

## Curriculum Vitae

### **Elvin Aycock, P.E., PLS, ACTAR**

Elvin Aycock is a professional engineer and holds the ACTAR certification (Accreditation Commission for Traffic Accident Reconstruction). He has been practicing engineering for more than 30 years and is licensed in five states, Georgia, Florida, North Carolina, Mississippi, and Alabama.

#### **Specialized Professional Competence:**

**Accident Reconstruction:** Mr. Aycock has been providing automobile accident reconstruction for more than nine years. He has attended Northwestern University Traffic Institute for reconstruction training of accidents involving automobiles, light trucks, heavy trucks, motorcycles, and pedestrians. Application engineering principles and vehicle dynamics are used to determine vehicle speeds, vehicle direction, delta-V, principal direction of force, change in velocity and impulse. The initial point of contact on the roadway, roadway marking evidence, and final resting position of the vehicles are used in the momentum analysis while the contact damage on the vehicles, crush coefficients, and vehicle data are used in the conservation of energy analysis. Other types of cases involve vehicle orientation at impact, line-of-sight, visibility analysis, roadway defects.

Mr. Aycock is certified in the use and interpretation of the data from the "Black Box" (Event Data Recorder) found in most General Motors' vehicles and many of the Ford vehicles. This data can often provide information about speed, seat belt usage, delta-v, and braking.

**Hydroplaning Cases:** Mr. Aycock has been a hydrologist for more than 30 years and has provided expert witness services to attorneys in urban development cases as well as storm water drainage on roads and highways. This combined experience has given him excellent opportunities to consult on cases involving water on the roadway and the impact it has on the vehicle's tire hydroplaning or in some cases hydro-dragging.

**Engineering:** Roadway design and roadway defects are engineering services provided. Site designs for governmental agency permits are provided by the firm which also includes site evaluation, site analysis, traffic flow, grading plans, erosion and sediment control design, storm sewer design, sanitary sewer design, hydrology studies, detention and retention storage design, road and street design, water surface studies, flood plain evaluation and certification and permit expediting.

**Surveying:** Accident sites, roadway defects, topographic surveys, as-built surveys, ALTA/ACSM surveys, construction staking, detention pond certification, flood plain certification, boundary line conflicts, encroachments, site surveys, vehicular accident sites, line of site determination, water surface profile study surveys, survey inspection reports and certifications.

**Storm Water Flooding and Sedimentation Damage:** Mr. Aycock has many years of experience designing storm water structures such as detention ponds and storm water storage facilities. He has extensive experience in erosion control design and investigation of damage to downstream property owners.

#### **Accident Reconstruction Courses:**

- Accident Reconstruction: Northwestern University Traffic Institute
- Accident Investigation: Northwestern University Traffic Institute
- Vehicle Dynamics: Northwestern University Traffic Institute
- Algebra for Traffic Accident Investigators: Northwestern University Traffic Inst.
- Analysis of Low Speed Collisions: Texas A&M (TEEX)
- Traffic Accident Reconstruction: Investigative Engineers Association
- Vehicle Dynamics: Society of Automotive Engineers
- Air Brake systems: Bendix
- Traffic Accident Reconstruction: Investigative Engineers Association
- Special Problems in Accident Reconstruction: University of North Florida (IPTM)
- Traffic Accident Collisions: Accident Reconstructionist Society
- Performance of Heavy Commercial Trucks: Society of Automotive Engineers
- Accident Reconstruction Simulation with EDSMAC: Engineering Dynamic Corporation
- 2002 HVE Forum: Engineering Dynamic Corporation
- 2003 HVE Forum: Engineering Dynamic Corporation
- Event Data Recorder: University of North Florida (IPTM)
- Truck Brakes: Bendix Corporation
- Event Data Recorder (Black Box): IPTM - University of North Florida
- EDR Symposium: NTSB-George Washington Univ.
- 2004 EDSMAC & EDCRASH: Engineering Dynamics Corp. Forum
- Highway Vehicle Event Data Recorder Symposium: NTSB Academy
- 2005 HVE Forum: Engineering Dynamics Corp.
- EDSMAC, EDSVS & EDVST Simulation: Engineering Dynamics
- Reconstruction: Engineering Dynamics
- 2006 EDC Forum: Engineering Dynamics



## **Publications:**

**Accident Reconstruction Fundamentals: A guide to understanding Vehicle Collisions.** A 203-page book that addresses the fundamentals of Newton's Law as it relates to vehicle accident reconstruction. It illustrates how to determining speeds from skid marks, how to determine the coefficient of friction or drag factors, and velocities of vehicles in falls and flips.

**Reviewing Surveys and Drafting Legal Descriptions:** This book was written for the seminar given by Half-Moon, Inc. for real estate attorneys. It has been used in hundreds of seminars and in most every state in the US.

**Hydroplaning: Water on Pavement Surface:** A paper about a hydroplaning case in south Georgia where a vehicle hydroplaned, crossed the interstate median, and crashed into an oncoming vehicle. The cause of storm water accumulating on the pavement surface is detailed and presented in an understandable manner..

## **As an Instructor:**

**Fundamentals of Accident Reconstruction:** Mr. Aycock teaches a four-hour seminar for attorneys and insurance adjusters about the methods to calculate speeds of vehicles from roadway evidence. What roadway evidence is needed to input into speed calculations. Emphasizes traffic reconstruction examples using the laws of physics.

**Traffic Accident Reconstruction:** A four-hour workshop for engineers and attorneys. The conservation of momentum and the conservation of energy procedures were illustrated for calculating the velocities of vehicles. Principal Direction of Force, point of vehicle contact, first contact of vehicles on the roadway, contact damage and induced damage, and impulses were discussed with examples and photographs used to illustrate.

**Low Speed Accident Analysis:** A two-hour seminar covering the impacts which constitute a low speed event. The forces, accelerations, and Delta-V experienced in these types of accidents are explained to develop an understanding of impact experienced by the occupants. The Delta-V can further be used to develop an occupant motion study.

## **Seminars Locations and Dates:**

April 3, 2000	Las Vegas, Nevada
August 8, 2003	Fort Lauderdale, Florida
December 4, 2003	Atlanta, Georgia
November 6, 2004	Atlanta, Georgia
March 15, 2005	Atlanta, Georgia

**Education and Professional Affiliations:**

B.S. Civil Engineering, 1971 - Mississippi State University

**Professional Reconstruction Certification:**

ACTAR, Number 1111

Accreditation Commission for Traffic Accident Reconstruction (ACTAR) is a national organization responsible for testing and accrediting reconstruction investigators in the United States and Canada.

**Professional Engineering Registrations: (Professional Engineer, PE)**

Georgia, PE# 15983

North Carolina PE# 18734

Alabama PE# 18846

Mississippi PE# 6507

Florida PE # 64956

**Professional Land Surveying Registrations: (Professional Land Surveyor, PLS)**

Georgia PLS# 2374

Mississippi PLS# 1592

**REM, Number 4048 (Registered Environmental Manager)**

Registered Environmental Manager (REM) is awarded to professionals meeting educational criteria and successfully passing the REM exam as set-out by the National Registry of Environmental Professionals.

**Professional Organization Membership:**

National Society of Professional Engineers (NSPE)

Georgia Society of Professional Engineers (GSPE)

American Society of Civil Engineers (ASCE)

Surveying and Mapping Society of Georgia (SAMSOG)

Society of Automotive Engineers (SAE)

Investigative Engineers Association (I-Eng-A)

Southeast Accident Reconstruction Society, Inc.

National Association of Professional Accident Reconstruction Specialists

National Registry of Environmental Professionals



### **Professional Experience:**

- ◆ Atlanta Engineering Services, Inc., President and Principal Engineer  
Atlanta, Georgia May 1990 - Present

Atlanta Engineering Services, Inc. provides engineering consulting services and expert witness to attorneys and the insurance industry. Investigative and forensic engineering which includes vehicle accident reconstruction, vehicle inspections, accident site sketches and drawings, lamp examinations and expert testimony. Also, provides reconstruction seminars for attorneys and the insurance industry.

Mr. Aycock is licensed as a professional engineer and as an ACTAR vehicle reconstructionist. He is also certified in use of the Event Data Recorder (Black Box). He has worked as a traffic accident reconstructionist since 1996 and has evaluated accidents involving tractor/trailer semi-trailer rigs, automobiles involving single vehicles and multiply vehicles, pedestrians, and motor cycles.

Atlanta Engineering Services is a multi-discipline company providing engineering services to private and public agencies, construction industry, local, state and federal agencies, insurance industry, private community, oil company industry, mining industry, and to the manufacturing industry. Provides expert testimony in the areas of engineering, surveying, and accident reconstruction.

- ◆ Metro Engineering and Surveying, Inc. President and Design Engineer  
Atlanta, Georgia November 1987 - April 1990

Design engineer responsible for the technical design and engineering department development. Provided engineering services for developers, construction industry, oil company industry, railroad industry, quarry mining industry and to the general public.

- ◆ Ambumedix, Inc., Southeastern Regional Manager  
Atlanta, Georgia October 1983 - November 1987

Responsible for the development of home building department. Built homes for the Atlanta community. Explored ways to maximize the energy efficiency of homes, provided site layout and worked in the building material industry.

- ◆ Elvin Aycock & Associates President and Principal  
Laurel, Mississippi September 1975 - October 1987

Provided engineering consulting services to developers, construction industry, local government, private community, oil company industry, and to manufacturing industry. As consulting City Engineer, provided consulting services in engineering technical matters and in court testimony. Resident engineer for the reconstruction of the downtown redevelopment project. Provides expert testimony in the areas of civil engineering and land surveying.

- ◆ City of Laurel, City Engineer  
Laurel, Mississippi

March 1973 - September 1975

Provided civil engineering services for the City of Laurel which included road and street design, storm sewer design, sanitary sewer design, mapping, land surveying, meeting with the public, selection of speciality consultants, and review of development project. Reviewed development plans for the city and made recommendations for purchase of a private water system. Elected to the board of the Mississippi Association of Land Surveyors.

- ◆ Charles N. Clark & Associates, Inc. Engineering Technician  
Laurel, Mississippi

June 1971 - March 1973

Prepared drawing for State-Aid road project for the local counties, design of water systems, land surveying, road and bridge construction inspections, construction specifications, and analysis of structures. Responsible for the development of a soil laboratory, training of personnel, lab certification, purchasing testing equipment, running soil tests, and preparing reports.