Profiles in Architecture

Why Masonry?
www.whymasonry.org

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STRUCTURAL ENGINEER:
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GENERAL CONTRACTOR:
Oltmans Construction Co.

MASONRY CONTRACTOR:
Majestic Masonry, Inc.

BLOCK PRODUCER:
Angelus Block Company, Inc.

OWNER:
Ganahl Lumber Company

ARCHITECT’S COMMENTARY:
As the oldest lumberyard and hardware supply store in California, Ganahl Lumber has a longstanding history of providing building supplies to the local community. With years of success and an ever-growing client base, Ganahl expanded its operations and used concrete masonry units (CMUs) for its new facility.

WHY MASONRY?
The new site in Costa Mesa, California presented challenges the design team needed to overcome. First, the building needed to occupy a significant portion of the site, which made accommodating a parking lot a challenge. This was addressed by engineering and constructing rooftop parking directly over the retail building. CMU helped support the load bearing columns for the unique rooftop parking design.

Another site challenge was the limited construction material staging area. The site has a flood control channel running through it and is adjacent to a freeway onramp. The decision to construct with CMU provided an effective solution for managing staging.

Concrete masonry units were also used for the shear walls. In addition to the strength benefit, CMUs are durable and low maintenance. To enhance the aesthetics of the building, blocks of varying texture and color were selected. As a natural product, they will maintain a uniform appearance as they age consistently.
Architect’s Commentary: Injectors Direct is a state of the art facility that specializes in the refurbishing and sales of diesel fuel injection parts for all types of diesel engines. The facility was designed to provide specialized rooms specifically for cleaning, servicing, and testing injectors, as well as space for vertical lift modules for efficient storage and organization of inventory. Additional elements include modern office spaces, a full-featured employee lounge, and cohesive work stations. The 6,400-square foot facility is powered with solar energy and features drought resistant landscaping.

Why Masonry? The client wanted a design that was unique and would both compliment and stand out in the community. Clean and efficient were the overriding goals for both the design and the function of the building. The somewhat unique color scheme extends throughout the project reflecting the corporate theme, from building finishes and equipment, to the smallest detail, including a custom fork lift.

Several structural systems and material types were analyzed. Load bearing concrete masonry units (CMUs), in conjunction with wood framing, were determined to be the most functional while providing required durability. The CMU system provided low maintenance surfaces both inside and out. Ground face CMU was chosen for its clean look and finished appearance. Both 8” thick units and 4” thick veneer units were incorporated. Standard 8” precision block was chosen for many interior walls for durability, ease of cleaning, and cost effectiveness.
ARCHITECT: WRNS Studio
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GENERAL CONTRACTOR:
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MASONRY CONTRACTOR:
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Basalite Concrete Products, Inc.

OWNER:
UC Davis

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Architect’s Commentary:
The site for the new Veterinary Medicine Student Services and Administration Center (VMSSAC) called for a design that formed a gateway between the Health Sciences campus and the adjacent 100-acre arboretum. The VMSSAC is comprised of two distinct structures, a two-story administrative building and a single-story dining pavilion, which work together to frame a passageway. Composed of a series of outdoor rooms, this passageway provides direct circulation and access to the arboretum and events lawn, strengthening existing campus patterns of circulation and open space.

Given the prominence of the site, design had to anticipate future growth and overall campus cohesion. For this purpose concrete masonry units (CMUs) were selected. In particular, the design anticipates the planned Arboretum Visitors’ Center and Veterinary Medicine Teaching Hospital Expansion. The future expansion and the west façade of the VMSSAC will frame a central space at the heart of the Health Sciences campus. The café, which will be shared with the public, is positioned to feel readily available to arboretum visitors.

The material palette harmonizes with the Health Sciences campus and complements the arboretum landscape. The major volumes are cement plaster grounded by a series of CMU block that relate to the ground plane, the landscape, and adjacent campus buildings. The pair of buildings open to the patio and great lawn with a glazed storefront, while the other three edges are wrapped in veneer lightweight CMU block. This massing at the first level, upper level, and exterior stair are completely clad and reference a campus precedent of CMU-clad exterior stairs. The resulting lines of force establish a common space that straddles the breezeway between the buildings and includes both of their lobbies. The indoors are blurred with the outdoors and the buildings feel quite connected. VMSSAC is targeting LEED® Gold.

UC Davis Veterinary Medicine Student Services and Administration Center
Davis, California

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Architect’s Commentary: Skyline is a new, state-of-the-art elementary school designed to serve as an educational and community center for Solana Beach, a small beach city north of San Diego. It replaces a 60-year-old facility far too small and long out of date. The design is the result of an intensive, collaborative process involving administrators, teachers, staff, parents, community members, and others. Under school district guidelines, the new facility was developed largely as a single-block school with internal circulation. The long, east-west site orientation permitted a facility where every classroom has good views, with most also having access to glare-free north daylight through the use of clerestory windows. The site’s slope allowed for a "split-level" plan, with the two-story component facing the street to the south and smaller-scale one-story wings opening onto teaching patios and playgrounds to the north. Internally, a range of teaching spaces are provided from classrooms, to breakout rooms, to small group alcoves along hallways. This facilitates the district’s desire to accommodate different learning modalities. The resource center is centrally located, and the school’s “STREAM Pavilion” is a key feature where project-based learning will be showcased. Why Masonry? Concrete masonry units (CMUs) were the obvious choice for Skyline Elementary School, providing long-term durability and economy of maintenance. As a locally-sourced product it contributes to the school’s sustainable emphasis. Likewise, as a colorful, highly textured cladding (inside as well as out), it promotes the concept of a multi-sensory learning environment so critical to student success in the 21st century. Skyline Elementary School is designed to meet an advanced measure of sustainability by employing a range of strategies. The school exceeds Title 24 heating efficiency standards by almost 38% and cooling by an impressive 78%, some of which can be attributed to the use of CMUs. Through self-certification, Skyline Elementary is targeted to achieve more than twice as many points as the Collaborative for High-Performance Schools (CHPS) minimum threshold.
Architect's Commentary: The Desert Diamonds at Mountains Edge Regional Park is part of a new 34.5-acre sports complex in South West Las Vegas. The facilities are the result of a partnership between the Bureau of Land Management and Clark County. The design concept, developed with community stakeholder input, is centered on the theme of health and wellness.

The Desert Diamonds Baseball Complex creates the first 90-foot baseball diamond four-plex in the Las Vegas Valley. Concrete masonry units (CMUs) serve as the primary building material for a new restroom, concession, maintenance facilities, dugouts, and retaining walls. Three playing fields, each featuring a distinguishing color on the backstop and dugouts, support a fourth field – the Championship Field - which includes upgraded seating and an announcer’s booth.

Why Masonry? Concrete masonry units were instrumental to executing the design concept. The restroom and concession facilities flanking the Championship Field are at the heart of the complex, with CMUs providing the ideal material for a department with tight budgets and limited resources. Concrete masonry units also fit the intended aesthetics of the complex, tying the exterior walls of the restroom, concession, and maintenance facilities together visually.

The color availability in CMUs enabled the design team to easily accomplish the pixelated gradient pattern effect of the design intent, creating a bold statement with textures that blend the restrooms into the beautiful natural context. Durability was also an important determining factor for CMU use for each of the buildings, providing resistance to the natural wear and tear of a public facility and minimizing the need for maintenance. The project’s CMUs will ensure these facilities withstand the test of time, while providing an aesthetically pleasing community resource for local residents and visiting teams alike.
**Architect’s Commentary:** The District set a budget and desired scope that forced the design team to use creativity to meet the project criteria. Specific requirements based on the user group’s vision for the spaces further forced inventive solutions that could still deliver the project within the allocated budget while using conventional materials like concrete masonry units (CMUs) in an innovative manner.

The 480-seat performance space, lobby, drama classroom, and scene preparation spaces give an incredibly talented student body a new range of tools to achieve their aspirations. Folded acoustic reflectors inside contrast against the dark interior to create a striking effect and an environment suitable for amplified or unamplified sound. Connected dressing rooms, scene preparation, and state of the art controls and rigging now facilitate a full array of performances.

**Why Masonry?** Sitting at the front corner of the campus, the new auditorium, aptly named The Forum, references the surrounding rocky hills through CMU color and the sculpted form of the enclosure. The concrete masonry units are stacked, each course offset by a nominal amount. As the sun hits the CMUs via its daily path, dramatic shadows are cast. The overall effect is tilted walls that intersect to create a dynamic sculptural element signaling the value of the arts on the campus.

The design team worked to make the building look as if part of the spectacle of a performance. The glass lobby and staircase window seem to beam excitement of opening night to the community, while the blue-light blocks add a splash of color in the CMU façade. When the gates are open, the front court offers a luminous space connecting a modest lobby to the exterior for intermissions and pre and post-performance gatherings, while the CMU offers sound attenuation to keep performance sounds in and gathering sounds out. Saugus High School’s award-winning program now has a home worthy of their craft.
ARCHITECTURAL CONCRETE MASONRY

Concrete Masonry Units (CMUs) are dimensionally and aesthetically pleasing for ANY of your existing or future designs. CMUs can be integrally pigmented and textured to meet a wide range of client and project demands. CMUs are design flexible, versatile, noncombustible, durable, economical, and locally produced.

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• 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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