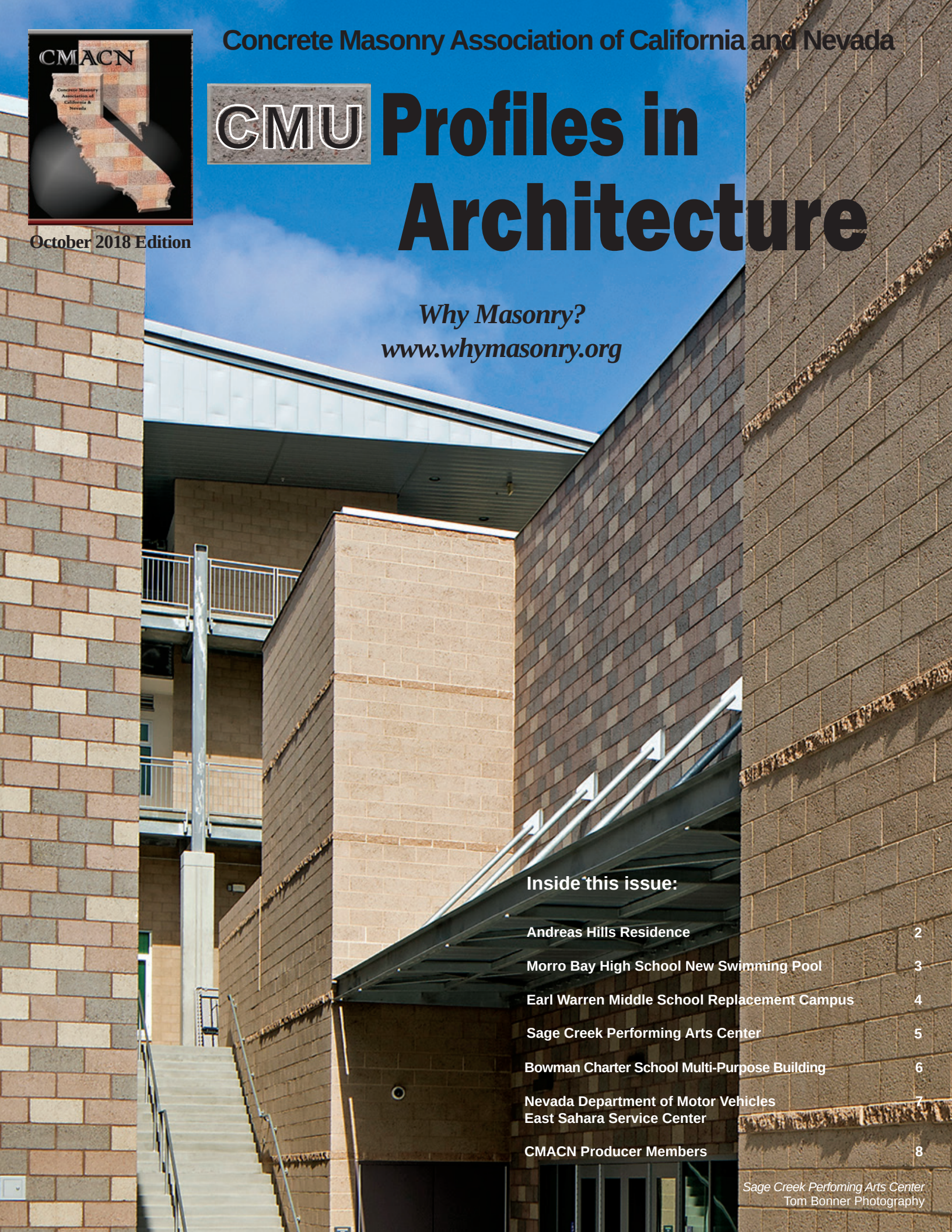

Concrete Masonry Association of California and Nevada

CMU Profiles in Architecture

October 2018 Edition

Why Masonry?
www.whymasonry.org

Inside this issue:

Sage Creek Perfoming Arts Center
Tom Bonner Photography

Andreas Hills Residence

Palm Springs, California

Architect:
o2 Architecture
1089 N. Palm Canyon Drive, Suite B
Palm Springs, CA 92262

Lance O'Donnell, AIA
Principal-in-Charge

Structural Engineer:
JN Structural Engineering
General Contractor:
HJH Construction, Inc.
Masonry Contractor:
Velasquez Masonry, Inc.
Block Producer:
Angelus Block Company, Inc.
Owner:
Andreas Hills Residents
©Photography:
Lance Gerber Studio

Architect's Commentary: Mountains surround the project site and provide 270-plus degrees of scenic views. Sensitivity to the South Palm Canyon location is expressed in the site design that set out to establish a direct relationship with the mountain vistas and solar patterns. By orienting the home's indoor/outdoor living to the south and north, the project maximizes passive heating and cooling strategies and promotes cross ventilation from the prevailing cooling breezes. In recognizing the 80-foot deep and 250-foot long trapezoidal boundary, site geometry informed major design decisions and resulted in a series of volumes running east-west with proximity to the street and the demand of privacy.

Why Masonry?

Early in the design process, the selection of concrete masonry units (CMUs) met the needs of the project: providing durability, thermal mass and acoustic performance while acting as an elegant backdrop to the home. Along the street stands the backbone of the design, a 132-foot white split face concrete masonry unit wall: the home's structure, finish and underlying texture. This CMU wall connects the main core of the home to the art studio while creating a courtyard that promotes indoor-outdoor living; here, windows provide uninterrupted sight lines through indoor/outdoor spaces. A series of incisions on the CMU wall at the courtyard are inspired by a visualization of sheet music for Beethoven's Moonlight Sonata. Clerestory windows embrace the mountain ridges and provide plentiful daylight while maintaining privacy. The design exceeded California Title 24 Energy Standards by 9% while utilizing generous indoor/outdoor operable windows and openings. Reinforcing our sustainable strategies are solar electric systems and deep overhangs and trellis to protect the house from intense summer sun. The material palette is simple and withstands the demanding desert conditions, white split face CMU, exposed structural steel and Cor-Ten steel create contrast and a balanced composition.

Morro Bay High School New Swimming Pool

Morro Bay, California

Architect:
KBZ Architects, Inc.
30 West Arrellaga Street
Santa Barbara, CA 93101

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Principal-in-Charge

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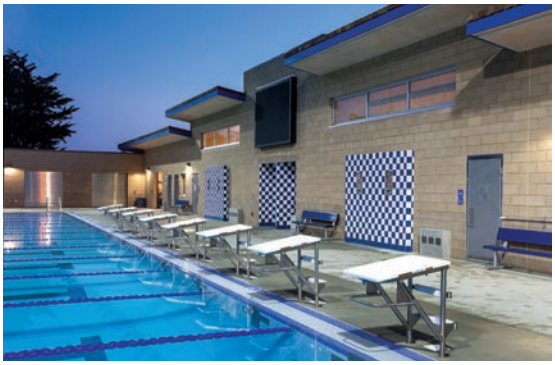
Red Mountain Services, LLC
Masonry Contractor:
Cooper Chase Construction
Block Producer:
Air Vol Block, Inc.
Owner:
San Luis Coastal Unified School District
©Photography:
Patrick W. Price, Architectural Photographer

Architect's Commentary: The Morro Bay High School New Swimming Pool was designed for use by the students and the City of Morro Bay residents. Siting of the pool entrance and the orientation of the pool building was based on inviting the public with the ease of parking and access. The pool building was specifically located to block the on-shore ocean breeze, just a stone's throw to the west. The students' use was made easy due to the close proximity of the student locker rooms and showers in the existing gym to the north.



The key elements of this project included: pool, locker rooms, equipment room, coach's office, storage space and an accessory building.

Why Masonry?

This swimming pool site at Morro Bay High School is within 500-yards of the Pacific Ocean. The choice of using concrete masonry units (CMUs) for the pool building was the only logical choice. Concrete masonry units perform well in wet environments, including salt-air locations. CMU is one of the most durable building materials and has the advantage of a high quality final finish that requires no maintenance or upkeep. All the original campus structures built in 1962 are constructed out of concrete masonry. There really was not a reason to vary the construction materials that have performed so well on the campus since its inception.

Earl Warren Middle School Replacement Campus

Solana Beach, California

Architect:
Lionakis
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Newport Beach, CA 92660

Laura Knauss, AIA, ALEP, LEED® AP
Principal-in-Charge

Structural Engineer:
Lionakis
General Contractor:
McCarthy Building Companies, Inc.
Masonry Contractor:
Haxton Masonry, Inc.
Block Producer:
RCP Block & Brick, Inc.
Owner:
San Dieguito Union High School District
©Photography:
Tim Maloney,
Technical Imagery Studios

Architect's Commentary: At San Dieguito Union High School District's Earl Warren Middle School, the existing steep, 20-acre campus, built in 1954, was in need of significant updates to not only meet the District's vision for community-focused, high performance learning environments, but also to address a myriad of access compliance issues. For years the District had struggled with the investment required to transform the aging campus. After a lengthy cost-benefit analysis, a district-wide master planning process and bolstered by a local, general obligation bond, it was decided: The campus would be replaced (on the same site) in central Solana Beach.

The design is decidedly Solana Beach inspired. Curved roofs recall ocean waves, "weathered wood" siding maintains the beach house vibe that serves as inspiration and surfboard details show up as signage, flags and shapes in the concrete masonry entry paving. The school mascot, the Seahawk, and beach glass in school colors are used as accents throughout, while the elevator is housed in a "lifeguard tower" which indicates surfing conditions to the entire community thorough colored LED lighting.

Why Masonry?

In response to the steeply sloped site, the design approach for the replacement campus was terraced. On the highest terrace sits the learning environments, classroom buildings reminiscent of beach shacks, overlooking the "beach" terrace—where the administration welcomes you, and hands-on learning environments, multi-purposes rooms, a food court and a joint-use library open up to a vibrant public space. Concrete masonry units (CMUs) were a natural material solution to navigate the hill slope, and are present throughout the campus in both buildings and retaining walls. The durable finish of CMUs can withstand the elements of the beach environment, as the campus is less than a mile from the beach and was subject to Coastal Commission approvals, while the sand tones and burnished finish add to the beachy campus vibe.

Sage Creek Performing Arts Center

Carlsbad, California

Architect:
Rachlin Partners
8640 National Boulevard
Culver City, CA 90232

Michael Rachlin, AIA, LEED® AP
Principal-in-Charge

Structural Engineer:
R.M. Byrd & Associates, Inc.
General Contractor:
Erickson-Hall Construction Co.
Masonry Contractor:
Haxton Masonry, Inc.
Block Producer:
ORCO Block & Hardscape
Owner:
Carlsbad Unified School District
©Photography:
Tom Bonner Photography - Exteriors and Audience Chamber
Chipper Hatter - Lobby

Architect's Commentary: As part of a design competition, Rachlin Partners offered a striking design for the new Sage Creek High School Performing Arts Center: a 16,500 square-foot facility housing an array of programs, including Choir and Instrumental Music, Musical Theatre, Drama and Dance. The facility also supports lectures and concerts by visiting artists.

Guests enter the center through an arrival plaza leading to a spacious two-story lobby designed to provide ample room for queuing into the Audience Chamber. The space can accommodate groups of more than 200 people for pre- or post-performance gatherings.

At ground-level, the Audience Chamber is entered via light and sound-lock vestibules at either end of the Lobby, providing convenient entrée to Orchestra and Parterre seating. The Audience Chamber is designed to seat 340-plus occupants with consideration given to sight lines and acoustics that allow a more intimate experience, thereby improving student attentiveness.

The entry façade is comprised of perforated metal panels that are suspended in front of a structural glazed curtain wall to control the amount of sunlight cascading into the building. While the screens present a striking modern aesthetic, they also offer a unique opportunity to provide large-scale projected signage for event advertising, as well as school identification.

Why Masonry? The Sage Creek Performing Arts Center utilizes concrete masonry units (CMUs) in multi-color earth tones which create a pattern designed to mirror the site's surrounding environment. The incorporation of CMUs into the project's program was also based on Carlsbad Unified School District's functional and aesthetic design criteria. As part of a heavily trafficked site, located on the Sage Creek High School campus, building materials have to withstand the rigors of everyday school use. Concrete masonry units have the advantage of being low maintenance, while also providing durability and sound mitigation. These qualities ensure that students and the community will enjoy the Performing Arts Center for many years to come.

Bowman Charter School Multi-Purpose Building

Auburn, California

Architect:
JK Architecture Engineering
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Derek Labrecque, Partner/Owner
AIA, DBIA, LEED® AP BD+C
Principal-in-Charge

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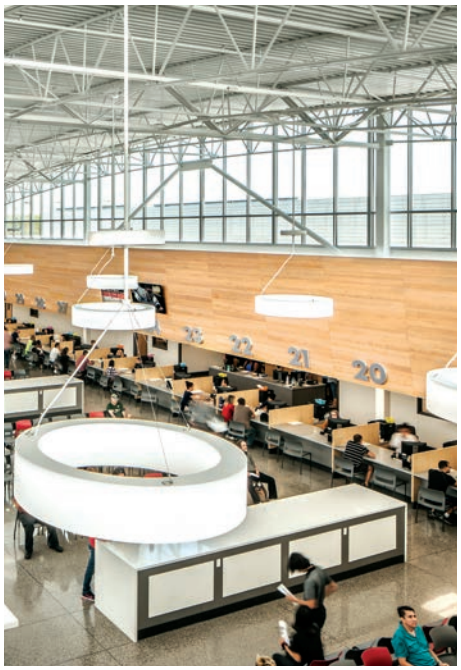
General Contractor:
Clark/Sullivan Construction
Masonry Contractor:
Bratton Masonry, Inc.
Block Producer:
Basalite Concrete Products, LLC
Owner:
Ackerman Charter School District
©Photography:
Travis M. Turner Photography

Architect's Commentary: The Bowman Charter School located in Auburn, CA is a unique school in that it supports both in-district and charter school students. Over the past 10 years, the school has significantly grown to an enrollment of approximately 650 students. In an attempt to continue to support the increasing demands of this TK-8 school and grow their educational programs, the school recognized that their facilities were a limiting factor. In response, the JKAE team prepared a 2025 Vision Plan to define what the Bowman Campus needed to support its programs. Through this effort they defined a Community Multipurpose Center as their first significant project that would support the educational needs of physical education, athletics, music and arts and performance, all while being a community asset.

Why Masonry?

The design team explored a multitude of structural and exterior finish options. Given the challenges foreseen within the California construction market, both from a labor and cost standpoint, as well as the desire to achieve an exterior and interior building structure that was appropriate for these program types, the team chose concrete masonry units (CMUs). The single wythe CMU construction provided the efficiency of being the primary structural system, the exterior finish suitable for maintainability and longevity, and the interior finish that is durable enough to handle the anticipated uses. A combination of precision and split-face CMU as well as slate tile has helped to create an aesthetic for the multipurpose building that the community is proud of.

Nevada Department of Motor Vehicles
East Sahara Service Center
Las Vegas, Nevada



Architect:
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Henderson, NV 89015

Michael Purtill, AIA
Principal-in-Charge

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M.A. Engineering, Inc.
General Contractor:
Core Construction
Masonry Contractor:
Cedco Inc.
Block Producer:
Superlite (an Oldcastle Company)
Eglin Butler Company
Interstate Brick
Owner:
State of Nevada
©Photography:
Tom Bonner Photography

Architect's Commentary: The Nevada Department of Motor Vehicles East Sahara Service Center is a 38,569 square foot single-story building with a high volume lobby space to accommodate 2,000+ visitors per day and 400 visitors at any one time. Primary considerations in the design of the facility are customer flow, access to services, visibility and safety of employees, durability and providing a comfortable place for all users.

The lobby is the centerpiece of the facility with 48 customer service desks with testing and camera functions surrounding the space. Curved trusses span the length of the lobby keeping the floor clear of columns that could interrupt the line of sight and supervision of the lobby space. Supervisor offices act as a backdrop, and all other functions such as building services, office space, restrooms and an employee breakroom and patio are organized behind them.

The facility design is equivalent to LEED® Silver. Several strategies are implemented not only to provide an energy efficient building, but also to provide a pleasant space for employees and customers. Priority parking is provided for low-emitting and fuel efficient vehicles, and a displacement ventilation system is utilized in the lobby along with a building energy management control system. Many of the building walls have dedicated program spaces assigned to them, reducing the opportunity to provide natural light at ground level. A clerestory storefront system with daylight-diffusing sandwich panels provide natural lighting from high windows that follow the profile of the curved roofline. There is a 24% overall energy reduction, with an even higher actual performance of overall energy reduction, compared to the building baseline. The building also has a 24% reduction in water use in plumbing fixtures and 78% reduction utilizing water efficient landscaping. Likewise, regional materials and those with a high recycled content were utilized.

Why Masonry?

Recognizing the need for the DMV to be constructed of highly durable, long lasting and low maintenance materials, the building envelope was designed as a load bearing concrete masonry unit (CMU) exterior wall system. Split-faced CMU was used from finish grade to four feet high in order to deter customers from leaning against the wall and scuffing it with their shoes. Honed CMU was utilized above four feet along with glazed CMU for color. Structural brick was also worked into the scheme to tie in to the existing buildings on campus and the adjacent National Guard building, both of which have brick exteriors.

Concrete Masonry Association of California and Nevada

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2017

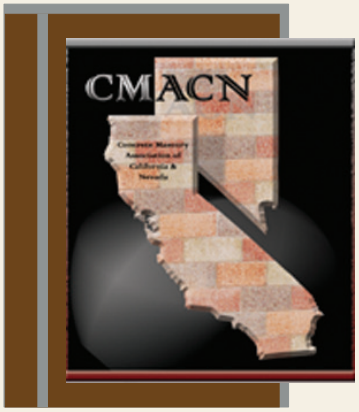
CMACN/AIACC Concrete Masonry Design Awards

Please view the list of 2017 CMACN/ AIACC Concrete Masonry Design Awards winning projects, as well as all previous award and regular quarterly issues of "CMU Profiles in Architecture" on our website at: www.cmacn.org.

2019

CMACN/AIACC Concrete Masonry Design Awards

Call for Entries availible January 2019.



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- Coordinating Members' efforts in solving common challenges within the masonry industry.

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