant positioning, speed determination, time/distance studies, point of impact placement and computer-aided reconstruction
- Accident investigations involving witness interviews, accident scene investigations, and vehicle examinations
- Motor vehicle/pedestrian analysis
- Motor vehicle/bicyclist analysis
- Lamp examination for on or off
- Completed over 225 accident reconstructions since 1986
- Investigation of over 2,500 accidents since 1980

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#### EXPERT WITNESS EXPERIENCE

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- Qualified in Washington County, Wisconsin Circuit Court on 10 occasions
- Qualified in Milwaukee County, Wisconsin Circuit Court on 1 occasion
- Evidence given on the following issues: seat belt usage, point of impact placement, impact speed, speed at start of skid prior to impact time/distance analysis, impact speed analysis, lamp examination, etc.

#### ACADEMIC BACKGROUND

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- **Various seminars and lectures**
- **Traffic Accident Investigation Seminar (24 hours) University of Wisconsin, Madison WI** Included vehicle acceleration and deceleration, vehicle stopping distances, information needed to reconstruct traffic crashes, human factors in traffic crashes, highway safety and design factors, vehicle skid performance, photogrammetry; May 1983
- **Advanced Traffic Accident Investigation (80 hours) Wisconsin State Patrol Academy, Ft. McCoy, WI** Included lamp examination, legal responsibilities in crash investigation, accident classification, measuring and diagramming accident scenes, examination of the roadway, vehicle examination and damage classification, tire-mark measurement, speed estimates, use of photography in accident investigation including daylight and night time instruction, field testing, skid tests; June 1984
- **Traffic Crash Reconstruction (80 hours) Institute of Police Technology and Management (IPTM) University of North Florida, Jacksonville, FL** Included derivation and origin of speed equations, computation of vehicle speed at impact using conservation of linear momentum, Behavior of vehicles in a collision (Newton's three laws of

motion), effects of weight shift in braking, effects of anti skid (anti-lock) braking systems, determination of direction of travel, initial contact and positions of vehicles on the roadway, testing acceleration, deceleration and skids of both passenger cars and motorcycles, critical speed scuffs, airborne tests, evaluation and interpretation of evidence at the crash scene, evaluation of information of reports and diagrams of initial investigating officers; February 1986

- **Highway-Rail Grade Crossing Collision Investigation I.A.C.P/National Sheriff's Association**
  
- **Traffic Crash Reconstruction (80 hours) Institute of Police Technology and Management (IPTM) Wisconsin State Patrol Academy, Ft. McCoy, WI** Included formula derivations (including minimum speed, kinetic energy, airborne speed, radius, critical speed, quadratic equation, conservation of linear momentum), Mathematical and algebra review, Newton's law of motion, time, distance and velocity equations, conservation of linear momentum, motorcycle collisions, vector sum analysis, review of physical evidence in crash reconstruction, reconstruction projects, field exercises (including airborne analysis, pacing calibration, acceleration analysis), geometry and trigonometry review, the study and use of airborne formulas, commercial vehicle collision reconstruction, special situation formulas, multiple departure momentum calculations, energy calculations. October 1996
  
- **Photogrammetry using iWitness Software WCSD DeChant Consulting Services** Digital photography, importing digital images into the iWitness software, processing digital images in iWitness, exporting .dxf file to a Computer Aided Drawing program to produce scaled crash diagram; May 2005
  
- **Traffic Crash Reconstruction Update (40 hours) Institute of Police Technology and Management (IPTM) Illinois State Police Academy, Springfield, IL** Geometry, trigonometry and selected mathematical topics, Dynamics and Newton's Laws of Motion, Skid analysis and testing, Critical speed yaw analysis, Time-distance analysis,

Concepts in rotational mechanics, Pole and narrow object impacts, Conservation of linear momentum, Fundamentals of rollover crash reconstruction, Uniform projectile motion and airborne speed analysis; May 2008

- Continually review books and publications relating to crash investigation. Review investigations with former instructors and with other crash investigators to ensure accuracy on specific cases.

#### PROFESSIONAL WORK EXPERIENCE

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##### **Washington County Sheriff's Department**

West Bend, WI

October 1979 to Present Deputy Sheriff

1983 to present

Traffic Crash Investigator

Served Ozaukee and Walworth County Sheriff's Departments and the West Bend, Germantown, Hartford, Jackson, Slinger, Kewaskum and Mequon Police Departments

- Supervise the Sheriff's Department Crash Reconstruction Unit
- Completed over 225 total investigations involving crash reconstruction
- Participated in investigation of over 2500 traffic crashes
- Experience investigating automobile, motorcycle, commercial vehicle bicycle and pedestrian crashes
- Investigated several traffic crashes for civil litigation not related to duties at the Sheriff's Department

January 2005 to present

Lieutenant/Shift Commander

June 2001 – December 2004  
Supervisor

Detective Lieutenant/ Detective Bureau

January 1997 – June 2001  
Supervisor County Drug Task Force

Detective Lieutenant/

January 1988 – January 1997

Patrol Sergeant

4711 MAPLE GROVE DR WEST BEND, WI 53095

December 1980 – January 1988 Patrol Officer

October 1979 – December 1980 Special Deputy (Part Time)

Assigned to SWAT Team 1989 – 2000

SWAT Commander 1997 – 2000

**Security Personnel, Inc.,** **Milwaukee, WI**  
September 1979 - December 1980 Security Guard  
October 1978 to September 1979 Director of Personnel

**Sears Auto Center** **Ann Arbor, MI**  
Auto Mechanic and Assistant Manager

Duties included engine tune-up, brake overhaul, front steering and suspension repair and alignment, other minor auto repairs, supervision of 20 other employees  
September 1976 to September 1978

**Honda of Ann Arbor** **Ann Arbor, MI**  
Set-up mechanic  
Duties included set-up of new motorcycles and minor repairs  
May 1975 to September 1976

Employed by various independent service stations performing minor automobile repairs  
Prior to May 1975

#### PROFESSIONAL ASSOCIATIONS

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- Illinois Association of Technical Accident Investigators
- Midwest Association of Technical Accident Investigators
- Society of Automotive Engineers
- International Association of Special Investigation Units

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