Profiles in Architecture

January 2014 Edition

CMU

Why Masonry?

www.whymasonry.org

Concrete Masonry Association of California and Nevada

Inside this Issue

U.S. Army Reserve Center / OMS / UHS

Las Vegas, Nevada

Architect:
Mason & Hanger
300 West Vine Street, Suite 1300
Lexington, KY 40507

Aasiya M. McCoy, AIA, LEED® AP BD+C
Design/Project Principal

Structural Engineer:
Mason & Hanger
General Contractor:
MW Builders, Inc.
Masonry Contractor:
A-1 Masonry & Sandblasting
Block Producer:
CEMEX
Owner:
U.S. Army Corps of Engineers
©Photography:
Abstract Photography, Inc.

Architect's Commentary: The U.S. Army Reserve Center (USARC) just outside Las Vegas, Nevada includes four buildings totaling 99,908 square-feet: a Training Building, Unit Storage Building, Organizational Maintenance Shop, and an Unheated Storage Building. This USARC will support 800 permanent reservists, full-time support personnel, and additional military and civilian personnel on a visiting basis.

Administrative areas include private offices, administrative common spaces, recruiting and retention offices, mail room, and a family support office. Educational spaces include classrooms, library reading and storage, a learning center, training aid storage, and weapons simulator. The Assembly Hall includes kitchen and chair/table storage. Physical fitness area, weapons vault, storage cages, and facility maintenance/operation/support areas are also included.

The Training Building is designed to blend into the site and the mountains beyond. The design lowered the roof and created office space in what would have been unused attic space. The private offices form the edges of a large open administration space.

Why Masonry? The large curvature of the building façade increased the length of exterior wall and allowed for additional office spaces to have daylighting. We were able to achieve a smooth curve by segmenting the radius of the concrete masonry unit (CMU) walls into large sections. Anti-terrorism requirements were met through the use of CMU walls by providing a stout structure for the blast resistant windows. The concrete masonry unit walls were utilized as special reinforced shear walls. This provided an economical means of achieving the high seismic design requirements for the Las Vegas area. The use of CMU walls is preferred in Training Buildings in order to withstand the abuse from the soldiers during their weekend drills.

The facility was designed in accordance with the Energy Policy Act of 2005. In addition to compliance with the standard, the building was designed to achieve an energy consumption level that is at least 30% below the level achieved under ASHRAE Standard 90.1. It also utilized solar panels on the parking canopy structures. The project was designed to a LEED Silver rating.