



CMU Profiles in Architecture

FALL 2025 ISSUE

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Monsignor Aidan M. Carroll
Performing Arts Center
JP Darling Associates/Architects
Kluger Architects, Inc
Photo by EPI Construction



Walnut Elementary School's New Multipurpose Room and Classroom Building

WALNUT, CALIFORNIA

Architect's Commentary:

In the past, Walnut Elementary School was on the brink of closure with only 350 students enrolled. Now, with more than 700 students enrolled, this new 10,990-square-foot Multipurpose Room and Classroom Building stand ready to serve the growing needs of the student body and flourishing academic programs.

Why Masonry?

The choice to utilize concrete masonry for this design was twofold – for the durability of construction and the seamless integration into the architectural context of the existing campus. Concrete masonry was the ideal choice for the longevity of the building, especially since the multipurpose room was constructed to be a large, open space. It was important to both the school and the architect that this new building did not feel out of place among the existing campus buildings. This was accomplished by tying together the visual identity and concrete masonry unit construction used on the entire campus.

Additionally, specific sustainable features were incorporated into the design of this new multipurpose room and classroom building to increase efficiency and performance: clerestory windows throughout the building add natural light to learning spaces, limiting the use of mechanical lighting, drought tolerant landscaping paired with low-flow urinals and drinking fountains decreases the overall water usage of the building each day, and energy efficient cooling and heating systems keep the building at ideal temperature ranges while keeping energy costs under control.

Walnut Elementary School received the prestigious 2023 California Distinguished Schools Award for proving educational excellence to their students. Robert Chang, Principal at Walnut Elementary School, shared how important this new building is to the school, District, and community: "This new building really symbolizes growth – as well as providing a current and relevant program for our students in the community."

Architect:

SGH Architects
707 Brookside Avenue
Redlands, CA 92373

Scott Griffith, AIA
Principal-in-Charge

Structural Engineer:

RTM Engineering Consultants
(Formerly KNA Structural Engineers)

General Contractor:

New Dynasty Construction Co.

Masonry Contractor:

Cornerstone Masonry Services, Inc

Block Producer:

ORCO Block & Hardscape

Owner:

Walnut Valley Unified School District

©Photography:

RMA Architectural Photography



2050 Main Plaza

NEWPORT BEACH, CALIFORNIA

Architect's Commentary:

The 2050 Main Plaza project included architectural design services for the renovation of an existing 5,000-square-foot outdoor plaza located between two high rise office towers. The existing plaza was reinvented to improve the amenity spaces available to the building tenants by providing a relaxing patio environment amongst the bustling city life setting. The new Main Plaza offers multiple open gathering spaces along with several covered, semi private lounge rooms, ensuring all tenants have a tranquil place to escape the city.

Why Masonry?

The plaza was designed to create an inviting space by delivering a sense of warmth with the choice in materials. For this purpose and others, concrete masonry units (CMUs) were selected as one of the main building materials. With a commitment to longevity and low maintenance, the material choices reflect this in a harmonious way. The heaviness of the CMUs is perfectly balanced by the lightness of the composite screen louvers. The amenity space also included three canopy structures equipped with a TV, ceiling fan, heaters and lighting to make the areas welcoming during every season. Every decision was guided by the principle of sustainability, ensuring that its impact on the environment was minimized while its contribution to the urban landscape was maximized.

Architect:

Ware Malcomb
10 Edelman
Irvine, CA 92618

Ilyes Nouzi

Principal-in-Charge

Structural Engineer:

Brandow & Johnston

General Contractor:

CDG Builders, Inc.

Masonry Contractor:

Boomer Construction Services, Inc.

Block Producer:

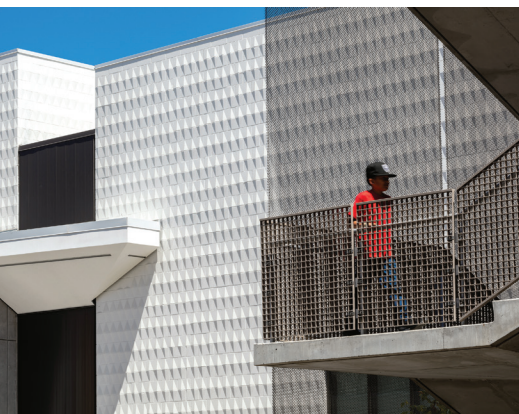
ORCO Block & Hardscape

Owner:

RiverRock Real Estate Group

©Photography:

Jason Sylvia



Wilson Middle School

SAN DIEGO, CALIFORNIA

Architect's Commentary:

Completed for San Diego Unified School District in 2021, Wilson Middle School is an all-new 142,000-square-foot, CHPS-designed school with Performing Arts Buildings where the primary structure is composed of concrete masonry units (CMUs). This school is part of the new George Walker Smith Education Campus, which also includes Central Elementary School and a joint-use athletics field.

With a bustling commercial thoroughfare flanking the north side, the new Wilson Middle School buildings exhibit a formidable community presence. The Performing Arts Buildings make up one third of the campus and include a 500-seat Theater, Drama Classroom, Band and Choir Classrooms, Art Studios, Learning Commons and Multi-media spaces. These remarkable buildings establish a community connection by inviting the public to enjoy their performance venues for theater and musical performances while displaying a strong physical presence within this active commercial district.

Why Masonry?

Concrete masonry units were favored for the construction of the new Performing Arts Buildings for their function and aesthetics. As a cost-effective solution for the primary load bearing structures, CMUs are known for being notoriously durable, having incredible longevity and requiring very low maintenance as a finished wall assembly. The inherent sound attenuation properties of CMUs are ideal for this project, as they effectively block unwanted traffic noise and other noise pollution from the learning and performing spaces.

With 12-inch-thick concrete masonry diamond block walls, many innovative energy saving systems and aesthetics were built into the school's design. The CMUs perform effectively as passive heat sinks, absorbing the heat energy from the sun during the day and

releasing it during the cooler evening hours. This attribute effectively modulates the interior room temperature of the spaces, reducing the need for mechanical heating and cooling. Additionally, the unique surface quality of the diamond CMUs provides a character well-suited to the Performing Arts Buildings' large, exposed walls, demanding attention from the students and the commercial district it resides within. Once installed, the CMUs only required a white paint finish to enhance the reflective surface quality of the block, triggering stunning results. When the bright sunlight of Southern California touches the buildings' sides, it reflects the sun's heat and showcases the faceted blocks, creating striking patterns of shadow and light that vary dramatically throughout the day and seasons. These spectacular light shows further demonstrate how stunning and timeless CMUs make this space for the students and community alike.

Architect:

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Chikako Terada, AIA, LEED® AP
Ralph Roesling, FAIA
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Structural Engineer:

KPFF Consulting Engineers

General Contractor:

McCarthy Building Companies, Inc.

Masonry Contractor:

Winegardner Masonry, Inc.

Block Producer:

RCP Block & Brick, Inc.

Owner:

San Diego Unified School District

©Photography:

Jeff Durkin, Bread Truck Films
Joe Cordell



Monsignor Aidan M. Carroll Performing Arts Center

LA PUENTE, CALIFORNIA

Architect's Commentary:

The Monsignor Aidan M. Carroll Performing Arts Center provides a state-of-the-art theater and a band and choir classroom for students to explore and experience creativity through fine arts, music, and theater production.

At approximately 20,000 square feet, the theater consists of a lobby, concessions, and an auditorium seating 398 guests. The "back of house" consists of boys' and girls' dressing rooms and scene shop. The stage follows the traditional proscenium theaters where the stage is separated from the auditorium by an architectural frame and has a removable covered orchestra pit. The architectural ceiling is conceptualized like a curved fan-out that descends to the proscenium and covers the catwalk lighting.

Why Masonry?

The theater is constructed of split-face and precision concrete masonry unit (CMU) block with the east and west auditorium walls of sine-block CMU (a curvilinear specialty block constructed in a basket weave layout). CMU was used to construct the building to provide a long-lasting impact and to ensure durability that will withstand years of abuse. Sine-block CMU was selected specifically for the sound reflectance from their curvilinear design.

Original Architect:

JP Darling Associates/Architects
20331 Irvine Avenue, Suite E-6
Newport Beach, CA 92660

James Paul Darling
Principal-in-Charge

Architect:

Kluger Architects, Inc
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Charles Kluger, AIA
Principal-in-Charge

Structural Engineer:

STB Structural Engineers

General Contractor:

EPI Construction

Masonry Contractor:

Masonry Constructors Inc

Block Producer:

Angelus Block Company, Inc.

Owner:

Archdiocese of Los Angeles Education & Welfare Corporation

©Photography:

EPI Construction



Mossy Chrysler Dodge Jeep Ram (CDJR)

CHULA VISTA, CALIFORNIA



Architect's Commentary:

Mossy CDJR is an all-new 14 million-dollar Chrysler, Dodge, Jeep, and Ram facility that contains sales, fleet, service, and parts departments with 28 service bays in shop, showrooms for four different Brands, covered service reception, customer lounge, offices, and parts storage, all contained within a two-story structure totaling 54,400 square feet located on 6.5 acres in Chula Vista.

This local family and veteran-owned state-of-the-art vehicle dealership was built from the ground up with the customer's experience in mind. The living plant wall and mini coffee bar help create a relaxing and comfortable environment. Customers can feel even more at ease with their pets by their side as they stroll through the dealership's dog park.

Why Masonry?

The service shop was constructed with load bearing reinforced concrete masonry units (CMUs) for several reasons:

- **Durability** – the service shop area is a harsh environment and exposed CMUs on the interior is a perfect match for the occupants. Mounting automotive equipment directly to the CMUs of the wall is advantageous for strength and flexibility should any of the equipment need to be relocated or new equipment be added in the future.

- **Resistance** – exterior weather resistance was also considered as a positive benefit of this material. The design integrates CMUs into the perimeter fence which secures and screens the service yard and trash dumpsters from public view.

- **Fire Rated** – the required barrier between the showroom/offices and the service shop were resolved with the non-combustible CMUs.

- **Acoustical** – solid grouted CMUs also successfully limit the unwanted noise created in the shop from traveling to the other zones of the dealership.

- **Sustainability** – utilizing CMUs from a manufacturer within 500 miles is good practice. This project is very durable and will remain resilient with little to no maintenance.

- **Efficiency** – the load bearing wall that was 12" thick then stepping to continue with 8" thick created a natural strong shelf to rest the 80' span roof trusses to create minimum number of support columns in the auto service shop.

- **Aesthetic** – this large, massive shop was designed with horizontal stripes of precision face to breakdown the large field of split-face texture which then further extends into the fencing creating a solid anchor of the north portion of the dealership. The dealership is inviting and visually appealing.

Architect:

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San Diego, CA 92106

Darrold Davis, AIA
Principal-in-Charge

Structural Engineer:

Structural Engineering Solutions, Inc.

General Contractor:

Lusardi Construction Company

Masonry Contractor:

Pro Structural, Inc.

Block Producer:

Angelus Block Company, Inc.

Owner:

160 Calle Magdalena, LLC

©Photography:

George Rivera
CCBG Architects, Inc



Chaffee Zoo Corporation, Zooplex Building

FRESNO, CALIFORNIA

Architect's Commentary:

The Zooplex was funded by Measure Z - a one-tenth of one percent sales tax on retail transactions - collected in Fresno County that benefits Fresno Chaffee Zoo's capital improvements and operations. The Zooplex is a \$13 million multi-purpose building that enables staff to better care for the animals.

Housed within Zooplex is a new central commissary where zookeepers prepare the appropriate diets for each animal at the Zoo. In addition, Zooplex serves as a staff hub featuring a well-appointed staff break room, shower/locker room, and administrative offices for animal care teams to collaborate and provide care for the animals. Employees now have a common break room with a kitchen and patio, along with laundry and changing rooms. When overnight care for animals is required, zoo staff or visiting keepers can stay onsite in a studio apartment with separate access. The second floor provides much-needed centralized office, work, and conference spaces for zoo administration and operations. The building is envisioned as an elegant "background" building to complement the zoo aesthetics without detracting from the surrounding exhibits.

Why Masonry?

Durability and ease of maintenance were paramount considerations, making the selection of concrete masonry unit (CMU) an ideal choice. CMU eliminates wall cavities and minimizes opportunities for infestation, mold, and other potential problems in a

sensitive environment such as a zoo. Sourced from a plant 15 miles from the site, CMU reduced the project's carbon footprint. They create a tight, well-insulated envelope while providing thermal mass, structural capacity, durability, fire resistance, and a singular attractiveness that requires no additional finish application. A 10" ground face insulated block was used to enhance both the thermal performance and architectural character. Finish coating was applied to the interior face of the perimeter wall in food storage and preparation areas, and manufactured stone was applied to differentiate the entrance.

Architect:

Paul Halajian Architects
265 East River Park Circle, Suite 420
Fresno, CA 93720

Paul Halajian
Principal-in-Charge

Structural Engineer:

Parrish Hansen Inc

General Contractor:

BMY Construction

Masonry Contractor:

McCurley and Day Masonry

Block Producer:

Basalite Concrete Products, LLC

Owner:

Fresno Chaffee Zoo

©Photography:

David Jon Photography





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Award Winning Projects

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www.cmacn.org



CMACN

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