JULIAN MERCER

ELECTRICAL ENGINEER

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PROFESSIONAL SUMMARY

Electrical Engineer with 7+ years in power distribution and substation design for utilities and industrial clients. Delivers protection studies, one-line diagrams, and construction packages that clear review and energize on schedule.

CORE SKILLS

Substation design | Power distribution | ETAP | Short-circuit studies | Protection coordination | Arc flash analysis | AutoCAD Electrical | One-line diagrams | Grounding design | NEC and NESC codes | Load flow analysis | Switchgear | Cable sizing | Construction support

PROFESSIONAL EXPERIENCE

Senior Electrical Engineer Jan 2023 - Present
Burns & McDonnell, Kansas City, MO

- Lead electrical design for a 138 kV substation expansion, coordinating civil, structural, and protection teams through IFC drawings on a 14-month schedule.
- Completed short-circuit and coordination studies in ETAP for three client sites and revised relay settings that removed two miscoordinated zones.
- Reviewed 60 contractor submittals a quarter and returned comments in under five working days.
- Mentor two new engineers on grounding calculations and one-line development.
- Presented design status to utility owners every two weeks and kept the engineering budget within 3% of plan across the project.
- Specified a new relay and communications scheme with the protection group, replacing aging electromechanical relays at two bays.

Electrical Engineer Jun 2020 - Dec 2022

- Produced conduit, cable schedule, and panel drawings in AutoCAD for four industrial plants, cutting redlines at final review by about a third.
- Sized transformers and breakers for a 4 MW plant upgrade and documented arc flash results that lowered the highest incident energy category on site.
- Visited construction sites to confirm installs against drawings, logging 35 field changes and closing them within the same week.
- Checked vendor drawings for 12 pieces of equipment and caught eight dimension and wiring conflicts before fabrication.
- Wrote the electrical sections of two bid packages, which helped the client compare contractors on equal scope.

Associate Electrical Engineer Aug 2018 - May 2020
Schneider Electric, Andover, MA

- Configured and tested low-voltage switchgear lineups for 25 customer orders and traced wiring faults before factory acceptance.
- Built a calculation template for voltage drop and conductor sizing that engineers across the group adopted for quoting.
- Supported commissioning of two motor control centers and recorded punch list items for the customer.
- Documented test results for 18 completed lineups, giving customers a clean record for their commissioning files.

EDUCATION

B.S. in Electrical Engineering, Missouri University of Science and Technology, Rolla, MO

CERTIFICATIONS

Professional Engineer (PE), Electrical - Power | Fundamentals of Engineering (FE) Exam Passed