

Teenage Dream

Noll & Tam Architects and the YMCA team up with a group of Berkeley-area youths to repurpose an old bill payment facility as a LEED-Platinum center for teens.



If the idea of a teenager handling important construction documents makes you shake in your steel-toed boots, you are probably not alone. Yet, in an effort to turn an old, two-story Pacific Gas and Electric Company (PG&E) bill payment facility into the YMCA-PG&E Teen Center in downtown Berkeley, California, a group of teenagers did just that. “The [YMCA] board decided to create a teen task force to participate in the

design process. And they asked the task force to [evaluate and] select the architects as part of their work,” explains Scott Salge, project architect at Berkeley-based Noll & Tam Architects. Making sure the \$4.3 million, 13,500-square-foot rehab was ecologically sensitive was also part of the brief, and led to a LEED-Platinum building with a new third floor addition. In a city known for its commitment to and activism on behalf of the environment, sustainability was a no-brainer. The opportunity to teach teens about the bidding, design, and construction processes on the way was also too good to pass up.

Berkeley is known as a hub for members of the well-educated upper middle class, not a harbor for at-risk youth. Yet, as Pete Gerharz, the center’s branch director, explains, the children of first-generation immigrants, as well as kids from the city’s less affluent neighborhoods, still struggle with illiteracy and lack access to tutoring and mentorship. Building a teen center was meant to help bridge those gaps while teaching “the teens about the process of building from concept to construction,” says Salge. “They learned how projects come together, worked with contracts, and worked through the process with the city of Berkeley.”

There was a lot to do. The original poured-in-place concrete building had the dour look of a fallout shelter: Its eastern and western facades were windowless and its colonnaded southern facade, which looks out over a park and across to Berkeley High

>TEAM

ARCHITECT Noll & Tam Architects

Owner YMCA of the Central Bay Area

Commissioning agent Rick Unvasky Consulting

Engineers Ingraham Dejesse Associates (structural); Timmons Design Engineers (MEP); KPFF Consulting Engineers (civil)

Landscape Dillingham Associates

General contractor Pankow Special Projects

Lighting Cupertino Electric

>KEY PARAMETERS

LOCATION Berkeley, California (San Francisco Bay watershed)

Gross area 13,500 ft² (1,255 m²)

Completed November 2010

Cost \$4.5 million

Annual purchased energy use (based on utility bills) 45 kBtu/ft² (511.2 MJ/m²), 31% reduction from base case

Annual carbon footprint 8 lbs. CO₂/ft² (39.2 kg CO₂/m²)

>SOURCES

Curtain wall Viracon ceramic fritted glazing

Concrete Cemex 25% flyash mix

Glass Kawneer VE.2M 1” Low-E/thermally broken

Low-slope roofing Johns Manville 101 SRI TPO

Photovoltaics Sun Light & Power

Reception countertops Vetrazzo BCM Cubist Clear

Floor and wall tile Vidrepur Glass Mosaic

Carpet Interface iLine Glasbac carpet

Plumbing American Standard; Toto

Building management system Schneider Electric

To see a video of the project, go to greensourcemag.com/video



School, included a dark, nondescript portal. Nonetheless, the design team maintained most of the concrete structure of the building, and the waffle slab on the second level. New additions to the existing skeleton included sheer walls, rebar ties, and footing. "It was a real challenge to get all the infrastructure, utilities, and new footings and structure in place to support the third floor," explains Salge. The team also added operable windows to the previously nonfenestrated facades and built a hydronic heating system into the floor slab on the first and third floors. Then they finished it all with low-VOC paints, adhesives, and sealants. PV panels mounted to the roof provide 10 percent of the building's total energy use. Over the first year of operation, natural gas use was much higher than predicted, while electricity use was noticeably lower. Project manager Alex Sinunu, of Pankow Construction, posits that occupants' unfamiliarity with new systems could be the cause of the higher gas use. "I do think that the radiant is just turned on too much, because it's so subtle," he says, noting that it takes time to get used to the idea that the radiant system isn't on and off. Sean Timmons, the project's MEP consultant, concurs. "We focused on very passive and low-maintenance systems, integrated with natural ventilation and daylighting strategies to minimize energy consumption."

Rather than one big goal-achieving move, all of these maneuvers contributed incrementally to the LEED-Platinum status, Salge says. "By having the YMCA as the owner/client, there were a lot of things we could do, like not air-conditioning all the spaces in the building." Throughout the rooms, wall-mounted plaques explain the benefits of these features. "It's part of the educational [mission]," Gerharz says. "In a normal office building, you don't get the constantly revolving population that can be exposed to things like this." Open,

1 The third-floor terrace provides outdoor space for respite or an informal gathering.

2 Interior spaces are shaded by louvers on the south and west facades.

