



Metal connects veterinary medicine facility

DWL Architects and Planners Inc. sought to create an iconic design for the **Equine and Bovine Center at Midwestern University's Animal Health Institute** in **Glendale, Ariz.** The design intent was for soaring, peaked roofs to echo surrounding mountains at Sonoran Preserve. Patterned brick walls represent the desert locale. Metal panels were specified to achieve desired colors and forms, and meet durability and maintenance requirements.

The lightness of metal panels allowed for large structural bays and column-free interior spaces. Additionally, nonporous metal wall panels, backed by rigid block walls, provide durable, cleanable surfaces that meet requirements for certification by animal welfare organizations.

Rachel Jebaraj, AIA, vice president at DWL Architects and Planners, says, "Metal played a crucial role in the delivery of this project, allowing for quick installation and minimal disruption to the campus during construction while helping us achieve our aesthetic and functional goals."

The scope of the 70,000-square-foot project was seven interconnected structures. The buildings have modular designs to accommodate future additions. In addition to an equine and bovine teaching and diagnostic building, it includes stables, paddocks, two shade canopies and two support buildings. The facility has large teaching workshops, treatment areas with padded walls for anesthesia and recovery, and housing for 20 horses and 20 cows. The support structures are used for feed, bedding and storage.

Most spaces in the Equine and Bovine Center have open barn doors; therefore, it was not feasible to use



Educational Market Activity

In June, educational construction was \$87.8 billion, representing monthly (9.3 percent) and annual (5.5 percent) decreases. Nonresidential construction and total construction recorded slight monthly declines and annual expansions. Nonresidential construction was 1.6 percent lower since the prior month and up 4.2 percent since last year. Total construction was down 1.1 percent for the month and rose 6.1 percent since last year.

Value of construction put in place in the U.S.

	Percent change June 2018 from		
	June 2018	May 2018	June 2017
Educational construction	87,855	-9.3	-5.5
Nonresidential construction	742,412	-1.6	4.2
Total construction	1,317,231	-1.1	6.1

Note: in millions of dollars, seasonally adjusted annual rate, as reported by the U.S. Census Bureau on Aug. 1.



Owner: Midwestern University, Glendale, Ariz.

Architect: DWL Architects and Planners Inc., Phoenix, www.dwlarchitects.com

General contractor: Chanen Construction Co. Inc., Phoenix, www.chanen.com

Louvers distributor: ThermAir Systems, Mesa, Ariz., thermairsystem.com

Louver installer: Midstate Mechanical Inc., Phoenix, midstatemechanical.com

Metal panel installer: Kovach Building Enclosures, Chandler, Ariz., www.kovach.net

Curtainwall: Kawneer Co. Inc., Norcross, Ga., www.kawneer.com, Circle #26

Doors: CornellCookson Inc., Mountain Top, Pa., www.cornellcookson.com, Circle #27

Louvers: Greenheck Fan Corp., Schofield, Wis., www.greenheck.com, Circle #28

Metal roof/wall panels: Rollfab Metal Products, Phoenix, www.rollfabmetal.com, Circle #29

Metal wall panels: Reynobond by Arconic Architectural Products LLC, Eastman, Ga., reynobond.com, Circle #30

traditional mechanical cooling systems. For shading and sun control, DWL Architects and Planners incorporated glazing, operable louvers and differing roof slopes. The various roof slopes maximize indirect daylight and guide upward flow and venting of hot air via an adjustable metal louver system at the apex. Additionally, the roof slopes are oriented to accommodate solar panels in the future.

Kovach Building Enclosures installed 21,000 square feet of Rollfab Metal Products' 22-gauge SL-175 standing seam roof system in Regal Blue. The roof panels have 1 3/4-inch-high ribs and two stiffening beads. Three panel widths were utilized: standard 18 inches, and optional 10 and 12 inches. Regal Blue closely matches Midwestern University's blue school color.

The roof panels were installed over solid substrate and open framing. They have a single-piece clip for thermal expansion and contraction. The same panels were continued in a vertical application as wall panels backed by concrete masonry unit walls.

Throughout the animal housing area, Midstate Mechanical Inc. installed Greenheck Fan Corp.'s op-

erable and fixed louvers. Louvers below roof peaks were painted to match the Regal Blue roof and wall panels. At the equipment storage and bovine treatment areas, CornellCookson Inc. supplied 12-foot-wide by 12-foot-tall, stainless steel, overhead coiling doors.

Silver metal composite material (MCM) panels used for rooftop screenwalls and panels near the main entrance to the teaching and diagnostic building coordinate with an aluminum curtainwall system at that entrance. Kovach Building Enclosures installed Kawneer Co. Inc.'s curtainwall and Arconic Architectural Products LLC's Reynobond MCM with Silver Metallic, three-coat, Fluoropolymer finish.

Midwestern University wants its Equine and Bovine Center to foster community partnerships with local ranchers, race courses and zoos. The teaching and diagnostic facility provides comprehensive veterinary services for larger animals including horses, cows and other large ruminants. University students gain hands-on experience in housing, handling and treating large animals throughout their life cycles. The \$25 million project was completed in January 2016.