

## Featured Project

### Sacramento Regional Wastewater Treatment Plant

Sacramento, California

**ArcSine** Engineering was the lead consultant on evaluation and design of replacement electrical systems for the influent pumping station at the Sacramento Regional Wastewater Treatment Plant. The project included a new 32 MVA substation with dual-feed 5kV switchgear and four 5kV motor control centers, capable of feeding 24,500 horsepower of load. Systems are fully redundant and serviceable. New equipment is housed in a 4,050-square-foot building, fully integrated with site plumbing, HVAC, communications, fire protection, and alarm systems. Building and landscape architecture complement surrounding facilities. The design also includes use-change of the existing 1,400-square-foot switchgear room to provide office infrastructure.

The influent pump station, with a capacity of 360 million gallons per day (peak), receives all of the sewage flow from Sacramento and surrounding communities. A mix of aging and new equipment, inconsistent as-built documentation, and extensive physical constraints made rehabilitation of this facility extremely risky. **ArcSine** closed the wide gaps between opinions among Owner personnel, and delivered a project which is supported without reservation by both technical and management staff. Our success was due to the following factors:

- Structured, criteria-driven approach.
- Detailed field investigations and testing by ArcSine field personnel, including electricians.
- Application of engineering knowledge and practical construction experience.
- Supportable cost estimating and economic analyses.
- Effective management of six subconsultants and clear communications with Owner personnel.
- Achieving consensus among Owner personnel.

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