John M. Batavich, PE, CFEI, CVFI, CFPS, LC | Forensic Electrical Engineer

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Professional Summary:

Mr. Batavich has over 20 years of experience in the engineering, specification, and assessment of electrical systems serving residential, commercial, educational, healthcare, industrial, institutional, mission-critical, municipal, and transportation facilities. His experience includes new construction, renovation, and demolition projects located in Florida, Alabama, Indiana, Michigan, and Nevada.

- Arc-Flash Studies and Arc-Flash Hazard Reduction Strategies
- Electrical Drawing Review for Errors and/or Omissions
- Emergency / Standby Power Systems and Transfer Switchgear
- Equipment Failures
- Fire Alarm Systems
- Fire Scene Processing
- Illumination Science
- Motors, Motor Control Systems, Variable Frequency Drives, and Power Electronics
- Laboratory Evidence Examination
- Lighting System Design, Evaluation, and Computational Analysis
- Lightning Protection Systems
- Lightning / Surge Damage Validation
- National Electrical Code (NEC) Analysis and Interpretation
- Overcurrent Protective Device Coordination Studies
- Power Distribution Systems Under 1,000V
- Scope of Electrical Repairs to Fire-damaged and/or Smoke-damaged Buildings
- Short-Circuit Studies
- Voltage Drop Studies
- Water Damage to Electrical Equipment

Licenses and Certifications:

Professional Engineer, Alabama, License #39417-E
Professional Engineer, Florida, License #82250
Professional Engineer, Georgia, License #PE046003
Professional Engineer, Indiana, License #PE11700446
Professional Engineer, Kentucky, License #37076
Professional Engineer, Louisiana, License #0044871
Professional Engineer, Mississippi, License #31895
Professional Engineer, North Carolina, License #051926
Professional Engineer, South Carolina, License #38895
Professional Engineer, Tennessee, License #124657
Certified Fire and Explosion Investigator, National Association of Fire Investigators (NAFI)
Certified Vehicle Fire Investigator, National Association of Fire Investigators (NAFI)
Certified Fire Protection Specialist, National Fire Protection Association (NFPA), #5475
Lighting Certified, National Council on Qualifications for the Lighting Professions (NCQLP), QL0003439

Professional Experience:

EFI Global, Forensic Electrical Engineer, 2020 – Present
VoltAir Consulting Engineers, Senior Electrical Engineer, 2018 – 2020
TLC Engineering Solutions (formerly TLC Engineering for Architecture), Electrical Design Engineer, 2017 – 2018
TLC Engineering Solutions (formerly TLC Engineering for Architecture), Electrical Engineer II, 2014 – 2017
TLC Engineering Solutions (formerly TLC Engineering for Architecture), Electrical Engineer I, 2013 – 2014
Quest Design Group (formerly Stewart Engineering Consultants), Electrical EIT, 2003 – 2013

Court Qualifications/ Depositions:

Litigation CV available upon request.

Specialized Education:

Commercial Kitchen Fires 1: Fundamentals, CFITrainer, 2024
Phasors and AC Circuit Analysis, RedVector / Vector Solutions, 2024
Electric Motors, RedVector / Vector Solutions, 2024
Vehicle Fire Investigation Training Program, NAFI, 2023
Photovoltaic Systems, International Association of Arson Investigators, Inc. (IAAI), 2023
Fire Effects Part 2: Combustion By-Products Effects, CFITrainer, 2023
Fire Effects Part 1: Heat Effects on Fuels, CFITrainer, 2023
2017 NEC Changes: Special Equipment, RedVector / Vector Solutions, 2023
Electrical Installations 1: Electrical Laws, Components and Circuits, RedVector / Vector Solutions, 2023
2017 NEC Changes: Hazardous Locations, RedVector / Vector Solutions, 2023
2017 NEC Changes: Overcurrent Protection and Grounding & Bonding, RedVector / Vector Solutions, 2023
2017 NEC Changes: Enclosures and Boxes, RedVector / Vector Solutions, 2023
Electric Power Substations, RedVector / Vector Solutions, 2023
The Value of Concentrating Solar Power and Thermal Energy Storage, RedVector / Vector Solutions, 2023
Power Transmission & Distribution - Basic Equipment and Terminology, RedVector / Vector Solutions, 2023
Explosive and Flammable Chemicals, RedVector / Vector Solutions, 2023
Generating Electricity, RedVector / Vector Solutions, 2023
Commercial Building MEP Design, RedVector / Vector Solutions, 2023
Transmission and Distribution: Distribution Line Installation and Removal, RedVector / Vector Solutions, 2022
Small Scale and Micro Scale Wind Applications, RedVector / Vector Solutions, 2022
2020 NEC Changes: Solar PV Systems and Interconnected Power Systems, RedVector / Vector Solutions, 2022
2020 NEC Changes: Process Review and Updated Articles, RedVector / Vector Solutions, 2022
Transmission and Distribution: Focus on Distribution, RedVector / Vector Solutions, 2022
Cogeneration Systems Essentials, RedVector / Vector Solutions, 2022
Transmission and Distribution: Underground Residential Distribution Systems, RedVector / Vector Solutions, 2022
Transmission and Distribution: Distribution Line Replacement, RedVector / Vector Solutions, 2022
NFPA 1033 & 921: 2022 / 2021 Editions Important Updates, CFITrainer, 2022

Emerging Technologies in Fire Investigation, CFITrainer, 2022
Alternative Fuel Vehicles, CFITrainer, 2022
Energy and Light, Energy of Light, Lightfair International, 2022
Writing Sequences of Operation and Control Intent Narratives for Lighting Control Systems, Lightfair International, 2022
Photovoltaic Cells & Systems, CFITrainer, 2021
Electric & Hybrid Vehicle Design Basics, CFITrainer, 2021
Electric & Hybrid Vehicle Fires, CFITrainer, 2021
Electrical Fire Alarm Systems, RedVector / Vector Solutions, 2021
Surge Protection, RedVector / Vector Solutions, 2021
Lithium-Ion Battery Fires, CFITrainer, 2021
2020 NEC Changes: Backup Power, Energy Storage, and Limited-Energy, RedVector / Vector Solutions, 2021
2020 NEC Changes: Conductors, Wiring Methods, and Enclosures, RedVector / Vector Solutions, 2021
2020 NEC Changes: Devices, Lighting, and Gear, RedVector / Vector Solutions, 2021
2020 NEC Changes: Equipment for General Use, RedVector / Vector Solutions, 2021
2020 NEC Changes: Focus on Wiring Methods, RedVector / Vector Solutions, 2021
2020 NEC Changes: General Requirements, RedVector / Vector Solutions, 2021
2020 NEC Changes: Overvoltage and Grounding & Bonding, RedVector / Vector Solutions, 2021
2020 NEC Changes: Special Equipment, RedVector / Vector Solutions, 2021
2020 NEC Changes: Wiring and Protection, RedVector / Vector Solutions, 2021
4-Day Fire Investigation Training Program – Orlando, NAFI, 2021
Arc Mapping Basics, CFITrainer, 2020
Critical Thinking Solves Cases, CFITrainer, 2020
Digital Photography and the Fire Investigator, CFITrainer, 2020
Discovery in Civil Cases, CFITrainer, 2020
DNA, CFITrainer, 2020
Electrical Safety, CFITrainer, 2020
Ethics and Social Media, CFITrainer, 2020
Evidence Examination: What Happens at the Lab?, CFITrainer, 2020
Fire Dynamics Calculations – Version 2.0, CFITrainer, 2020
Fire Investigation for Fire Officers Multi-Program, CFITrainer, 2020

- Documenting the Event
- Fire Flow Analysis
- Fire Investigation for Fire Officers
- Fire Investigator Scene Safety
- How First Responders Impact The Fire Investigation
- Physical Evidence at the Fire Scene
- The Scientific Method for Fire and Explosion Investigation
- Writing the Initial Origin and Cause Report

Fire Protection Systems, CFITrainer, 2020
Fundamentals of Residential Building Construction, CFITrainer, 2020
Introduction to Appliances, CFITrainer, 2020
Introduction to Fire Dynamics and Modeling, CFITrainer, 2020
Introduction to Youth-Set Fires, CFITrainer, 2020
Investigating Natural Gas Systems, CFITrainer, 2020
Legal Aspects of Investigating Youth-Set Fires, CFITrainer, 2020
Motive, Means, and Opportunity: Determining Responsibility in an Arson Case, CFITrainer, 2020
Motor Vehicles: The Engine and the Ignition, Electrical, and Fuel Systems, CFITrainer, 2020
Motor Vehicles: Transmission, Exhaust, Brake, and Accessory Systems, CFITrainer, 2020

Postflashover Fires, CFITrainer, 2020
Preparation for the Marine Fire Scene, CFITrainer, 2020
Principles of Fire Investigation Multi-Program, CFITrainer, 2020

- Critical Evaluation and Testing of Commonly Reported Accidental Causes
- Documenting the Event
- Effective Investigation and Testimony
- Ethics and the Fire Investigator
- Explosion Dynamics
- Fire Chemistry
- Fire Flow Analysis
- Fire Investigator Scene Safety
- Fundamentals of Interviewing
- Insurance and the Fire Investigation
- Introduction to Evidence
- Investigating Motor Vehicle Fires
- Physical Evidence at the Fire Scene
- Residential Electrical Systems
- Residential Natural Gas Systems
- The Scientific Method for Fire and Explosion Investigation
- Understanding Undetermined
- Writing the Initial Origin and Cause Report

Process of Elimination, CFITrainer, 2020
Search and Seizure, CFITrainer, 2020
The Deposition Part 1: Format, Content, and Preparation, CFITrainer, 2020
The Deposition Part 2: Questioning Tactics and Effective Responses, CFITrainer, 2020
The HAZWOPER Standard, CFITrainer, 2020
The Impact of Ventilation in Building Structures on Fire Development, CFITrainer, 2020
The Practical Application of the Relationship Between NFPA 1033 and NFPA 921, CFITrainer, 2020
The Potential Value of Electronic Evidence in Fire Investigations, CFITrainer, 2020
Thermometry, Heat, and Heat Transfer, CFITrainer, 2020
Understanding Fire Through the Candle Experiments, CFITrainer, 2020
Using Resources to Validate Your Hypothesis, CFITrainer, 2020
Commercial HVAC Systems Essentials, RedVector / Vector Solutions, 2020
International Building Code & More: Fire Protection Systems, RedVector / Vector Solutions, 2020
Fire and Smoke Dampers Simplified, RedVector / Vector Solutions, 2020
Commercial Electrical Systems Essentials, RedVector / Vector Solutions, 2020
Building Design and Construction Features for Fire Protection, RedVector / Vector Solutions, 2020
Water-Based Fire Suppression Systems, RedVector / Vector Solutions, 2020
Fire Essentials and Fire Science, RedVector / Vector Solutions, 2020 & 2017
Low-Voltage Fundamentals, RedVector / Vector Solutions, 2019
Intermediate Lighting, Lightfair International, 2019
Best Practices for Tunable Light Specification, Lightfair International, 2018
The Worlds of DMX512, DALI, and 0-10V, Lightfair International, 2018
Cogeneration Systems, RedVector / Vector Solutions, 2017
Arc Flash Hazard Analysis, RedVector / Vector Solutions, 2017
Fire Alarm System Essentials, RedVector / Vector Solutions, 2017
Lighting Controls Essentials, RedVector / Vector Solutions, 2017
LED / SSL 101 and a Lot More, Lightfair International, 2017
The Truth About Circadian Lighting, Lightfair International, 2017
Making Lighting Controls Occupant Friendly, Lightfair International, 2017
The Future of Lighting, Lightfair International, 2017

Emergency Lighting, Codes, Circuits, Controls, and Calculations, Lightfair International, 2016
Measuring and Reporting Illuminance in the Field, Lightfair International, 2016

Education:

Bachelor of Science (B.S.), Electrical Engineering, University of South Florida, Tampa, FL, 2012
Associate of Applied Science (A.A.S.), Computer Information Technology, State College of Florida (formerly Manatee Community College), Bradenton, FL, 2002

Affiliations:

Institute of Electrical and Electronics Engineers (IEEE)
Institute of Electrical and Electronics Engineers (IEEE) Power & Energy Society
Institute of Electrical and Electronics Engineers (IEEE) Power Electronics Society
National Academy of Forensic Engineers (NAFE)
National Association of Fire Investigators (NAFI)
National Society of Professional Engineers (NSPE)