Why Masonry?
www.whymasonry.org

Featured in this issue:

1. Indio Corporate yard
2. Oxnard College Performing Arts Center
3. Mesa College Police Offices
4. USMC Bachelor Enlisted Quarter Package 5
5. Ruby Duncan Elementary School
6. Fremont Fire Station No. 11
7. Sacramento Zoo Giraffe Barn Replacement and Viewing Deck
8. Templeton Farms Equestrian Center Barn
9. Commercial Mixed-Use Building at 763 2nd Street
10. Dinuba Aquatics Facility
11. CMACN Producer Members 2013 Design Awards Note

Concrete masonry buildings are “green”.
Concrete masonry units are generally manufactured locally from local raw or recycled materials, and the units themselves can be recycled.
Architect's Commentary:
The Corporate Yard is a 40,000 square-foot municipal service center for the city of Indio: also home to the city’s Public Works Department and the Indio Water Authority. It includes administrative offices, vehicle maintenance facilities, and amenities for field crews and staff.

Although the client did not require LEED® certification, the project boasts a contemporary materials palette in which concrete masonry provides both a functional and structural backbone and a key aesthetic element. Ribbed metal panels wrapped above bands of concrete masonry in varied colors and textures emphasize the building’s horizontality. Signature vertical elements such as a slate tiled accent wall lend a civic presence to a building type that is often dismissed as purely utilitarian. The project sets a progressive tone for future civic work in its region.

Why Masonry? Concrete masonry was used extensively for its durability, ease of maintenance, cost effectiveness, and aesthetics. The vehicle repair bays and crew workshops receive heavy use, so the architect selected concrete masonry for its ability to resist punishment. Used as both finish material and building structure, concrete masonry saved time and money during construction by its ready availability and easy installation. Finished on the interior with epoxy paint, the 8" and 12" thick reinforced concrete masonry walls are expected to wear well over time with minimal maintenance. Utilizing a combination of precision and split-faced units in multiple colored horizontal bands, the architect tied the building to its desert environment, while underscoring the building’s overall contemporary aesthetic.

A dramatic departure from the local design vernacular, the project boasts a contemporary materials palette in which concrete masonry provides both a functional and structural backbone and a key aesthetic element. Ribbed metal panels wrapped above bands of concrete masonry in varied colors and textures emphasize the building’s horizontality. Signature vertical elements such as a slate tiled accent wall lend a civic presence to a building type that is often dismissed as purely utilitarian. The project sets a progressive tone for future civic work in its region.
OXNARD COLLEGE PERFORMING ARTS CENTER
OXNARD, CALIFORNIA

ARCHITECT:
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Principal

STRUCTURAL ENGINEER:
Li & Associates, Inc.

GENERAL CONTRACTOR:
Woodcliff Corporation

MASONRY CONTRACTOR:
Lindero Masonry Incorporated

BLOCK PRODUCER:
Angelus Block Company, Inc.

OWNER:
Ventura County Community College District

Architect's Commentary: The Oxnard College Performing Arts Center is a major design focal point for the campus as well as its largest capacity lecture hall and auditorium. Prominently located at the campus entry, this multi-use complex houses a 400-seat auditorium, 100-seat black-box theater, 1,700 square foot television studio, and classroom spaces. The building's design features rotated forms, differing heights and butterfly roofs that create an iconic and inspiring statement, while a distinguishable outdoor plaza dubbed "The Courtyard of the Arts" serves as a centralized space for public gatherings.

The building’s design and program embraces sustainable building practices and “green” technology. Sustainable features of the project include: a high-efficiency “smart” irrigation control system that monitors weather conditions and adjusts watering cycles based on real time conditions; reduced-flow faucets and waterless urinals in restrooms to improve the facility’s water efficiency; low-e glazing to maximize daylight in interior spaces while mitigating solar heat gain; high-reflectance cool roof products to minimize interior heat gain and reduce the project’s heat island impact; and incorporation of locally manufactured materials, such as masonry block, to lower environmental impacts associated with transportation and to stimulate local economic activity.

Why Masonry? The use of masonry as the primary architectural wall construction material provides many benefits to this Performing Arts Center. Programmatic requirements both unique to the site and typical for performing arts centers pointed to masonry as the ultimate solution for noise pollution mitigation, budgetary constraints, the requirement for a signature building design, and the functional requirements of the building.

Among the design criteria for this building was to provide an acoustically-protected building adjacent to a busy street and to isolate acoustical transmission among the spaces within the building; the mass of masonry walls makes achieving these goals possible by preventing transmission of sound from outside and within.

Another critical requirement for this building was to achieve signature design status while adhering to a modest budget; masonry allows for the structural component of the wall to also be the finished face of the wall. Integral color units with banding of split face units creates a bold design statement with high durability and low life cycle costs.

The use of masonry is a visual demonstration of the structural integrity of the building. The public can see and appreciate the structural make up of the building and make a visceral connection to the human labor effort and material quality that goes into the construction of a building like this.
MESA COLLEGE POLICE OFFICES
SAN DIEGO, CALIFORNIA

ARCHITECT:
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Principal-in-Charge

Michael B. Wilkes, FAIA
Design Principal

Doug Paterson, AIA
Project Architect

STRUCTURAL ENGINEER:
Hope Engineering

GENERAL CONTRACTOR:
Barnhart Balfour Beatty

MASONRY CONTRACTOR:
New Dimension Masonry, Inc.

BLOCK PRODUCER:
RCP Block & Brick, Inc.

OWNER:
San Diego Community College District

Architect’s Commentary: The 7,000 square-foot Mesa College Police Offices building was designed as part of a larger master plan project for the eastern portion of the Mesa College campus in San Diego, California. The master plan included a new campus entrance roadway, the re-alignment of the existing campus street network, a new 1,000 car parking structure, and the designation of sites for future campus buildings. The small, single-story Police Offices building served as a central element in this redevelopment plan, and it is a valuable resource for students, faculty, staff and visitors at the primary entrance to the Mesa College campus.

The District’s desire was for the campus police to have a strong presence in the new parking structure for safety and security reasons. After careful consideration of several alternatives, we proceeded with a design that integrated the police building with the parking structure, which allowed the police building to have both a public face at the campus entrance and secure parking for police staff inside the parking structure.

Why Masonry? Concrete masonry units (CMUs) were incorporated in the design as a primary building material for many complimentary reasons. CMUs provided a humble, low-maintenance exterior shell; a durable, long-lasting envelope that functioned as the building’s primary structure and exterior enclosure. The strength and durability of the masonry was an important feature to the District and the campus police. The color and texture of the masonry also provided a great degree of warmth, which offered a welcoming environment for visitors to the facility. Two colors of masonry were used in a stacked bond configuration, which complimented the design of the colored glazing used for the building’s fenestration. As the first LEED® Gold certified building on the Mesa College campus, the concrete masonry also offered an exceptional degree of thermal performance for the building’s interior spaces.
USMC Bachelor Enlisted Quarters Package #1
Camp Pendleton, California

ARCHITECT:
cass i so wats ky 1 Chapman + associates
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San Diego, CA 92103

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Principal-in-Charge

DESIGN-BUILD FIRM:
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San Diego, CA 92101

David E. Golden, Vice President
Preconstruction Manager

STRUCTURAL ENGINEER:
SMR-ISD Consulting Engineers, Inc.

GENERAL CONTRACTOR:
Harper Construction Company, Inc.

MASONRY CONTRACTOR:
Frazier Masonry Corporation

BLOCK PRODUCER:
ORCO Block Co., Inc.

OWNER:
NAVFAC Southwest

Architect’s Commentary: This design-build project is the first of a multi-billion dollar Marine Corps initiative to replace outdated barracks with comfortable, modern facilities so single Marines may enjoy a living environment comparable to a college dormitory or apartment complex in the private sector. This project was massive, encompassing five barracks on three separate sites to house a total of 1,768 personnel in 884 double rooms with semi-private bathrooms.

The primary challenge for the team was to develop a design which evokes the sense of a college campus with its aesthetics and functionality, but which is also durable, economical and sustainable.

Why Masonry? The solution to rely heavily on the use of concrete masonry enabled the team to capture the Marine Corps’ mission with facilities that are functionally efficient, sustainable, dynamic, inviting, and exciting in their architectural statements.

The broad palette of available concrete masonry unit (CMU) colors and textures gave the team great leeway in creating variety and interest in the building and site designs. The exterior building design relied on light, integrally-colored, split-face CMU with complimentary architectural banding and accents to achieve the desired smaller building appearance of a residential apartment community. In an innovative technique lauded by the Government, the team manufactured bullnose concrete masonry units with radius edges to be installed in doorways to minimize chips and cracks and thereby reduce future maintenance costs.

The use of locally manufactured concrete masonry units containing recycled materials, along with recycling the CMU job site waste materials, enhanced the sustainable package and was essential for this project to gain enough points to achieve USGBC LEED® Gold certification for sustainable design, rather than LEED® Silver as called for in the contract. In total, over 784,000 units of concrete masonry in various colors and textures were skillfully and artfully incorporated into this ten-building complex, making it a showcase project which established the new “Best of Breed” BEQ standards for the Marine Corps barracks program.
RUBY DUNCAN ELEMENTARY SCHOOL
NORTH LAS VEGAS, NEVADA

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Director

STRUCTURAL ENGINEER:
Mendenhall Smith

GENERAL CONTRACTOR:
Core Construction

MASONRY CONTRACTOR:
Frazier Masonry Corporation

BLOCK PRODUCER:
Tri Delta (an Oldcastle Company)

OWNERS:
Clark County School District

Why Masonry? The architect designed the school to be flexible, efficient, easily-maintained and lively. CMU was a natural choice. Its aesthetic qualities – texture, pattern, and color – allowed the architect to design exciting accents in plain façades. Its durability, local availability, and ease of maintenance made CMU a good life-cycle choice. At Ruby Duncan Elementary School, the architect used concrete masonry to do what it does best: provide support for steel structure, provide a durable building skin, express pattern and color, and offer a distinctive appearance at an affordable price.

Flexibility is achieved by the linear arrangement of classrooms separated by an open “hinge” of outdoor learning space. As grade level populations change, classrooms can be traded from grade to grade, but the basic grade separation is maintained. The owner-mandated energy budget of 36kBTU per square-foot per year is met through daylighting, building envelope, the HVAC system, lighting and controls, and end-user education.

The courtyard and classroom wings are the best expression of how concrete masonry is used as a design feature. Glazed CMU was used to create two patterns; one is a large block of color and the other is a confetti pattern. Each is used to accent large portions of the exterior walls, indicating spaces that are kid-focused. From the main entrance of the school, the visitor experiences unfolding views that go from the less vibrant street view façade to the kid-focused, fun courtyard. The rhythm of the building plan is expressed by smooth CMU insets at each classroom. This adds interest to the split-face mass of the building. The insets provide a strong pattern, and create a concealed concrete masonry face where solar shades are anchored.
**Fremont Fire Station No. 11**
**Fremont, California**

**Architect:**
WLC Architects
1110 Iron Point Road, Suite 200
Folsom, CA 95630

Max Medina, AIA
Principal Architect

Bill Louie, AIA
Project Architect

**Structural Engineer:**
MLA Structural Engineers, Inc.

**Construction Manager:**
Zolman Construction

**Masonry Contractor:**
Pacific Bay Masonry

**Block Producer:**
Calstone Company, Inc.

**Owner:**
City of Fremont

*Architect’s Commentary:* The new LEED Silver Certified, Fire Station No. 11 located within a large box commercial and retail complex serves the southern portion of the city. The 1.47 acre site adjacent to an Interstate highway is in the flood plain per FEMA, which required extensive grading and importing of material to elevate the building.

A fun fact is that the office building across the street was used in a scene from the original Terminator movie. With this information, the station design took on a futuristic look achieved through the edgy massing, material choice and the red light beacons. The station is identified by the two vertical slots representing “11” on the prominent high fin wall.

The two-story fire station consists of a 3-bay Apparatus Room, public lobby, internal staff work areas, and living quarters. Construction materials include concrete masonry, wood framed walls, structural steel braced frames and columns, and concrete floor slab on grade. Exterior finishes include split-faced and precision concrete masonry, pre-finished metal siding, two-color exterior stucco finish, standing seam metal roofing, metal canopy & trims, tinted double-glazed windows, and steel doors.

Interior sustainable features include stained concrete floor, solar hot water collection system, light tubes, multi-zone air distribution systems, occupancy and daylight sensors, and recycled materials.

*Why Masonry?* Finding low-maintenance and durable materials was key for the working areas of the fire station to function properly. The fact that concrete masonry construction is able to stand the test of time, is cost effective and versatile enough to provide the desired aesthetics made the decision to use masonry easy and obvious.
SACRAMENTO ZOO GIRAFFE BARN REPLACEMENT AND VIEWING DECK
SACRAMENTO, CALIFORNIA

ARCHITECT:
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Principal

Michael R. Patrick, AIA
Principal

STRUCTURAL ENGINEER:
Buehler & Buehler Structural Engineers, Inc.

GENERAL CONTRACTOR:
Otto Construction

MASONRY CONTRACTOR:
Richard Reynolds Masonry

BLOCK PRODUCER:
Basalite Concrete Products, LLC

OWNER:
Sacramento Zoological Society

Architect’s Commentary: The project involved the construction of a public viewing/feeding deck and new giraffe barn. The design process involved acquainting the design team with the special equipment required for this unique form of animal husbandry and how to construct a building to accommodate this equipment and zoo keeper process. The basic program requirements for the barn were the provision for five stalls, feed storage areas, a utility room for food preparation, an animal unloading enclosure for new arrivals, and an off exhibit area for recuperating animals and newborns. The circulation was designed to allow transfer of animals between stalls as required. A specialized piece of equipment, designed to safely contain a giraffe, was installed to allow keepers to perform inspections of the animal’s neck and head while at the same time attending to hoof care. A single roll-up door allows both the lower food storage area and a hay loft to be stocked with food using the zoo’s forklift. Openings with metal shutters, located at giraffe eye height, were strategically located to allow staff to interact and perform inspections of the giraffes while the giraffes were on exhibit (i.e. in the exhibit area).

Why Masonry? The non-profit status of the zoo required a very tight budget. We were able to take advantage of a very generous donation from Basalite Concrete Products, LLC. The masons installed the block to mimic the spotted coats of the giraffes. The installation provided a durable/low maintenance finish, which was both handsome and whimsical.

The team solicited donations from local building product suppliers and subcontractors. The goals of the project were to support a local institution and raise awareness about giraffe conservation. Although humble in nature, this was truly a community effort for the benefit of the community.
Architect's Commentary: This 11,500 square-foot, 24 stall Barn is part of the Templeton Farms Equestrian Center on a 52 acre site bordering the Salinas River in Templeton, California. The center also includes a 35,400 square-foot covered riding arena, an outdoor riding arena, a covered horse walker and support barns with future additions still to come. The facility needed to match the caliber of the instructors at the center and cater to the needs of a high level dressage clientele.

The Barn is laid out on two axes with the 24 stalls in one long wing and the support facilities including wash stations, solarium, feed room, laundry, tack rooms, and offices in the other wing. The center of the axis is capped with a glassed-in cupola that also contains large vents to help ventilate the barn. At the ends of each axis there is a glassed in sliding barn door to let in light when closed. Each stall has an exterior door opening out into a private fenced paddock.

Why Masonry? Safety for the horses is a major concern of the facility. Horses also like to chew on everything. The stall fencing and the doors and windows in the stalls are all galvanized steel with a hardwood infill to combat their abusive ways. Concrete masonry was considered from the start because of its ability to stand up to a large horse, the horses don’t like to chew on it, and it provides a great foundation for the prefabricated steel roof structure above. Our supplier was able to give us concrete masonry units with a rounded edge that we used everywhere a horse could make contact with a sharp edge. The dark brick-red block color gives the facility a traditional feel and contrasts well with the stained redwood sided gabled ends and the galvanized roof and trim. The flooring for the aisles is a sand colored concrete brick paver.
ARCHITECT:
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763 2nd Street, Suite 200
Encinitas, CA 92024
Warren W. Scott, AIA
Principal

STRUCTURAL ENGINEER:
Palos Verde Engineering

GENERAL CONTRACTOR:
Viking Commercial Construction

MASONRY CONTRACTOR:
Merit Masonry, Inc.

BLOCK PRODUCER:
ORCO Block Co., Inc.

OWNER:
CWK Properties, LLC

Architect’s Commentary: A typical “commercial project with a mixed residential use” located in this area of downtown Encinitas would place the bulk of the building across the complete street frontage with the commercial below and the residential above. We decided to change the rules and have some fun. To avoid this solid barrier a section of the frontage is left open to allow access and a connection to the project interior. The residence becomes a separate structure for privacy and a way to enclose the central private parking courtyard. A pedestrian bridge crosses the private parking court to connect the buildings at the second floor.

Flexibility in the functional design of the building has provided more than just a place to work and live. The parking court has doubled as a gathering place for special occasions including holiday parties and AIA meetings.

Why Masonry? Masonry was the finish of choice for this project from the start. When used properly, it can impart a sense of permanence with its timeless aesthetic and long lasting structural qualities. In this project, masonry is the primary first floor element to anchor the building to the ground plane, while providing urban style and human scale. The selected factory sandblasted finished concrete masonry was chosen for its consistent color and texture, and also to prevent the environmental consequences of onsite sandblasting. In situ, treatment of the block consisted of a natural finish with an environmentally approved clear anti-graffiti coating to prevent defacement common to the urban environment. The clean lines and natural texture of the chosen masonry finish was left exposed in portions of the interior in conjunction with the structural and mechanical systems, creating a loft type experience.

Treatment of storm water in the coastal areas is a common concern. The building is designed to collect roof storm water and transfer a portion through a sculptural rock column to the site landscaped filtration system. Parking stalls use rock-lined trenches to help in filtering contaminates as well. Additionally, the roofs are sloped for future solar collectors in an effort to prevent built-in obsolesce. Though the project was not registered for a certification by an accredited association, most of the project materials were qualified for certification and the design and construction is well within the guidelines of such requirements. This project was designed with the belief that longevity is the foremost contributor to a sustainable outcome. With this dogma, we designed this project to be durable, functional, and appealing to the human spirit. As such, masonry played an essential role in allowing us to attain our goals.
**DINUBA AQUATICS FACILITY**

**DINUBA, CALIFORNIA**

**ARCHITECT:**
S.I.M. Architects
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Fresno, CA 93711
David M. Iwanaga, AIA
Principal

**STRUCTURAL ENGINEER:**
Wood Wiley & Jebian Consulting Engineers

**GENERAL CONTRACTOR:**
Chevron Energy Solutions, Pankow

**MASONRY CONTRACTOR:**
Bratton Masonry, Inc.
**BLOCK PRODUCER:**
Basalite Concrete Products, Inc.

**OWNER:**
Dinuba Unified School District

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**Architect’s Commentary:** The new Dinuba Aquatic Complex features a 30 meter competition pool and a small pool that is used by students during the week and the community on the weekends. The project also includes a small administration office, concessions and food prep, training room, locker room/restrooms and pool equipment room. All functions are housed in a long and rectangular concrete masonry building accented by the fun wavelike patterns of colored masonry. The building shape and structure could have been boring and plain with grey concrete masonry units (CMUs); but by utilizing colored and textured CMUs in wavelike patterns, the building suddenly became alive and fun.

**Why Masonry?** Concrete masonry was chosen because of its durability to withstand the harshest of conditions; where sun, water, kids at play and equipment come together. The concrete masonry also would not succumb to the harsh chemicals and fumes in and around a pool equipment room. It also provided a great insulator from the noise generated by the three powerful pool pumps.

Capped off by large transparent and semi-transparent shade structures, the Dinuba Aquatics Complex has truly become a jewel for the City of Dinuba and the Dinuba Unified School District.
ARCHITECTURAL CONCRETE MASONRY

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Concrete Masonry Association of California and Nevada (CMACN) is a nonprofit professional trade association established in 1977, is committed to strengthening the masonry industry in California and Nevada by providing:

• Technical information on concrete masonry for design professionals.

• Protect and advance the interests of the concrete masonry industry.

• Develop new and existing markets for concrete masonry products.

• Coordinate members’ efforts in solving common challenges within the masonry industry.

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2013 CMACN/AIACC CONCRETE MASONRY DESIGN AWARDS

Mark your calendar for the 2013 CMACN/AIACC Concrete Masonry Design Awards competition “Call for Entries”.

The 2011 award winning projects can be viewed at www.cmacn.org.