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FIRMS breaking new ground

Photo courtesy of Himmelman Construction

Himmelman Construction Engages Students To Help With Project Engineering Problem

Colorado-based Himmelman Construction is taking authentic learning to the next level, by engaging engineering students at the STEM School and Academy in Douglas County to find a solution for two structural columns that affect the visual aesthetics and functionality of the space.

"We enjoy involving our end-users in the construction process," said Barry Himmelman, president of the company. "Giving these bright young engineering students a chance to participate in a real life problem was an opportunity we could not pass on," he added.

While completing a 30,000-sq-ft renovation of an existing building, the construction team lowered the floor 24 in. to accommodate a second floor. In the process, they discovered structural columns that affect the building layout. Himmelman, eager to involve the school, asked the team to throw the problem to the students. "Let's see what they come up with," he said.

The first column is on a ramp that must be ADA compliant. It extends into the pathway of the ramp, creating an unsightly obstacle. The second column is in middle of the fitness center on the ground floor. The ceiling in this room will be open, so whatever solution is found for this column, it must flow visually to the second floor.

"This isn't kid's stuff," said Himmelman. "These are tough problems that construction teams and engineers deal with nearly every day. We gave the students the problem on a Tuesday and asked for feedback by Friday."

"Using AutoCAD, CREO or Google SketchUp, about 15 students worked in teams to design practical solutions to this problem," explained STEM School engineering teacher Mike Shallenbeger. "This is a perfect project for our students and underscores the STEM education mission to work directly with businesses and expose students to real-life problems. It doesn't get much better than this," he added.

Himmelman project manager Scott Edwards, who holds a degree in architecture design and drafting, said, "I was quite impressed with the level of talent these kids have. They are doing stuff that I didn't start until college."

After follow-up meetings and discussions with Himmelman, the student's ideas and designs were utilized in solving the constructability issue. "This was so cool," said Nick Palmer, a high school junior. "Just think, whenever we come back to this school, we will know that we played a small part in the engineering and construction of this new addition."

Denver's Alliance Center Renovation Goes High Tech

Rendering courtesy of Gensler

The five-story building includes nearly 40 collaborative, flexible office spaces in various sizes and shapes, plus ample common spaces and tenant service areas.

By Mark Shaw. ENR Mountain States

A complete interior renovation of the historic Alliance Center building at 15th & Wynkoop streets in Denver's Lower Downtown aims to create a LEED-Platinum "hot-desk" office environment that has not been tried anywhere else in the city.

The open-space interior plan "intuitively co-locates" different groups of tenants who will share office resources such as computer networks, conference rooms, printers and technical services and even cubicle and desk space on a rotating basis, says Jason Page, the Alliance Center director. His group, the Alliance for Sustainable Colorado, will manage the tenants when renovations are complete later this spring.

Page says the open-concept plan should save both money and energy. It will also provide tenants with better networking opportunities and maximum flexibility in how they use the physical resources of the building. It works only in a nearly paperless environment, he says.

"This is a mission-driven concept," Page adds. "We hope to change office culture." Management retains the right to move tenants around within the building as space allocations and needs change. There is no "ownership" of a particular space or even of an individual desk on a regular basis. "It's a collaborative approach, one where the traditional sense of space is more blurred," Page says.

The five-story, 41,356-sq-ft building includes nearly 40 collaborative, flexible office spaces in various sizes and shapes, and 16 glass-walled conference rooms with occupancy sensors and integrated-lighting, audio-visual and HVAC controls. Each of the upper floors has expansive spaces filled with natural light and 30-ft-tall, open-beam ceilings. The main floor offers digital signage and event space that holds up to 160 people for cocktails or banquet seating and can be leased by the public for special events.

The Alliance Center currently houses 20–23 tenants, most of them smaller nonprofits such as Conservation Colorado, Colorado Solar Energy Industries Association, Sierra Club, Bike Denver and eGo Car Share. The building's newest tenant is the Nonprofit Centers Network, which is relocating its main office from San Francisco to Denver.

The $3.7-million renovation, designed by Denver's Gensler and being built by contractor EJCM, with owner's oversight from Fitzmartin Consulting, will also be a high-tech, green showcase. It features three roof-mounted, wind-driven turbines "on steroids" that integrate with solar panels to provide the building's power, says Don Fitzmartin, owner of Fitzmartin Consulting. He says that, to his knowledge, this will be the first use of urban wind turbines in Denver. "The technology here is so sophisticated that it allows the tenants not to worry about technology," he says.

Last renovated 15 years ago, it was the first historic building in the world to receive both the LEED for Existing Buildings Gold and Commercial Interiors Silver certifications.

PROJECT TEAM

Owner's Rep: Fitzmartin Consulting, Don Fitzmartin
Architect: Gensler
Contractor: EJCM
Mechanical: Johnson Controls
Conference Room Technology: AVI Systems
Furniture/Workspaces: Citron Workspaces

PROJECT FACTS

- Renovation of a 1908 historic building in LoDo
- Project start: August 2013
- Expected completion: March 2014
- The construction cost is $88 per sq ft
- The building is 41,356 total sq ft
- The renovation will create 38,000 total usable sq ft
- Pursuing LEED-Platinum certification, which raises the bar from the building's current LEED-Gold certification
- The organization is evaluating an integrated alternative-energy package that will be designed to sell energy back to the grid.
- Project funding provided through a combination of private donations, historic tax credits, commercial PACE program and Program Related Investments

Design features include:

- An innovative space that will increase the building's density by at least 40%
- Collaborative areas will constitute 45% of the building's space. These include conference rooms, huddle spaces, a café, common areas and touchdown spaces for impromptu gatherings/meetings.
- The building is designed for a 21st Century work force.
- In addition to collaborative spaces, there are private offices and phone booths. All spaces are right-sized to make both the rooms and the people using them more productive.
- A cutting-edge rooftop renewable unit manufactured by Quantum Renewable Energy, only the second unit of its kind installed in an urban environment.
- The Alliance is working with the National Renewable Energy Laboratory in Golden to design a state-of-the-art building control system that will link lighting, mechanical, electrical, HVAC, projectors, plug strips, etc. into one system. This will make the building "smart" and limit energy use.
- Installing a heat-island-reducing roof surface.
- Daylighting and glass walls for interior brightness.
- World-class, high-tech conference rooms.
- Modern Teknion furnishings provided in all tenant spaces.