GreenSource

THE MAGAZINE OF SUSTAINABLE DESIGN

FRONT PAGE NEWS

ASU'S WALTER CRONKITE SCHOOL OF JOURNALISM TRANSFORMS DOWNTOWN PHOENIX

GREENSOURCEMAG.COM
A PUBLICATION OF THE MCGRAW-HILL COMPANIES
September+October 2010
McGraw Hill CONSTRUCTION

WALTER CRONKITE SCHOOL OF JOURNALISM

Phoenix, Arizona

By SCOTT BLAIR

The school benefits from close proximity to Phoenix's new light rail system and a new sustainable public park.

Left The entry and main stair is anchored with a kinetic sculpture that uses a heat chimney to rotate reflective metal elements.

@ For a construction time lapse video, go to greensourcemag.com/video

If journalism cannot exist in a vacuum, then a journalism school cannot succeed without engaging the community beyond its walls. That's the lesson taught by designers of the Walter Cronkite School of Journalism and Mass Communication at Arizona State University's (ASU) downtown Phoenix campus, completed in August 2008. Through redevelopment of an urban brownfield site, the $71-million, 223,000-square-foot building achieved LEED Silver certification and helped re-energize a floundering core Phoenix neighborhood.

"It's a catalyst," says Steven Ehrlich, FAIA, principal with Culver City, California-based design architect Ehrlich Architects. "It is rooted not as an ivory tower, but as a real member of the community." With just 22 months to program, design, and deliver the

Headline News

ASU's School of Journalism embraces the urban community with its downtown campus.

>KEY PARAMETERS

Location Phoenix, Arizona (Salt River watershed)
Gross area 223,000 ft² (20,700 m²)
Cost $55 million
Completed August 2008
Annual purchased energy use (based on utility bills) 89 kBtu/ft² (110 MJ/m²), 23% reduction from base case
Program Ground floor retail, classrooms, library, faculty offices, television and radio studios, and lecture hall

>TEAM

Owner City of Phoenix and Arizona State University
Architect and interior designer Ehrlich Architects
Executive architect HDR Inc.
Design builder Sundt
Commissioning agent TESTMARC
Engineers HDR Inc. (electrical and mechanical); Caruso Turley Scott (structural); Dibble & Associates (civil); Speedie and Assoc. (geotechnical)
Landscape Ten Eyck Landscape Architects
Energy Quest Energy Group
Acoustical McKay Conant Brook Inc.
Lighting Ehrlich Architects, HDR Inc., Arizona Lighting

>SOURCES

Glazing Viracon; Oldcastle BuildingEnvelope
Paints Sherwin-Williams
Carpet tile Mohawk Monologue Modular; Shaw Asphalt Carpet Tile; Interface Geometry Carpet Tile
Ceiling tiles Armstrong Dune Square Lay-In Optima, Open Plan Square Lay-In; 9wood Linear Wood; Tectum Full Span Corridor Panels
Office furniture Vecta E-Table (conference tables)
Chairs Steelcase Leap, Cachet, Think, Scoop Stool, Sidewalk, Max Stacker; Ki Lancaster; Cabot Wrenn Edge Chair; Carolina Retrospect Seating
Storage Steelcase Universal; REI Mailmaster
Other furniture Steelcase Enea/Sidewalk Diekman Answer/Currency/Montage/Post & Beam/Universal; Brayton E2/Werndl; Vecta Display Cases; Peter Pepper Nexus; Krug Answer/Currency Finelite, Columbia, Kim Prescolite, Dm Lighting, Sistemalux, Louis Poulsen, Alkco, Pinnacle, Beta Calco, Luminaire
Lighting Finelite, Columbia, Kim, Prescolite, Dm Lighting, Sistemalux, Louis Poulsen, Alkco, Pinnacle, Beta Calco, Luminaire
Water saving fixtures Sloan, Kohler

1

2

1. **TV studios are housed on the top story within a long-span, lightweight steel structural system.**

2. **Journalism student applications have risen dramatically since the new building was opened.**

project before the first day of classes, design-build was a necessity. "The team forms itself prior to coming to interview, rather than the owner selecting the designer and the contractor and saying that everyone has to get along," says Tauny Woo, city engineer.

Awarded the project on a Friday, the winning team of Ehrlich; Tempe, Arizona-based general contractor Sundt Construction; and the Phoenix office of HDR Inc. as executive architect was up and running the following Monday morning. "The whole design was built around speed and an aggressive construction schedule," says Terry Abair, project director with Sundt.

Using integrated project delivery augmented with "lean construction"—a concept borrowed from the auto industry to boost efficiency and value—the architects, contractor, engineers, and design-assist subcontractors co-located inside HDR's Phoenix offices for the duration of the design phase. "It became one continuous design charrette," says David Gibney, HDR's western regional director of sustainability. The team later moved to a single large trailer onsite during construction.

Designers understood from the beginning that the structure had to be post-tensioned, cast-in-place concrete to avoid long lead times for steel or pre-cast fabrication. A 30-foot structural bay system was chosen as the most efficient because it was the widest span that a column-hung forming system could support. This system allowed crews to start interior work the day the forms were stripped, Abair says.

The next decision was the footprint and height. The team used BIM to rapidly and radically evolve the design to experiment with numerous configurations ranging from 5- to 9-stories, says Matthew Chaney, AIA, Ehrlich's project architect. Eventually, they settled upon six stories to avoid high-rise designation, and a four-bay width that allows daylighting to penetrate into the school's five working newsrooms, mediated classrooms, auditoriums, and central forum space. The 26-foot-tall top story transitions to a lightweight-steel, long-span system to accommodate television studios and sound stages for ASU and Arizona's PBS station.

The building presents a dynamic public face with a variety of exterior cladding designs, including locally sourced masonry

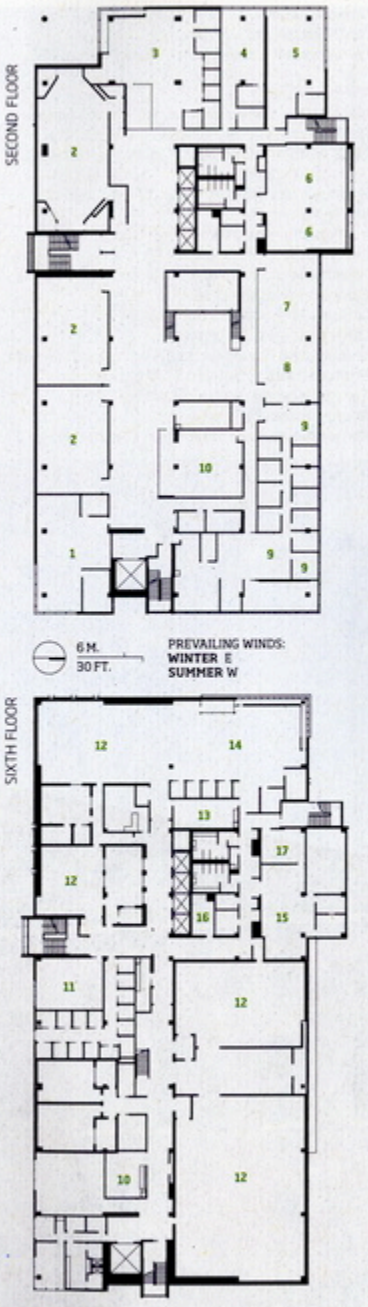
and tricolored, corrugated steel in a pattern influenced by radio spectrum waves. Each exposure was treated differently to dissipate sunlight. Ehrlich originally thought to shade the southern facade by extending the floor slabs beyond the building envelope. "Talking with our engineers, it became apparent that in a very hot climate like Phoenix, if you extend the floor slab beyond the glass line, you'll end up dragging heat back into the building through the concrete," he says. Thus a lightweight, louvered metal system blocks the heat. "It was another interesting approach that evolved through the teaming process," he adds. The western exposure benefits from a stainless-steel mesh over the louver system to reduce visible light transmittance by 50 percent. Elsewhere, narrow, shadow box-framed window openings control the light hitting the low-E, dual-pane glass. With sun-angle calculations, the team optimized these through BIM.

Energy optimization LEED points were limited due to the use of Northwind, a chilled water loop available to numerous buildings in downtown Phoenix. However, its use saved on capital budget and gained program space by eliminating the need for a chiller plant and cooling towers, says Howard Shugar, senior project manager with HDR. Condensate water from air handlers is reused for a water feature that also irrigates drought-tolerant landscaping.

The fountain is framed by the separate $3.5-million Taylor Street Mall, which added streetscaping south of the building to create a "front door" and a pedestrian backbone connecting other campus buildings. After class, students cool off in Civic Space, a new park that sits to the west of Cronkite. It features a suspended amoeba-like sculpture by artist Janet Echelman, undulating shade canopies topped with PV panels, pervious paving, and ample trees. It's all part of a growing urban microcosm that benefits students via the building's expansive views on the ground floor. "It provides a sense of 'porosity'—the ability not only for the students to look outside, but the community to look in," Gibney says. GS

Scott Blair is editor-in-chief of *Southwest Contractor* and regional bureau chief for *Engineering News-Record*.

BILL TIMMERMAN



1 Campus newspaper
2 Theater/classrooms
3 Newsroom
4 Professional center
5 New media room
6 Utility
7 Reading room
8 Student lounge
9 Student services
10 Lab
11 Training classroom
12 Studio
13 Conference
14 Daily newsroom
15 Broadcast
16 Data