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Expertise. Precision. Innovation.

## Curriculum Vitae

### Michael F. Bosworth P.E.

**Profession:** Michael Bosworth is a Professional Engineer and Consultant with experience, education, and training in the fields of Mechanical Engineering, Civil Engineering and Forensic Engineering. His practice currently focuses on providing consulting services to legal, insurance, governmental, and corporate clients throughout North America. Specific areas of expertise include vehicle collision reconstruction, commercial vehicle crash investigation and analysis, highway work zone traffic control, traffic control devices, vehicle system components and dynamics, and driver factors. Michael has provided consulting services in 11 states including expert witness testimony at the deposition or jury trial levels in Florida and Illinois

With a professional and academic background in both Mechanical Engineering and Civil Engineering, Mr. Bosworth investigates product and premises liability and mechanical failure cases. Michael applies his forensic expertise to construction inspection and materials testing of commercial, residential, and high-rise buildings. His professional experience includes inspection of structural elements, masonry, steel reinforcing, cables, formwork, bolts, and fireproofing. Included areas of expertise are construction plan compliance, construction equipment failure, construction and materials defects, worksite accidents and other worksite issues as they relate to construction.

**Licensure & Certification:** Professional Engineer, State of Florida, License Number 67515  
American Concrete Institute (ACI) Certified Structural Masonry Inspector, Certification Number SMI-2432

**Education:** *University of Florida, Gainesville, Florida*  
Bachelors in Mechanical Engineering, 2002

*University of Florida, Gainesville, Florida*  
Masters in Civil Engineering, 2009

*Northwestern University, Chicago, Illinois*  
Advanced Traffic Accident Reconstruction, 2008

*Member of Chi Epsilon National Engineering Honor Society for outstanding academic achievement*

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1451 W. Cypress Ave.  
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**Experience:**

*Bloomberg Consulting, Inc. – Tampa, Florida*

- 2010 – Senior Forensic Engineer
  - Vehicular Crash Investigation & Reconstruction
  - Mechanical Failure Analysis
  - Product and Premises Liability
  - Facility and Site Safety Investigation
  - Electronic Event Recorder Data Retrieval
  - Construction Materials and Compliance Inspection & Testing
  - Construction Accident Investigation & Reconstruction

*Armstrong Forensic Engineers, Inc. – Tampa, Florida*

- 2008 to 2010 – Senior Forensic Engineer
  - Vehicular Crash Investigation & Reconstruction
  - Mechanical Failure Analysis
  - Product and Premises Liability
  - Facility and Site Safety Investigation
  - Construction Materials and Compliance Inspection & Testing
  - Construction Accident Investigation & Reconstruction
  - Expert Witness Services at the Deposition, Mediation and Jury Trial Level

*Universal Engineering Sciences – Gainesville, Florida*

- 2005 to 2007 – Project Manager / Construction Forensics Specialist
  - Construction Forensics Engineer
  - Construction Services Engineer
  - Commercial and Residential Building Inspector

*Proctor Engineering Research and Consulting, Inc. – Gainesville, Florida*

- 2002 to 2004 – Forensic Engineer
  - Vehicular Crash Investigation & Reconstruction
  - Product and Premises Liability
  - Construction Accident Investigation & Reconstruction
  - Structural Failure Investigation

*MACTEC, Inc. – Newberry, Florida*

- 2000 to 2003 – Project Engineer
  - Environmental Field Work Team Leader
  - Senior draftsman

*NASA: Florida Space Research Institute – Cape Canaveral, Florida*

- 2001 – Engineering Intern under shuttle astronaut Dr. Sam Durrance

*University of Florida – Gainesville, Florida*

- 2000 – CAD / 3-D Modeling Computer Drafting Instructor

**Professional**

- Society of Automotive Engineers (SAE)

**Associations:**

- Institute of Transportation Engineers (ITE)
- American Concrete Institute (ACI)
- Pyrotechnics Guild International Inc. (PGII)



**Publications & Presentations:**

“Commercial Vehicle Dynamics for Collision Reconstruction”, ARC Crash Conference Technical Series, Las Vegas, Nevada, 2009 for inclusion in Collision Magazine, coauthor.

“Vehicular and Driver Factors in Commercial Vehicle Safety”, Proceedings of the 1<sup>st</sup> International Road Safety Conference, Cape Town, South Africa, 2009, coauthor.

**Training:**

- 2009 - Florida Safe Home Wind and Hurricane Mitigation Inspector Certification
- 2008 - Advanced Animation and Forensic Engineering Analysis using Vista FX3
- 2005 - Florida Concrete Products Association Certified Structural Masonry Inspector (Renewed 2009)
- 2003 - Pyrotechnics certification, Pyrotechnics Guild International through the Florida Pyrotechnics Guild
- 2001 - 40 Hr - Hazwoper hazardous waste site safety certification (expired)
- 2000 - High speed machining machine design and construction under Jiri Tlustý - University of Florida.
- 1996 - Former Brevard County, Florida Emergency Medical Technician

**Consulting Experience:**

VEHICULAR ACCIDENT INVESTIGATION AND RECONSTRUCTION

*Crash analysis and reconstruction involving:*

Passenger vehicles	Trucks	Trailers
Semi tractor-trailers	Commercial trucks	Intermodal Equipment
Recreational vehicles	Motorcycles	Pedestrians
Bicycles	Roadside hazards	Hazardous road conditions
Highway control and safety devices	Road construction sites	Parking lots
Intersections	Crosswalks	Heavy Equipment

*Reconstruction and Analysis Types*

Automotive component analysis	Vehicle crush analysis
Vehicle fire analysis	Road elevation and line-of-site analysis
Roll-over analysis	Road analysis of tire marks, furrows and gouges
Vehicular fluid discharge analysis	Lane change analysis
Crash sequence reconstruction	Crash site measurement and mapping
Crash reconstruction animation	Bulb filament analysis
Momentum Analysis	Mechanical Failure
Biomechanical impact and failure analysis	Static analysis of lumbar spine of seated driver
Seat belt	Tire Failure
ATV / Scooter Mechanical Failure	Weight distribution / Sway control systems
Electric Brakes and Controllers	Custom off-road vehicle design analysis



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**Consulting Experience (continued):**

**BUILDING CONSTRUCTION, CONSTRUCTION EQUIPMENT AND CONSTRUCTION MATERIALS**

Threshold building inspection as an agent	Non-threshold building inspector
Reinforcing steel inspection	Masonry inspection
Brick inspection	Concrete, Grout and Mortar testing
Vapor barrier installation	Rebar, joint reinforcing wire and post tension cable
Retainer walls	Precast panel and ornamentals inspection
Fire-proofing inspection	Project plans and specifications compliance
Bolt inspection	Grout mapping using thermography
Water intrusion using thermography	Structure Scanning with GPR technology
Concrete strength testing – cylinders, rebound hammer	Elevator towers
Concrete Strength Testing - Windsor probe	3-View cabinet hinge failure
OSHA, NIOSH & ADA compliance	Forklift control system design analysis
Receiving platform failure (southern-pine wood material failure)	Sharp edge analysis
Dishwasher Failure (flooding)	Track-loader Occupant Sensor System failure
Commercial mower roll-over	Slip and fall
Welder electrocution	Construction Equipment Piezo-alarm Analysis
Wind Damage Inspection	Material fall and strike
Water Damage Inspection	Furniture Failure
Hail Damage Inspection	Hangar door counter-weight mechanical analysis

April 2010