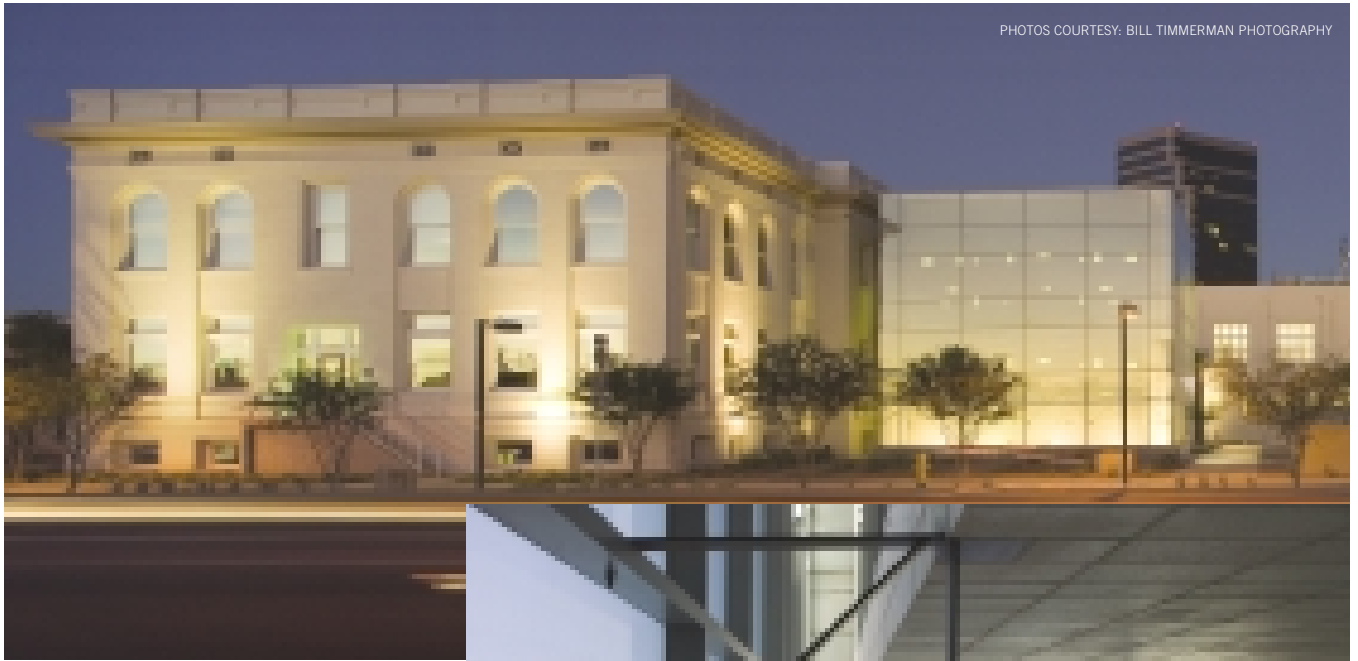


Arizona Best of 2007

University of Arizona College of Medicine

Public Project Over \$10 Million

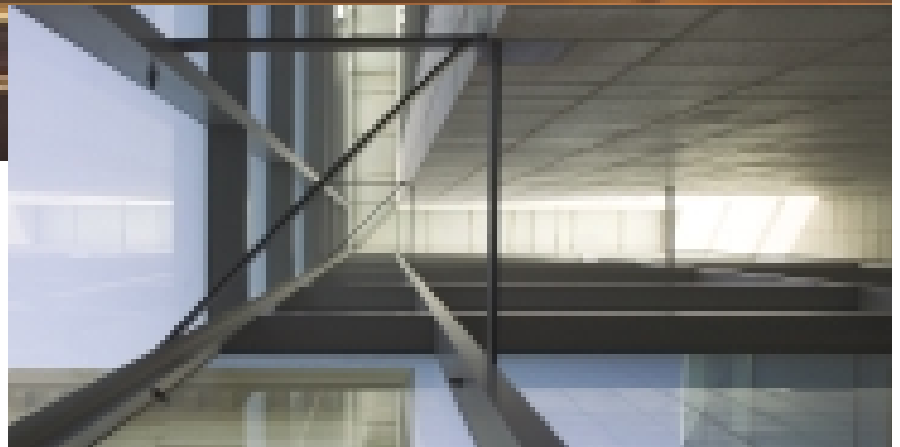


PHOTOS COURTESY: BILL TIMMERMAN PHOTOGRAPHY

Housed in historic Phoenix Union High School, the College of Medicine transformed the existing neoclassical structures into a modern facility. New core structures in Buildings 1 & 3 were attached via bridge connections to limit the contact points, allowing the core to be removed without compromising the original structure. Due to the condition of Building 1, specially designed shoring columns were constructed on the exterior, which allowed for the complete rebuilding of the three-story structure on the interior.

Operable wood windows were installed on the building exteriors, virtually identical to the original, 1911-era windows, with the addition of thermally-insulated glazing. The auditorium, which will be used as a conference center, features reuse of the original wood flooring, with rehabilitation of plaster ceilings and ornamentation and wood staircases.

Advanced data technology and video



conference capabilities abound, along with student surgical simulation suites and exam rooms with real-time video and current anatomical models. An estimated 150-student-per-class program will utilize the campus, built in cooperation with Arizona State University.

Judges praised the project for reusing historic elements and for the dramatic economic impact the project is forecast to provide the community.

Submitted by: DPR Construction and SmithGroup

Owner: City of Phoenix

Client: Arizona Board of Regents/University of Arizona

Architect: SmithGroup

Contractor: DPR Construction

Other Design: Metropolis Design Group LLC; Floor and Associates

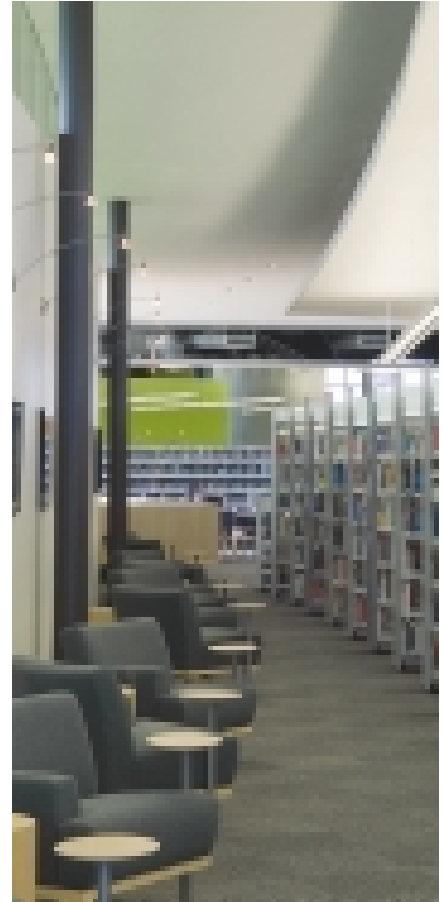
Engineers: Paragon Structural Design; Dibble Engineering

Major Subcontractors: Delta Diversified Enterprises; Midstate Mechanical; Metal-Weld Specialties; Walters & Wolf; Sun Valley Masonry

Arizona Best of 2007

Cesar Chavez Library

Public Project Under \$10 million



Opened in December of 2006, the Cesar Chavez Library has quickly become an elemental part of community life in Laveen. Offering free computer classes and a space just for teenagers, this library is visually and contextually integrated into the Sonoran Desert.

Anticipated to receive LEED silver certification, the library is a model for sustainability, teaching lessons of environmental awareness to its patrons. With a north-south exposure that allows natural daylight to illuminate the library and a windowless west elevation to mitigate direct solar heat gain, the interior of the

library is a comfortable space for the community to gather.

Designers of the library were influenced by the surrounding park, which includes a man-made lake. All of the rainwater that falls on the library's 37,000-sq-ft sculptural roof is collected and stored in the lake, to later be reused for irrigation. A reading room located outside on the patio recycles mechanically cooled exhaust air, and patrons have access to adjustable spot diffusers to ensure maximum enjoyment of this unique feature.

The gracefully arced form of the

library marries with a previously-extant earth mound, further unifying the structure with the landscape.

Submitted by: Line and Space LLC

Owner: City of Phoenix-Phoenix Public Library

Architect: Line and Space LLC

Contractor: Linthicum Constructors

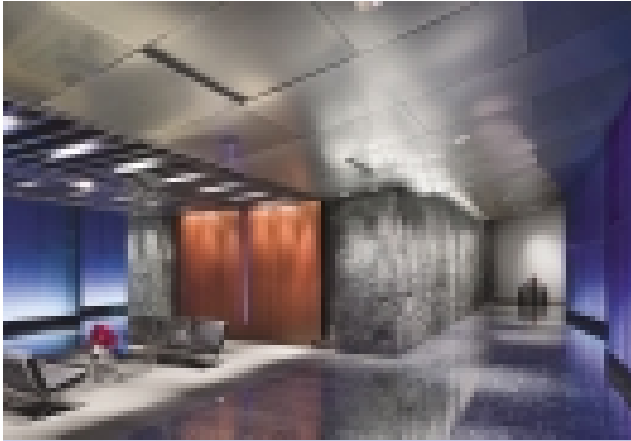
Other Design: McGann and Associates; Richard + Bauer; Rumsey Engineers

Engineers: KPFF Consulting Engineers; Caruso Turley Scott; Energy Systems Design

Arizona Best of 2007

Hayden Ferry Lakeside Phase II

Private Project Over \$10 Million



The \$48 million Phase II at Hayden Ferry Lakeside represents the fluidity of the adjacent lakefront through its nautical-themed form that conjures images of sailing ships and rolling waves. The 12-story, 300,000-sq-ft office tower features 88 fabric “sails” that surround its exterior. The lobby contains 96 panels of blue-tinted “cast” glass illuminated from behind, creating the illusion of water.

A 4,000 sq ft cast-in-place concrete fountain faces Tempe Town Lake and is accented by five distinct water elements.

To simulate the appearance of the old Salt River, the fountain’s bed is comprised of 6,000 sq ft blue terrazzo tile while pavers and colored concrete in the hardscape reinforce the riverbed metaphor. A 100-ft spire illuminated with a blue LED light tops the office tower.

The project was constructed on top of an existing and fully operational parking garage. In addition, three levels and 23,420 sq ft of retail space were added to an existing parking structure, which is visually-enhanced with applied pre-cast and metal panels.

Submitted by: McCarthy Building Cos. and Davis

Owner: SunCor Development Co.

Architect: Davis

Contractor: McCarthy Building Cos.

Other Design: IDEA Inc.; Creative Designs Lighting; ADM Group

Engineers: Civil Resources LLC; Caruso Turley Scott; Peterson Associates

Major Subcontractors: Buesing; McCarthy/Ceco; HACI; Midstate Mechanical; Delta Diversified; W.J. Maloney; Pete King Construction

Fireside at Norterra

Private Project Under \$10 million



With 21,000 sq ft of space, the Fireside at Norterra Community Center at Dynamite Mountain Ranch serves a variety of purposes, cohesively joining both the utilitarian and the decorative. The natural stone lower-level entryway with accents of slate leads to the open two-story structure, featuring a 40-ft rock-climbing tower that culminates in a glass-capped apex, affording panoramic views of the cityscape.

Built on the side of a mountain in North Phoenix, Fireside at Norterra features rusted steel structural and site elements with exposed ceilings and a roof that curves outward from the center to emphasize the low, cantilevered side roofs. Large expanses of glass allow for interaction

between the community and the environment, while the overhangs with their dramatic wood-beam supports provide an outside gathering place.

Surrounded by neighborhood pools, tennis courts and children's play areas, this design harmoniously blends with the surrounding community. As build-out occurs, the sales office in the center will become a banquet hall, while the lobby will become a great room.

Judges were attracted to the contextually-appropriate mix of building materials, especially the board-formed concrete.

Submitted by: SAB/Southwest Architectural Builders and Douglas Fredrikson Architects

Owner: Pulte Homes

Architect: Douglas Fredrikson Architects

Contractor: SAB/Southwest Architectural Builders

Major Subcontractors: Compton Plumbing; APB Mechanical; Kuhl's Electric; North Star Pipeline; Ronning Landscaping; Young, Swenson, & Cross Paving; Hardrock Concrete Placement; Sidewinders Masonry; Schuck & Sons Construction Co.; Meyer and Lundahl; Jim Brown & Sons; Mirage Plastering; J-Rock Drywall Inc.; Re:Source Flooring; Southwest Elevators; Parsons Rock Retaining Walls

Arizona Best of 2007

Camelback Pedestrian Underpass & Road Improvement

Transportation Project



Notorious for being one of the busiest surface streets in the City of Phoenix, Camelback Road near 24th Street is also popular with pedestrians because of local shopping amenities, such as the Biltmore Fashion Park and the Esplanade. The need to enhance the environment for these pedestrians resulted in the construction of a grade-separation facility.

Scarcely impacting area drivers, the new six-lane roadway grade is so slight that the 90,000 vehicles using Camelback Road daily experience little sensation as they travel up and over the underpass. The roadway is 5 ft above grade, while the underpass is 5 ft below grade, producing a 10-ft high by 36-ft-wide underpass complete with a sky-

light, glass block and glass ceiling tiles for interior light.

Construction also included sidewalks, curb and gutters, raised medians, landscaping, intersection improvements and two pedestrian entry plazas.

The final design cooperatively merges the vehicular traffic requirements with safety and aesthetic considerations for pedestrians, resulting in a project that benefits both.

Submitted by: Hunter Contracting Co.

Owner: City of Phoenix-Roads and Streets Dept.

Architect: Peterson Design

Engineer: Premier Engineering

Contractor: Hunter Contracting Co.

Major Subcontractors: Advance

Terrazzo; RBG Construction;

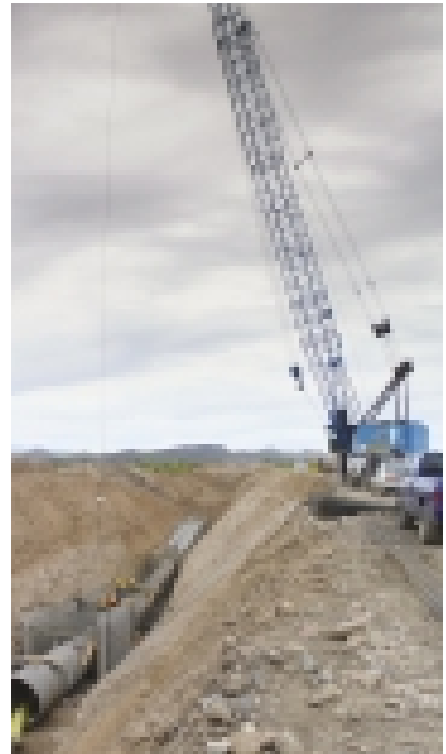
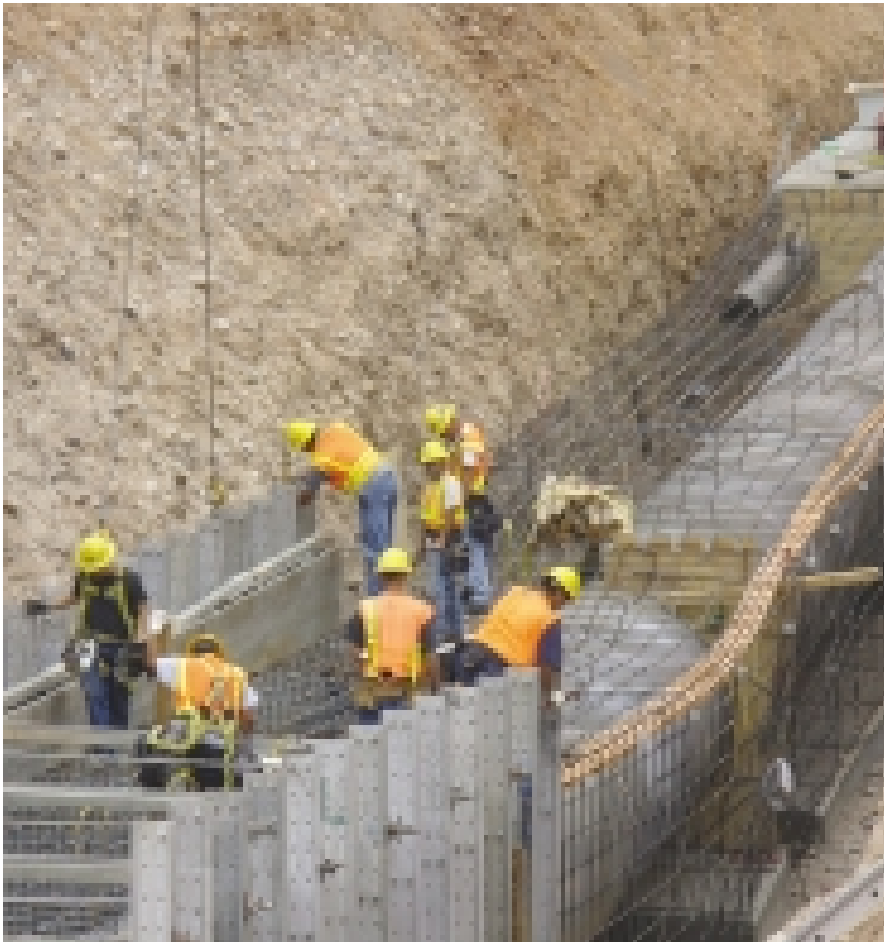
Freebird Landscaping; Petty's Tile;

Certified Construction; WW Smith;

Coyote Glass; Bernie's Brass

Lake Pleasant 78-In. Water Transmission Main

Civil/Infrastructure Project



The 78-in. welded steel water line will carry up to 160 million gal/day of potable water for the city of Phoenix water distribution system. The \$49.4 million project, begun July 2004 and completed December 2006, also provides for a second 78-in. line, also with a maximum capacity of 160 mgd.

The project involved the excavation, installation, backfill and testing of approximately 44,230 lin ft of 78-in. main, 40,640 ft of 8-in. force main, 5,570 lin ft of 16-in. waterline, 44,230 lin ft. of dual 4-in. fiber-optic ducts and a connection

for future waterline. The team excavated a 1,700-ft tunnel through hard rock, 70-ft below ground.

In addition, the construction team installed valves, blow-offs, concrete encasements, jacked casings, manholes, pavements, landscaping, corrosion-protection system and connections to the Lake Pleasant Water Treatment Plant and the Tramonto main.

Impacting the project was the Cave Creek Fire of early 2005, which affected 243,800 acres north of the project. Although the team constructed 20-ft-

high berms to accommodate normal water flows through the New River Wash, the damage to foliage from the fire, in conjunction with the seasonal monsoon rains, allowed the wash to run at its highest levels in 30 years. This violated the berms, requiring that some 26,000 cu yds of earthen material had to be extracted. Still, with stepped-up schedules, the team delivered the project on time and with minimal environmental impact.

Submitted by: PCL Construction

Owner: City of Phoenix

CMAR Contractor: PCL Construction

Engineer: Stanley Consultants

Major Subcontractors: Mine

Development; Harris AZ Rebar; Peak Corrosion; Olsen Precast; Northwest Pipe

Arizona Best of 2007

NAU Applied Research and Development Facility

Public Green Building Project and Higher Education Project



This environmentally-sustainable facility, constructed at 7,000 ft above sea level, is a 61,000-sq-ft, three-story structure designed to function as a state-of-the-art research center on NAU's campus. A LEED platinum building, the ARD will be one of the greenest structures in the country. 91% of the construction waste produced was recycled for other uses, as when the wood forms used to pour the concrete were later chipped into small pieces and used as mulch for the building's landscaping. With the choice to use 57% of necessary

construction materials from within 500 miles of the site to reduce fuel consumption, the local economy also benefited. The cement content of the concrete was reduced by 40% by replacing it with fly ash, which reduced the amount of carbon dioxide emissions, and recycled steel was also used.

Renewable energy strategies such as photo-voltaics help the building generate 20% of its own power, while using 60% less energy than a traditional office building. This savings was achieved through passive ventilation, radiant heating and cooling, super-insulation, heat recovery and advanced electronic monitoring of the building system. Over \$1 million in utility expenses is expected to be saved over a 20-year period.

Adhesives, sealants, paints, carpet and wood materials are benign and emit

no toxic fumes. Natural-fiber insulation is 85% post-industrial recycled denim. No harmful chemicals, irritants or VOCs are contained in the insulation.

Water usage in the building is reduced by 60% with the use of reclaimed water. All plants on site are native to the area and also benefit from reclaimed water use. A green roof is planted on top of the attached meeting facility, utilizing more native plants while acting as an insulator and water management system.

The National Park Service, NAU vice provost and the USGS are tenants of the building. The advanced Kiem Research Laboratory is also on-site. Visitors will be able to see how the building works through interactive displays with continuous monitoring and reporting of all building energy and mass flows with indoor environmental quality reporting and education a priority.

Submitted by: Burns Wald-Hopkins Architects and Kitchell Contractors

Owner: Northern Arizona University

Architect: Burns Wald-Hopkins Architects; Hopkins Architects

Contractor: Kitchell Contractors

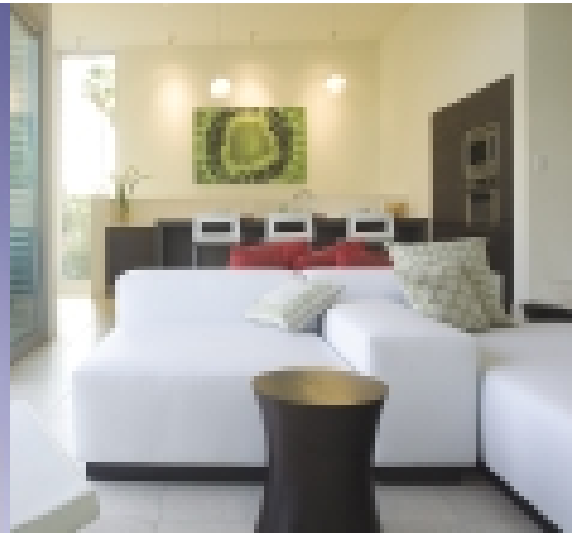
Engineers: ARUP/Design Engineering; Schneider & Associates; Arizona Engineering Co.

LEED Consultants: Green Ideas; Green Built Consulting

Major Subcontractors: Brother's Masonry; Triad Steel Services; Southwest Metalsmiths; Western Millwork; Progressive Roofing; Banker Insulation; Elward Construction Co.; Ignace Brothers; BZ Painting; ISEC; Boyer Metal Company; Dial Mechanical; T. Barnabas Kane & Associates

The Galleries at Turney

Private Green Project



The \$3 million residential project, in the Biltmore/Camelback community, is the first LEED-H certified development project in Arizona. Begun August 2006 and completed June 2007, the eight-unit development offers homeowners an

opportunity to own sustainable living space close to the amenities of the upscale area.

The project provides dense housing that retains the scale and feel of a single-family home. For instance, each approximately

2,000-sq-ft residence has its own footprint and perimeter envelope and a private outdoor garden area for leisure and entertainment: A courtyard concept, based on London row houses, was selected.

The units rise from lower masonry walls to upper zinc and cement elements. Homeowners ascend from the lower level to the second floor with its 12-ft-high living and entertaining room. Street-front units have a window wall and covered deck looking streetside, and the rear units have a private garden. In both, the ceilings compress into the bedrooms and guest rooms.

Submitted by: Urban Edge Builders

Owner: Modus Development

Architect: [merz] project

Contractor: Urban Edge Builders

Engineers: Woodward Engineering;

BDA Engineers; Akribis Engineering; Winters & Associates

Subcontractors: Desert Sun; All

Seasons Electric; Arizona

Trademasters; Kovach; SunTech

Glass

Arizona Best of 2007

Light Rail Operations and Maintenance Center

Best Project Management, Large Project



The \$65.4 million facility will house the operations and maintenance for the METRO Light Rail system. The facility's track is part of Line Section 4, also completed by the same joint venture, to ensure a seamless process from line to maintenance.

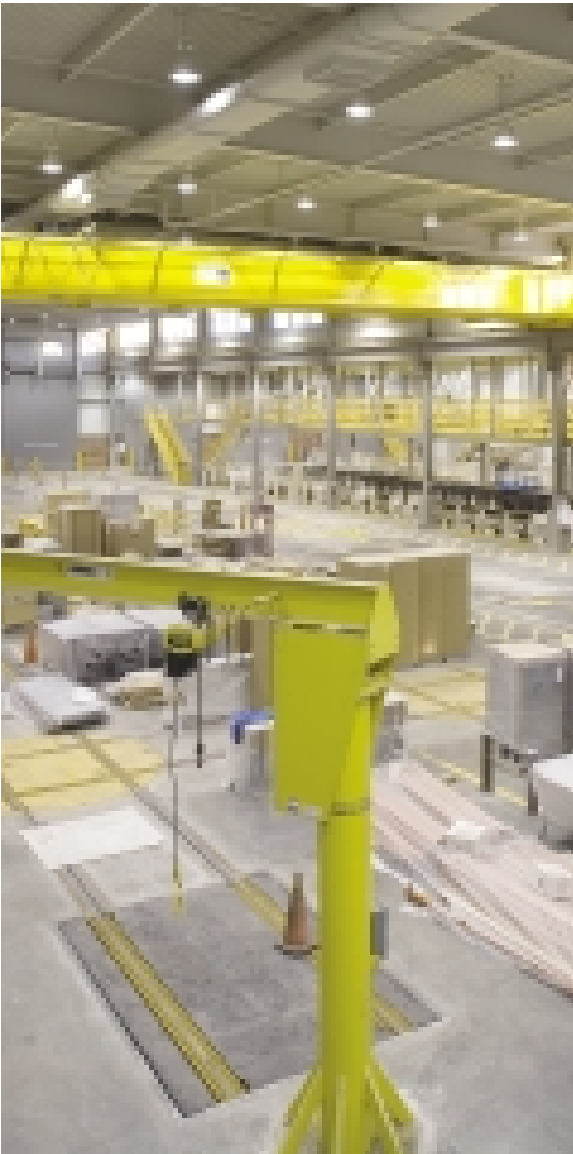
The 35-acre property includes four structures: the 130,000-sq-ft Maintenance of Engineering building, comprising office space and shop space; the 20,000-

sq-ft Maintenance of Way building, with office space and service bays; and the Service and Cleaning Platform buildings. The campus also includes 3.65 mi of ballasted track, transitioning from the system via a Loop 202 right-of-way and a new bridge over Washington Street to the maintenance facilities.

The Salt River bed site required that 680,000 cu yds of fill be trucked to

bring the site 13 ft above the bed. In addition, the soil was compacted to withstand a 100-year flood occurrence. The contractor had to incorporate perforated drains and pumps at each of the buildings' bases for flood protection.

Because of the proximity of the campus to Phoenix Sky Harbor International Airport, height restrictions required specialty cranes during construction.



Submitted by: Sundt/Stacy & Witbeck
JV and Valley Metro Rail

Owner: Valley Metro Rail
Designer of Record: STV

General Contractor: Sundt/Stacy &
Witbeck Joint Venture

Engineers: PB America; Rudow &
Berry; Gannett Fleming; ATL Inc.;
R.A. Alcala & Associates; Denmark
Engineering

Other Design: Wendell Burnette
Architects; Logan Simpson Design;
SVR

Major Subcontractors: Hirschfeld Steel;
Commonwealth Electric Co.; Summa
Mechanical; Ramirez Mechanical
Systems; KLB Construction

Arizona Best of 2007

Rio Vista Recreation Center

Best Project Management, Small Project



The \$12.5 million design-build project is a 51,376-sq-ft center on two levels for a growing Peoria neighborhood.

The geometrically diverse building was designed to pay for 75% of its operating costs through selected “for-pay” programs. As a result, the design blends both “for-pay” and public programs: The double-height lobby serves public functions including the large multi-purpose room, the conference room, classrooms and child watch. A curving reception area transitions to the “for-pay” sections, which occupy half of the ground level and the second level.

The design/build team had to work with an existing parking lot and lake. In addition, they were challenged to design a facility that provided 360-degree experiences. As a result, citizens can enjoy views of New River, the lake, the park and the community while participating



in activities.

While glazing was maximized, solar gain was minimized through deep overhangs and perforated metal scrims. Durable materials such as naturally patinaed Corten steel, colored concrete masonry and locally quarried sandstone are also responses to the harsh desert sun. Throughout the process, close coordination between the team and the city, including weekly site walks, ensured timely completion.

Submitted by: ARCHITEKTON

Owner: City of Peoria

Architect: ARCHITEKTON

Design Build Partner: Haydon Building Corp.

Engineers: BDA Structural Engineers; Taylor RyMar Corp.; DMJM Harris Landscape Architects

Major Subcontractors: Sun Valley Masonry; TP Acoustics; Tri-City Mechanical; Wilson Electric Services; RKS Plumbing & Mechanical; Total Metals

Arizona Best of 2007

Buckeye Union High School District Gymnasiums

K-12 Education Project



The \$13-million project includes two gymnasiums for the Buckeye Union High School District: a modernist style for the Estrella Foothills High School, with its stained concrete block and articulated details, and a Southwestern-inspired style for the more traditional Buckeye High School with variegated stucco to maintain consistency with the existing campus. Each project was completed with the idea of maintaining these motifs.

Each of the facilities include operable,

stow-away bleachers seating 1,800 people for center-court games, locker facilities, a wrestling practice room, storage, concessions and display cases.

In addition, the Buckeye High School called for an outdoor concession stand, due to its proximity to a football field. The gym also houses a publicly-accessible weight room and a student bookstore.

In all, the two gyms fulfill the challenge of integrating contemporary design to the character of a traditional

agricultural community. The structures use lighting and large open spaces to promote school spirit and give participants a sense of awe and dignity.

Submitted by: Orcutt/Winslow

Owner: Buckeye Union High School
District #210

Architect: Orcutt/Winslow

General Contractor: Adolfson &
Peterson Construction

Construction Manager: G.V.
Enterprises

Engineers: Caruso Turley Scott;
Sullivan Designs; Associated
Engineering; Kraemer Engineering;
Hess-Rountree Landscape Architect;
T.J. McQueen & Associates

Arizona Best of 2007

The Curley School Project

Renovation/Restoration Project



The Curley School had been vacant since the 1980s in Ajo, the historic Arizona former mining town. Completed in 10 months, the \$6.3 million project revitalized the former public school as an artisan's hub and tourist destination. The renovated space includes 30 live/work units; public spaces such as a library and an auditorium; offices for residents and

the community; and landscaping and recreational areas.

The center of a residential neighborhood, the campus is comprised of two important Ajo historic buildings. The first, built in 1919 and expanded in 1926-28, is a 40,000-sq-ft Spanish Colonial Revival. The second 10,000-sq-ft building was built in 1937.

Paramount was preserving the period detail, such as wood doors, transoms and windows, while updating to contemporary features. The project utilized local craftsmen to recreate and restore building components, thus investing in the community and teaching new skills.

The tightly scheduled and budgeted project had nine funding sources, including state and federal funds. As both a residential and historical project, the work had to comply with state and federal housing and preservation guidelines.

Submitted by: The Architecture Company

Owner: International Sonoran Desert Alliance

Architect: The Architecture Company

Contractor: TBR Construction & Engineering

Engineers: Rick Engineering; Structural Concepts; Advantech Facility Design

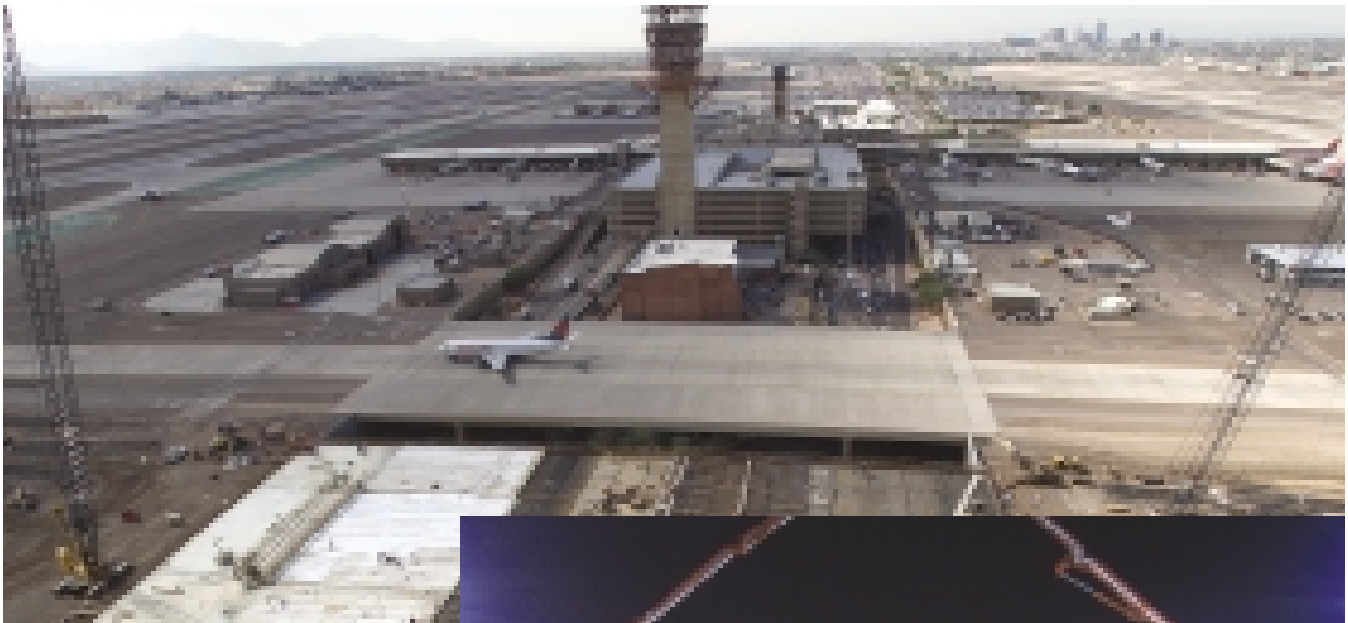
Landscape Architect: Susan Black & Associates

Major Subcontractors: MMI; Lectra-Serv; Rock n Steel; Johnson Bros. Painting; Cherry Landscape

Arizona Best of 2007

Taxiway S Reconstruction and Bridge

Engineering Project: Civil



The world's seventh busiest airport, Sky Harbor required a new cross-taxiway bridge to serve its over 100,000 passengers and 900 tons of cargo daily. The design-build \$33.4 million project required the demolition of three bridges and the construction of a new 400-ft-long, 214-ft wide bridge over Sky Harbor Boulevard.

Key to the success of the project was designing the bridge for huge live loads using 3D finite element analyses. Taking into account that aircraft can weigh up to 1.5 million lbs, the analyses were used to determine load distribution based on structure stiffness and the resulting differential deformations that had to be accommodated in the design.

In addition, because an inherently robust post-tension concrete box-girder structure type was chosen, the foundation system had to be tuned to ensure the stiffness of the lateral frame formed by the superstructure and deep foundations did

not result in unmanageable prestress loss. The bridge was supported on drilled shaft foundations to allow for construction of a planned underground people mover.

The city needed the taxiway built as quickly as possible since it involved the closure of one of only three taxiways at the airport. Phased construction, open communications and the construction of a two-lane detour helped keep the project on track while minimizing impacts to airside and landside operations.

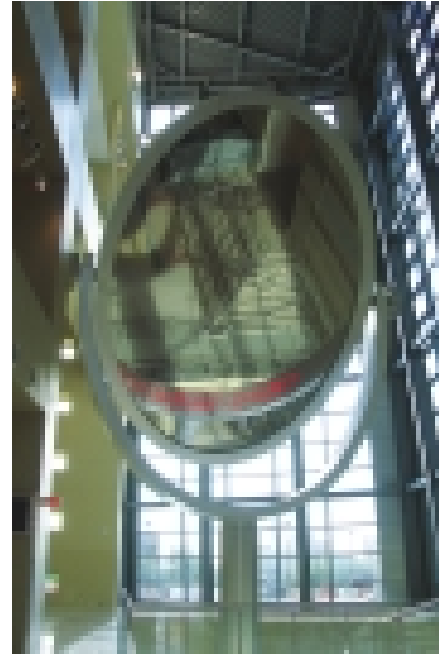


Submitted by: HDR Engineering; Kiewit Western Co.; Dibble Engineering
Owner: City of Phoenix Aviation Dept.
D/B Contractor: Kiewit Western Co.
D/B Engineers: HDR Engineering; Dibble Engineering
Other Engineers: CR Engineers; Speedie & Associates; Logan Simpson Design
Subcontractors: Asphalt Busters; Cactus Transport; CASE Foundation; Consolidated Rebar; Five G; Hogue and Associates; Penhall Co.; Recon; Rural Electric; Serrano Painting; Slaton Bros. SW; T.L. Smith

Arizona Best of 2007

Phoenix Convention Center West Building

Engineering Project: Structural



The \$190 million project in downtown Phoenix provided for the demolition of the existing North Convention Center Hall. The 350,000-sq-ft building includes 62,000 sq ft of below-street level exhibition space; a two-level below-grade parking area; below-grade loading docks, over which are large steel and concrete transfer beams; a 165-ft-high open atrium, extending from 50 ft below grade

to 115 ft above; 27,000 sq ft of street-level meeting rooms; 21,000 sq ft of conference rooms; interstitial office spaces; and 45,000 sq ft of meeting space in the west ballroom, an almost column-free space designed for heavy loads.

The building required 9,000 tons of steel and 10,000 cu yds of concrete. The lower ballroom sits under a busy street, so the design had to allow for heavy traf-

fic loads, noise and vibration. The building also abuts existing features, including Symphony Hall, for which permanent shoring was installed.

Adjacent to Symphony Hall, the three-side glass atrium posed a variety of design challenges, including battering 5 degrees north to allow it to clear the existing overhang and 13 degrees west as an architectural feature. The west ballroom, requiring loading capacity of 250 lbs per sq ft on a 90-by-90-ft grid, incorporated 10,000-psi concrete columns bearing up to 13 million lbs.

Submitted by: PK Associates

Owner: City of Phoenix

Structural Engineer: PK Associates

Architect: HOK; SmithGroup

General Contractor: Hunt Construction Group

Concrete Contractor: Suntec Concrete

Steel Contractor: Havens Steel

Arizona Best of 2007

Reproductive Medical Institute

Interior Project Over \$5 million (tie)



Providing a wide variety of reproductive services under one roof, Reproductive Medical Institute is the first of its kind in the Southwest. The design had to join these subspecialties within an aggressively sterile environment while providing for the emotional needs of clients. Shared lobby space links each suite in a bright, airy atmosphere, providing clients with

cheerful surroundings in which to wait. The outdoors and indoors are integrated through materials such as glass doors and skylights to bring in natural light, exposed aggregate flooring and restrooms that feature frosted acrylic panels and Trex strips to allow light to filter through.

Details such as art niches, wall fountains, clean-lined furniture and a mix-

ture of zebra wood, quartz surfacing, bamboo panels and espresso-stained maple help to create a spa-like experience in a traditionally unnatural environment. In the exam and recovery rooms, wood sheet vinyl and concrete-like solid surfacing provide a natural-looking backdrop while meeting all health and safety codes.

The judges felt the holistically-designed environment gives patients the tranquility, peace and security that can often be missing from many medical establishments.

Submitted by: Orcutt/Winslow

Owner: Ryan Companies US

Architect: Orcutt/Winslow

Contractor: Ryan Companies US

Engineers: Kraemer Engineering;

TLCP Structural; Professional Consulting Engineers

Subcontractors: SECON; Midstate

Mechanical; Norcon Industries;

Partitions & Accessories; RE:Source;

Adobe Paint; Skinner Interior

Systems; Adobe Drywall; Maverick

Concrete; Walters & Wolf; M&H

Mechanical; Gemini Co.

Arizona Best of 2007

Sky Harbor Terminal 4 Retail Renovation

Interior Project Over \$5 million (tie)



Twenty-one retail tenants and eight freestanding retail merchandising units inhabit over 128,500 sq ft of space in Terminal 4 of Phoenix's Sky Harbor International Airport. The project was designed to reflect Arizona's natural beauty and diversity to natives and visitors alike. Dramatic lighting against a backdrop of overhanging cliff-like projections on the ceiling mimic Arizona's famous canyons while graphic floor designs draw the patrons' eyes down to scenes of native fauna while providing orientation. The actual retail spaces appear to be carved out of the canyon wall, completing the design metaphor.

Special care was taken with the tile and stone elements. Forty-five different types of porcelain floor tile from Italy were used, configured in 12 different patterns. There were 20 different wall tiles used, and four



types of stone native to Arizona's Chino Valley area were used as column wraps.

By re-examining the original phasing plan, Weitz was able to reconfigure the work to occur in multiple areas at once without affecting the airport's functionality. As a result, the \$25 million project came in substantially ahead of schedule.

Submitted by: The Weitz Co.

Owner: City of Phoenix

Architect: TranSystems Corp.;

Minnesota Architectural Alliance

Contractor: The Weitz Co.

Engineers: LSW Engineers; Nabar Stanley Brown, Schuler and Schook

Subcontractors: Able Steel; Aero Automatic Sprinkler; Dickens Quality Demo; E & K of Phoenix; IMCOR; Scuderi Tile; Vickers/Hari; Wilson Electric; Young Electric Sign Co.

Arizona Best of 2007

Heard Museum North

Interior/T.I. Project Under \$5 Million



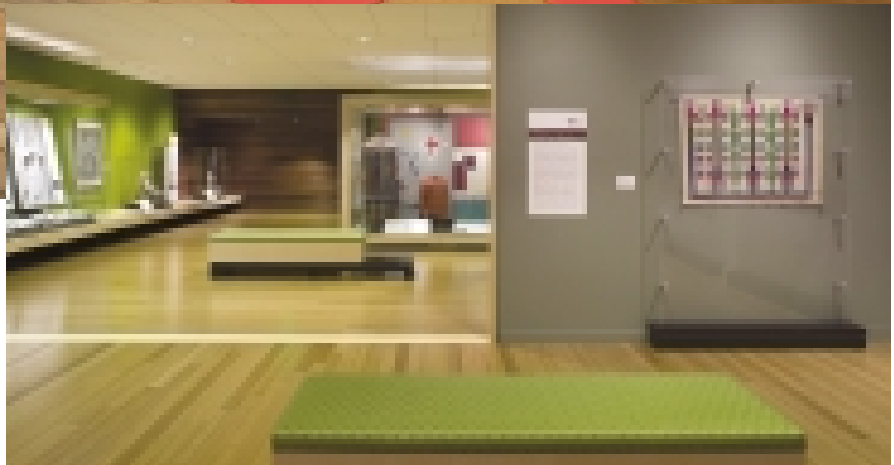
PHOTOS COURTESY: BILL TIMMERMAN PHOTOGRAPHY

The 11,000-sq-ft project provides new space for the Heard Museum North, which first opened a satellite campus in north Scottsdale in 1996.

The \$2.9 million project includes two exhibit galleries comprising 4,000 sq ft: a permanent gallery with built-in exhibit architecture to show the Heard's collection of Southwestern American Indian artwork; and a changing gallery which also serves as a performance/lecture space for special events.

The project also includes an interpretive garden; a 1,000-sq-ft Arcadia Farms Café with indoor and outdoor seating; and a 2,000-sq-ft museum shop.

The challenge was to create a highly unique environment using two typical retail spaces within one free-standing



shell at the high-end strip-mall The Summit at Scottsdale. The architects sheltered the galleries within the larger volume by creating a 'jewel box' of interior walls out of reclaimed redwood wine tanks.

The café and retail shop are separated only by glass and are further connected by a ceiling that floats above both. The retail area features handcrafted millwork and pedestals to display art pieces for sale.

Submitted by: Holly Street Studio

Owner: Heard Museum

Architect: Holly Street Studio

Contractor: Brignall Construction

Engineers: Rudow + Berry; ICDS; Woodward Engineering; DRW Engineering

Other Design: Ganymede Design Group; Roger Smith Lighting Design; Desert Foothills Landscape

Arizona Best of 2007

City of Phoenix Forensic Crime Laboratory

Mechanical Project



The \$38 million three-story facility houses a crime laboratory, office space and below-grade parking structure. The mechanical systems were designed with safety, performance, energy efficiency and flexibility as paramount goals.

Safety provisions include a comprehensive security system and a micro-processor-based laboratory airflow and room-pressurization control system. Performance is enhanced by equipment standardization, redundancy and sophis-

ticated yet simple controls.

There are three chillers, each sized for 50% of peak load. The chiller plant is designed with equipment selected to operate at extremely high efficiency levels during part-load operation, when chillers operate at less than half of the power requirements of most chillers.

The fume hoods, normally the biggest energy consumer in laboratories, require half the exhaust airflow of conventional fume hoods. The ventilation

system is designed to vary the amount of air delivered based on the demands of either space cooling or of make-up for air exhausted through fume hoods or other containment devices.

Since the office areas do not require 100% outside air, the ventilation system is separate from the lab system. It is also a demand-based system designed for cooling requirements and includes a 100% outside air economizer.

Submitted by: The Durrant Group

Owner: City of Phoenix

Architect: The Durrant Group

Contractor: Gilbane Building Co.

MEP Engineers: Harley Ellis Devereaux

Mechanical Contractor: Bel-Aire Mech.

Subcontractors: Rosendin Electric;

ISEC; Coreslab Structures; Jones

Concrete; Progress Roofing; AROK;

T-P Acoustics

Arizona Best of 2007

Phoenix Air Traffic Control Tower and TRACON Facility

Electrical Project



This \$58 million project provides Sky Harbor International Airport with a 320-ft tall, 850-sq-ft air traffic control tower and a 78,000-sq-ft base building which houses the Terminal Radar Approach Control system, a 48-radar position facility that enhances controllers' ability to monitor and control up to 1,350 aircraft as they approach or depart the airport area.

Since the facility is critical to air traffic safety, power systems needed to be extremely reliable. Two incoming high voltage, 12.47 kV services are run to the

site, and each is stepped down to 480-volt, three-phase, three-wire via a pad-mounted transformer. Each is designed to support the entire facility in the event of a power outage to the other feed.

An innovative critical power distribution system was developed for the project to achieve the client's power system source availability of 99.9998% minimum requirements to essential and critical loads. Several examples include: the failure of any single power system component could not interrupt any critical loads;

the design had to facilitate maintenance and repair on individual components without the need for a system outage; upon a commercial power outage, automatic transferring of redundant elements servicing critical power loads must be accomplished in 4 milliseconds or less.

All this was achieved within an aesthetically-attractive structure clad in copper, metal panel, colored concrete and glass, which has already become a welcoming beacon for people arriving to Phoenix through the airport.

Submitted by: Jacobs Engineering Group

Owner: Federal Aviation Administration

Design Firm: Jacobs Engineering Group

Contractor: Jacobs Engineering Group

Electrical Contractor: Cannon & Wendt

Subcontractors: Schuff Steel; IMCOR; W.J. Maloney; Kiewit Western; Enclos; Buesing Corp.; Brycon Corp.; Complete Fire Protection; Safway Scaffolding; Star Roofing

Tempe Center for the Arts

Steel Project



Echoing the design of ancient Anasazi structures and the dramatic earth forms of Monument Valley, this 88,000-sq-ft facility features a 600-seat main theater with an intricate cast-in-place concrete dome ceiling, a 200-seat studio theater, art gallery, banquet/meeting room, lounge, administration offices and support spaces.

Able Steel Fabricators worked in conjunction with Top Flite Construction to fabricate and install approximately 1,400 tons of structural and miscellaneous steel. The focal point for the steel portion of this project, however, is the 700 tons of exposed pipe truss framing for the multi-faceted roof. The roof structure's bent trusses were necessary to frame out the ridges and valleys used to encompass all of the performing and support spaces under a single sound-absorbing struc-

ture. Capping the 90-ft-tall flytower, the steel structure is supported on neoprene rubber isolators for vibration isolation from overhead aircraft noise.

The entire project was detailed using a 3D modeling system in order to ensure the proper connections of a multitude of different angles.

Submitted by: Okland Construction and ARCHITEKTON

Owner: City of Tempe

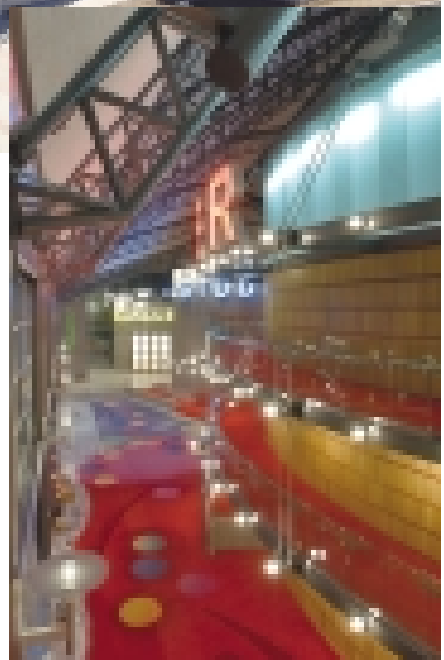
Architect: ARCHITEKTON + Barton Myers Associates Inc.

Contractor: Okland Construction Co.

Program Manager: Kitchell CEM

Steel Fabricator/Contractors: Able Steel Fabricators; Top Flite Construction

Engineers: Arup; Stantec Consulting; GEC



Subcontractors: Conwest/HACI; RML Electric; Elward Construction Co.; ISEC; Padilla Glass; Sun Valley Masonry; CS&W Construction

Arizona Best of 2007

Cedar Avenue Pedestrian Bridge

Concrete Project



The Cedar Avenue Bicycle and Pedestrian Bridge links the Flagstaff Urban Trail System and the Arizona Trail System over Cedar Avenue by blending form and function, combining aesthetics appropriate to the surrounding area's scenic backdrop.

After several options were presented to the public, a design integrating modern post-tensioning with classical concrete construction techniques was chosen. The

bridge features a graceful arch with 17 ft of clearance that gives drivers under the bridge a feeling of openness through a 138-ft, 6-in. single span. A very thin structure at the center span was achieved through the use of 5,000-psi post-tensioned concrete. The cast-in-place box girder bridge's concrete has a variable depth from a minimum of 4-ft, 6-in. to a maximum of 12-ft, 4-in.

Rustic touches include the use of large

boulders to retain the fill slopes at the abutments and a malapi façade on the span mimicking the native stone found in Flagstaff. Completed on time and on budget, the bridge offers bicyclists and pedestrians with vastly improved safety in a structure that assimilates well with the natural environment.

One judge remarked the project shows off the graceful versatility of concrete while providing a functional structure to serve the community.

Submitted by: T.Y. Lin International

Owner: City of Flagstaff

Design Firm: T.Y. Lin International

Contractor: Vastco

Concrete Contractor: Rinker Materials

Subcontractors: Five G Inc.; Casciani

Stone Masonry; D&R/Paradise

Arizona Best of 2007

Southwest Ambulance Corporate Center and Training Complex

Industrial/Warehouse Project



The 127,000-sq-ft operations and maintenance facility comprises four separate buildings on a 13-acre site. The \$13.3 million project began November 2005 and was completed November 2006 for the company, which began in 1982 with one ambulance and now maintains a fleet of nearly 300, serving the Western states.

The fleet building is the service facility for ambulances. It includes eight lift

stations as well as offices.

The administration building is set off by means of a large gabion wall. This same stone design repeats at the interior receptionist desk. Openness characterizes this building: A lounge connects the offices. Continuing this theme, a courtyard between this building and the operations building includes an amphitheater.

The operations center is a training facil-

ity for paramedics, EMTs, and drivers and includes a dispatch center. Behind it, a large canopy shelters ambulances moving in and out of maintenance.

The support building stores supplies as well as storage tanks of oxygen for the ambulances and contains offices for support staff.

Submitted by: Concord General Contracting

Owner: Indevco Partners

Architect: The Architecture Company

Contractor: Concord General Contracting

Engineers: Caruso Turley Scott; Hess Rountree

Major Subcontractors: JFK Electrical Contracting Enterprises; Tri-City Mechanical; Parsons Steel Erectors; S&S Paving; The Campbell Collaborative; Associated Engineering; S Diamond Steel

Chinle Sports Complex

Masonry Project

PHOTOS COURTESY: PATRICK LEMPKA



The 150,000-sq-ft project comprises two buildings in the Four Corners area on the Navajo Reservation. The athletic campus includes a 6,000-seat basketball area, an aquatics center with group exercise rooms and four classrooms.

For 15 years, the community planned and saved federal funding to build this \$31.4 million project. To accommodate the buildings, the community decided to demolish the old Chinle High School and build the facility as part of the current campus.

Basketball and volleyball are the primary intended sports, but concerts and community gatherings will also be accommodated.

To avoid a standard box design, the team incorporated surrounding rock formations into the structural masonry and steel. This reduced the large scale of the building, making it site appropriate and comfortable for the community.



Submitted by: Green & Green
Owner: Chinle Unified School District No. 24
Architects: Green & Green with HOK Sport + Venue + Event
Contractor: FCI Constructors
Engineers: Martin Engineering & Surveying; GFG Structural Engineers; Pearson Engineering Associates

Masonry: G&G Enterprises
Major Subcontractors: Schuff Steel Management Southwest; IMCOR; Nichols Electric; Concrete Structures; Irwin Seating Co.; Advance Terrazzo Co.

Arizona Best of 2007

Lake Pleasant Water Treatment Plant

Editor's Choice: Civil/Infrastructure Project



This massive water treatment plant's first phase has an initial capacity of 80 million gal per day. With an eye towards future growth, the plant is designed to be expanded up to 320 mgd.

The largest design-build-operate project in North America, this delivery method was chosen to foster better planning and to allow the operator to be part of the design process early on to ensure that the facility would be of sufficient quality to last up to 30-50 years.

The plant features many modern treatment techniques to control taste and odor, eliminate harmful bacteria and provide a reliable supply of drinking water that fulfills all governmental regulations. Structures include a raw water pumping station, which pumps water from the CAP's Waddell Canal; a nearly 2-mi, 90-in.-dia raw water transmission pipeline; the plant itself, which treats water using ballasted flocculation, ozone and UV disinfection, deep-bed

monomedia filters and other methods; and the operations building comprised of cast-in-place concrete with a unique textured finish.

While the 285-acre project was located in a remote desert area to minimize impact to nearby communities, up to 95% of the native plants were salvaged and re-used onsite.

Submitted by: McCarthy Building Cos./Black & Veatch

Owner: City of Phoenix

Operator: American Water Services

Engineer: Black & Veatch

Contractor: McCarthy Building Cos./Black & Veatch

Architect: Swaback Partners

Subcontractors: Ames Construction; University Mechanical and Engineering; Ludvik Electric Co.; Murphy Industrial Coatings; Endo Steel

Phoenix Art Museum

Editor's Choice: Renovation/Restoration

At 45 years old, the Phoenix Art Museum is an enduring point of civic pride. The largest art museum in the Southwest features a growing collection of modern, contemporary, and Latin American art. The museum's expansion features a new main lobby and four-level gallery wing, increasing the structure's size by 30,000 sq ft. In addition, 47,000 sq ft of exterior spaces were transformed with a landscaped entry plaza and sculpture court.

At the new main entrance, a shaded plaza provides a dramatic introduction to the museum with granite pavers and an 8-ft-tall water curtain fountain, which acts as both a visual screen and a sound screen for the busy streets adjacent to the museum. A wide protective canopy cantilevers from the building to shield visitors from the desert heat.

To protect the priceless artwork inside the museum, the addition could not admit direct sunlight, yet to achieve an open, modern aesthetic, natural light was critical. A dug-out light well brings reflected light into the basement, while clerestory windows at the top of the rotunda allow light to penetrate the levels below.

The expansion is characterized by innovative design and detailed craftsmanship.



Submitted by: Kitchell Contractors and Magnum Companies

Owner: City of Phoenix-Phoenix Art Museum

Architect: Tod Williams Billie Tsien Architects

Contractor: Kitchell Contractors

Engineers: CMX Group; Ambrosino, DePinto & Schmeider; Severud Associates; Caruso Turley & Scott

Major Subcontractors: Magnum Companies; B&B Glass; Ten Eyck Landscape; Brothers Masonry; Coreslab Structures; Grounds Control/Terrain; HACI Mechanical Contractors; Kovach; Metal Weld; Renfro Design Group

