

SchoolConstructionNEWS

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MAY 2015 | VOLUME 18, NUMBER 3

 EmlenMEDIA
Publisher of specialized business news Since 1994

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*When the schools are not using the facility, it can also be leased out to visiting theater companies.
Photo Credit: Tom Bonner*



*The design team created a two-story glass façade that brought natural light into the space.
Photo Credit: Tom Bonner*

A STANDING OVATION

The Bonita Center for the Arts takes center stage
By Jessie Fetterling

A celebratory concert on Oct. 18 marked the debut of the Bonita Center for the Arts, which serves both the cities of San Dimas and La Verne.
Photo Credit: Benny Chan



The art center is committed to providing services to all grade levels and any school within the Bonita Unified School District that would like access.
Photo Credit: Benny Chan

project data

BONITA CENTER FOR THE ARTS, SAN DIMAS, CALIF.

Type: Performing arts theater
Construction Cost: \$22,603,313
Start Date: Sept. 20, 2012
Completion Date: October 2014
Owner/Operator: Bonita Unified School District
Project Manager: Capital Program Management
Architect & Interior Designer: Rachlin Partners
Landscape Architect: L.A. Design Associates
General Contractor: Tilden-Coil Constructors Inc.
Structural Engineer: R.M. Byrd and Associates
MEP Engineer: Glumac
Civil Engineer: Yomtov Inc.
Geotechnical Engineer: Ninyo & Moore
LEED Consultant & Commissioning Authority: Verde Concepts (CHPS consultant), 3QC (commissioning authority)

The Bonita Unified School District has long wished for a performing arts venue that would stand as a landmark not only for the 13 schools in the district, but also for the community as a whole. Finally, that wish came true this past fall.

A celebratory concert on Oct. 18 marked the debut of the Bonita Center for the Arts (BCA) — a facility that serves both the cities of San Dimas and La Verne. Students from throughout the community gathered to show off the venue’s wide range of capabilities. Everyone from student choir singers to band musicians performed, bringing the audience to a standing ovation. Since opening, the excitement has yet to stop.

Culver City, Calif.-based Rachlin Partners designed the facility, while Riverside, Calif.-based Tilden-Coil Constructors Inc. served as the general contractor on the project. Construction started in September 2012 and took about two years to complete.

The community first added a performing arts center to its wish list some 25 years ago, and that idea came to fruition as early as 2004 when the community passed a bond program to help with funding. However, the \$22 million project wasn’t built until a second bond

program was passed to help them accumulate the necessary funds, according to Michael Rachlin, president and founding partner of Rachlin Partners. “This was a high desire for the community, but lower on the priority list,” he said. “It finally came about and they’re very happy for it.”

Designing for Performance

The 29,250-square-foot center features a 700-seat main indoor theater as well as an outdoor performance area. Both can host drama, dance, lecture, and band and choir performances for the district’s 13 schools in San Dimas and La Verne. When the schools are not using the facility, it can also be leased out to visiting theater companies, which can help generate additional income for the school district to offset operation costs, Rachlin said.

The art center is committed to providing services to all grade levels and any school within the district that would like access. An annual planning meeting with potential stakeholders within the district is held to discuss how the facility will be used, said Bill Cox, theater manager for the BCA. From this meeting, a booking cal-

endar is created for the academic year.

“With regard to the ‘type’ of production work [we can do], I would say we are only limited by our imagination,” Cox said. “Any type of performance work is possible. The BCA is a state-of-the-art venue with the latest in theatrical technologies. What we can do now is provide a forum where students can experience and participate in a professional venue — a concert hall that is suited well for music and dance.”

The school district wanted a centralized venue that could accommodate these different types of performances; however, Rachlin said he quickly learned that the different performance types required different acoustical requirements. For instance, designing for musical theater would have different reverberation times than designing for lectures.

“We worked very closely with acoustical engineers to create a system called variable acoustics,” Rachlin said. “It’s a basket weave–design shape customized to enhance reverberation time and to have a very live acoustical chamber.”

FACILITY OF THE MONTH



While the facility is designed to accommodate a variety of performances, it is also a teaching and learning facility.

Another key part of the facility's intricate design included the air supply plenum located directly underneath the slab of the orchestra, parterre and balcony levels, added Doug Nguyen, project manager for Tilden-Coil Constructors Inc. This design allowed the theater to avoid running overhead ductwork that would negatively impact the aesthetics of the building's interior.

One challenge that occurred during the project was the complicated coordination process that was required to install the plumbing, electrical, HVAC and low-voltage trades — all systems of which were required to be hidden from the audience view, according to Nguyen. "The pipes, conduits and pathways were all required to be installed inside CMU walls and cast-in-place concrete walls," he said. "With cast-in-place concrete walls being over 30-feet high, this was a tremendous challenge to overcome."

In addition to figuring out the acoustics and building systems, another key challenge was the facility's sustainable design. The design team created a two-story glass façade that brought natural light into the space. However, they also needed to shade that space so that hundreds of patrons could comfortably stand in the lobby without a high demand for air-conditioning. Plus, the design team wanted to make both a visual and sustainable connection to San Dimas' surrounding neighborhood and dry, sunny environment.

The design team shaded the glass façade by adding computerized louvers that track the angle of the sun. The louvers deflect sunlight to keep interior spaces cool, thus minimizing the demand for air-conditioning. The solar-shading fins open and close automatically to let in more light on cloudy days or less light on sunnier days. An outdoor solar shade overhang was also added to help expand the lobby space.

"There is strong sunlight beating on

the glass that contributes to solar heat gain," Rachlin said. "The computer can track the sun and, on a sunny day, can close the louvers so that the sun doesn't hit the glass too much and saves on energy."

The playful juxtaposition of materials such as stucco, concrete, metal panels and landscaping helped add to the inviting façade. Drought-tolerant plants were also selected to accommodate a low-water-usage landscape with low maintenance needs. Wherever possible, drip irrigation is also used as a highly efficient method of delivering water to support plant growth.

To make sure visitors understood the building's sustainable features, there are placards on display that provide an educational experience to all who visit. The building is currently pending Collaborative for High Performance Schools (CHPS) verification, California's highest standard of green education facilities.

Some of the sustainable features that students and patrons will learn about include lobby windows made of low-E glass, which blocks 67 percent of solar heat while allowing light to pass through. The facility also features low-volume toilets that save an average of 51,840 gallons of water per year and pint-flush urinals that save 70,875 gallons. Bathroom faucets also contain automatic shut-off valves, and the conditioned air delivered from below the floor, through the pedestal bases of the auditorium seats, uses less energy due to lower fan speeds.

Teaching Components

While the facility is designed to accommodate a variety of performances, it is also a teaching and learning facility, Rachlin said. For instance, the lighting control and sound control booths are meant to be used for teaching and learning, providing the first step for students to develop a career in back-of-the-house functions.



The design team worked very closely with acoustical engineers to create a system called variable acoustics, a basket weave—design shape customized to enhance reverberation time.

There is also a green room or black box, a multipurpose room that can be used as a classroom as well as a green room during performances. It was also designed to be used as a black box theater, which is intended for much smaller and more intimate performances such as drama. It has a 30-foot-high ceiling and can be fitted with stage lighting on a lighting grid for performances within the space, according to Rachlin.

"[The performing arts center] is used as a teaching environment for students to develop an expertise in theatrical arts so they could go on to a college level or professional level," Rachlin said.

Because of this, the design team initially worked with a user group of students, staff, teachers and members of the community that the school district put together. "We toured a number of facilities throughout San Gabriel Valley to look at different stage configurations to determine the best program to meet the needs of the community," Rachlin said. "They were very instrumental in coming up with the right program."

Cox added that a lot of time and energy was spent in getting input from a wide range of potential users. "During the design phase of the project, potential stakeholders were invited to participate in large round table discussions as to the art centers potential uses," he said. "Bonita Center for the Arts was designed based on those discussions to meet the needs of the district."

The project was envisioned using the integrated project delivery (IPD) process, so Rachlin Partners teamed up early on with Tilden-Coil. "Like

most IPD projects, we experienced a collaboration effort with the general contractor, which involved looking at alternative materials in the budget we had."

Rachlin added that the project was unique because, in the 25 years he's worked with K-12 school districts throughout California, this is the first performing arts center that the design firm has solely designed for performing arts. "I had many more specialty consultants than I've ever worked with. I got to deal with an acoustical engineer, lighting designers and theater consultants," he added. "The level of technical expertise for our performing arts center is much more complicated than a typical class building. There was a learning curve in terms of getting up to speed in what makes a theater chamber come alive."

Cox said that the general response has been fantastic. "After each public performance, patrons linger to admire the architecture, and the comments regarding each performance's production values have been positive," he said. ■

productdata

Millwork & Cabinets: K&Z Cabinet Co.

Acoustics: Newson Brown Acoustics

Flooring: Ameripolish Surelock (stained and polished concrete floors), Tandus Flooring (carpet),

Door Hardware: Curries (doors and frames), Von Duprin (hardware)

Glass/Glazing: Arcadia (storefront and curtainwall)

Paint: Dunn-Edwards

Auditorium/Assembly: Theatre Solutions Inc. (theater seats)

Signage: Apco Architectural Sign Systems

Windows: Arcadia

Partitions: Scranton Products

Communication Technology Consultant: Averbach Pollock Friedlander (theater and AV consultant)