

For close to 70 years, J.L. Richards has been providing our clients with comprehensive electrical engineering support that keep their systems running safely and smoothly.

Our extensive electrical team has delivered successful designs for standard and specialized applications across several diverse sectors. Our approach is focused on logically designed sequenced systems that are affordable to create, economical to maintain, and flexible to expand. Safety, reliability, and energy efficiency are key considerations for every electrical project we engage in.

With our expertise in power distribution, innovative energy, energy storage, instrumentation and controls, lighting, communications systems, life safety systems, security systems, back-up power, and specialty studies, our team is eager to bring your projects to a successful completion.

Talk to our Electrical Engineering team about our hands-on design experience in any of these key areas of expertise.



## Automation & Controls Systems

- Automation and control system design
- PLC and DCS programming
- Human-machine interface programming
- Commissioning assistance

## Communications Systems

- IT Infrastructure, wired and wireless
- Fibre and copper

## Innovative Energy

- Net-zero energy and carbon design
- Solar photovoltaics
- Energy storage
- Energy audits

## Instrumentation & Controls

- Functional descriptions and control narratives
- Piping and instrumentation diagrams (P&IDs)
- Control panel design
- Instrumentation and Valve Controls
- Plant networks
- Motor controls

## Life Safety Systems

- Fire alarm systems and suppression systems
- Aspirating smoke detection
- Emergency lighting and wayfinding
- Building code reviews

## Lighting

- Interior and exterior building lighting
- Right-of-way lighting
- Advanced lighting controls

## Power Distribution

- Electrical distribution design, including ungrounded 44 kV
- Overhead and underground power line design
- Impedance and solidly grounded system
- Substation safety design and GPR studies
- Short circuit, coordination and arc flash studies
- Power factor and load flow studies
- Power harmonic studies
- Lightning protection
- Designs for power quality improvement

## Power System Technologies

- Portable, standby and prime power generating systems
- Standby and prime power generating systems
  - CSA C282 life safety generators
- Battery energy storage systems (BESS)
- Co-generation, combined heat and power
- Renewable energy systems, including:
  - Solar
  - Hydroelectric

## Security Systems

- Intrusion detection and access controls
- CCTV (IP based)
- Site vehicular and pedestrian access control
- Site security lighting

## Software Design

- Software development
- Databases
- Platforms

# Electrical Engineering

Architecture  
Civil Engineering  
Electrical Engineering  
Energy Systems Engineering  
Environmental Engineering  
Mechanical Engineering  
Planning  
Project Management  
Structural Engineering

## Talk to us today

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