“Keep my children safe and sound. Build their schools out of concrete masonry block.”
ARCHITECT:
Carpenter Sellers Architects
1919 S Jones, Suite C
Las Vegas, NV 89146

W. Rick Sellers, AIA
Principal

Michael Del Gatto, AIA, LEED AP
Principal

Robert Gurdison
Director of Design

STRUCTURAL ENGINEER:
John A. Martin and Associates

GENERAL CONTRACTOR:
Sletten Construction of Nevada

MASONRY CONTRACTOR:
Ramco Masonry, Inc.

BLOCK PRODUCER:
Trenwyth Industries, Inc.

OWNER:
Andre Agassi Charitable Foundation

Architect’s Commentary: The Andre Agassi College Preparatory Academy (AACPA) was founded in 2001 to provide academic programs designed to enhance a child’s character, respect, motivation and self discipline in one of the most at-risk neighborhoods in Las Vegas. Child centered education in a small classroom setting of 25-1 nurtures a sense of responsibility within a safe and trusting environment.

Our goal was to develop an overall vision for the school that reflects and enhances the educational experience, creating a school that the students are aware is unique and special. The 138,840 square-foot school is located on a 7.89 acre site.

CMU block was used as a primary building agent because of durability, low maintenance and longevity. The different styles of CMU allowed Carpenter Sellers Architects (CSA) to achieve the design we wanted. By using multiple, decorative finishes such as smooth finish, sandblasted finish, mesastone, seashell, etc., we were able to use concrete masonry block as a featured element of the school.

Different territories are designed to inspire lower grades to become a part of the upper levels. This creates a campus that symbolically celebrates the matriculation process and accomplishes 2 distinct missions: 1st create a sense of “what’s next” and 2nd allowing age appropriate areas. The High School is the final culmination and reveals itself slowly as you journey down the spine of the campus. This sculptural shape is the terminus for the mall. This special design piece is also part of the graduation ceremony and fundraising. AACF requested a space for fund raising with views of Las Vegas. CSA conceptualized a third floor deck that met AACPA’s needs, but proposed an idea that was accepted with enthusiasm to create tradition through architecture at the school. CSA proposed a bridge from the roof deck to a smaller roof deck that spanned over the High School Quad below that will serve 300 as the commencement bridge. A student does not cross the bridge until graduation. It is here that CSA wished to express that the students’ journey does not end at Agassi Prep; the journey continues……
THE UNION
SAN DIEGO, CALIFORNIA

ARCHITECT:
Jonathan Segal, FAIA
1945 B Street
San Diego, CA 92102

Jonathan Segal, FAIA
Principal

STRUCTURAL ENGINEER:
Mobayed Consulting Group

GENERAL CONTRACTOR:
Jonathan Segal, FAIA

MASONRY CONTRACTOR:
Masonry Unlimited

BLOCK PRODUCER:
RCP Block & Brick, Inc.

OWNER:
Jonathan Segal, FAIA

Architect’s Commentary: During the 70’s San Diego had a flourishing textile business and strong union membership. The Golden Hill area directly adjacent to the San Diego Freeway and Downtown became home for the textile manufacture’s union hall. Subsequently, the union and textile manufacturing industry moved away and the site fell in disarray. Rather than demolishing the nondescript 70’s slump block building, the architect took a sustainable approach, and acting as owner/developer/contractor, decided to adaptively reuse the building as a fully sustainable edifice with two affordable live/work lofts and his own architectural office.

In addition, the property provided two parking lots that are now developed to include 13 individual “for rent” sustainable town homes. Conceptually the homes are designed to harmonize with the neighborhood, have significant individual presence on the street, and substantial private outdoor space connected to the interiors by an abundance of glazing.

Along with the adaptive reuse of the site and buildings, other sustainable features of this project are seen throughout. Concrete masonry was utilized to provide a strong contrasting base for the entire project and to help unify the new and old buildings. Each unit generates its own power from roof mounted photovoltaic panels and has landscaping with drought tolerant plants. Cross ventilation was used to eliminate the need for air conditioning. Abundant daylighting was included for every room in each unit.

No subsidies or variances were provided for the city of San Diego.
**Jewish Synagogue**

**San Francisco Bay Area, California**

**Architect:**

**Glass Architects**

200 E Street

Santa Rosa, CA 95404

Eric M. Glass, AIA

*Principal*

Craig W. Roland, FAIA

*Design Architect*

**Structural Engineer:**

Dasse Design, Inc.

**General Contractor:**

Oliver & Company

**Masonry Contractor:**

Inland Masonry, Inc.

**Block Producer:**

Calstone Company, Inc.

_Architect’s Commentary:_ Upon awarding the commission for this new synagogue, the first question the congregation leaders asked of the architectural team was, “Can this project be accomplished on this site?” The answer required considerable study because the property in question was a dramatic hilltop overlooking the city in all directions, but steep and fraught with such problems as access, earthquake faults, and potential endangered species protection. Parking for 115 cars was mandatory, and fire and emergency access was an essential and complex city requirement. The project required an initial phase of 10,200 square-feet of multi purpose space including sanctuary, offices, classrooms, and outdoor activity terrace. The site also needed to accommodate substantial future expansion.

After numerous studies, the solution emerged in the form of creating terraced pads to accommodate the buildings, parking, and drives, with the terraces supported by retaining walls, which were eventually determined to be most comfortably handled by concrete masonry. Some of the walls were curved to follow site contours and this shape also became the featured block wall of the building façade and interior lobby.

The building became a 10,000 square-foot collage of rectangular functional rooms and unique curved-wall spaces. Included in the latter is the main sanctuary, which has a semi-circular spatial projection that allows large quantities of natural light through Kalwall windows and focuses seating on the bima. The torah enclosure at the rear of the bima is flanked by stained glass windows. Besides the featured block wall, the exterior materials are primarily stucco with glass looking into the terrace from offices and meeting rooms. There is a roofscape above the broad flat roof of clerestory projections sheathed in red corrugated metal directing light into the sanctuary and entry.

The future expansion will occur at the other side of the entry terrace enclosing it and giving additional security to the entire complex.
Bakersfield Fire Station No. 5 and Police Substation

Bakersfield, California

Architect of Record:
RRM Design Group
3765 S. Higuera Street, Suite 102
San Luis Obispo, CA 93401

Victor Montgomery, AIA
Principal

Structural Engineer:
Cornerstone Structural Engineering Group

General Contractor:
Wallace & Smith

Masonry Contractor:
Preston Masonry, Inc.

Block Producer:
Angelus Block Company, Inc.

Owner:
City of Bakersfield

Architect’s Commentary: The City of Bakersfield requested a new joint-use facility incorporating a 7,125 square-foot fire station, a 618 square-foot police substation, and a future 1,500 square-foot community room to be constructed on a 1.3 acre site.

The facility’s architectural style compliments the existing site, which is bordered by an airport, industrial area, and agricultural use property. The design incorporates split-face, earth-tone concrete masonry to provide mass, tie building forms together, and evoke a sense of permanence and security. The complementary forms of the CMU entry pilasters and apparatus bay walls create a vertical accent to support the roof forms, defining the building entry and evoking images of airplane hangars from the neighboring airport. Masonry’s inherent ability to weather and age gracefully was a primary consideration for a long lasting civic presence in a growing community.

Since firefighters, police, and community members will all use and have access to the facility, the design needed to solve each group’s needs. Living quarters were placed in close proximity to the apparatus bays and secure parking to ensure efficient operations and quick response time of firefighters and police. The massing of the CMU balances the transparency of the glazing to help visually define the distinction between the facility’s public or private spaces. Accommodations were made for future growth for both a community room or additional bunkrooms.

The use of CMU creates efficient and low maintenance apparatus bay and turnout areas, which typically require high maintenance. Its thermal mass tempers the exterior temperature fluctuations and provides a more energy efficient interior climate, which ultimately minimizes heating and cooling costs. Daylighting was incorporated into interior spaces to further decrease energy consumption.
Architect’s Commentary: The four recently constructed buildings located in the Fairway Industrial Park in Santa Maria, California, are the first of 20 individual lots on site to be developed. All buildings were designed using reinforced concrete masonry units (CMU) for their exterior walls and parapets, along with storefront window systems and skylights to provide natural light within the space. With the wide variety of colors and textures available to us from the block manufacturer, we were able to develop an overall site plan that shows a continuity between the buildings, while still giving them their own color schemes and individual characteristics to make each one stand out from the others.

The project was originally designed to house 22 individual 5,000 square-foot CMU buildings, each on their own lot, that incorporate warehouse and office usage. It was meant to be as flexible as possible to meet the needs of potential buyers and allow for a wide variety of building options. We took advantage of this flexibility during the initial phase of development by combining two lots and buildings into one 10,000 square-foot CMU building on a larger lot. This was done twice during the initial phase to accommodate a television studio and an auto parts distribution warehouse.

The auto parts warehouse posed a difficult problem in that it needed to have a clear height within of 26'-0" with minimal columns to interfere with their racking system. To achieve this height, a 10" thick block was used along with steel reinforcing to get the necessary strength and stability needed from the wall, and to allow the masons enough room within the wall cavity to vibrate the grout mix down into each cell.

The use of concrete masonry block has provided us with aesthetically pleasing exterior finishes, good durability, and low exterior maintenance costs over the life of the building, assuring our clients that their building will be there for them for years to come.
The first floor clinic provides comprehensive medical treatment and psychological counseling services to over 20,000 patients per year. It accommodates emergency response vehicles, patient examination rooms, and counseling center, laboratories, as well as medical record storage, nurse and staff facilities.

The second floor uses an efficient geometric structural grid and double-loaded corridor to hold ten new interdisciplinary classrooms. The classrooms’ large operable windows provide bright, natural light, and utilize the marine environment for natural cooling, thereby reducing energy consumption.

The main entry faces into campus, and onto the site of a future quad, developed as part of the campus’ master plan. Exterior circulation separates the first and second floor programs, and connects the new building to the terrace level of the existing Arts Extension Center, via a new bridge.

The health center not only serves its patients as a working clinic, but functions as a training site to the College’s student medical programs, preparing the next generation of healthcare professionals. CCSF’s Student Health Center is also committed to the city as a dedicated place of refuge in case of a disaster response situation. This new facility plays an important role in both the growth of San Francisco’s City College, and community welfare.
PERRIS COUNTY COMPLEX
PERRIS, CALIFORNIA

ARCHITECT:
HDR Architecture, Inc.
251 South Lake Avenue, Suite 1000
Pasadena, CA 91101

Paul Nagashima AIA
Design Principal

Alan Korth, AIA
Principal-in-charge

Curtis Lockwood, AIA
Project Manager

Pari Tivay, AIA
Project Architect

STRUCTURAL ENGINEER:
HDR Architecture, Inc.

GENERAL CONTRACTOR:
RDK Consulting, Inc.

MASONRY CONTRACTOR:
ASR Constructors

BLOCK PRODUCER:
ORCO Block Company, Inc.

OWNERS:
County of Riverside, California

Architect’s Commentary: The Perris County Complex, located in the city of Perris, in Riverside County, California, includes a 49,242 square-foot Sheriff’s Station, a 28,991 square-foot Forensic Services and Evidence Warehouse facility, and a 24,870 square-foot Family Health Clinic.

The 17 acre site includes planning for a future 75,000 square-foot building and County of Riverside Maintenance Building. The Master Planning concept is designed around pedestrian access to the buildings placing each building closer to the street for access, and includes meandering sidewalk pathways throughout the site to better facilitate access. Landscape design is low-maintenance, low-water usage, high desert plant types, which are native to California.

The Perris Family Health Center is located on an opposite corner of the site from the Sheriff’s Station to provide separate access, while still maintaining a visual continuity necessary to create a civic campus presence.

The building materials are designed to be cost effective, durable, and low maintenance, achieving extended life of the structures. Tile roof elements at the entries, in combination with masonry exterior walls, enhances the civic campus feel.

Concrete Masonry was an ideal selection for the Perris County Complex. In addition to its durability and low maintenance, the ability to integrate multiple specialty products into the design allowed the exterior to achieve a level of quality befitting a civic structure. The use of split face and decorative block in both exterior details and interior courtyards, serves to tie the spaces together. Consistency of masonry across multiple adjoining structures and details provides continuity throughout the campus. In its color and finish, the concrete masonry units compliment the material palette, reflecting the natural desert context.
The Robert E. “Bob” Price Recreation Center—the result of a collaboration between Lee & Sakahara Architects and both Clark County Real Property Management and the Clark County Parks and Recreation Department—provides a long-awaited, multi-purpose facility supporting a variety of athletic, educational programs and events for local residents of all ages.

The prime objective of the project was the development of a new facility that would integrate with the existing Cora Coleman Senior Center, and provide a seamless interaction between both institutions to strengthen the services available as part of a continuing effort, by Clark County, to enhance newly revitalized North Las Vegas.

The Modern Classical design is meant to evoke a sense of civic recognition and pride befitting its named benefactor. The majority of the 18,986 square-foot structure is built of masonry capped with a standing seam metal roof. The overall mass is broken down into multiple facades, with the CMU set on a constant arc, the designer created a spiral component, evident in plan and elevation.

The concrete masonry design appears on the interior at the Front Desk, Lobby Walls and Gymnasium areas, with the banded concrete masonry block walls contributing to the blurring of the boundaries between indoor and outdoor spaces by giving them equal treatment, into a cohesive Architectural statement.

Recreation Center Details
- Multi-use 7,700 square-foot Gymnasium with one full-size and two half-size Basketball Courts, two Volleyball Courts and three Paddle Tennis Courts.
- Accredited and licensed 870 square-foot Preschool, with adjacent 1,700 square foot Outdoor Playground.
- Centralized, 960 square-foot Administration Area and Front Desk.
- Flexible, 2,300 square-foot, Multi-Purpose Recreation Room, with folding room divider.
- Mirrored 992 square-foot Dance Studio with wood flooring.
- Integrated, Computer-ready 973 square-foot Teen Activity Room.
- Multi-function Lobby and Outdoor Patio for special events.

Design
- Self-contained, low-fire Packaged Central Plant, Air Conditioning and Heating System, utilizing 25-35% less energy than traditional buildings.
- Glass windows with exterior coating and stainless steel radius shade structure to prevent glare and reflect heat away from the building.
- Center-spine skylight used to capture outside light from the rooftop and channel it into the building.
- Desert Landscaping.
- Extensive use of Concrete Masonry Units (CMU) through out facility to meet structural and energy saving requirements manufactured locally.
Bermuda 2538 Zone Pumping Station
Henderson, Nevada

Engineer:
Carollo Engineers
376 East Warm Springs Road
Las Vegas, NV 89119
Eric Leveque, P.E.
Principal in Charge

Architect:
Lucchesi Galati
500 Pilot Road, Suite A
Las Vegas, NV 89119
Raymond Lucchesi
Principal
Craig Galati
Principal
J. Denise Cook
Design Architect

General Contractor:
J. A. Tiberti Construction

Masonry Contractor:
Scott Zemp Masonry

Block Producer:
Cind-R-Lite Block Company, Inc.

Owner:
Las Vegas Valley Water District

Engineer’s Commentary: The Bermuda 2538 Zone Pumping Station is located in the City of Henderson, Nevada. The pumping station can deliver up to 25 million gallons a day of drinking water to customers of the Las Vegas Valley Water District. State-of-the-art telemetry allows the four 300-horsepower pumps to be controlled and monitored miles away at the District’s central location.

The station’s location is fairly remote today, but it is sited in a growing area and can easily be seen by commuters from a nearby expressway. While the main function of the station is to provide water efficiently and dependably, the Water District is keenly aware of its public image and directed the design to be aesthetically pleasing.

To provide good hydraulic conditions, the pumping units needed to be below grade. The building above the substructure would have to house a 5-ton bridge crane to bring the heavy pumps up to grade level for maintenance. The required size of the above grade building would measure 175 feet long, 75 feet wide, and rise more than 25 feet above the grade. To meet the Water District’s aesthetic directive and still be cost effective, the engineer and architect developed a design with a curved metal-roofed concrete masonry building over a reinforced concrete substructure.

Concrete masonry was chosen as the material for the building walls because it was readily available in the area, was familiar to local contractors, and allowed the architect the flexibility to enhance the visual impact of the large building. Both split-face and buff-face decorative colored CMUs were used for constructing the walls, while architectural precast concrete columns were provided for bridge crane, wall, and roof support. The seismic requirements for the tie-in of the walls to the precast concrete support columns and the curved roof demonstrates the adaptability of concrete masonry to meet stringent structural conditions. A graffiti protection coating was applied to the exterior wall surfaces to accentuate color and reduce maintenance.

Photography: Greg Gould, Carollo Engineers
ARCHITECT:
Durrant Group
410 North 44th Street, Suite 800
Phoenix, AZ 85282
Larry Smith, AIA
Principal-in-Charge
Brad Schultz, AIA, LEED AP
Project Manager

ASSOCIATE ARCHITECT:
Taylor Teter Partnership
7533 North Palm Avenue, Suite 300
Fresno, CA 93711
Loren Aiton, RA, LEED AP
Project Manager

STRUCTURAL ENGINEER:
Middlebrook + Louie

GENERAL CONTRACTOR:
R. Pedersen & Sons

MASONRY CONTRACTOR:
Bratton Masonry, Inc.

BLOCK PRODUCER:
Blocklite (A Division of Basalite Concrete Products, LLC)
Trenwyth Industries, Inc.

OWNER:
Kings County

Architect’s Commentary: In Kings County, Hanford, California, Durrant programmed and master planned a 500-bed Jail, Sheriff’s Office and Forensics Facility to replace two existing jails and office. The initial phase of 100,000 square feet was constructed, consisting of 362 beds in two indirect supervision housing units with central control, intake, video visitation, and video arraignment court. The introduction of video visitation and video arraignment at the facility was one of the first in the state of California and saves significant operational costs to the County by not transporting inmates to visitation or court.

This jail is located in an area where a mix of commercial and residential development is occurring. Therefore, it was designed to blend the facility into this setting by removing building features typically associated with jails and adding features not found in jails. Inmate cell window and recreation yards are located away from the public view, and the perimeter walls of the building are reinforced for security to eliminate the perimeter fencing. The exterior walls are rendered in colored split face concrete masonry for warmth and scale. It is built using three colors applied graphically to the walls to reduce the apparent size of the building. Day lighting of the jail cells is by windows to the adjacent dayroom with skylights. High bay outdoor recreation yards are located in the core of the building and are open to the elements above.

Concrete masonry units are used extensively for load bearing walls; where higher loads are present, additional steel reinforcing bars or columns are concealed in the cores of the masonry. Thicker masonry units were used for the freestanding cantilever walls surrounding the vehicle sallyport. In the kitchen and inmate shower areas, glazed block was used to provide an impervious and low maintenance wall finish.

The building is organized along the central corridor, which accommodates all of the movement of people and contains infrastructure that is capable for expansion to suit future building additions. Use of concrete masonry units will facilitate facility expansion without use of specialized construction methods and the flexibility of the masonry lends itself to a variety of purposes whether it is pertaining to weather, security barrier, structural element, interior partition or wet walls.
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- Technical information on concrete masonry for design professionals.
- Protect and advance the interests of the concrete masonry industry.
- Develop new and existing markets for concrete masonry products.
- Coordinate members’ efforts in solving common challenges within the masonry industry.

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