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Northwest Concrete Masonry Association, helping put concrete masonry to work for you.
Uptown Gig Harbor was always meant to be more than an ordinary shopping center. The retail project includes 165,000 square feet of shopping space configured in 14 structures that house retail stores, restaurants, and a 2,500 seat cinema. Shoppers at Uptown Gig Harbor enjoy pedestrian walkways, outdoor seating, lush landscaping and water features that offer a comfortable respite from the big box retail of the last decade.

The design/build team of Hansen, Hansen & Johnson Architects and HHJ Construction Inc., transformed a wooded, 30-acre site into a modern shopping center that is, in essence, an “anti-mall.” Uptown Gig Harbor deliberately avoids the predictable “Disneyland” look, says architect Robert H. Kleven, AIA, by creating more of a lifestyle commercial center “built with a tapestry of unique concrete masonry structures that allow businesses like Panera Bread, Chico’s, and Borders to each retain their own distinct identity, while retaining the unity of the entire project.”

“This project is overwhelmingly built with concrete masonry,” says Kleven. “We gave the exterior of these buildings their own unique identity by using a variety of CMU, including split-face, ground-face, full block and half-high block. We also used a variety of stacking techniques—some double stacked and some aligned.” This variety is all part of the design goal to give the development a “constructed over time” look—similar to a community that retains a unique richness as it expands through the years—which helps add an authenticity to these commercial structures. “What we didn’t want was to have one humongous parking lot surrounded by retail structures that all look alike. Instead we wanted to create an understated, elegant façade with a feeling of permanence, and CMU does all of that,” Kleven states.

“We chose concrete masonry because it is very easy to work with and it gave us that sense of quality and permanence that we were looking for,” asserts Mr. Kleven. “We could have designed these structures with steel or wood stud construction with a veneer overlay, or we could go with CMU. When we compared the cost between those two options, the concrete masonry was the clear winner.”

The project developer, John Hogan, managing partner, Gateway Capital LLC agrees, “The use of concrete masonry allowed us to use a common, traditional construction source, and by varying the type of CMU, we achieved a ‘built over time’ look, which is very hard to create with other common materials.”

**CREDITS**

**OWNER** Gateway Capital LLC, Fife WA  
**ARCHITECT** Hanson, Hanson & Johnson Architects, Fife, WA  
**STRUCTURAL ENGINEER** PCS Structural Solutions, Seattle, WA  
**GENERAL CONTRACTOR** HHJ Construction Inc., Fife, WA
The award-winning Whole Barracks Renewal project in Fort Lewis, Washington has always had lofty goals. WJA Design Collaborative took on the challenge to design a new barracks that could provide energy efficient, aesthetically pleasing, functional living areas for 300 Army soldiers while also complying with safety requirements, such as anti-terrorism force and fire protection.

At the time of the proposed design, “the lead time on structural steel was about nine months, and the construction schedule just didn’t allow that type of delay,” says Steve Borman, president, Keystone Masonry Inc., the masonry contractor. “Rather than use steel, we proposed they use loadbearing CMU with hollow-core concrete plank floors.”

The Army Corps of Engineers agreed to use concrete masonry as the structural building material. The base of the building uses burgundy, split-face block, which continues up to the first floor window sills. From these sills on up, burgundy half-high, smooth-face CMU were used while the upper floor uses cream-colored units. “Using CMU definitely expedited the schedule,” states Borman. “I believe we put that building up faster with CMU than it could be done framed.” “Budget and schedule are critical elements to the Army,” says Dan Callan, principal, WJA Design Collaborative. “We were able to stretch the budget by using a structural concrete block masonry wall system that emulates the look and color of adjacent brick veneer structures.”

Another big advantage of using CMU on this type of project is that “it helps meet the progressive collapse and force protection requirements that can be pretty stringent for military projects,” says Mike Steinthal, Absher Construction Company. “If you use wood-frame construction, you have to go back and beef up the structure quite a bit to meet those same requirements. By using concrete masonry units and placing a little extra reinforcement and solid-grout, it allowed us to easily comply.”

This structure has been a huge success and is the first at North Fort Lewis to attain LEED Silver certification for its energy savings and sustainable features. The project was awarded a 2007 National Design Build Award. Regarding the success of using CMU on the structure, Ted Lewis, project engineer, Army Corps of Engineers says, “It met all of our needs and gave us adequate force protection. It blends in well with other structures at North Fort Lewis. It turned out really nice.”

CREDITS
OWNER Army Corps of Engineers, Fort Lewis, WA
ARCHITECT WJA Design Collaborative, Seattle, WA
STRUCTURAL ENGINEER WJA Design Collaborative, Seattle, WA
GENERAL CONTRACTOR Absher Construction Company, Seattle, WA
For a retailer on the scale of Nebraska-based Cabela’s, a day without customers and sales is a day of a significant amount of revenue lost. So when Cabela’s needed to get their new Post Falls, Idaho store up and running as soon as possible, they chose to build with masonry. The world-famous catalog and retail outdoor recreation outfitter selected The Pointe at Post Falls, an 800,000-square-foot-shopping center, for their 26th showroom location in the nation. While most of their expansive retail buildings have been constructed using precast concrete, Cabela’s selected concrete masonry units (CMU) to build the 125,000 square foot North Idaho store.

According to Mark Nienhueser, director of facilities for Cabela’s, the choice to go with CMU allowed wall construction to begin 4-6 weeks earlier than if they had waited for precast panels to be trucked in. Tilt-up walls were also ruled out, primarily because tilt-up would make impossible the efficiency of having electrical and plumbing work happening on the interior slab simultaneously with perimeter wall construction. With CMU, the store was able to get up and running quickly. “Masonry provided a better alternative to stay on schedule and on budget – it was an economical and aesthetic decision,” said Nienhueser. Patrick Linhart, Vandervert Construction’s project manager commented, “the use of masonry over tilt-up sped up construction by at least a month. A tilt-up schedule wasn’t going to work with this project.”

Another reason for the CMU solution to Cabela’s needs was the high quality of masonry craftsmanship and material available in the area, according to Pat Henkle, Vandervert superintendent. Henkle said, “the high quality of work really impressed Cabela’s – in this case masonry was the wisest choice.” Nienhueser added, “We’re very satisfied with what the contractors were able to achieve with both craftsmanship and schedule.”

Spilker Masonry was able to get the 26 foot high load-bearing gray block walls up in just six weeks. “The block walls not only serve as bearing walls, but also function as shear walls for the building as part of the lateral load resisting system” stated project engineer Andrew Douma. Once the walls were built, foam insulation was injected into the ungrouted block cores, the wall interior was furred out and finished, while the exterior was painted and sealed. Spilker also installed 4,000 square feet of Cabela’s unique blend of a manufactured river rock inside and out – one of the signature touches for all of their retail stores. At the main entrance the river rock accents the exterior log framing that almost completely disguises the structural CMU walls underneath.

CREDITS

OWNER Cabela’s, Sidney, Nebraska
ARCHITECT Crabtree, Rohrbaugh & Associates – Architects, Mechanicsburg, PA
STRUCTURAL ENGINEER Centerpoint Engineering, Inc., Mechanicsburg, PA
GENERAL CONTRACTOR Vandervert Construction, Spokane, WA
Concrete masonry was the construction material of choice for Spokane Public Schools when they set out to follow the Washington Sustainable Schools Protocol (WSSP) for High Performance Schools with the design of the new $14.3 million Joel E. Ferris High School Gymnasium, Health and Fitness Complex. The project actually exceeded WSSP requirements with its effective application of daylighting, energy efficiency, indoor environmental quality, commissioning, sustainable materials and site responsiveness. Insulating foam was injected into the cells of the structural block, low-E glass was used, steel extensions were used for shading and protection from sun, and local materials were used whenever possible for construction.

Said Greg Brown, director of capital projects for Spokane Public Schools, “many schools here were built in the 1960’s when sustainability and longevity were not made priorities – masonry conveys the character we want while giving us the energy savings and low maintenance costs we are looking for over the lifetime of our buildings.”

With this 54,000 square foot facility, NAC Architecture used a variety of building materials. Glu-laminated wood framing for exposed trusses is combined with concrete block, brick masonry, and metal panels. Approximately 83,000 concrete block were used in the project, including Castle White ground-face, and standard gray block. A custom blend of three different rich red tones in 4 x 8 x 8 brick was used for veneer complements.

The site for the new building was another factor in the masonry choice, according to project architect, Doug Heyamoto, AIA. “The form and mass of CMU blended well with the site. We wanted to introduce forms and materials that were rustic, and masonry fit,” said Heyamoto. He added that masonry was selected for this project because of its structural qualities, aesthetics, design flexibility, sustainability, and durability. “When you use it for loadbearing walls,” said Heyamoto, “you get finished surfaces inside and out.”

CMU was used for exterior walls, interior corridors, piers and as the foundation wall rather than poured concrete. Loadbearing 34-foot tall CMU walls in the gymnasium were designed for a strength of 1500 psi. Randy LaPlante of LSB Engineers commented “the masonry worked quite well – it’s hard to beat CMU for gym spaces.”

One of the design goals for Spokane Public Schools is to build schools that will last 50 years. “That is easy to do with masonry,” said Greg Brown. “Using masonry products in this school provides a durable, low-maintenance facility with the aesthetics our tax payers appreciate.”

**CREDITS**

**OWNER** Spokane Public Schools, Spokane, WA  
**ARCHITECT** NAC Architecture, Spokane, WA  
**STRUCTURAL ENGINEER** LSB Engineers, Spokane, WA  
**GENERAL CONTRACTOR** Levernier Construction Inc., Spokane, WA
Compartmentation fire containment strategy

Effective fire protection in buildings requires a balanced design approach including:
• Detection (alarms)
• Suppression (sprinklers)
• Compartmentation (non-combustible masonry materials)

The non-combustible compartmentation fire containment strategy complements other strategies to improve fire safety. It provides built-in, passive fire protection while active systems, sprinklers and smoke alarms, require a water source and a mechanical and/or electrical system to operate.

Containment with concrete masonry products that will never burn and will maintain their structural integrity is a vital part of a balanced design approach.

Designers and code officials should consider the reliability of fire protection from individual components versus the redundancy provided by the combination of all three balanced design strategies.