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Detail Photo:
South Region High School No. 9
Additional photos and article in April 2013 Issue of “CMU Profiles in Architecture”
MAINTENANCE CENTER,
MENDOCINO TRANSIT AUTHORITY
UKIAH, CALIFORNIA

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BLOCK PRODUCER:
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OWNER:
Mendocino Transit Authority

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Architect's Commentary: The bus fleet maintenance center is located in a heavily industrialized landscape. Its position on the site is the result of functional requirements. Buses return to the facility to refuel, wash, detail, park, and receive necessary maintenance prior to returning to their routes. Operational efficiency is essential.

The sawtooth form of the building creates large expanses of north-facing clerestory windows lending ample daylight to the service bays. All of the interior surfaces of the high bays are lined with concrete masonry units (CMUs) and finished in white to promote cleanliness. This treatment gives maintenance staff a balanced daylit environment in which to service the buses. Interior lighting is automatically dimmed when sufficient daylight is present in the space, controlled by a rooftop photocell sensor, minimizing electrical consumption for lighting. In-slab radiant floor heating systems maximize comfort during the work-day in the area where maintenance crew members are often working below the buses. The buses are painstakingly cared for as they are fundamental to ridership demands locally and at the farther reaches of the region.

Despite the abundance of large operable bus-bay doors, the envelope design achieves 22% better than stringent state energy standards. A high-efficiency evaporative cooling HVAC system contributes to energy efficiency. Onsite energy production has offset nearly 100% of electrical usage by the facility during its first several months of operation. Solar photovoltaic panels are located on the south-facing, sloping rooftop. The owner and design team were awarded incentives for participation in PG&E’s Savings by Design program for new construction.

Why Masonry? Exterior material choices of concrete masonry units, aluminum panel, and natural wood reflect the site surroundings. Concrete masonry units are the ideal finish for the building base, providing durability and lasting value on the exterior. The CMUs work in concert with structural insulated metal panel systems to form the wall and roof structure, as well as the finish. There are simply fewer materials used in the project, minimizing impacts on material resources. The patterning of the concrete masonry units expresses a sense of motion associated with the daily passage of buses to-and-from their routes. At the north side of the building, cantilevered CMU walls along with a wood rainscreen anticipate a future administration addition to house transit authority personnel.

CMACN 2014 April Issue of “CMU Profiles in Architecture”
Architect’s Commentary: This is a new facility at a remote County Park in Morgan Hill, California. Anderson Lake is a man-made reservoir used for water storage and recreation for the area. The recreational use of the lake, its shoreline and trails is under the prevue of the County Parks and Recreation Department. The new visitor center is located at the park’s visitor entry. It replaces a converted older house that had been used as the ranger office.

The Visitor Center is designed to LEED® Silver standards and includes solar hot water heating and photovoltaic electric generation. It consists of an exhibit space, offices, restrooms and storage spaces and has 5,900 square feet of indoor space and an outdoor classroom. An adjacent maintenance shop of 2,600 square feet is also double-walled with concrete masonry. The masonry selected is a tan-colored split face concrete masonry unit (CMU) of standard dimensions. The 8” thick walls were solidly grouted and insulated on the inside face. Both buildings have an exterior wainscot of natural rock veneer up to the window sill level. Clerestory windows provide daylighting to the interior. Windows are double-glazed and lo-flow plumbing fixtures were used throughout. The project was completed in 2012 at a cost of $3,600,000.

Why Masonry? The architect designed with CMU for durability and its thermal characteristics. Concrete is a relatively inert material not subject to rot, water absorption or deterioration from solar or organic causes. It transmits heat or cold very slowly (thermal lag) and protects the interior spaces from the heat of the day and the direct sunshine. Morgan Hill is in South Santa Clara County and has very hot summers. The use of Concrete Masonry in this instance saved both heating and cooling energy.

ANDERSON VISITOR CENTER
MORGAN HILL, CALIFORNIA

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OWNER:
County of Santa Clara, State of California
Department of Parks and Recreation

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Marvin A. Bamburg, AIA, CSI, LEED® AP,
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CMACN 2014 April Issue of “CMU Profiles in Architecture”
Architect’s Commentary: The new 20,150 square-foot, Multi-use Gymnasium at Upland High School developed from a campus-wide Master Plan. The “gym” became a reality due to increased demand for additional basketball, volleyball, a variety of dance and cheer programs, along with the need for a large, multi-use space for a variety of other school and community activities and events.

The facility is comprised of an 11,700 square-foot gymnasium, 3,600 square feet of dance and aerobic classrooms, and 800 square feet of restrooms on the first floor, with 4,050 square feet of multi-use classrooms on the second floor. The main gym has a rubberized synthetic sports floor that allows excellent performance for athletic and cheer events, while maintaining a good floor for maintenance/acoustics for multi-use activities such as assemblies, testing, and community events.

Why Masonry? After a careful analysis and comparison of structural systems for the new gymnasium including steel brace frame, concrete tilt-up, wood, etc., concrete masonry units (CMUs) were selected as the prominent building material. The inherent properties of concrete masonry units such as permanence, efficient constructability, excellent structural properties, extreme durability and virtually no maintenance is perfect for a high school campus. CMUs were also the most cost effective for the project’s modest budget of $4.8 million.

Additionally, matching the design aesthetic of the existing campus was very important. The adjacent classroom buildings’ design and construction are short concrete tilt-up panels with integral tan stones as the finish...“old school”. Concrete masonry was the perfect material to transition between the old and the new. 12” and 8” split face, center scored, burnished and precision units were utilized. A simple “layering and patterning” of these varied natural colored units broke down the large scale of the building, giving it a more textural and articulated look. The concrete masonry units were also carried seamlessly into the site work for retaining walls, stairs, ramps, planters and seat walls.

The Gymnasium and classroom building integrate a number of sustainable elements and features. The first of which is using concrete masonry units as the primary and prominent building material. It is both a structural solution and a finish material. CMU meets a number of the LEED® (Leadership in Energy and Environmental Design) and CHPS (Collaborative for High Performance Schools) elements and points. CMU provides thermal and insulating properties for the perimeter wall of the gym, and is a locally available material. CMU provides excellent durability and low maintenance for a High School facility.
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MASONRY CONTRACTOR:
Concept Builders

BLOCK PRODUCER:
Angelus Block Company, Inc.

OWNER:
Church of Perfect Liberty

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Lauren Miyake, Lauren Miyake Photography

Architect’s Commentary: The Church of Perfect Liberty spent over 20 years in the planning and building of this facility. Sustainability has always been a main focus, and the building’s solar roof was on the top of their shopping list from day one. In addition, the community collaborated on other various ways to create a safe and secure place for the community, both physically and spiritually. From these discussions, a photovoltaic roof and battery back-up were installed to provide disaster relief in the case of a power outage. Natural lighting, cross ventilation, and fully accessible storefront windows were also consciously selected options to provide the community with an energy independent gathering space.

Why Masonry? The blending of religious symbolism within the local residential community was especially important in creating a design theme for this church with deep roots in Japan. The use of a split face concrete masonry unit was an ideal selection for achieving the sense of openness into the community, representing the Western culture. In contrast, the high gable roof retained the residential flavor, reflecting the high roof congregational space, symbolic of Eastern culture.

This church provides two services to different language groups, and even provides a safe space for children and toddlers to participate. The sound proof room that is visually attached to the main chapel allows for parents to listen and watch the service without having to worry about their children creating a distraction for the rest of the congregation. The facility is ADA approved and fully accessible for all. The multi-purpose area provides a space for patio parties that invite neighboring communities, emphasizing the church’s vision to be a welcoming place for a diverse audience regardless of differences in race, gender, age and religion.
Architect's Commentary: The City of Signal Hill required a new Police Facility that was cost efficient and durable that would represent the Art Deco founding of Signal Hill while respecting the environmental friendly thinking of the Citizens of Signal Hill. The new facility would feature a dispatch center with state-of-the-art communications systems and an Emergency Operations Center which would enable the City to assist its community and nearby public-safety agencies during emergencies and natural disasters.

The 21,500 square-foot facility was constructed on an improved 3-acre site that has the typical sloping terrain of Signal Hill. The facility was designed for future expansion to meet the long-term needs of the police department and to achieve a LEED® Silver Certification. Solar panels have been installed over the parking shade structures. Windows, including clerestories at the hallway, have been designed to allow natural light throughout the building and an automatic lighting system adjusts its electrical lights to maximize the use of natural light. A drip-irrigation system waters the drought-tolerant plants and water runoff on the property will pass through vegetated bio-swales before drained into the street.

Why Masonry? Concrete masonry units were selected as the best material for the building envelope and site walls to realize the highest building-safety and seismic standards to withstand major earthquakes and other disasters without compromising structural integrity. Gray split-face and precision concrete masonry units were used under pure white plaster and blue standing seam metal roof accents, which together reflect the requested Art Deco Design. Plastered concrete masonry units, painted steel, and glass are the only materials found on the site and work together well to make the facility an inviting, and secure Public Safety Facility.
Architect’s Commentary: The 17th Street Beach Safety Center houses all of the functions the lifeguards need in order to perform their job efficiently and effectively. The new facility houses these functions under one single roof instead of separated into three buildings as the old facility previously had. The aesthetic quality of this building was very important to the community of Del Mar. During concept design and throughout design development, the design team held several meetings with community leaders to get their input on the aesthetics of the building. It was agreed upon that the small, but prominent building, would need to fit in with the neighboring beach community, but it was important to create a building that made an impact.

Why Masonry? Concrete masonry units (CMUs) were selected as the primary building component for their durability, aesthetics, and ability to withstand the harsh salt water environment. The CMUs were accented by more uncommonly used materials and details. Exposed glu-lam beams and an out-of-the-ordinary curved roof added more interest to the building. Additionally, the board-formed concrete walkway covering the new culvert was designed to look like the boardwalk, creating much more impact and an attractive beach access for locals and visitors. Around the building, planters and seat walls incorporating local artists’ work add local and personal design elements to the site. Decorative tiles, benches, and trellises flanking the boardwalk were donated by community members, further heightening the sense of pride the community feels at having this new facility.
Architect’s Commentary: This is a new facility for Knight transportation, a large trucking company. Their ever growing fleet needed an additional facility to park, store and maintain their vehicles. The first phase of structures on site is the business office and lounge for drivers. The second phase will include five repair bays for their vehicles. The third and final phase will be an addition to the office. The owner’s on-site operations include fleet fueling, repair, dispatch and storage.

Why Masonry? The use of masonry was a key element in the initial phases of design due to its durability and rugged beauty. The owner required a material that could be water-resistant, provide support for high, open bays and be the finish material on the exterior. Honed, and split face masonry with integral color were used to create contrasting patterns on the exterior in addition to natural sandstone and stucco.

Steel trellis structures provide shading on the west and south sides of the building, helping to reduce heat gain and sun infiltration into the lounge and training rooms.

Having masonry as the integral part of the design satisfied the client’s needs by providing a durable, secure building and a structure that will be used for many years to come.
MOORPARK COLLEGE
HEALTH SCIENCE CENTER
MOORPARK, CALIFORNIA

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BLOCK PRODUCER:
Angelus Block Company, Inc.

OWNER:
Ventura County Community College District

©PHOTOGRAPHY:
John Linden, John Edward Linden Photography

Architect’s Commentary: Opened in 1967, today the Moorpark College campus educates 15,000 students in the Simi Valley/Agoura/Thousand Oaks area.

Why Masonry? The original Masterplan and design was developed by noted Los Angeles modernist firm Daniel, Mann, Johnson and Mendenhall (DMJM) and the campus has been careful to preserve and extend the original architectural language, massing, and materiality of the legacy buildings as the campus has grown and modernized. Accordingly, this new two-story, 42,960 square-foot Health Science Center is crafted with the campus’ primary palette of sand colored concrete masonry, white plaster and precast concrete outriggers connecting the new building both literally and figuratively with the historic buildings.

The program for the $23,900,000 structure includes nursing, radiology technology, EMT, health information technology and home health care. The center also houses anatomy, natural sciences and the industrial biotechnology programs. Additional shared science labs and support functions include integrated specialized instruction environments for healthcare and biotech professions.

This building is sited at the northeast corner of campus, defining a central open quad and connecting via a bridge as the third link in a chain with two other science buildings. Several sustainability goals are quietly delivered in the design. The building was sited to save a line of legacy pine trees, which then provide shade and character to a quiet sciences garden along the south side of the building. The campus’ first planted roof covers the administrative building, offering the landscaping to an outdoor study terrace on the second level. Daylight is brought deep into all the labs via three huge light monitors in the center of the cool white roof. All circulation is on the exterior of the building through covered arcades and open breezeways that separate the lab/learning block from administrative and support spaces on either end.
Architect's Commentary: The Santa Maria Valley Humane Society project consists of a main adoption center building, five adjacent kennels and several site walls. The Humane Society is a non-profit organization that operates the only ‘no-kill’ animal shelter on the Central Coast of California. Palacios Architects was chosen as the firm to plan, design and administer the construction of their new 22,000 square-foot facility located on Stowell Road in Santa Maria, California.

Why Masonry? For any Client, but especially for a non-profit organization, the value of the finished product is not only in how it looks, but how it performs. With this premise in mind, in addition to the architecture of the buildings, our firm was very concerned with the issue of durability and long term maintenance of the kennels. Cleanliness for the animal population requires extensive use of water and mild detergents, so we needed to specify materials that would hold up well under such conditions. Concrete masonry unit (CMU) construction for these buildings was a natural choice.

The use of concrete masonry units for the kennels allowed both the flexibility of conforming to our design aesthetic, and the durability that the facilities require. Given the stringent seismic codes in California, the detailing of a CMU building is crucial. Our Engineering Consultants, Smith Structural Group, LLP, worked with us to provide the clarity needed for the construction documents. The General Contractor, Dan Blough Construction, Inc., also worked with our firm to ensure that the construction conformed to the plans and specifications. Due to the diligent planning of our design team and the cooperation of the Contractor, the construction schedule for these buildings was met without significant impacts.

The concrete masonry site walls were installed quickly, then plastered and finished with a decorative concrete cap to serve as both screen walls and seating areas. Achieving the radius portions of the design was facilitated by the use of CMUs with an attractive finished product that enhances the overall site design.

The buildings are now occupied and are performing in the manner we had anticipated. We have confidence that they will serve their purpose for many years to come. The Humane Society staff and Palacios Architects have been pleased with the materials choice for these buildings.
Architect's Commentary: Harley Ellis Devereaux (HED) was commissioned to revitalize an existing park and community recreation center. Designed to LEED® Certification, this project has transformed a loosely defined set of facilities into a new focal point for the town. When HED began work on the project, the original fire station had just been replaced and the existing recreation center was showing signs of wear and tear. The new project has added a library, child development center, administration building, a skateboard park, basketball courts, multi-use turf areas for softball and soccer, public restrooms, picnic shelters, a maintenance building and shaded parking lots.

The buildings have been oriented and clustered to take advantage of natural light, create complementary, sheltered outside spaces protected from the wind, and add a strong civic presence to the community. Butterfly roofs provide soaring interior spaces and permit generous day lighting while protecting windows from direct heat and glare. Natural ventilation has been used throughout the facility.

Why Masonry? Concrete masonry walls became key components to the redevelopment and refinement of the complex. Smaller pavilions and service pavilions which need to be protected and low maintenance have concrete masonry walls which are blended in with simpler plaster planes and Treks Siding. Because of the varied programs sharing the same public space and some significant grade changes across the site, there was a need for both extensive retaining walls and solid enclosure screens for outdoor play spaces. These became an opportunity to add texture and a degree of playfulness to the overall material palette of the park and community buildings. The walls are built with 4” coursing. Two integrally colored, honed masonry units were used to create distinctive staggered horizontal patterns that complement the other colors and materials employed throughout the complex. Beautifully executed, they add a finer grains scale and visual punch while recalling the hues and striations of the surrounding desert landscape.
Concrete Masonry Association of California and Nevada

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• 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 2013 award winning projects can be viewed at www.cmacn.org.

Please contact the CMACN Office at (916) 722-1700 or info@cmacn.org with any questions.

The 2015 CMACN/AIACC Concrete Masonry Design Awards “Call for Entries”

The 2015 CMACN/AIACC Concrete Masonry Design Awards competition “Call for Entries/Request for Binders” will be available at www.cmacn.org January 2015.

2015
CMACN/AIACC CONCRETE MASONRY DESIGN AWARDS
“CALL FOR ENTRIES”

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