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and ASSOCIATES, Inc.

Structural  
Engineering

SCADA

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Controls

Control Systems  
Programming

# Wastewater Treatment Plant Expansion

## City of Brentwood, WWTP Expansion Project Brentwood, California

The Brentwood WWTP Expansion Project, with a construction value of over \$48 million, included replacement of an existing plant while the existing plant remained operational until completion of the new facilities. TJCAA provided structural design, predesign, design, and construction services for the entire upgrade facility as part of the G.S. Dodson & Associates, Inc. team. The TJCAA design included the following structures:

- Solids Handling Headworks and Electrical Building
- Influent Pump Station
- Denitrification Basin
- Oxidation Ditches
- Chlorine Contact Basins
- Tertiary Filters
- Chemical Handling Facility
- Administration Building
- Outfall Structure
- Cascade Aerator

These structures were designed for construction with cast-in-place concrete, structural steel, and concrete masonry. Due to its visibility from a bicycle path along the river, the cascade aerator design required special attention to aesthetics. The design featured simulated rock, to achieve a waterfall effect, serving both functional and aesthetic purposes. The site has liquefiable soils, and TJCAA designed several schemes for upgrading the soils; ultimately, the City of Brentwood elected to use the stone column scheme.

### Key Features:

- Multiple Structures
- Highly Visible Site
- Ground Improvements

This project, which required coordination with multiple offices, had a demanding schedule. TJCAA delivered its design on schedule and within budget.

