



Concrete Masonry Association of California and Nevada



Profiles in Architecture

July 2021

Why Masonry?

www.whymasonry.org

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GOMPERS PREPARATORY ACADEMY

Gompers Preparatory Academy - Athletic Facilities
RNT Architects
Jeff Durkin, Bread Truck Films

UC Berkeley Legends Aquatic Center

Berkeley, California



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ELS

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Creative Masonry

BLOCK PRODUCER:

Basalite Concrete Products, LLC

OWNER:

University of California, Berkeley

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Lawrence Anderson Studio

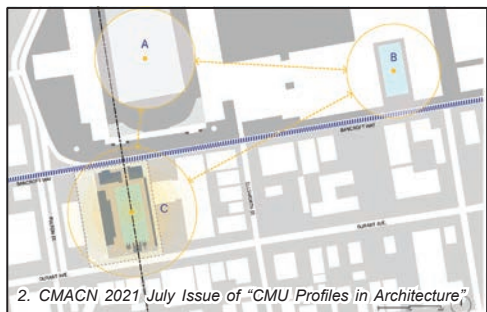
ARCHITECT'S COMMENTARY: Legends Aquatic Center provides exclusive training space for UC Berkeley's intercollegiate aquatic athletes. The 9,200-square-foot center features a 50-meter stretch pool with a two-centerline dive tower, locker rooms, and multipurpose/training room fronting the main street and facing the university's historic Edwards Stadium. The entrance, pool, and dive tower were designed on axis between the stadium's two pylons to connect the two facilities. The design establishes a connection with the athletics precinct and energizes the aquatics program and the campus' southwestern edge.

WHY MASONRY?

The entry was designed as a large glass opening granting views of the pool and dive tower to passersby. Three building finish materials were used for the multipurpose building: stacked bond concrete masonry units (CMUs); corrugated, perforated metal skin; and translucent blue glass walls that weave through the building in plan view, tying the elements together. At night, the building is lit, illuminating a formerly dark corner along the busy street. The locker-room building utilizes the same palette of stacked bond CMUs and translucent blue-punched windows.

CMUs are used both as a structural system and exterior finish, demonstrating their versatility as a construction/finish choice and their capability to deliver the project on budget. Utilizing CMUs met the University's criteria for using urban, durable finishes that also complemented the adjacent campus buildings. The project used groundface 8"x16" CMUs, recalling the stone and masonry used to build the campus and helping the project achieve LEED® Silver certification.

This urban project takes advantage of its dense location, connection to campus, greater Downtown Berkeley area, and all of the varied means of public transportation. Water efficient fixtures resulted in a water-use reduction of 41%. Additional sustainable design elements include 20% recycled content materials, 20% regional materials, 90% FSC certified wood products, low-emitting materials, high-albedo roofing and pool deck, and full cutoff exterior lighting.



Gompers Preparatory Academy – Athletic Facilities

San Diego, California



ARCHITECT'S COMMENTARY: Modernizing the existing Gompers Preparatory Academy is a three-phased design effort. The master plan will add science laboratories, classrooms, and athletic facilities to the campus. Phase 1 included the addition of air conditioning and improvements to the existing campus. Phase 2 includes the new athletic facilities totaling 29,000 square feet, which consists of a gymnasium, locker rooms, weight room, and dance room. Phase 3 will replace several aging relocatable buildings, with two

new academic buildings and a lecture hall totaling 33,300 square feet, along with site improvements to complete a new academic quad with the new athletic facilities, and connect the new facilities to the rest of campus. The core philosophy of the project, based on the Director's pedagogical philosophy, is to create spaces that are conducive to performance in order to develop a cohesive community. Therefore, music and movement and varied scale gathering places are vital.

WHY MASONRY? The Athletic Facilities Gymnasium will act as a performance space with a stage that faces both the interior and can face the exterior quad through a large roll up door. The main interior space is constructed of concrete masonry units (CMUs) for their honest beauty and durability. CMUs were also determined to be best suited for the project because of its proximity to State Route 94, as the CMUs provide sound attenuation and increase indoor environmental quality. The CMU pattern, which gives a feel of movement, was influenced by the speed of the vehicles that travel along highway 94.

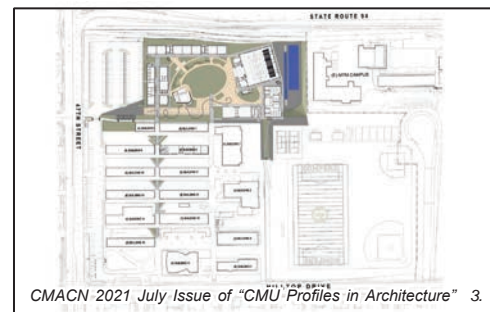
Some of the sustainable features of the project are: window actuators throughout the project to ventilate the locker rooms and gymnasium; high clerestory windows for daylighting at the Dance Room, Weight Room, and Gymnasium; tubular daylighting devices in all the restrooms for natural light; white PVC roof for cooling; and the use of FCS Certified maple wood athletic flooring in the Gym and Dance Room.

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Jeff Durkin, Bread Truck Films



Fechtman Residence

Fallbrook, California



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BLOCK PRODUCER:
ORCO Block & Hardscape

OWNER:
Fechtman Residents

©PHOTOGRAPHY:
ORCO Block & Hardscape



ARCHITECT'S COMMENTARY: The Fechtman residence is 4000 square feet, located on a 2-acre parcel in Fallbrook, California. The residence's orientation is north/south, and oriented to a 270 degrees panoramic view to the east. The site has been involved in a wildland fire, with the previous owner's home resulting in a total loss. Therefore, many construction methods, materials, and systems were put in place to prevent future fire hazards. One such method was to eliminate over hangs and eaves from the resident's design to prevent fire entry points.

WHY MASONRY? Concrete masonry units (CMUs) made up almost 99% of this project's building materials, and were selected for their fire resistance characteristics, durability, low maintenance, and color selection. CMUs were utilized for all of the project's lintels and perimeter load bearing walls. Considering concrete roof pavers offer maximum fire protection, the roof's assembly utilized a 3-inch-thick concrete paver placed on raised pedestals bearing on rated tapered rigid insulation, which was then secured to the dead level concrete deck to direct water flow to drains below the pavers.

Taking advantage of the project's concrete masonry units' thermal lag properties, the residence features passive heating, passive cooling, and daylighting strategies. Heating and air conditioning of the resident's interior is accomplished by radiant hot water in the concrete slab, and is assisted by eight LG VRF units commanded by iPhone /thermostats. The project's electric generation is totally satisfied by 28 LG solar voltaic panels and exceeds Net-Zero.

The open plan and concrete masonry unit use within the residence was employed to maximize future multiple use and function and to present functional requirements. Together with the CMUs' fire resistant properties and functionality, this residence will remain intact and practical for many years to come.



Los Feliz Pool House

Los Feliz, California



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BLOCK PRODUCER:
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OWNER:
John V. Mutlow
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Michael Arden Photography

ARCHITECT'S COMMENTARY: The pool house and lap pool are an independent addition to an existing California style bungalow. The floating roof is independently supported on eight steel columns. The ribbon of clerestory windows above the concrete masonry unit (CMU) retaining wall reinforces the visual sense of the floating roof. The lap pool reinforces the horizontality of the floating roof and is heated by an array of solar collectors, which provide 100% of the heat during the summer months.

The Pool House is minimally furnished to reinforce the sense of space, its materiality and the people occupying the space. The freestanding light is a 1930's industrial light. The Adirondack style white chairs and the chaise lounge are designed and crafted by local artisans. In the summer a curtain is installed to increase the shade provided by the large overhanging roof. The curtain, a Norwegian army camouflage material for snow country, was sourced in England and identifies the change of seasons to the West facing façade. It substantially reduces the daily heat gain, and the shadow from the curtain casts an ever-changing pattern onto the surfaces in the Pool House. In winter the curtain is removed and stored so that the sun penetrates the space with both the 6" concrete floor and the 8" concrete masonry unit (CMU) wall serving as a heat sink.

WHY MASONRY? The pool house's horizontal bands are reinforced by the polished aggregate CMU blocks. The CMU wall, positioned with a south west orientation, in summer acts as heat sink keeping temperatures inside cool, and in winter keeping the inside temp warm, thus eliminating the need of an HVAC system. Designed on an 11 x 14 grid, the façade facing the existing house is transparent with wall to wall double glazed low E sliding glass doors. This transparency expands the visual depth of the garden. For sustainability the north wall cuts into the natural slope to help moderate temperature fluctuations by using the earth's natural thermal mass. To avoid unnecessary solar heat gains the south west overhang extends over and shades the sliding glass wall system.



ARCHITECT:**RRM Design Group**

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BLOCK PRODUCER:

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OWNER:

California Truck Centers

©Photography:

RRM Design Group, Matthew Carver

Central Coast Truck Center

Santa Maria, California



ARCHITECT'S COMMENTARY: Central Coast Truck Center, part of the California Truck Centers Truck Dealer Family, required a new state-of-the-art full service Freightliner and Western Star Truck Dealership in Santa Maria, CA. The new 40,000-square-foot dealership serves California's Central Coast trucking industry with parts, service, and sales. The dealership needed to have ample space to store nearly \$1 million in OEM Parts inventory, 14 service bays, a chassis dynamometer, training room for technicians, a large sales lot for new and used trucks, and room to grow.

The front of the building is a high-volume space featuring a large retail display area and counter for OEM sales. It also includes office areas for management and a sales warehouse storage area that includes a storage mezzanine. Entering the sales department, visitors are greeted by a fashionable lobby/reception area that leads into a conference room and private offices. Other amenities include a large break room connected to an exterior enclosed patio for employee use. The service department includes an exterior covered canopy able to accommodate large trucks waiting to be serviced and a large lounge room reserved for customers waiting for their trucks to be serviced. Towards the back of the building, the service bays feature 14 large overhead doors making it possible to drive through from one side of the building to the other.

WHY MASONRY?

It was easy to choose concrete masonry units (CMUs) as the building product that would provide the design and durability necessary for this type of structure. One unique advantage of utilizing CMUs was color options: the local block manufacturer was able to provide CMU colors that matched the branding of California Truck Centers across the state. Structurally, CMUs made it possible to create large volumes and openings without compromising stability and provided an attractive contemporary industrial appearance and highly-functional building for years to come.

Pajaro Valley High School Playfields Upgrade

Watsonville, California



ARCHITECT:
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Project Architect

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MASONRY CONTRACTOR:
Patania Masonry

CONSTRUCTION MANAGER:
Cumming Corporation

BLOCK PRODUCER:
Calstone Company, Inc.

OWNER:
Pajaro Valley Unified School District
Ryan Block, Senior Project Manager

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Leslie Engleking, Santa Cruz Real Estate Photography - Left-Bottom, Center-Bottom, & Right-Bottom Photo
Ryan Block, PVUSD - Left-Top & Right-Top Photo
John Tischler, SFA - Center Photo



ARCHITECT'S COMMENTARY: As part of its current bond measure, the Pajaro Valley Unified School District (PVUSD) constructed the sports facilities at Pajaro Valley High School (PVHS), a long-awaited step towards completing the campus since its construction in the early 2000s. The project was completed in early 2021 and immediately put to use for home games and events. 2021 was also the first year that PVHS hosted a graduation ceremony on site.



PVHS is situated on the outskirts of Watsonville, CA and approximately three miles from the Pacific Ocean. The project site lies on the southern edge of the school property, on a low hill with sweeping views of the surrounding wetlands and farms.

The new 8-acre facility at PVHS features a synthetic turf football and soccer field, 8-lane track, two softball fields, and bleachers to accommodate 2,200 spectators. Various field support buildings were built including dugouts, a track storage building, and softball scorekeeper building. The facility is two-tiered, with the upper level featuring a ticket booth, concessions, and restroom buildings situated in a small plaza with views of the fields below.



WHY MASONRY? The overall design of the facility is unified in a contemporary and clean aesthetic with limited building material types. Concrete masonry units (CMUs) were used for the majority of the buildings for several reasons, with durability, sustainability, and aesthetics in mind. The CMU walls of the concessions and restroom buildings, set in a modern stacked bond pattern, compliment the existing campus, yet stand prominently with their own design language. The CMU is in turn complimented by the vast amount of cast in place concrete retaining walls on the site. The solid-grouted CMU walls provide structural load bearing and lateral force resistance along with simplicity in their form. Topped with exposed roof framing using stout 3x rafters, the buildings in whole express an architecture of truth. These aspects will contribute to their longevity in this coastal climate with relatively low maintenance needs over their lifetime.



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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.

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