



Concrete Masonry Association of California and Nevada



Profiles in Architecture

Winter 2024

Why Masonry?

www.whymasonry.org



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2022 Grand Award Winner
Desert Palisades
Woods + Dangan
Photo by Joe Fletcher

Announcing
2024 CMACN/AIACA
Concrete Masonry
Design Awards Competition
“Call for Entries”

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www.cmacn.org

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Principal-in-Charge

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Project Manager/Architect**STRUCTURAL ENGINEER:**

Miyamoto International

GENERAL CONTRACTOR:

Specialty Construction Inc.

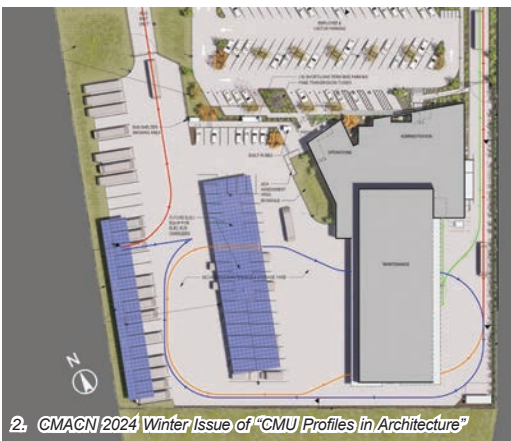
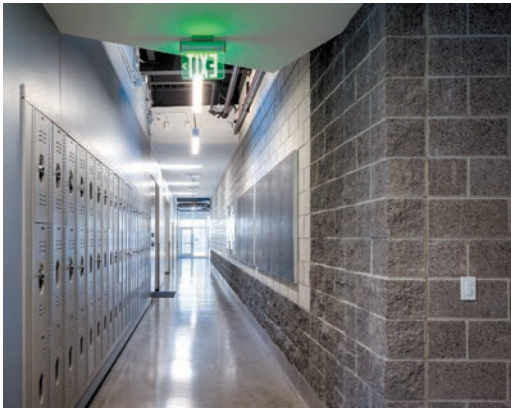
MASONRY CONTRACTOR:

Masonry by Darin, Inc.

BLOCK PRODUCER:Air Vol Block, Inc. (a Basalite Concrete
Products, LLC Company)**OWNER:**San Luis Obispo Regional Transit
Authority**©PHOTOGRAPHY:**

Chang Kim

San Luis Obispo RTA Bus Maintenance Facility

San Luis Obispo, California

ARCHITECT'S COMMENTARY: The Regional Transit Authority (RTA) needed a permanent home for their administration, operations, and vehicle maintenance within the city of San Luis Obispo. The design of the facility not only needed to meet the needs for housing these operations for the next 40 plus years, it also needed to take into consideration that as a publicly funded project, it had to be budget conscious and appropriate for its long-term use.

The resulting facility is comprised of two main areas – the vehicle maintenance area, consisting of maintenance bays, storage, and support spaces, and the administration/operations area, generally consisting of traditional office spaces – about 18,000 square feet and 9,000 square feet, respectively. The maintenance area, being of a regular, efficient rectangular volume, was constructed of load-bearing concrete masonry unit (CMU) walls with a steel joist roof. The admin/ops area, made up of smaller spaces that could be flexible in the design, was constructed of a traditional steel frame with plywood shear walls. The intersection of these two areas centered on the design concept for the building that reflected the gently sloping peaks around San Luis Obispo and the geological interest in the region. The façade of the maintenance area used two colors of CMU to articulate an undulation in the CMU pattern that represented the peaks of the San Luis Obispo County, also known as the Nine Sisters.

WHY MASONRY? When designing public facilities in particular, we always look to connect our projects to the local community both economically and socially. The design team began researching local materials to aid in keeping costs low, but also to support our design intent and local businesses. We quickly found that a CMU manufacturer was across the street from the RTA's old location and a mile down the street from the site for the new facility. When considering resiliency, structural efficiency, and aesthetics, concrete masonry was the obvious choice, but to add the convenience of a local manufacturer just around the corner, it made CMU the hands-down obvious choice to support the design of the new home for the RTA.

P-198 F-35

Maintenance Hangar

MCAS Miramar, California

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Harper Construction Company, Inc.

MASONRY CONTRACTOR:

Haxton Masonry Inc.

BLOCK PRODUCER:

ORCO Block & Hardscape

OWNER:

NAVFAC Southwest

©PHOTOGRAPHY:

Alex Nye Art



ARCHITECT'S COMMENTARY: Following a legacy of aviators, including the original Navy Top Gun School, this F-35 Hangar positions Marine Corps Air Station (MCAS) Miramar for the future. This 158-million dollar project is a critical piece of the largest weapons program in U.S. history. The dual squadron hangar design enables each squadron to emphasize their unique operational identity. The floor plan was structured to support the priorities of maintenance control, safety, and quality. This organization empowers the Marine Corps to assemble a world class program where aircraft are perpetually mission capable. The area of the two hangar bays is roughly equivalent to two football fields. The clear door opening for each of the two modules spans 277 feet with a 225-ton main door truss to accommodate each hangar bay which service six aircraft. This 160,000-square-foot building is intended to serve the nation continuously for the next 50-75 years.

WHY MASONRY? Concrete masonry units (CMUs) were selected for their durability, cost effectiveness, and ability to meet the high security requirements demanded of the facility. Aside from the steel framed hangar bay, all the maintenance areas and the two-story office complex rely on CMUs for structure, building envelop, and aesthetics. Programmatic requirements such as maintenance, squadron training, management, and mission planning were integrated while expressing their components in CMUs. Limits on landscaping inside the airfield security perimeter contribute to an austere and Spartan façade. Maintenance areas are expressed via textured and earth-element colored CMUs within the framework of Miramar's palette. Beach sand colored CMUs and anchored extensions offer a distinct articulation of the building entries. Simple clear glazing yields a complimentary green tint with the rising and setting sun on the high windows. All these elements echo the prudently purposeful design of the maintenance and operation hangar.



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GENERAL CONTRACTOR:
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MASONRY CONTRACTOR:
Majestic Masonry, Inc.

BLOCK PRODUCER:
Angelus Block Company, Inc.

OWNER:
Ganahl Lumber Company

©PHOTOGRAPHY:
Anthony Gomez

Ganahl Lumber

San Juan Capistrano, California



ARCHITECT'S COMMENTARY: The design for Ganahl Lumber's San Juan Capistrano store combines the company's long history and connection to wood products with a modern aesthetic. Natural earth tones and materials echo the rustic designs of the area. Located on a 17-acre site at the south end of the city, this 145,000-square-foot facility optimizes operational efficiency while respecting the surrounding context and infrastructure.

Drawing upon previous work with Ganahl, we refined the organization of 15 structures on site. The retail store, drive-through lumber yard, an operations facility, and supporting storage buildings are all located to minimize disruptions to nearby residences while providing an ideal experience for the customer.

WHY MASONRY? The program and design criteria for the building required an exterior wall that could perform multiple tasks simultaneously. In this harsh retail environment of customers, shopping carts, trucks, and forklifts constantly crossing paths, the exterior walls needed to be tough enough to take some serious daily abuse, yet remain warm and inviting. Concrete masonry unit (CMU) block was the only solution for that challenge.

While wood is the main star and selling point for the lumber yard, the cedar and Douglas fir glulam beams, trusses, and dowel laminated timber floors and roofs

are all resting upon the exterior walls which are mainly CMU block. Fully grouted and reinforced 12 inch CMU blocks proved to be more than sufficient to provide the compressive strength required to support the roofs and mezzanine floor. To reinforce the natural material theme, four standard colors of block as well as three different profile heights were selected. By mixing and matching those options, a unique but repeatable 48-inch by 24-inch module was created that balances aesthetic complexity with relative ease of construction. For durability, structural strength, and an aesthetically pleasing and easily maintained finish, nothing compares with CMU.

Poly High School Auxiliary Gymnasium Addition

Riverside, California

ARCHITECT:

PBK

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STRUCTURAL ENGINEER:

T & B Engineering, Inc.

GENERAL CONTRACTOR:

Tilden-Coil Constructors

MASONRY CONTRACTOR:

Majestic Masonry, Inc.

BLOCK PRODUCER:

ORCO Block and Hardscape

OWNER:

Riverside Unified
School District

©PHOTOGRAPHY:

Ryan Hills,
ORCO Block and Hardscape

ARCHITECT'S COMMENTARY: Poly High School was built in 1965. It is one of the oldest high schools in Riverside, CA and is one of five comprehensive high schools in the Riverside Unified School District. The campus is located in an established residential area.

The 9,000-square-foot auxiliary gymnasium addition is nestled between the existing gymnasium and the baseball field. It consists of a single high-volume main multi-purpose athletic court with natural daylighting augmented by energy efficient LED lighting. The main space contains flexible telescopic bleachers and sustainable wood flooring. Restroom facilities, equipment storage, and training rooms are located on the perimeter of the main court. Exterior architectural features and elements are intended to match the context of the existing gymnasium. The staff envisioned that this auxiliary gymnasium would have multiple uses, providing a place on campus for testing, athletics, and community events.

WHY MASONRY? Concrete masonry units (CMUs) were ideal for this project in many ways. Their versatile size and color created an aesthetic appeal that was paramount in creating a distinctive customized look while at the same time honoring the context of the existing adjacent buildings. Colored concrete pavers were also utilized as an accent feature to provide contrast from the surrounding concrete paving.

CMU structures are unmatched in their durability and demonstrated resistance to fire, mold, rot, insects, and vermin. They can withstand high impact and abuse, are blast and bullet resistant, and provide excellent sound dampening. CMUs have a very long lifecycle with minimal maintenance over their lifespan, saving the end user significant time and money. CMU structures stay warmer in winter and cooler in summer due to their inherent mass, therefore providing utility cost savings year-round. Likewise, CMUs have minimal waste, are recyclable, and are sustainable. All these benefits made CMUs the perfect building material for Poly High School.



Orange County Juvenile Multipurpose Rehabilitation Center

Orange, California



ARCHITECT: Lionakis

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Irvine, CA 92614

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Lionakis

GENERAL CONTRACTOR:
P.H. Hagopian Contractor, Inc.

MASONRY CONTRACTOR:
Cornerstone Masonry

BLOCK PRODUCER:
Angelus Block Company, Inc.

OWNER:
County of Orange

©PHOTOGRAPHY:
Tim Maloney, Technical
Imagery Studios



ARCHITECT'S COMMENTARY: Designed as a replacement for Orange County Juvenile Hall's aging and inadequate visitation center, the 26,230-square-foot Multipurpose Rehabilitation Center (MRC) primarily operates as a visitation facility, while providing flexible secure and non-secure program space, vocational training rooms, and a gymnasium for in-custody youth. This addition to the existing Juvenile Hall campus serves detained youth year-round and is also available to youth and families who are receiving probation supervision and services while living at home. The MRC intends to enhance rehabilitation of youth offenders by increasing family involvement, expanding the capacity and effectiveness of rehabilitation programs, improving the continuity and effectiveness of services, and increasing opportunities for youth to participate in activities at the facility.



WHY MASONRY?

Concrete masonry units (CMUs) were selected by the architect to improve the facility's energy efficiency, while also adding to its durability and security. The CMUs, which were coated with a siliconized rubber coating to make them water repellent and anti-graffiti, were selected to minimize maintenance. Utilizing split-faced CMUs throughout the exterior helped to ground the building and create the feel of modular stone and permanence. The goal for this project was to present a progressive model to reduce recidivism. The selection of concrete masonry allowed the design team to fulfill Orange County's goal of creating a rehabilitative, normalized environment for their MRC, while adding value, ensuring durability, and providing a high security environment.



Nipaquay Elementary School

San Diego, California



ARCHITECT'S COMMENTARY: The contextual reference for the project was to design a 'next generation' elementary school campus for the Civita development in the Mission Valley neighborhood of San Diego, a centralized urban campus on an extremely tight site, based on the project goals of flexibility and connectivity. Upon entering the welcome center facilities, visitors are visually engaged with the campus's centerpiece, the innovative "maker space", amphitheater, and library/media center. This space was designed with new STEAM curriculum in mind, centered on technological integration

and student exchange. In keeping with the goal of promoting collaboration, classrooms were built to connect directly to their own exterior workspace. This indoor/outdoor design approach provides a specific design typology consistent with San Diego's environment and allows for students and teachers to collaborate and connect.

The campus was designed as a hub for the community's youth, with an emphasis on blending seamlessly into the neighborhood by providing pedestrian access directly to the site. Even the school's name, Nipaquay, which means 'second home' in the Kumeyaay language, supports this focus. The team also integrated the building design and systems to be 'learning tools' as part of the campus pedagogy, i.e. the solar panel's performance can be monitored by the students to observe impacts of sunny vs cloudy days, exposed concrete masonry unit (CMU) structure 'explains' the construction, and campus graphics highlight the STEAM curriculum. Even roof top systems were designed to present a clear and organized view from the adjacent residential uses. The focus on flexibility, connectivity, and sustainability make it an example of innovative school design that will be evident for years to come.

WHY MASONRY? The Architects worked directly with the CMU manufacturer to create a natural and organic custom color blend recalling the sandstone bluffs found throughout Mission Valley. CMU was incorporated across the campus as the exposed material on the ground level for its durability, limited maintenance, and sense of permanence for a school designed for the next 50 years. It also contributed to the sustainability focus of the neighborhood campus by way of its local sourcing and availability.

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Structural Engineers

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MASONRY CONTRACTOR:
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BLOCK PRODUCER:
RCP Block & Brick, Inc.

OWNER:
San Diego Unified School District

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Brady Architectural Photography





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Concrete Masonry Association of California and Nevada (CMACN)
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.
- Protecting and advancing the interests of the concrete masonry industry.
- Developing new and existing markets for concrete masonry products.
- Coordinating Members' efforts in solving common challenges within the masonry industry.

The Spring issue of "CMU Profiles in Architecture" contained an error on page 5. The Masonry Contractor for Wiseburn USD / Da Vinci Schools, El Segundo, California should have been listed as Reyes Masonry Contractors Inc., not Upland Contracting Inc.

NOTE: Some photos may have been altered to fit the page format.