

Best of 2008 DBIA

## Cayuse Technologies Meier Technologies/Chervenell Construction

Best Project Under \$10 Million



Photo Credit: Meier Enterprises

MEIER Enterprises, Inc. served as the Architect and Engineer for Cayuse Technologies, a new information technology business center at the Cayuse Business Park in Pendleton, Oregon. The owner is the Confederated Tribes of the Umatilla Indian Reservation (CTUIR), the main tenant is Accenture, Inc., and the general contractor is Chervenell Construction

The facility is a \$5.7 million, 40,000 sq ft technology business center containing an open and collaborative workspace for approximately 400 people, two large call center rooms, numerous and varied sized conference and training rooms including huddle rooms, private offices, a cafeteria, and a service area. In addition, this new 4.9 acre business center has a reception area with two-story high glass walls, a gallery hall designed to display cultural art, and an interpretative art display. The materials used for the structure included steel, concrete, aluminum, and metal wall panels. The majority of the building has a raised access flooring system for air, power, and communication which ensures flexibility for future growth.

MEIER provided architectural, civil, structural, mechanical, plumbing and electrical design services. Because of the integrated approach, the structural, mechanical and electrical systems were "value engineered" from the beginning. The design/build team utilized a combination of engineered drawings, vendor shop drawings, and submittals during the design process. This allowed a significant reduction in the project delivery timeline. Architectural work included floor, roof, ceiling and overall plans. Civil work

included parking; earthwork; onsite storm drainage with an infiltration pond; and foundation, site, grading and utility plans. Structural work included foundation, structural elevations, low and high roof framing, and seismic and wind loading. Mechanical work included operations, testing, fire protection and sprinkler systems, and an HVAC plan. Additional responsibilities included programming, schematic design, design development, preparation of construction documents, and construction period assistance.

MEIER integrated various team building methods into the daily project activities by providing in-house A/E services. Because MEIER is an architectural and engineering company, all of the design disciplines were integrated from the start. Our familiarity and longstanding relationship with Chervenell Construction allowed the construction process to start during early design. The offices are located within a few blocks of each other thus making collaboration a key theme. From schematic design on, members of the construction team were involved in the design process which resulted in a coordinated effort of material selection, construction techniques and cost control. This process encouraged constant communication and continuity of personnel teams as well as enhanced programming. These efforts reduced the time necessary to respond to the client's needs. Other team building techniques included kick-off and lessons learned meetings with the owner and the tenant. As a team incentive, the owner offered the general contractor, Chervenell Construction, 25 percent of the savings for avoiding unnecessary project expenditures.



The project's most unique innovation included the installation of an underfloor air distribution system. The project team worked closely with the manufacturer and the installer from design through construction. The HVAC system utilized an underfloor air distribution/ displacement ventilation system to efficiently deliver conditioned air to the occupied zone in the building. Supply air containing at least the minimum volume of outside air is filtered and conditioned to the required temperature and humidity. It is then delivered by the air handling unit to an underfloor plenum, traveling through a shorter distance of ductwork than for traditional ceiling based systems. This raised floor system allows all cabling services to be conveniently distributed through the underfloor plenum. Savings associated with these services offset much of the initial cost of the raised floor system. The flexibility of this system allows facilities to easily adapt to new technologies and new business directions. The ultimate benefits of using this system include increased worker productivity, employee retention, reduced operating costs and an increased market value of facilities.

Project challenges included completing the project within a tight timeline which was eight months from conceptual through final occupancy; embracing the tribe's cultural heritage while making it functional for the tenant; and providing open lines of communication with the international, progressive tenant while preserving the

legacy and traditions of the Umatilla Tribe. To address all of these issues, MEIER conducted daily face-to-face meetings for the first two weeks of the project.

Special project highlights included providing quiet rooms; using natural colors and lighting to promote a bright and cheerful environment; and optimizing space and aesthetics using the new-to-industry, underfloor air distribution system. Additionally, the facility brings the outside in and complements the natural environment with stone and natural materials with colors to match the tribe's heritage. Natural elements of the facility include drought tolerant native vegetation and natural daylight visible from all workspaces. By using natural light, the facility is able to operate the light density on less than 1 watt per SF while providing more than adequate lighting to perform necessary tasks. Energy related aspects include the use of indirect natural light to minimize solar gain (heat), and the use of an energy efficient, high reflectant membrane roofing system to minimize heat gain.

The project encouraged economic stimulation in a depressed economic environment. The results were job opportunities with real advancement and earning potential in an industry that did not exist on the reservation. Cayuse Technologies has been able to fill many positions by recruiting tribe members, other Native Americans and other residents living on or near the reservation. The workforce is projected to grow to more than 250 people over the next two years.

Funding came from prestigious supporters such as the State of Oregon, the Oregon Economic Development Department, the United States Department of Commerce Economic Development Administration, the United States Department of Agriculture, the Oregon Department of Transportation, the Oregon Special Public Works Fund, and the Northeast Oregon Alliance. Additional overall supporters and dignitaries included Senator Ron Wyden, Senator Gordon Smith and Congressman Greg Walden.

As a contribution to the community, MEIER provided a monetary donation for the Umatilla Tribe's annual, community picnic. This event enhances their presence and relations in the Pendleton community and surrounding area.

### Project Team

**Owner** Confederated Tribes of the Umatilla Reservation

**Managing Entity** Cayuse Technologies

**General Contractor** Chervenell Construction Company

**Architects and Engineers** Meier Enterprises, Inc.

**Subcontractors** Aden Masonry, Advanced Technology Group, All Valley Sheet Metal, Bargen Mechanical, Cascade Fire Protection, Cross-L Welding and Fabrication, Dale Thomas HVAC, Pendleton Electric, Dale Thomas HVAC Dan Leslie Roofing