

PLAINS TALK

A Publication of West Plains Engineering, Inc.

Sioux Falls WPE: ISU...Innovative Technology for Veterinary Medicine

• The College of Veterinary Medicine (CVM) was established at Iowa State University (ISU) in 1879, and has had significant influence on the agribusiness community of the state and region. As such, the College is responsible for providing leadership and programs to meet the needs of the State of Iowa for train-

ing, research, clinical/treatment and service in the field of Veterinary Medicine. ISU-CVM is the oldest public CVM in the nation, celebrating its 125th anniversary in 2005. In 1976, a building of 420,000 square feet was constructed for the CVM administration, five academic departments, the library, the Veterinary Teaching Hospital (VTH), the Veterinary Diagnostic Laboratory (VDL), and the Laboratory Animal Resources unit (LAR). The building's size remained constant for nearly thirty years until 2004, when the Bio-Security Level 2 facility was constructed adjacent to the VDL, followed by a 120,000 square foot large animal hospital addition completed in 2008. The building complex has undergone numerous internal remodels to accommodate program changes and



Lively murals awaken the reception waiting rooms.

to fit new equipment and technologies into existing spaces.

In 2004, the American Association of Veterinary Medicine evaluated the programs and the facilities, finding the need to improve the condition of the physical environment used to diagnose and treat animals and to teach future veterinarians.

Poor layout, overcrowding, wear and tear and deferred maintenance had contributed to the concerns.

InVision Architecture was challenged to remodel approximately 80,000 square feet of the facility, as well as incorporate a two-story office addition. JE Dunn Construction Company, Story Construction, ACI Mechanical, Blackhawk Automatic Sprinkler and DeVries Electrical Incorporated were just a few of the key players involved in the construction. The CVM Small Animal Hospital renovation and addition was designed with the purpose of reestablishing the College as a premier Veterinary Medicine College. In 2009, construction on the first of multiple phases was underway. Construction of the \$45,000,000 animal hospital was completed in May 2012. Multiple phases

Sioux Falls WPE: ISU...Innovative Technology for Veterinary Medicine, *continued*

were required to maintain a functional hospital and educational facility.

If you grew up in the Midwest you might remember playing in a hayloft of an old barn. Typically, these were poorly lit, hot and had some of the biggest spiders around. This would be a good description of a portion of the remodel. This area was converted into a mechanical room housing the major pieces of equipment allowing usable space on the main level to be maximized. The main level was converted into exam rooms, oncology and dermatology procedure rooms, main entrance and a canine rehabilitation gym. Each department has a "Rounds" room to allow students a gathering place to share their knowledge as it pertains to their specific area of study.

Once the barn area construction was complete, several practices were moved from the occupied 40,000 square feet of remodel, allowing the remaining phases to be completed. In this area of remodel the hospital offers Clinical Pathology Laboratory, Sterilization, Surgical Packs Assembly, ICU, Surgery Suites, Induction, Recovery, Laser Procedure, Dental and Minor Procedures, just



ISU front entrance greets you with innovative veterinary care.



Christian Petersen's original 1938 terra cotta sculpture of The Gentle Doctor located in the main entrance.



A state-of-the-art veterinary surgical suite

to name a few. The 6,500 square feet of Surgery Suites boast high-tech Trumpf lights for a variety of light levels along with the capability for HD cameras to allow surgeries to be broadcast to classes over the internet.

A micro-bulk medical gas system was designed to provide oxygen throughout the facility. Medical gas was provided in all Surgery Suites, Procedure Rooms, ICU and supporting type spaces. Medical vacuum could also be found at these locations. A central vacuum system was also incorporated into the facility to allow ease of cleaning.

While designing and watching the construction progression over the last few years, it is very satisfying to realize the impact this has on animals, their owners and future practicing doctors.

The transformation and services are state-of-the-art making any "human" doctor envious of the layout. Doctors have the ability to continue their practices, as well as teach next generation veterinarians using the newest technology.



About the Author:
Jeremy Goodroad is a Mechanical Designer in the Sioux Falls Office.

Casper WPE: Community Health Center of Central Wyoming

• The summer 2011 issue of *Plains Talk* included a sneak peek of the new Community Health Center of Central Wyoming (CHCCW), of which construction was just commencing. The 50,000 square-foot building was completed August 2012, combining their three office locations throughout Casper into one state of the art facility. In recognition of their new facility and community involvement, the CHCCW hosted their first annual community block party in late August.

The Community Health Center is a non-profit health care organization whose purpose is to put in place an affordable patient care program addressing community needs. It is a seven day walk-in clinic program that provides affordable care and insurance based services for the community offering an alternative to going to the ER. The new health center offers family medicine, behavioral health care, dental care, senior care and full pharmacy, laboratory and diagnostic services.

The new building was made possible by a \$12 million



Community Health Center equipped to serve more patients



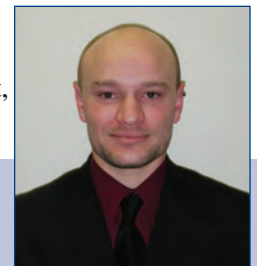
Interior pathway leading to a variety of medical services

grant from the federal Health Resources and Services Administration. The center sees more than 13,000 patients a year and it is anticipated to double over the next several years with the new Health Recovery Act. The new facility allowed for an increase in exam rooms from 48 to 75. It also is equipped for more outpatient procedures. This allows the CHCCW to have approximately 100,000 office visits annually, compared to about 50,000 office visits in previous years.

GSG Architecture in Casper teamed up with Boulder Associates, Inc. out of Colorado as the Architects. West Plains Engineering, Inc. provided electrical and mechanical design services. We coordinated our efforts

with Casper Electric and CK Mechanical, the electrical and mechanical contractors on the project, both located in Casper, Wyoming.

About the Author:
Andrew Maxwell is an Electrical Designer for the Casper Office.



★ WPE COMPANY NEWS ★ WPE COMPANY NEWS ★



• Welcome...to **Chris Green** who joined the Rapid City office in October 2012 as an Electrical Engineer. He graduated from Texas A&M University in 1991. Chris lives in Rapid City with his wife Ronda and their four children – Christopher, Michael, Erin, and Alexander. Chris has a lifelong love of aquatics and he swims for fitness as well as participates in competitive swimming as a USA Swimming member coach.

West Plains Engineering is rolling out a new website!

West Plains Engineering offices have collaborated and compiled information to build a living, breathing website for all WPE employees to showcase their work and share good information. The site sports a modern look, with the focus being on current and recent projects.

Check it out at: www.westplainsengineering.com

• 4609 S. Techlink Circle, Sioux Falls, SD 57106
Phone: (605) 362-3753
Fax: (605) 362-3759

• 1750 Rand Road, Rapid City, SD 57702
Phone: (605) 348-7455
Fax: (605) 348-9445

• 145 S. Durbin, Suite 205, Casper, WY 82601
Phone: (307) 234-9484
Fax: (307) 234-5494

• 215 2nd Ave. SE, Suite 200, Cedar Rapids, IA 52401
Phone: (319) 365-0030
Fax: (319) 365-4122

Rapid City WPE: Lakota Studies Building, Sinte Gleska University

• Sinte Gleska University derived its name from the Lakota warrior and leader of the same name. The University was founded to promote bilingual and bicultural education, one of his major concerns and causes prior to his assassination in 1881.

The Lakota Studies building was recently completed and opened for use at the Sinte Gleska University in Antelope South Dakota, next door to Antelope Lake. The facility has the unique distinction of being the largest functional tee pee in the world. It consists of 3 full stories and a mezzanine for an observation tower and a future telescope. The basement level has an open classroom that can be divided into two and a multi-use lecture hall which can also be used to project images from the future telescope. The main level houses the main entrance atrium, a classroom, and



Higher education with a unique design

various office space. The second level is similar to the main but also includes access to the mezzanine and telescope locations.

Although not required to be LEED, like all designs WPE is involved with, it was designed to incorporate energy efficient lighting, HVAC, and plumbing equipment.

The building design team included Professional Land Art Association (PLA), Henricksen Inc., and West Plains Engineering.

The construction team

included J. Scull Construction, Tessier's Inc., Stromer's Plumbing, Egger Steel, and Muth Electric.

About the Author:

Michael Heinrich is a Mechanical Engineer in the Rapid City Office.

