Sweetwater Union High School District Uses Prolog® Software to Establish Funding Accountability and Project Controls on 10-Year, $644M Modernization Program

Founded in 1920, the Sweetwater Union High School District has grown to accommodate more than 42,000 students in grades 7 to 12 and more than 32,000 adult learners. The District's 32 campuses located throughout San Diego County are representative of California's rich cultural diversity; approximately half the student population speaks a language other than English at home. Sweetwater's quality school facilities and strong community support have allowed it to attract and retain qualified teachers that help students excel both in and out of the classroom.

In November 2006, San Diego County passed Proposition O, a $644M local bond to fund the repairs and improvements needed throughout the Sweetwater Union High School District to ensure a safe, healthy and quality learning environment. Proposition O would upgrade classrooms, restrooms, science labs and technology; improve handicap accessibility; remove asbestos and lead paint and upgrade the fire and safety systems.

The first order of business for Sweetwater's Board of Trustees was to select a Proposition O program management firm. From a field of seven qualified candidates, the Board chose the joint venture team of Gilbane Building Company and SGI Construction Management. Together, the two companies would lead the Sweetwater modernization and construction initiative, which would consist of approximately 55 projects over 10 years.

Establishing Project Controls

As Gilbane/SGI prepared for the first phase of Proposition O, it became apparent that Sweetwater needed to implement a project management solution to handle the strict accountability requirements of the bond, including real-time budget management and monthly reporting of funds allocation.

According to Jaime Ortiz, Gilbane/SGI's Program Manager, Sweetwater's previous bond initiative was managed using a maze of spreadsheets scattered across a variety of different desktops and servers. “The way the previous program was run made the data integrity very suspect,” Ortiz explains. “For example, change order rates were in three different places. There wasn’t one central database where you could go to get the information needed.”

Gilbane/SGI hired Rotech Consulting, Inc., construction technology consultants headquartered in San Diego, to help with the selection and implementation of project management software. “Rotech brought a lot of experience to the table and understood what we needed to achieve,” says Ortiz. Gilbane had an established relationship with Rotech and trusted their recommendation, which was Prolog Manager and Prolog WebSite from Meridian Systems.


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Jaime Ortiz
Bond Program Manager
After taking the time to thoroughly understand the business challenges around Proposition O, Rotech helped the program management team establish workflow processes to ensure that contract deliverables were met. “Rotech was there to help us identify the problems with the previous bond program and customize Prolog so those things would be corrected going forward.”

Because the ability to stay on schedule is paramount on a 10-year program, Sweetwater also purchased scheduling software and Rotech integrated the third party program with Prolog. “Costs are captured in Prolog,” explains Ortiz, “and pushed to the scheduling software. So we have real-time information on both systems that provide very different project views.”

Data Visibility Mitigates Risk

Using Prolog to track and manage all project information, including contracts, budgets, submittals, requests-for-information (RFIs), invoices, change orders and meeting minutes, using a single, centralized database allows the program management team to catch schedule delays or cost overruns early. Having visibility into submittal and RFI response times are just some of the key performance indicators (KPIs) that will help Gilbane/SGI deliver high quality services to Sweetwater.

“Proposition O is such a large program that we need to catch problems early – before they become irreparable,” says Ortiz. “With Prolog, we have the information needed to make decisions that mitigate risk and correct the course of action before it’s too late.”

Creating Checks and Balances

Having checks and balances in place is vital with a publicly funded program. When reviewing financial details from the previous bond program, Gilbane/SGI found many invoices charged to the wrong job. For Proposition O, a customized invoice approval and routing system has been set up within Prolog to make sure this doesn’t happen.

Invoices are logged in Prolog and paired with an approval routing sheet before being distributed. Each person in the approval process has a unique bar code identifier and a scanner that integrates with Prolog. When an invoice is approved, a person scans their bar code and manually routes the invoice to the next person on the list.

For Ortiz, finding out where an invoice is in the approval process couldn’t be easier. He simply looks in Prolog to find out who scanned it last. This ability has helped meet an important project deliverable: paying contractors and vendors within 30 days of the received date.

Reporting Provides Accountability

Unique to the projects of Proposition O is funding accountability to multiple groups, including the Board of Trustees, the Citizens’ Bond Oversight Committee and the Office of Public School Construction. For auditing purposes, Prolog will be used to track various funding sources for the bond. A detailed program management report is generated for Sweetwater each month that includes executive summaries, along with program budgets and commitments and project summaries.

“It’s important for the District to know how much of the Proposition O money is going back into the community,” explains Ortiz, “so we’re tracking our outreach efforts through our contracts in Prolog. Every time we pay an invoice to a vendor, it calculates the outreach classification. Right now, for example, we’ve committed $8M in contracts to local vendors and $12M to disadvantaged or women-owned businesses. As we pay more invoices, the numbers change automatically.”

When all $644M of Proposition O has been spent, Sweetwater will be able to let its citizens know exactly how many of their tax dollars went back into the local community. “That’s a really big deal,” adds Ortiz.

Prolog has also allowed Sweetwater to create custom project status reports that are automatically generated in real time. “With the click of a button,” says Ortiz, “we can get critical project information, including financial details and key milestones on a two-page report. If I need to go out to the project or talk to the principal of the school, I can take that report with me and answer any question that comes my way.

Prolog WebSite Creates Consistency

Prolog WebSite will be used to communicate with the extended project team, including general contractors (GC’s), architects and state inspectors. From any Internet connection, authorized users can access project information such as contracts and drawings and generate communications such as RFIs. The GC’s will even use Prolog WebSite to enter proposed change orders and create invoices according to a specific schedule of values.

“Prolog WebSite allows us to be consistent throughout the program,” explains Ortiz. “Because everyone has access to the same information, confusion is eliminated. This should allow us to keep our costs down and keep the projects on schedule.”
High Performance Program Management

Since Proposition O is just beginning, Sweetwater’s use of Prolog is in its early stages as well. Rotech continues to provide on-site consulting, training and support services and is working with Gilbane/SGI to further enhance their use of the software. For example, the creation of reporting dashboards (currently in progress) will deliver KPI’s at-a-glance.

Rotech is also developing a three-way utility to verify whether Prolog, the scheduling software and the District’s accounting system are in sync. When complete, quick daily audits can be done to ensure data integrity, which will eliminate lengthy reconciliation at month-end.

“Prolog allows us to do high performance program management because it gives us the tools to slice and dice information a thousand different ways, find problems early and keep projects on track,” concludes Ortiz. “I’ve been part of three other bond programs and I’ve never seen anything like this done to this level of detail and sophistication.”

Sweetwater Union High School District Project Profile

Proposition O Bond Program: Phase I

The Sweetwater Union High School District has started the design phase for the first nine schools to be renovated under Proposition O, a $644M local bond to fund the repairs and improvements needed throughout the 32-school district.

The design work on Chula Vista High School, Chula Vista Middle School, Hilltop High School, Mar Vista High School, Montgomery High School, National City Middle School, Southwest High School, Southwest Middle School and Sweetwater High School is due to conclude by late 2008, with construction beginning in early 2009.

This first phase of the Proposition O Bond Program will cost approximately $205M and will focus on the most immediate needs throughout the nine schools.

Key Project Elements

› New classroom, food service and multipurpose buildings
› Upgrade classrooms/restrooms/science labs/technology
› Improve handicap accessibility
› Remove hazardous materials
› Upgrade electrical, fire and safety systems to meet current and future demands

Anticipated Results: Specific school projects to be funded by Proposition O were identified after months of diligent work by school site committees that included faculty and staff, parents, students, community members and facilities experts, ensuring that a comprehensive master plan was developed for each school.