

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 2: Investigation, CFITrainer, 2024
2023 NEC Changes: General Requirements for Wiring Methods, Conductors, and Enclosures, RedVector / Vector Solutions, 2024
Changes to NFPA 70E Standard for Electrical Safety in the Workplace – 2021 Edition, RedVector / Vector Solutions, 2024
Transmission and Distribution: Using Line Test Equipment, RedVector / Vector Solutions, 2024
Transmission and Distribution: Transmission Line Installation, RedVector / Vector Solutions, 2024
Reliability Engineering Essentials, RedVector / Vector Solutions, 2024
Transmission and Distribution: Pad-Mounted Transformers and Switchgear, RedVector / Vector Solutions, 2024
2021 International Building Code Essentials: Fire Safety, RedVector / Vector Solutions, 2024
Construction Cost Estimating: Types and Purposes of Estimates, RedVector / Vector Solutions, 2024
DC Power in the Data Center, RedVector / Vector Solutions, 2024
Energy From Waste, RedVector / Vector Solutions, 2024
Transmission and Distribution: Substations and Switchyards, RedVector / Vector Solutions, 2024
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)