

# Robson Forensic

Engineers, Architects, Scientists & Fire Investigators

**DARYL L. EBERSOLE, P.E., CFEI**  
**Electrical Engineer – Industrial, Commercial, Residential**

## PROFESSIONAL EXPERIENCE

2002 to present **Robson Forensic, Inc.**  
*Associate*

Provide technical investigations, analysis, reports, and testimony for failure analysis, and toward the resolution of commercial and personal injury litigation involving the design, construction, operation and maintenance of electrical systems, equipment and devices. Areas of expertise include:

- National Electric Code; Class 1, Division 1 and 2, and Class II Division 1 and 2 spaces, explosion proof, lighting, design, operation, electrician, maintenance.
- National Electrical Safety Code; Power distribution, power lines, towers, 69 kV, substations, 3-phase, transformers, grounding, high voltage switches, lightning protection, metering, fully coordinated circuit protection, conduit, wiring, receptacles, power panels, knob and tube.
- Electrical faults, electrical explosions, arc flashes, lightning damage, workplace safety, and electrical safety tools and equipment.
- Industrial control, programmable logic controllers, computer interface design, facility alarm system, lead/lag boiler control, steam flow control, axis speed control systems, communication protocols, high speed processor control, control system console design.
- Software, assembly language, C++, Visual Basic, RSView32, Wonderware, database, machine programming, Allen-Bradely, Automax, Omron, Modicon.
- Printing press operation, ink blending, viscosity control, solvent recovery, roto-gravure printing press, offset printing press, automated cylinder electroplating, automated conveyor systems, robotics, ink tanks, pumps, scales, register systems, color control, paper expansion and shrink control, bindery equipment, trim collection systems.
- HVAC systems, air conditioners, air handling, heat recovery, boiler systems, deaerators, compressed air systems, exhaust systems, centrifugal and absorption systems, thermal oxidizer systems.
- Fire suppression systems, Carbox, FM200, halon, wet and dry sprinkler systems, fire pump.
- Fire detection and alarm systems, UV, smoke detectors, flow switches, pressure switches, pull stations.
- Devices serviced include: motors, drives, circuit boards, batteries, uninterruptible power supplies, emergency generator, power conditioners, isolated ground systems, power monitors, heaters, traffic signals, rectifiers, gas sample analyzers, solenoid valves, combustion engine controls, burner systems, ovens, after burner systems, switches, relays, analog devices, digital devices, tachometers, encoders, decoders, multiplexers, TTL, CMOS, power supplies, crane controls, hydraulics,

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pneumatics, pumps, fans, electrostatic systems, motor controls, variable frequency drives, DC drives, soft starters, forklifts, material handling equipment.

- Switches, limit switches, temperature limits, proximity sensors, fuses, relays, circuit breakers, contacts, contactors, motor starters, motors, drives, power supplies, timers, connectors, splices, strain relief, terminals, terminations, cables, cords, conductors, receptacles, plugs, bus bars.
- Semiconductors, capacitors, M.O.V's (Metal Oxide Varistors), voltage regulators, potentiometers rheostats, thermocouples, RTD's (resistance thermal detectors) strain gages, chips, rectifiers, SCR's (silicon controlled rectifiers), battery chargers.
- Analog transmitters, ultrasonic sensors, inductive sensors, photo-electric devices.
- Appliances serviced include: ranges, dishwashers, water heaters, toasters, refrigerators, televisions, computers.
- Electrocutation and electrical shock injuries.
- Electrical causes of fires.
- Video and audio recording equipment, software, and motion analyses.

2003 to present **Fournier Robson, LLC**  
*Consulting Engineer*

Provide designs for power distribution systems, fire alarm systems, emergency power systems and isolated grounding systems. Provide technical analysis and write technical documents. Provide analysis of standards. Provide design of power distribution, circuit breaker, audio system, and control system enclosures.

2002 to present **Ebersole Engineering**, Lancaster, PA  
*Electrical Engineering*

Provide engineering services including printing control systems, automation, industrial controller programming, custom software, automated data collection and reporting, hardware design, facility systems, solar systems, and power distribution. Control systems for electroplating operations. Substation design, boiler lead/lag and compressor lead/lag control, steam flow control, solvent storage level control and pumping systems. Manage recalls and service bulletins. Provide custom digital video recording and editing. Video and audio enhancement.

2008 to 2010 **Lancaster County Career and Technology Center**  
*Instructor*

Provide training for electricians and electronic technicians in the mechanical and electrical laboratory. Training for the electrical industry including safety, industrial, commercial, and residential.

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- 1995 to 2003 **Quebecor World**, Atglen, PA  
*Electrical Engineer, Building and Equipment*  
Provide a full range of electrical engineering services for a 500,000 square feet, 400 employee printing facility to include the construction and maintenance of electrical systems. Manage projects and utility contract negotiations. Engineering designs for an \$89 million-dollar plant expansion including the addition of a 3.5 meter roto-gravure printing press and two offset printing presses. Various discipline responsibilities including HVAC, plumbing and fire protection. Manage internal and external resources involved in projects and installations. Supervise and coordinate the activities of 4 electronic technicians conducting experiments in the electronics laboratory. High speed scanning systems. Video and audio recording equipment, software, and motion analyses.
- 1986 to 1995 **R.R. Donnelley & Sons**, Lancaster, PA  
*Electrical Projects in the Engineering Department* 1994-1995  
Printing unit addition for special colors on an offset printing press. Automated electro-plating line for cylinder engraving department.
- Electrical Maintenance Shop Coordinator* 1992-1994  
Coordinated 13 maintenance electricians and 3 electronic technicians. Supervised and scheduled these resources for a 24-hour operation. Provided technical support as needed. Estimated costs and suggested enhancements.
- Maintenance Electrician* 1986-1992  
Performed failure analysis, implemented and serviced various electrical devices that use the lowest DC voltage levels to 3-phase systems of AC up to 69 kV. Completed an apprenticeship through textbook study, written examination, and practical experience, and advanced to Journeyman Electrician.
- 1983 to 1986 **Dart Container Corporation**, Leola, PA  
*Electro-mechanical maintenance*  
Specialized maintenance on foam cup automated inspection machines. Electrical and mechanical installations. Chain, sprockets, welding, pipe fitting, servicing, adjustments, lubrication, machine timing, photo-cells, solenoids, valves, contactors, relays, wiring, controls, sheet metal and part fabrication, rebuilding, painting, high voltage static eliminators, vacuum systems, power distribution, and pneumatic systems.
- 1981 to 1983 **Conestoga Country Kitchens**, Lancaster, PA  
*Kitchen Cabinet Installer*  
Installed kitchen cabinets, bath vanities, counter tops, and vent systems.

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## PROFESSIONAL CREDENTIALS

Professional Engineer: NCEES, Pennsylvania, Maryland, Ohio, South Carolina, District of Columbia, Florida, Connecticut, Louisiana, Delaware, New Jersey, Virginia, Mississippi

Certified Fire and Explosion Investigator (CFEI)

## EDUCATION

Bachelor of Science in Electrical Engineering, Drexel University, 1997

### *Continuing Education:*

National Fire, Arson, & Explosion Investigation Training Program, NAFI, 2012

CED Engineering – Introduction to Solid State Semiconductors, August, 2011

NSPE – Winning QBS Strategies for Powerful Project Interviews, July, 2011

NSPE – A Sustainable Approach to Planning and Design, July, 2011

NSPE – Solving the Risks in Green Design, July, 2011

NSPE – Qualification Based Selection Process Under Attack, July, 2011

NSPE – The New Ethics and Compliance Rules for Contractors, July, 2011

Penn State York, Advanced Induction Motor Principles, July, 2011

NSPE – Negotiation for Success, July, 2011

NSPE – How to Start Your Own Engineering Firm, July, 2011

NSPE – Ethics Forum – Access to Client Information, July, 2011

NSPE – Ethical Engineering Concepts and Challenges, July, 2011

NSPE – Engineering Leadership – What, Why and How, July, 2011

NSPE – Comparing Contract Documents, July, 2011

NSPE – Duty to Report, July, 2011

NSPE – Communicating Technical Ideas Persuasively, July, 2011

NSPE – Advanced Robotics, July, 2011

PSPE – Robotic Applications, July, 2011

PSPE – Introduction to Robotics, July, 2011

NSPE - Ethics Forum - Ethical Engineering and Fair Trade - Ethics of Agreements, January, 2011

NSPE - Ethics Forum - Ethical Engineering and Fair Trade - Employment Practices, October, 2010

PSPE – The Integrated Design Process, September, 2010

Lancaster County Industrial Safety Council, Electrical Safety

Millersville University, Digital Electronics, Linear Electronics

Stevens Trade School, Transistors

Harrisburg Area Community College, Access 97

Rockwell, DC Drive Training

Rockwell, Vector Control AC Drive

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Rockwell, Automax Network  
Wonderware, In-Touch Comprehensive  
Yesco, Visual Basic  
Lancaster County Industrial Safety Council, NFPA 70E

## PROFESSIONAL MEMBERSHIPS

National Fire Protection Association (NFPA)  
National Society of Professional Engineers  
Pennsylvania Society of Professional Engineers  
Lincoln Chapter of Professional Engineers  
Institute of Electrical and Electronics Engineers  
Underwriters Laboratories (UL) Standards Technical Panel for Wire Connectors, UL  
486A-E  
Pennsylvania Association of Arson Investigators (PAAI) – Associate Member

## PRESENTATIONS

HVAC Equipment and Electrical Investigation for the Pennsylvania Association of  
Arson Investigators (PAAI), January 2008  
OSHA Training Course, April 2006  
Engineering Course, May 2002, 2004, 2006  
Fire/Explosion Origin and Cause Investigation Course, July 2006