

TJC
and ASSOCIATES, Inc.

Message from
the President

We Have Added
MicroStation

Industry News

Featured
Project-
Pacheco
Pumping
Plant ASD
Replacement

The TJCAA Quarterly

www.tjcaa.com

Message from the President

Gianna Zappettini
I have watched TJC and Associates, Inc. (TJCAA) grow since our doors opened in 1998. With that growth, we have expanded our areas of expertise to include not only structural engineering, but also instrumentation, control, and electrical engineering. We are a successful firm recognized for our professional expertise, respected for our quality, and known as a great place to work. We are continually looking for new opportunities to provide our excellent service to past, present and future clients. Contact us to see if we can collaborate with you on your next project.

We Have Added MicroStation

TJCAA now runs MicroStation V8i, and can provide CADD services to those clients who need drawings to be completed in either MicroStation or AutoCAD.

Industry News

Diesel-powered generator sets are the preferred equipment for the emergency standby power needs of many of our clients. These generators have been required to meet increasingly stringent air quality regulations since the EPA began to enforce limits on diesel exhaust emissions from non-road diesel engines in 1996 and on stationary diesel engine-generator sets in

2006. This year, the regulations on pollutants such as NOx and particulate matter are becoming more stringent; while also dependent on unit size, in general, "Tier 4" is going into effect. Engine manufacturers are choosing to meet the standards by adding equipment such as catalytic converters, particulate filters, or other technology that may result in increased cost of generator equipment and maintenance, relative to earlier installations.

In more generator news, some California Air Boards allow flexibility in the use of emergency standby generators. Some clients in the central coast area for example, may participate in PG&E's demand response program: customers agree to voluntarily take themselves off the grid at scheduled times when requested by PG&E. Program participants then run their generators even though a PG&E outage has not occurred. In exchange for their participation, they pay a lower utility rate. The program, coordinated through the Monterey Bay Unified Air Pollution Control District, allows in certain circumstances the installation of generators that comply with slightly less stringent air quality requirements than otherwise permitted, so that they can be used for the demand response program.

Featured Project - Pacheco Pumping Plant ASD Replacement

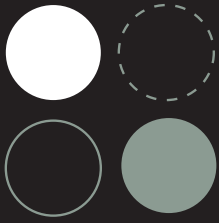
TJCAA provided electrical engineering design services for the adjustable speed drive replacement project for Santa Clara Valley Water District's Pacheco Pumping Plant. This project prepared the District for implementation of modern drive technology to enhance the reliability of the pumping plant, which is a critical link in the District's water supply infrastructure.



The facility previously had twelve 2,000 hp wound rotor motors controlled by slip energy recovery drives that had reached the end of their useful lives. This project approach called for replacing the old technology drives with current pulse-width modulated adjustable speed drives. TJCAA performed a motor conversion feasibility assessment and a risk assessment for operation under the new, pulse-width modulated equipment. This fascinating project required our designers to consider detailed construction sequencing that would permit continuous plant operation. TJCAA provided engineering design of the new variable frequency drives and their

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WBE/SBE Certifications

Entertainment Review

Dates to Note

Did You Know?

TJCAA's Business Certifications

- Alameda County Small, Local Emerging Business
- City of Oakland Local Business Enterprise
- California DGS Micro Business (SB (micro))
- Port of Long Beach SBE
- San Diego County Water Authority SBE
- SoCal Network SBE
- CA PUC WBE
- City of Sacramento SBE

newer technology impact on the existing 2000 hp motors. The project also included motor modifications involving conversion of the wound rotor motors to standard induction motors, including rigorous testing requirements.

In the controls department, system upgrades included replacement of the plant's existing programmable logic controllers and individual pump relay control panels. Motors and pumps are being provided with new condition assessment systems for enhanced vibration and temperature monitoring for asset management and predictive/preventive maintenance purposes. The design also included 13 new flowmeters. Our Senior Design Engineer Donna Rammell reports that the District is starting up three of the retrofitted pumps this month, and we are enjoying a chance to watch our design take effect while we provide engineering services during construction.

WBE/SBE Certifications

While our politicians argue about who provides jobs and who stimulates our economy, we are busy being a hardworking small business—an important part of the economy. Many state and federal programs and agencies emphasize the importance of small businesses and offer incentives for incorporating small businesses when contracting, and many have specific goals for inclusion of small business enterprises (SBEs) and woman-owned business enterprises (WBEs). Larger firms seeking to up their contract percentages often team with small businesses to meet agency goals; imagine how happy they are to discover that TJCAA, with its great qualifications and expertise, fits in that category! Many entities seek specific certifications, such as the ones that TJCAA has (see text box).

Entertainment Review

The word from Mike in our IT department is that Harry Potter and the Deathly Hollows, Part 2 is well worth the trip to the cinema. It is better than Part 1,

he says, and adds, "Many outstanding questions are answered." This was the final installment of an eight-movie series. According to Potter character Ron Weasley, "We can end this." (PG-13, 130 min.)

Dates to Note

September 23 The Autumnal Equinox; see <http://www.almanac.com/calendar/date/2011-09-23>

September 24 8 p.m.; Junius Courtney Big Band Tribute to Earl "Fatha" Hines at the Freight and Salvage, Berkeley

October 16–20 American Concrete Institute Convention - Bridging Theory and Practice, Cincinnati, Ohio

October 17–20 Solar Power International '11, Dallas, Texas

October 15–19 Water Environment Federation - Technical Exhibition and Conference, Los Angeles, California

November 6 Daylight Savings Time Ends. Do not forget to turn your clocks back!

Did you know?

Flying fish (of the family Exocoetidae) start their aerobatics by using their powerful tail fins to build up speed underwater. They surface and taxi briefly, building up more speed, and then launch into the air and glide on their wing-like pectoral fins. They sometimes extend their flights by briefly dipping their tails back into the water. Consecutive glides totaling 400 meters have been reported, and a 45-second "flight" has been recorded on film.

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