

Concrete Masonry Association of California and Nevada

CMU Profiles in Architecture

October 2019

Why Masonry?
www.whymasonry.org



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Leucadia Dwell: Steven Lombardi Architects

Ventura County Fire Station 35

Newbury Park, California



ARCHITECT:
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Architects, Inc. (RNT)
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San Diego, CA 92101

Ralph J. Roesling, FAIA
Principal-in-Charge

STRUCTURAL ENGINEER:
Burkett & Wong Engineers (BWE)

GENERAL CONTRACTOR:
Lead Builders, Inc.

MASONRY CONTRACTOR:
Reyes Masonry Contractors, Inc.

BLOCK PRODUCERS:
Angelus Block Company, Inc.
Trenwyth Industries (an Old
Castle Company)

OWNER:
County of Ventura, Public Works Agency
Ventura County Fire Department

©PHOTOGRAPHY:
Stephen Schafer Photographer



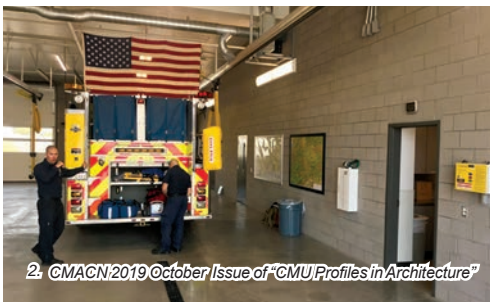
Architect's Commentary: Ventura County Fire Station 35 is a new Essential Services Facility constructed by the Ventura County Fire Department to replace an existing single story concrete masonry unit (CMU) fire station originally constructed in 1961. The station is located in the northwest corner of the city of Thousand Oaks, which has had a large amount of growth occur in both the tech and biotech industries since the construction of the original station.

The new station was designed to house nine firefighters and three fire apparatus, while allowing for a generous amount of vehicular circulation on a small, previously undeveloped lot. The site for the station is situated on a minor industrial street, providing a unique backdrop for a civic building serving the larger community. Taking advantage of the surrounding context and utilizing CMU, the same material which so well served the original fire station, this new facility was designed by reassembling materials and forms of nondescript industrial buildings into a cohesive and iconic design.

WHY MASONRY? Due to its durability and structural properties, several types of CMU were used on the project: from precision block at the apparatus bay, shot blast block at site walls, to honed, polished and filled block at the main building for a highly finished appearance.

The mass of the building is broken into a two-story building mass with living quarters and office space, and a single-story large mass for the apparatus bay and rooms. The two-story massing at the street provides a welcoming street presence while also accommodating the fire apparatus turn radius for the apparatus bay at the back of the site.

In addition to the use of CMU, sustainable features also include bioswales/infiltration devices to detain and treat stormwater, an efficient heat pump system that can transfer heat from warmer areas of the building to cooler areas, and sawtooth skylights oriented north for generous and even daylighting.



Elk Grove Aquatics Center

Elk Grove, California



ARCHITECT:
ELS Architecture + Urban Design
2040 Addison Street
Berkeley, CA 94704

Clarence D. Mamuyac, Jr., FAIA,
LEED® AP BD+C
President/CEO

STRUCTURAL ENGINEER:
Forell/Elsesser, Inc.

GENERAL CONTRACTOR:
Arntz Builders, Inc.

MASONRY CONTRACTOR:
McCurley & Day Masonry

CONSTRUCTION MANAGER:
Roebbelen Contracting, Inc.

BLOCK PRODUCER:
Basalite Concrete Products, LLC

LANDSCAPE ARCHITECT:
SWA Group

OWNER:
City of Elk Grove

©PHOTOGRAPHY:
Lawrence Anderson Photography, Inc.

ARCHITECT'S COMMENTARY: "The Elk Grove Aquatics Center offers the first new public pools in Elk Grove in more than a decade, and the first 50-meter pool in the city," announced Steve Ly, mayor of Elk Grove. "It expands on the high-quality aquatic facilities available in Elk Grove and provides more water for local, regional, and even statewide competitions, which is good for our kids, good for our quality of life, and good for our local economy."

The Aquatics Center, located in the City of Elk Grove's Civic Center Park, is designed to fit within the new park master plan that includes a future Seniors Center, Youth Center, and new Commons. "With the official swim season recently concluding, the city experienced firsthand the tremendous benefits of the facility, which ranged from packed recreation swims, multiple swim tournaments, a variety of swim classes for residents, and popular waterslides," said Jason Behrmann, Elk Grove's city manager. "This facility was built to meet the diverse needs of our community and their love for water recreation activities."

WHY MASONRY? Conceived from the landscape plan, the facility's 16-foot-high curved exterior concrete masonry unit (CMU) wall rises from the park's new curving landscaped pathways. Stretching over 400 feet long, the CMU wall forms the parkside elevation of a 13,000-square-foot, single-story building, which is intersected by a louvered steel trellis at the entry.

Concrete masonry units are used as a structural system and exterior finish, demonstrating their versatility and durability as a construction and finish choice along with their capability to deliver the project on budget. The 4x8x16-inch-unit proportion reinforces the horizontal character of the building within the park, and the color complements existing soils and new pathway paving.



ARCHITECT:
Populous®

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Kansas City, MO 64112

Lyle Miller, AIA
Senior Principal-in-Charge

STRUCTURAL ENGINEER:

RRM Design Group

GENERAL CONTRACTOR:

Specialty Construction Inc.

MASONRY CONTRACTOR:

Masonry by Darin

BLOCK PRODUCER:

Air Vol Block, Inc.

OWNER:

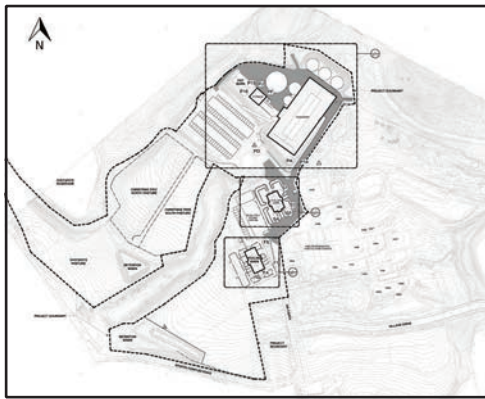
California Polytechnic State
University, San Luis Obispo

©PHOTOGRAPHY:

Michael Urbanek Photography

Oppenheimer Family Equine Center

San Luis Obispo, California



ARCHITECT'S COMMENTARY: Cal Poly, San Luis Obispo's motto of 'Learn by Doing' is manifested in the two new barns dedicated to equine reproduction research. The multi-functional design of the foaling and stallion barns prove any space can be used as a classroom or learning experience.

WHY MASONRY?

While the smooth and split face concrete masonry units (CMUs) create a bold statement with colors and textures that blend the buildings into the beautiful natural context, their use is more importantly critical to the design concept. An important determining factor for CMU use for the buildings was their extreme durability and resistance to abuse caused by both strong horses and the required biosecurity procedures necessary for horse safety. New born foals are sensitive to bacterial infections, and CMU walls are needed to withstand water and chemicals used in the frequent cleanings and wash downs.

Building dimensions, including stall sizes and door and window openings were all coursed to fit with the size of the CMU. Smooth CMU was incorporated at door jambs to accommodate the steel framing required for barn doors and windows. The load bearing walls required innovation between the design and construction team to coordinate the fitting and placing of the pre-engineered steel roof structures. The project's CMU uses will ensure the barns will withstand the test of time.

Leucadia Dwell

Leucadia, California



ARCHITECT:
Steven Lombardi Architect
1926 Bacon Street
San Diego, CA 92107

Steven Lombardi
Principal-in-Charge

STRUCTURAL ENGINEER:
John Nicita

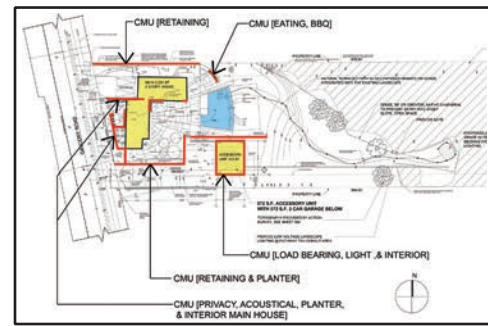
GENERAL CONTRACTOR:
The Morgan Group, Inc.

MASONRY CONTRACTOR:
Earl K. Powers Construction

BLACK PRODUCER:
RCP Block & Brick, Inc.

OWNER:
Leucadia Dwell Resident

©PHOTOGRAPHY:
Steven Lombardi Architect



ARCHITECT'S COMMENTARY: Leucadia is a mecca for surfers and artists, a beach town within Encinitas. Sitting on top of a hill with the Pacific Ocean to the west, Batiquitos Lagoon to the north, and mountain views to the south and east, this compound has an amazing 360 degree view. With an introverted courtyard and gardens, the L-shaped main building and accessory dwelling unit have commanding views. Conceived as a passive dwell, it allows winter heat in from the south and blocks the sun during the summer. The house's orientation naturally grabs ocean breezes from the west and mountains breezes to the east.

WHY MASONRY? Concrete masonry units (CMUs) provide support, visual aesthetics, climate control, sound control, and salt erosion resistance for the house. 8"x4"x16" CMUs are used structurally for load bearing inside and out, retaining walls, planter walls, interior finishes, exterior lighting fixtures, and for the outdoor barbecue island. CMU is also used as the vertical spatial and acoustical dividing walls for each room between the public spaces and private bedrooms, as well as for each floor horizontally. CMU wraps around the guest house and garage, while cement board creates a rain screen façade on the main house. Aluminum rib exterior panels are used on the north where floor to ceiling glass doors open.

Bonita Unified School District Office Renovation and Expansion

San Dimas, California



ARCHITECT:

Rachlin Partners

8640 National Boulevard
Culver City, CA 90232

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

Paul Dragescu, AIA
Project Architect

STRUCTURAL ENGINEER:

Lin & Wu Engineering

GENERAL CONTRACTOR:

Harik Construction, Inc.

MASONRY CONTRACTOR:

Ramirez Masonry Inc.

BLOCK PRODUCERS:

Angelus Block Company, Inc.

OWNER:

Bonita Unified School District

©PHOTOGRAPHY:

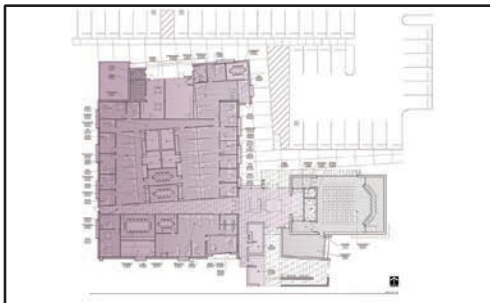
Tom Bonner Photography



Architect's Commentary: The renovation and expansion of the Bonita Unified School District Offices provided for a much-needed upgrade for the operations of the school district. The existing 8,582 square foot facility received new interior and exterior finishes and a new open concept plan layout. The intent of the open layout was to encourage collaboration and facilitate communication between the District's multiple departments. To support the District's current and future needs, the project included a 5,486 square foot expansion to accommodate a new lobby, restrooms, conference rooms, and board room.

The multi-use board room incorporates natural daylighting, and is able to accommodate board meetings, conferences, testing, and videotaping. The office facility features a reprographics area, a space saving electronic filing system, and skylights that allow for ample daylight.

WHY MASONRY? The Bonita Unified School District Office was originally constructed of concrete masonry units (CMUs), which was subsequently selected as the primary structural system for continuity. CMU was also selected for its affordability and durability. Aesthetically, CMUs greatly enhanced the design by creating a contrast to the other exterior finishes. The striated CMU design is comprised of two sizes, two colors, and two finishes (shotblast and burnished). The resulting pattern produced a strong contrast between the visual and tactile qualities of the building's exterior materials.



Oceanside High School Performing Arts Center

Oceanside, California



Architect's Commentary: Oceanside High School's new Performing Arts Center serves as an iconic gateway to the downtown Oceanside community. Moreover, the Center is a brilliant landmark at the highly trafficked Interstate 5 freeway and Mission boulevard intersection, welcoming visitors to the inner high school campus. The large, transparent lobby glows at twilight and in the evening hours. This space serves as its own multipurpose venue, uniting the plaza and two performance halls. The program for this facility is inclusive of a 500-seat main hall, 150-seat studio theater, indoor and outdoor scenery shops, a recording studio, classroom space, and outdoor seating with performance areas.

WHY MASONRY? Timeless materials of concrete masonry units (CMUs), glass, and metal panels reflect a civic quality, but are also durable and will stand the test of time with heavy student and community use. The building has a distinctive silhouette from various perspectives that speaks to its function and provides orientation. The project offers integrated, versatile and inviting indoor/outdoor spaces: driveways, drop-off areas, parking and pedestrian plazas that contribute to a coherent, safe and readily occupied urban landscape.

Sustainable landscape and building strategies were utilized as part of the design. Some features include exposed southwest CMU walls that are covered with a 'green screen' for cooling, as well as a broad roof overhang that protects from the elements and promotes indoor/outdoor use of the lobby with natural ventilation. The theater has load bearing CMU walls to provide thermal mass and to allow for night flushing to help cool the buildings in warm weather.

Main spaces in the building employ displacement ventilation, taking advantage of the single tiered seating and high volume in the theaters. Acoustical isolation of the theater is controlled with concrete masonry units.

ARCHITECT:
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225 Broadway, Suite 1300
San Diego, CA 92101

Jennette La Quire, AIA
Principal-in-Charge

STRUCTURAL ENGINEER:
Wiseman + Rohy Structural Engineers

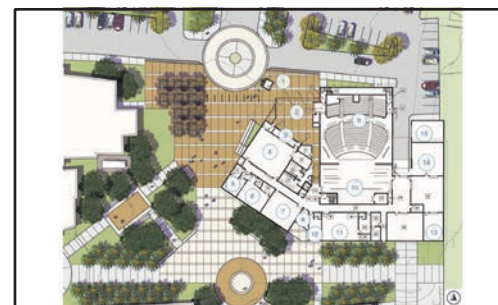
GENERAL CONTRACTOR:
Erickson-Hall Construction Co.

MASONRY CONTRACTOR:
Kretschmar & Smith Inc.

BLOCK PRODUCERS:
ORCO Block & Hardscape

OWNER:
Oceanside High School

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Mike Torrey Photography





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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.

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