

## Featured Project

### Jaxon Enterprises

Le Grand, Redding, Porterville, and Coalinga, California

Jaxon Enterprises started business in the 1960's as a road constructor, initially for lumber and plywood firms such as U.S. Plywood and then, later on, for the California Division of Highways. The business eventually evolved into an aggregates and asphalt concrete supplier to others as well as to the firm's own construction needs

ArcSine Engineering provided design and engineering support for owner-build, design-build, and design-bid-build projects for California aggregate

#### LeGrand Asphalt Plant—Le Grand, CA

This plant produces aggregates from an alluvial deposit located in South East Merced County. At this asphalt plant with 12kV commercial power service, errors in metering and delays in billings from the power provider resulted in disputed bills of several hundred-thousand dollars. ArcSine Engineering analyzed plant production, modeled electrical demand, and developed energy and billings estimates. ArcSine evaluated operational changes to reduce future billings. ArcSine negotiated with the commercial power provider, ultimately reducing the outstanding bills by half.

#### Goat Ranch Quarry—Redding, CA

Work included preliminary design and utility coordination for 12kV service and distribution throughout a rural Northern California rock quarry and asphalt plant. Prepared a report including estimated costs of initial installations of commercial power and onsite generation, along with supporting documentation; i.e., production/energy usage projection, adjustment to PG&E revenue allowance, PG&E correspondence, PG&E billing rates, Provided one-line diagram.

#### Deer Creek Asphalt—Porterville, CA

This plant is a Quarry Operation located in South East Tulare County. Aggregates from this plant have supplied Federal, State, County, City and private projects in Tulare, King, Kern, and Fresno Counties. Design and utility coordination for 12kV electric service and site distribution for a 56-acre rock quarry and asphalt plant. Project required the phased cutover from engine-driven generators to utility power. A protective device coordination study was provided covering both the customer-owned equipment as well as utility protective devices.

#### Avenal Aggregate & Asphalt—Coalinga, CA

This plant, previously operating with diesel engine-generator power, faced strict local Air Quality Board requirements. ArcSine provided the plant with the flexibility of primary metered 21kV utility service, including surge arresters to minimize problems to electronic drive systems. The system included unswitched power factor correction, capacitors to reduce utility reactive billing, typical with motor loads.

Automation/Controls  
Electric Power  
Generation/Transmission  
Electrical  
Motor Control  
Utility Coordination  
Grounding

