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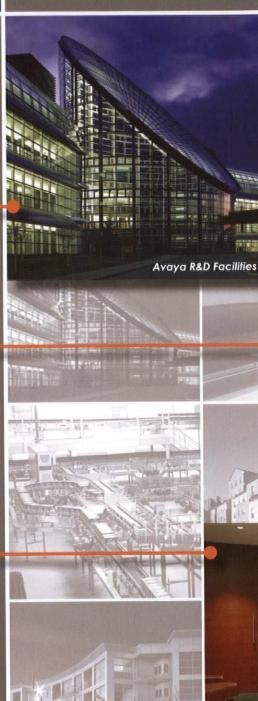
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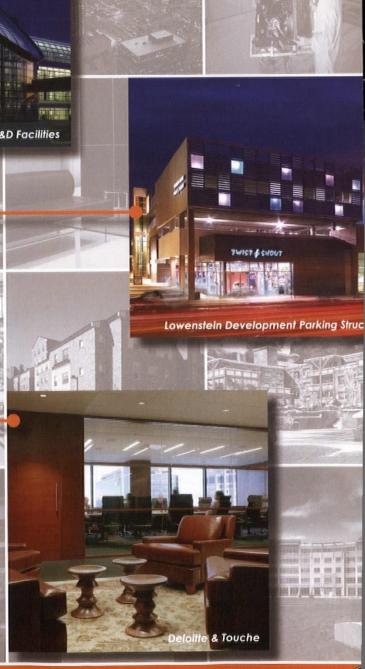
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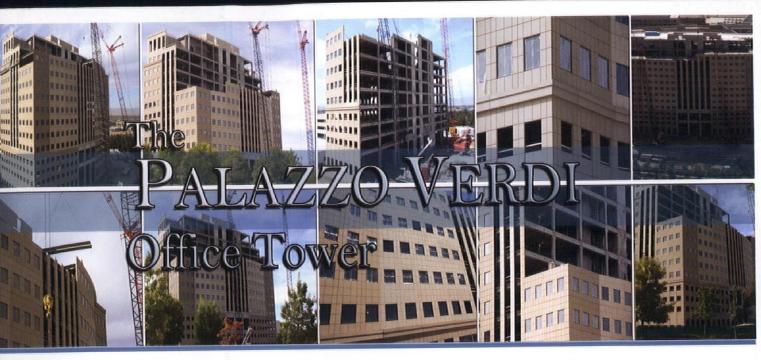
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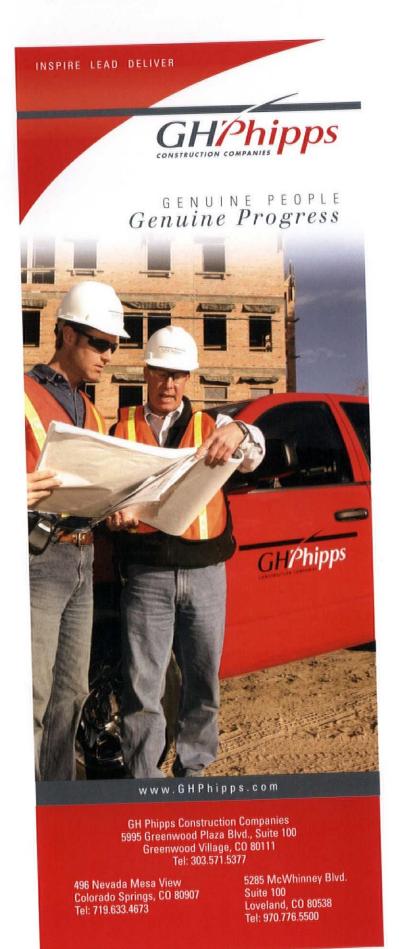
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On the Cover: The Quigg Newton Auditorium and Ellie Caulkins Opera House Semple Brown Design PC Denver

The primary mission of Architect Colorado is to inform AIA Colorado members about architectural news, trends and developments occurring throughout the state and about work being done in our region and beyond by our members. The publication also serves as an outreach tool to educate the community about the value of architectural excellence and the contributions of AIA Colorado architects.





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Building what's next."





In a few short months, the Democratic National Convention will be in Colorado. Many speeches about hope and change will accompany it. Inevitably, diversity within American society will be discussed by leading politicians. Within AIA, the lack of diversity in the architectural profession also results in much discussion. Members often hear the organization referred to as the "good ol' boys club." I believe the perception of AIA must continue to advance.

AIA members need to broaden the definition of diversity. Diversity, as it relates to the profession, includes not only gender and race, but the numerous roles found in architectural practices across the country.

The discussion surrounding the decrease in the number of interns becoming licensed illustrates this point. It is possible the trend correlates to the challenges associated with the licensing process. However, I would argue it is directly related to interns finding equally rewarding career paths, inside the architectural profession, that do not require licensure.

The summer issue of *Architect Colorado* takes a diverse look at the profession of architecture, exploring interior architecture, the business side of sustainable building and professional education, which features Dr. Mark Gelernter, Assoc. AIA, dean of the College of Architecture and Planning at the University of Colorado Denver.

My acquaintance with Dr. Gelernter began in 1989 when, as a freshman at the University of Colorado, he was my first studio professor. I was impressed back then; now I am amazed by the current program's direction and quality of facilities resulting from his leadership. Each year Dr. Gelernter's program continues to increase the standards of academic excellence and service to the profession of architecture. One needs to only examine the quality of the staff and academic achievements specializing in sustainability to realize the numerous career possibilities emerging from the program.

Earlier in the year, AIA broadcast an online webinar (free to all AIA members) espousing the virtues of diversity in the services architects are able to provide as a hedge against the inevitable downturns in the economy. The decision to focus the summer issue of *Architect Colorado* on interior architecture is a friendly reminder of that valuable advice. The interior architecture projects highlighted in this issue cover a wide range of geography and building type. AIA Colorado hopes the projects inspire.

Sincerely, Chris Stumm, AIA AIA Colorado 2008 President

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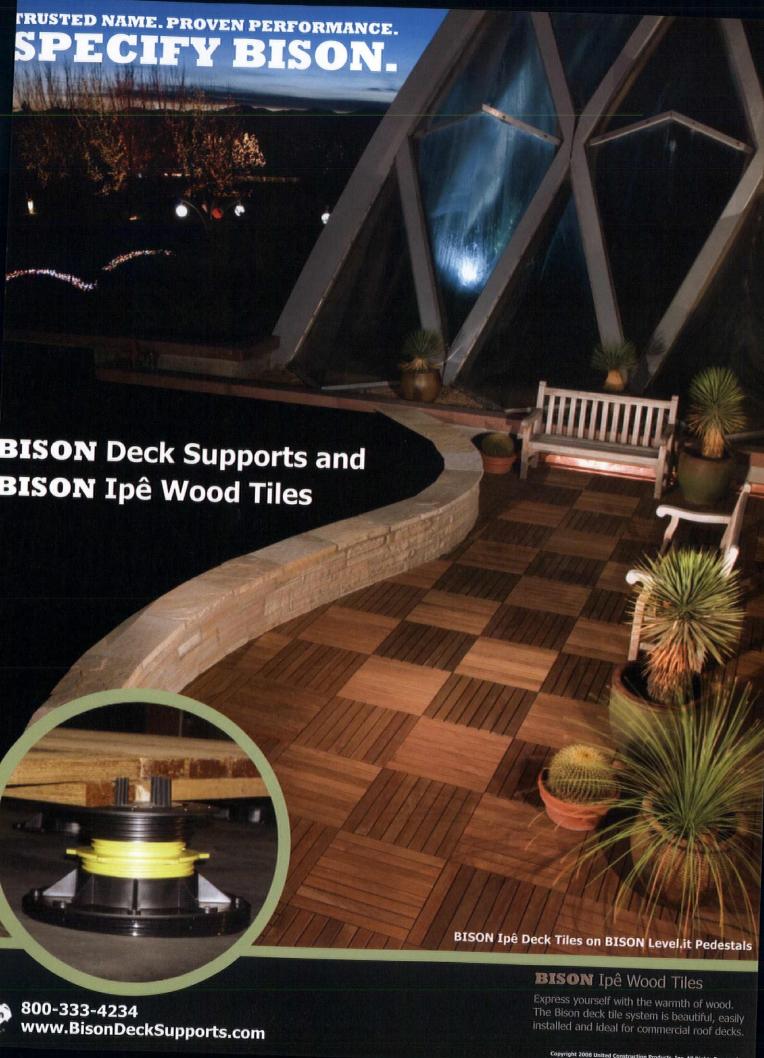
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Colorado Fellows Announced

The AIA 2008 Jury of Fellows elevated AIA Colorado members **David Ballast**, **FAIA**, principal at Architectural Research Consulting and **Gregory Friesen**, **FAIA**, principal at CSNA Architects to its prestigious College of Fellows, an honor awarded to members who have made significant contributions to the profession.



Gregory Friesen, FAIA



David Ballast, FAIA

2008 Young Architects Awards

AIA Colorado announced the 2008 Young Architects Awards during the Young Architects Awards Gala on April 11. The following awards and honorable mentions were selected from 85 entries submitted by firms, designers and young architects from across the state. The entries were judged by a jury of architects and community leaders, chaired by Mark Gelernter, Ph.D., Assoc. AIA, dean of the College of Architecture and Planning at University of Colorado Denver.

Award Winners:

Young Architect of the Year

Joe Colistra, AIA in situ DESIGN (Denver)



Dan Craig, AIA; Joe Colistra, AIA; and Amy Birdsall, Assoc. AIA

Young Firm of the Year

Studio H:T Inc. (Boulder)

Intern of the Year

Emily Adams, Assoc. AIA AndersonMasonDale Architects (Denver)

Mentor of the Year

Dean Dalvit, AIA EV Studio (Denver)

Mentor of the Year

Jane Rogers, Assoc. AIA JG Johnson Architects PC (Denver)

Student Portfolio

Stacey McBride 4240 Architecture Inc. (Denver)

Graphics - Digital Media

Brad Tomecek, AIA Studio H:T Inc. (Boulder)

Craftsmanship - Physical Media

Aubree Diebolt 4240 Architecture Inc. (Denver)

Built Architecture

Rahul Mohare Van Meter Williams Pollack (Denver)

Unbuilt Architecture

Julie Meyer, AIAS University of Colorado at Denver



Christina Haas, AIAS, and Hans Morgenthaler, Assoc. AIA

Honorable Mentions:

Young Firm of the Year in situ DESIGN (Denver)

Student Portfolio

JC Elder Georgia Institute of Technology

Graphics - Digital Media

Brady Colvin Humphries Poli Architects PC (Denver)

Graphics - Digital Media

Melissa Ford, AIA Bennett Wagner & Grody Architects PC (Denver)

Craftsmanship - Physical Media

Carlos Cordero-Loza 4240 Architecture Inc. (Denver)

Craftsmanship - Physical Media

Jerome Hamman University of Colorado Denver

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2008 Scholarship Winners The Architectural Education Foundation, AIA Colorado, awarded more than \$33,000 in scholarships to the fol-

than \$33,000 in scholarships to the following recipients during the AIA Colorado Young Architects Awards on April 11:



Heather Ludwig, Assoc. AIA; Chris Green, AIA; and Greg McMenamin, AIA

Anniversary Scholarship

Lindsay Merget (Boulder)

C. Gordon Sweet Scholarship Grant Block, AIAS (Lone Tree)

Gary G. Landin Scholarship

Christina Libetti (Boulder)

AIA Colorado North Chapter Scholarship

Rachael Gana Johnson, AIAS (Boulder)



Michael Kephart Scholarship

Heather Ludwig, Assoc. AIA (Fort Collins)

Kenneth R. Fuller Scholarship Brian Rasmussen (Boulder)

Robert K. Fuller Scholarship Eric Watson, AIAS (Denver)

William C. & Priscilla W. Muchow Scholarship I

Laura Robinson (Denver)

William C. & Priscilla W. Muchow Scholarship I

Kellen Schauermann, AIAS (Boulder)



Kellen Schauermann, AIAS, and Bob Fuller, AIA

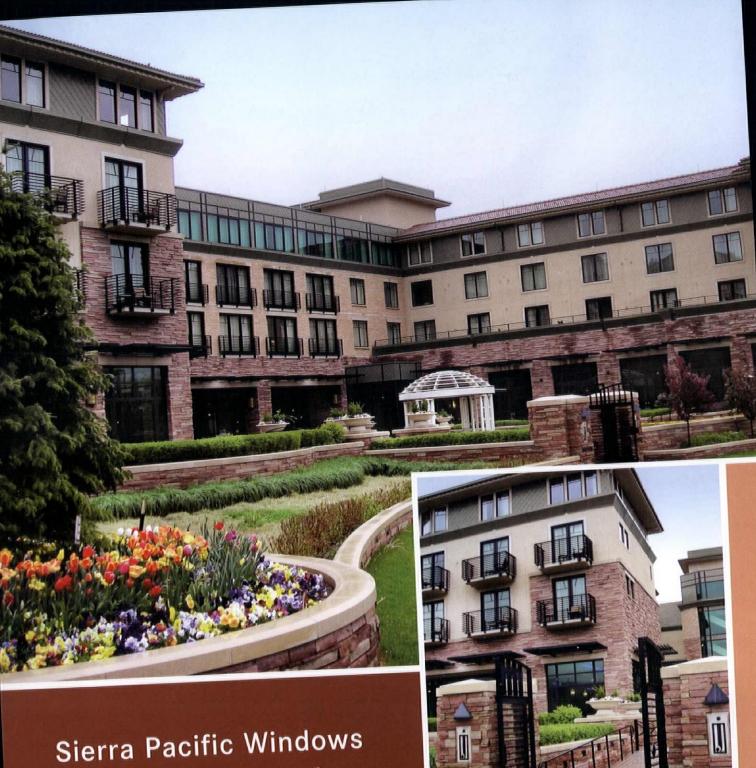
DeVon M. Carlson Scholarship Heidi Crespi (Denver)

Temple Hoyne Buell Scholarship Steve Foltz, AIAS (Denver)

James M. Hunter Scholarship

Heather Ludwig, Assoc. AIA (Fort Collins)

Fisher Traveling Scholarship Award I Sean O'Hara, AIA (Denver)



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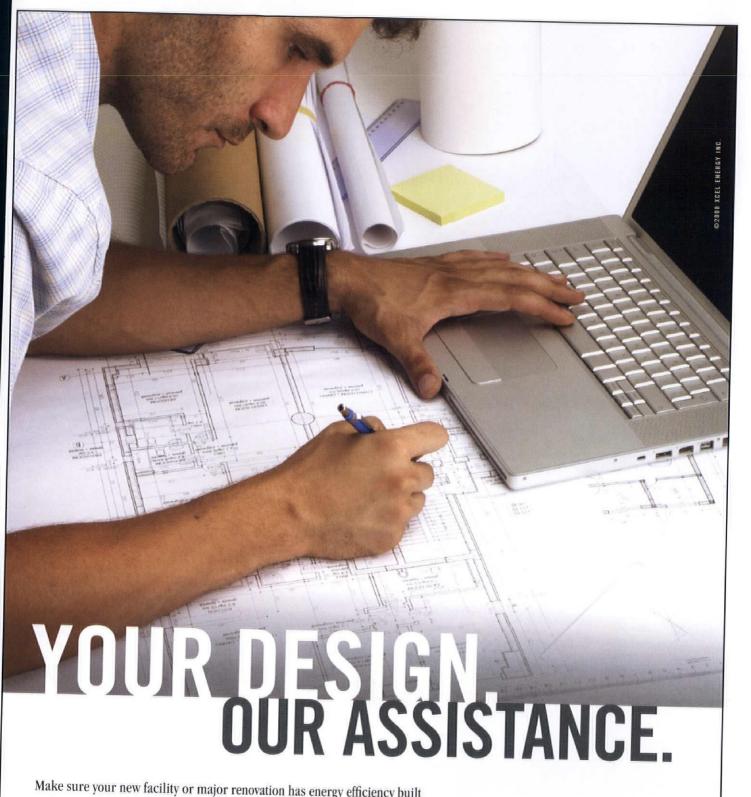


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The Green Scene

Sustainable, energy-efficient designs are good for the environment and business

By Karen Nitken





Top: Main entry to Aspen Middle School. The school was designed to LEED Gold standards—certification is pending.

Above: Outdoor dining terrace. Transpired solar collector beyond (black wall).

he idea of creating buildings that use less energy and other natural resources was a novelty already starting to fade in the 1980s.

"Back then there was an initial interest that waned," said Alan Ford, AIA, principal of Alan Ford Architects and Hutton Ford Architects and author of Designing the Sustainable School. "Some people stayed with it, but on a very small scale."

Times have certainly changed.

In the last two years, green development has become all the rage. Clients are taking notice and demanding that buildings meet green-benchmark standards like the Leadership in Energy and Environmental Design (LEED) certification from the U.S. Green Building Council (USGBC).

The LEED standard, developed in 2000, made it easier for everyone to understand what a "green" building actually entails. The system works by awarding points for energy efficiency, choice of materials and minimized waste during construction. LEED certification is valuable by providing a specific benchmark that can be promised by architects and marketed by clients.

"It's given us and the clients a tool and a benchmarking device," said Ford.

Ford now sees elements of sustainability being incorporated into every aspect of building design. This includes tree replacemnent after land clearing, use of recycled materials in construction and the application of volatile organic compound (VOC) paint, which provides better indoor air quality.



Many recent political and public outreach campaigns contributed to making sustainable construction a top priority for architects and their clients.

Three years ago, Ford argued with clients about the benefits of goodfor-the-earth elements. Now waterless urinals, high-performance glazing on windows and photovoltaic cells on the roof that capture solar energy are often assumed as part of the project.

"Compared to what we were experiencing in the '70s, I think this is a much more comprehensive view of energy and the environment than we had back then," said Ford. "Now big corporations and the general public are embracing these things. There's more money behind it, more interest and more advancement."

Many recent political and public outreach campaigns contributed to making sustainable construction a top priority for architects and their clients. The movie, *An Inconvenient Truth*, put a spotlight on increasing environmental issues. Rising energy prices also prompted clients to improve the energy efficiency in buildings.





Top: Typical sunshade detail.

Middle: Classroom with natural daylight harvesting.

Bottom: Outdoor deck with main entry lobby beyond.

Environmentally friendly materials such as bamboo and cork for flooring can be attractive and earth friendly. Bamboo grows quickly and so does not deplete forests, while cork can be extracted from cork oak trees without damaging the trees.



Above: The Signature Center uses the User Effective Building approach, a coin turned by the developers, Aardex LLC, to maximize the productivity of its workforce and is the largest LEED Platinum in the Rocky Mountain Region.

There is a direct correlation between daylight availability and performance. The Signature Center maximizes the availability of daylight by design with open offices primarily on the exterior and with three layers of glazing to bring light to interior offices exterior glazing, plazed partition walls and interior office glazed walls.



Colorado requires all state buildings to be LEED Gold certified and many federal buildings also are being constructed to meet LEED standards. Private clients and universities also are jumping on board, recognizing that LEEDcertified buildings are becoming more marketable by the minute.

Going green is good for the environment and business. Renee Azerbegi, president of Ambient Energy, said, "Everybody in my field is superbusy." Ambient Energry is a company that helps architects in Colorado "make their projects green." According to Azerbegi, business has been so strong that Ambient Energy will be moving from Golden, Colo. to larger offices in Denver.

One of Azerbegi's clients is not only going green for environmental benefits, but because the client also believes it will lead to higher retention rates.

Sustainable schools are beneficial to the environment and to student performance. Studies found that classrooms lit by natural light have less absenteeism and teacher turnover. Correlations have been found connecting daylighting and improved test scores, said Ford.

Ford and Azerbegi both noted that many elements of sustainable design are inexpensive and attractive, observing that when sustainable features add to the initial cost of development, those dollars are often recouped by future energy savings.

One of the simplest ways to increase energy efficiency is through the use of high-performance window glazing, said Ford. Window glazing has advanced dramatically; it now can be fine tuned to filter or transmit light in specific ways.

A system that Azerbegi recommends is a device developed in the 1990s called a transpired solar collector, which preheats ventilation air through a large unglazed solar collector. "It's the most cost-effective solar technology on the market," she said.

Another simple technique, which also tends to increase the aesthetic appeal of buildings, is to maximize daylighting by increasing the use of windows. New technologies have made windows more energy efficient than ever before, the windows are not letting in cold Colorado air - just the bright Colorado sunlight.

Azerbegi also uses solar tubes in small spaces like bathrooms. "At the roof, you have a glass circular dome with a 20-inch diameter tube that goes down into the room and provides daylight to that space," she explained

Environmentally friendly materials

such as bamboo and cork for flooring can be attractive and earth friendly. Bamboo grows quickly and so does not deplete forests, while cork can be extracted from cork oak trees without damaging the trees.



Left: Gymnasium exterior showing mechanical piers used for the displacement ventilation system.

Right: Gymnasium interior with lights on.



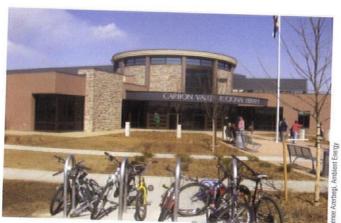
LEED-certified projects can be as chic as any other. The hippy-earthy aesthetic of the '70s is long gone. Floors made of stained concrete, bamboo or cork all display high-end beauty. Highly efficient heating and ventilation systems are not visible and more windows can add to a building's aesthetic appeal.

"I've worked with a lot of projects where you can't tell it's a LEED building, It doesn't have to look granola," said Azerbegi. "But if the client is into green, they want it to look that way a little."

Ford believes that sustainability is only one part of a building's equation. "I still think aesthetics is important, and place and programmatic issues and all those things can't be overlooked."

Currently, Ford is involved with projects that look to the past and to the future; however, they both include sustainable elements.

"On every project, the things I'm doing today would not have been asked of me two years ago," said Ford.



Above: Carbon Valley Regional Library is a model of a self-certified LEED Silver library, which focused efforts on utility bill savings, specifically energy savings (underfloor air, hot water condensing boilers, transpired solar collector, daylight sensors and high performance building envelope saves more than 35 percent on energy cost savings) and water savings (more than 50 percent in water usage from irrigation and more than 40 percent in water savings from plumbing fixtures).



Right: Underfloor air systems make a lot of sense in libraries, such as this one at Carbon Valley Regional Library, because of the advantages of high-energy savings, better indoor air quality, low-noise and ease of adaptation to new layouts.

A Military Structure Soars to Success

The Army Aviation Support Facility at Buckley Air Force Base Wins Kudos for Sustainability and Attractiveness.



The stereotype of military buildings, reinforced in countless movies and television shows, is of gray-green boxes, utilitarian and ugly. But that old image is being proven wrong with the Army Aviation Support Facility at the Buckley Air Force Base in Aurora, Colo.

he structure, which holds helicopters, flight training and support facilities, administrative offices and a VIP reception area for the aviation program of the Colorado Army National Guard, was recently named the Air Force's best sustainable facility. It sets a new standard for design of military buildings, meeting the U.S. Green Building Council's (USGBC) Leadership in Energy and Environmental Design (LEED) criteria for sustainability, while being attractive both inside and out.

On the interior, warm paint colors, plenty of natural light and structures, such as open grid ceilings, create interest and cohesion. Features that control noise, such as acoustical wall and ceiling treatments and modular carpet, which is easy to maintain, make the building user-friendly.

From the outside, the building's color scheme of terra cotta, blue and green reflect the Colorado landscape and sky. The metal and glass elements give it airiness and an impression of flight. The soaring shape references a wing or helicopter blade. "We were inspired by the helicopter itself," said Brian Duggan, Assoc. AIA, a senior associate with Coover-Clark & Associates and a principal designer for the project.



The soaring shape of the exterior references a helicopter blade.

Edward Pieterick, AIA, of CH2M Hill in Englewood, Colo., and the architect-of-record for the project, said the client, from the beginning, was interested in creating a building that would "stand out on campus as something special," while still meeting specific Air Force specifications and satisfy rigorous cost-benefit calculations.

"They really held our feet to the fire on cost issues," Pieterick noted.

CH2M Hill worked closely with Coover-Clark, handling the design development and engineering. Coover-Clark focused on interior and landscape design.

One innovation that turned out to be particularly cost-effective was the decision to use concrete floors stained in a rich palette of colors. The floors are decorated with compass settings, historical graphics and flight vectors that tell the history of the site through meaningful imagery. "Our charge was to take that concrete slab and make it into an art piece," Duggan said. The simple flooring material avoided waste and kept costs at a minimum.

Planning for the building began in 2002. Construction lasted from late 2003 to late 2006 and cost an estimated \$34 million.









Top: The floor carries a true north compass setting, flight vectors and other imagery that tell the story of the air force base.

Bottom: A stained concrete floor does not have to be boring.

Opposite page: A stained concrete floor, plenty of natural light and warm paint colors create an inviting space that is also energy-efficient. The goal was to create a state-of-the-art facility. The National Guard had even joked that one goal was to make the Air Force jealous, Duggan said. "We love going back to that point because the Air Force is really proud of it, too."

Being recognized as the Air Force's top sustainable facility was "a real source of pride not only for this client, but for the host, which is the Buckley Air Force Base," said Duggan.

The main building, large enough to house four Chinook helicopters and eight Blackhawks, has a volume of 118,000 square feet. An 18,000-square-feet auxiliary structure can hold three more Chinooks and eight more Blackhawks.

The facilities, basically a four-story structure attached to a single-story building, replaced a facility built in the 1970s to house UH-1 helicopters. The original structure did not meet maintenance requirements for the new, larger aircraft. The Chinook is probably three times as large as the UH-1, and the Blackhawk is about 50 percent larger, said Duggan.

Colorado's long, cold winters caused concern about ice on the aircraft ramp and prompted designers to situate the building so that the hangar doors open to the south.

The decision meant the back of the building became the front door. "We had to design all four sides of the building as front doors," Duggan said. "When somebody lands, they're really impressed."

The exterior starts with concrete masonry units (CMUs) glazed to create a terra-cotta look that blends well with the Colorado landscape and other structures on the campus. Corrugated metal and aluminum composite ma-

terials on the roof not only reference the aircraft within, but create a stunning visual effect "to really kind of make it feel uplifting, almost as if those roofs were floating," said Duggan.

A curved, standing-seam metal roof sheds snow and rain. The flat roof areas, which help the arched roofs "pop," are all ENERGY STAR rated.

In the four-story structure, the challenge was avoiding a warehouse-like feel in a space meant to house enormous flying machines. The solution was insulated-glass windows that incorporate natural light, views of Colorado and keep cold air at bay.

Ninety-six percent of the occupied building has access to daylight. The savings provided by using natural light instead of artificial is estimated at about \$10,000 per year in operating costs, said Duggan.

The heating and ventilation system pulls heat from air being exhausted from the building and adds it to the fresh air going back in, which saves energy and money. The hangar requires an exchange rate of one air change per hour. According to Duggan, the mechanism saves an estimated \$38,000 per year.

"The whole building, through a number of different energy conservation methods, has about a 40 percent energy savings," said Pieterick. An implementation and control system allows the energy consumption to be monitored from the main office. Consumption can even be altered remotely by turning off lamps or turning on fans.

From the beginning, the goal was to create a LEED certified project. The building is part of a movement soon to become federal law. The U.S. government will require new National Guard projects to achieve a LEED Silver rating. Duggan believes the Buckley project will obtain a LEED Silver rating and possibly qualify as LEED Gold.

The success of the Buckley building proves that military buildings do not have to look like the barracks and Quonset huts of the old. Military buildings can be attractive, sustainable and incorporate energy-saving methods.

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Design Architect Coover-Clark & Associates Inc. Production Architect CH2MHILL – Corvallis, Ore. Location Aurora, Colo.

Cost \$34 million

Scope Facility is primarily for training and maintenance of Blackhawk (UH-60) and Chinook (CH-47) helicopters. The AASF is comprised of 118,000 square-feet sitting on 57 Acres of land within the Buckley Air Force Base perimeter. The facility was an addition to the Colorado Army National Guard's campus within the base and is the main home for aviation operations of the Colorado Army National Guard. Hangar bays, maintenance shops, administrative offices, flight operations. Purpose New home for helicopter aviation, training, and maintenance, which expanded and upgraded airframes that would not fit otherwise in existing facilities. Completion January 2007

Owner Colorado National Guard User Army National Guard Contractor PCL Engineering CH2MHILL – Denver and Corvallis, Ore.

Other Notable Projects by Coover-Clark & Associates, Inc.

- Kansas City International Airport:
 Consolidated Rental Car Terminal (Kansas City, Mo.) design architects/interiors in conjunction with BWR, K.C., Production Architecture and Engineering
- Colorado State University Fort Collins Transit Center, LEED™ Gold
- University of Colorado Boulder Football Locker Room/Varsity Dining Lounge.







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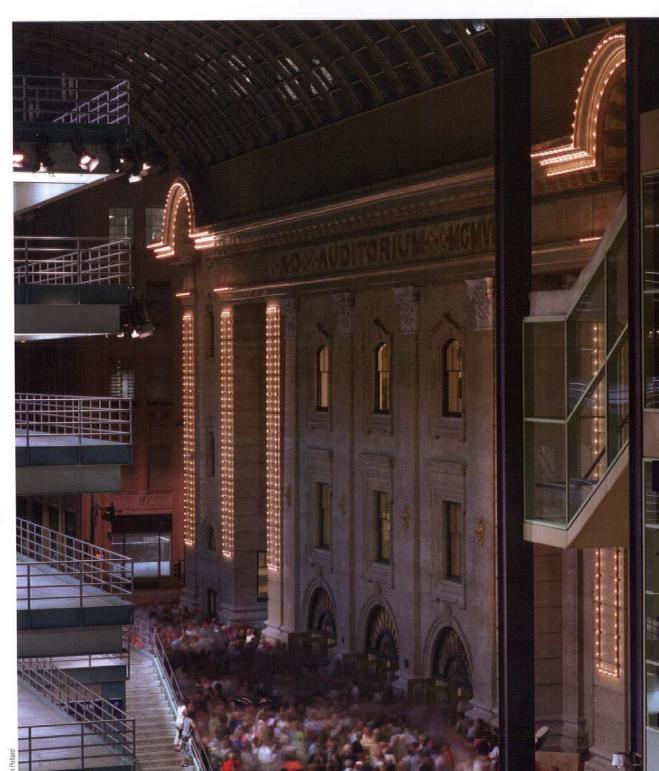
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By Chryss Cada

Creating Denver's Ellie Caulkins Opera House

Contemporary Design in a Historic Wrapper



The historic exterior of the auditorium remains unchanged.





Top: Demolition was completed and construction of the new Ellie Caulkins Opera House began.

Bottom: Likened to building a "ship in a bottle," construction took place within the walls of the historic Quigg Newton Auditorium.

Opposite page: The stacked lobby allows for people on every floor to be a part of the social lobby experience.

Denver took recycling to a whole new level when it reused the entire exterior of a building in the construction of the Ellie Caulkins Opera House.

The opera house, completed in September 2005, is a new building constructed entirely within the walls of the historic Quigg Newton Auditorium.

"We had the rare opportunity to do something incredibly sustainable by adapting the old building for reuse," said Peter Lucking, principal architect on the project for Semple Brown Design P.C., who has since left the firm. "The history of this building was irreplaceable, so we didn't replace it."

City officials wanted to preserve the exterior of the historic building, which is the cornerstone of the Denver Performing Arts Complex. The auditorium first opened in 1908 as a multi-purpose hall that served as a convention center, athletic arena, theater and concert hall. The assembly hall was demolished in the 1950s to create a 2,100-seat theater. Leftover space behind the theater became meeting rooms for the convention center.

Although many visitors view the auditorium and the opera house as one and the same, they are actually two independent structures.

"People who refer to this as an interior renovation have the totally wrong idea," said Chris Wineman, project liaison with Semple Brown.

To understand the scope of the \$92 million project, Wineman refers to the award that the opera house won from the National Council of Structural Engineers Association (NCSEA). The category was Other Structures.

"It was up against bridges and all sorts of unusual projects," he said. "I think it (the award) shows the singularity of reusing a historic structure this way."

Martin/Martin Inc., the engineering firm that oversaw the project, had to figure out how to keep four, 2 feet-thick, 85-feet-tall unreinforced brick walls standing while demolishing the interior of the building. The walls were approximately 70 feet tall above ground. The only other elements remaining from the old building were seven sets of paired columns that supported seven full-span trusses and some portions of the roof. The new structure required digging 4 feet deeper than the existing 12-foot basement.

The system to brace the building included many components. Horizontal soil nails were used for tie-backs, tensioned against flat steel plates to stabilize the below-grade sections of the perimeter walls, supporting them from vibrations from traffic on adjacent 14th and Champa streets.

Permanent construction of the new foundation wall elements was accomplished using cantilevered piers, post-tensioned tie-downs (vertical micro-piles) and retaining grade beams that stabilized the existing building footings, which were undermined by the additional depth required for the new structure. Aircraft cable and tube steel bracing above ground level sta-



Below: The new opera house has a deeper stages, 2,268 seats (up from 2,067) and room for 110 musicians (previously there was only room for 30).

Opposite page: Interior view from stage: A contemporary interior is accented by traditional red velvet seats.

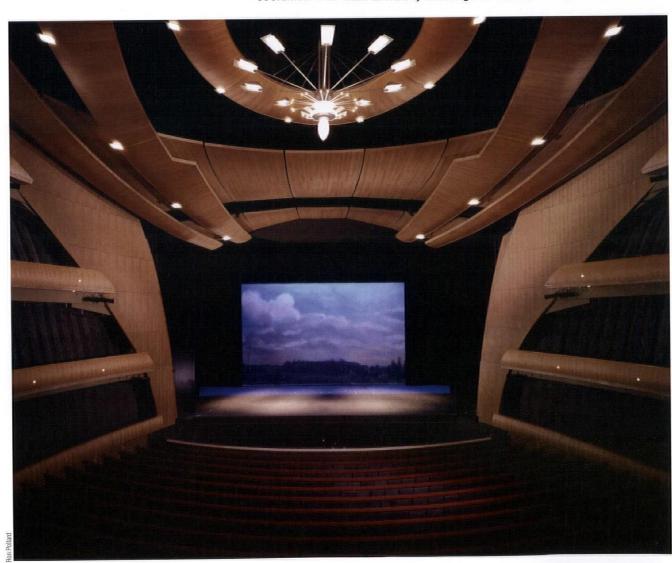
bilized the above-grade section of all perimeter walls from wind. All bracing fell within the space occupied by the existing seven pairs of lattice columns. Construction occurred vertically, slowly building up from the foundation.

Because the "Ellie" (named for Denver arts supporter Ellie Caulkins) was built within the shell of the auditorium, the construction process has been referred to as "building a ship in a bottle." After overseeing the project, Lucking has a slightly different characterization.

"The difference is there's room for the ship in the bottle—we were trying to cram a salmon into a sardine can," Lucking said. "There were a lot of things that weren't there before we had to fit them in."

The renovation boosted the space in the auditorium from 105,000 to 280,000 square feet. The number of seats was raised from 2,067 to 2,268, including the addition of 21 private boxes. Lobby space more than doubled. Renovations made the stage deeper, making room for 110 musicians where previously there had only been room for 30. New additions include a 25,800square-foot reception space, a loading dock, two elevators and 66 toilets. Performers have 13 additional dressing rooms (up to 15 from only two previously), a new green room and new wardrobe, hair and make-up rooms.

Squeezing all the extras into the existing space required all the trades to coordinate their work at weekly meetings for more than a year and a half.





Randy Bennett, superintendent with the general contractor PCL Construction Services, Inc., said measurements were down to 1/8 of an inch.

Operating a construction site within existing walls made getting supplies to the site a challenge. A crane in the middle of what is now the audience

seating lifted supplies from out on the street. When construction was done, the crane itself had to be taken apart and carried out of the auditorium doors piece by piece.

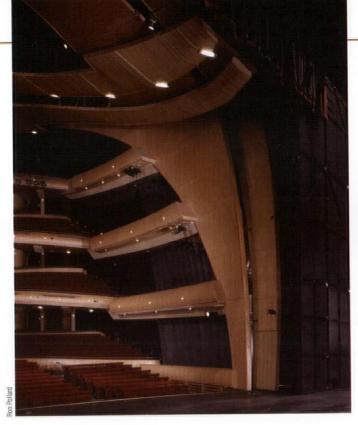
To make the most of the space, architects had to go vertical.

"There's no way we could fit 2,200 people on the ground level of the lobby," Wineman said. "Instead we stacked it, incorporated balconies on each floor and used transparent materials that give people "There's no way we could fit 2,200 people on the ground level of the lobby...instead we stacked it, incorporated balconies on each floor and used transparent materials that give people the feel of being in one big open room no matter what floor they are on." *Chris Wineman*

the feel of being in one big open room no matter what floor they are on."

The stacked balconies play a role in the acoustics of the space. "As you go up, each of those levels steps back very slightly so there's not a steep overhang, because we're using the ceiling as a very important acoustical re-

Right: The balconies of the opera house are curved to maximize acoustics.



flective surface," Wineman continued. "So the sound is going up from stage, bouncing off the acoustical reflectors on the ceiling, and coming back down to each of the balcony levels."

"The sight lines of the space are configured in such a way that everybody can see into the orchestra pit. Sound follows line of sight, so if you can see into the pit, you are much more likely to hear what's coming out of the pit," he added.

While the primary purpose of the space is to be an opera house for un-amplified music, the design also allowed for amplified sound. "Up above the ceiling reflectors is a

void space that has a series of very simple acoustical drapes that we can expose when we need to soak up more sound energy. The nice things about these is that they are up above the ceiling panels so they are not a visual change to the room, but they do change its acoustical character," Winemann said.

Original Palladian glass windows lining the exterior walls make the lobby visible to passers-by. The two sets of stairs ascending from the corners of the building are crafted from terrazzo with glass handrails.

"From the beginning, we set out to build one of the world's great opera houses," Wineman said. "To do that, we sought to create both a sense of grandeur and a space that is technically at the highest level it can be."

Red velvet seats are the only obvious tribute to classical opera houses in the contemporary design of the Ellie. The complex curves of the seating levels from the orchestra to the upper balcony allow for better sight lines as well as enriched sound quality. No seat is further than 112 feet from the stage.

In order to accommodate performers, the Ellie's fly tower grew from 65 feet tall to 117 feet.

"It's the highest fly tower anywhere between New York and LA," Lucking said. "It was always our goal to have the building provide for the needs of any production that wanted to perform here."

In the three years since its opening, the Ellie has proven its ability to host a wide range of productions in addition to opera, most notably the off-Broadway premiere of Disney's *A Little Mermaid*.

"The folks at Disney told us that it [The Ellie] was more capable than any theater on Broadway," Wineman said. "When people from New York perform in Denver and have their needs met, it makes us feel like we've accomplished our goal of building one of the world's great performing arts theaters."

THE QUIGG NEWTON AUDITORIUM AND ELLIE CAULKINS OPERA HOUSE

Architect Semple Brown Design P.C. Location Denver Construction Cost \$92 million Scope 280,000-square-foot Opera House (2.268 seats)

Purpose The Ellie Caulkins Opera House is a performing arts venue that is expected to rank as one of the top 10 opera houses in the world. Sitting in the heart of Denver's urban core, it is home to Opera Colorado and Colorado Ballet. It is a completely re-built facility within the shell of a 95-year-old building.

Completion September 2005

Owner City and County of Denver General Contractor PCL Construction Acoustical and Sound Consultant Robert F. Mahoney & Associates

Theatre Consultant Fisher Dachs Associates Theatre Consultant Theatre Collaborative Consultants

Architectural Lighting Horton Lees Brogden Lighting Design

Structural Engineers Martin/Martin Inc. Mechanical/Electrical/Plumbing Engineers M-E Engineers Inc.

Life Safety Consultant Rolf Jensen & Associates Inc. Civil Engineers The Lund Partnership

Signage and Graphic Design Consultant TaCito Design Inc.

Kitchen Consultants Ricca Newmark Design

Other Notable Projects by Semple Brown Design P.C.

- Kent Denver Student Center: Denver School of the Arts.
- Larimer Square Revitalization (Denver).
- The Corner Office (Denver).

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Healthy Building Good for the Budget Good for the Planet

By Mark Blunck

Integrityspiritual

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The seven core values of Penrose Hospital are imprinted on a large, brick-clad wall in the Sister Ruth Anne Panning Financial Center. They are respect, excellence, integrity, stewardship, spirituality, compassion and imagination. These values are at the center of the hospital's mission and are the driving force behind its organization.

he most prominent word on the wall is "stewardship," which Webster's Dictionary defines as, "The individual's responsibility to manage his life and property with proper regard to the rights of others." In this architectural project, the dictionary definition is used for both financial resource management and the reuse of an existing building—two interconnected themes supporting one another.

After a major hospital addition project and departmental transfers into the new offices, the financial department had only one viable option for expansion. This was the 100-plus-year-old laundry building constructed of doublewide brick walls of approximately 5,400 usable square feet. It was an undesirable space that throughout the years had also been used as auxiliary storage and a warehouse for building materials and supplies. Its future use for anything more substantial was highly doubted by the client.

Enter RTA Architects. Project Architect Margaret Gilbert, AIA, and Project

Designer Anne Smith, Assoc. AIA, had a fully realized design concept in hand before submitting it to their longtime health care client. The architects had to convince their client that this rough, old industrial building could be transformed into office space. Eventually, the client came on board with the proposed concept.

"The great thing about it was that on three walls, the west, north and south, the space has big windows. The space looked like it could be fantastic, but you had to see past the ugly that was there," said David Howard, the hospital's director of facilities.

The most important aspect of the project is the industrial aesthetic and the full exposure of building systems. The idea is not a new one; it has been around since the dawn of the Industrial Age in factories and warehouses.

In 1908 and 1909, Peter Behrens designed the AEG Turbine Factory in Berlin, creating a template for the new age of industrialization with the architectural principle of displaying the method by which a building is constructed and the various functional components. The design philosophy eventually found its way to the experimental Case Study House Program in California, especially during the 1950s, when many of the homes were built with steel framing. The industrial look in residential projects was revived in the 1970s and became an important part of the high-tech design movement.



Above: The conference room is positioned near the middle of the space with a modular table to add flexibility of use.

Opposite page: The curved, laminated maplebent-plywood forms at the end of each cubicle nicely contrast with the linear aspect of the large cavernous space. For the past several decades, there has been a focus on the reuse of existing and historic buildings as thousands of old structures around the world have been converted into commercial spaces for all types of public and private clients. Architecture and design firms are often their own clients in these adaptive reuse projects.

The hospital space called out for this type of design. "We knew from the start that we were going to use the industrial look," said Gilbert. "We liked the old doors, and it had an area that used to be a dock plus all the old exposed HVAC systems."





Left: The cubicles are low enough so as not to block the windows and allow all the natural light to enliven perimeter and inner offices.

Right: Bright colors are utilized to express the industrial aspect and pull these elements into the overall design.

At the Sister Ruth Anne Panning Financial Center, the industrial look has been fully expressed by several methods and materials. The exposed raw concrete floors in the circulation path and lobby area show decades of flaws and stains still fully visible, but now covered in clear sealant.

"We evened the floor out, but we didn't try and take all the paint off the floor or off the walls either," said Gilbert. "We did not want to use any of the solvents and heavy chemical materials that it would have taken to clean the building up so it would be stark clean."

Original brick walls were sealed and painted, thereby abating lead paint concerns. The practice of revealing heating, ventilation and air conditioning (HVAC) ducts, conduits and water pipes is fully expressed to show the actual guts of how a building operates. Even the additional pendant lighting reflects the industrial aspect. Situated behind the receptionist area are two original loading dock doors, one refitted with insulated glass to maximize daylight and the other locked open as part of the new entryway.

The financial center is a combination of exposed components finished in high-end materials, but still expressing an unrefined quality. Colors of deep red and apple green for pipes were selected for their vivid architectural impact and strongly contrast with the white walls and partitions, air ducts and gray concrete construction materials. An important factor was the decision not to conceal these operational components. By not covering them up, the architect and client have utilized the best of green design practice by using no new materials for that purpose. That is the greenest green option of all.

"We call it adaptive reuse, using the building without changing the building," Gilbert said.

"Maintaining the base structure and the base walls made a huge difference and enabled us to really continue to talk about how we can be more green in our operations," says Howard. "People are finally coming to the point of acceptance that green doesn't necessarily mean ugly or austere if you work with it well."

Thick-plate glass sections provide a separation from the open space and the organization's core values are imprinted on the brick wall.



Another objective was to allow the strong natural light to penetrate as far into the space as possible, with the 12.5-foot ceiling height being a vital asset. This was accomplished by locating the five private offices and the large conference room in the middle of the cavernous space, thereby keeping the windows fully exposed. These private inner offices and the conference room are fronted by large sheets of transparent glass, enabling light to flow through the spaces, with the middle portions frosted to serve as marker boards. The 19 offices located around the perimeter have low partitions, allowing maximum light to enter from the windows.

SISTER RUTH ANNE PANNING FINANCIAL CENTER AT PENROSE HOSPITAL

Architect RTA Architects (Margaret Gilbert, AIA) Location Colorado Springs

Budget \$856,722

Scope 5,366 square feet. Renovating an existing laundry building into professional offices

Purpose The interior design brought the building up to code and met the needs of the financial department for five private offices, 19 open offices, one large conference room, and a reception area.

Completion September 2006

Owner Penrose St. Francis Interior Designer RTA Architects (Anne Smith, Assoc. AIA)

Other notable projects from RTA Architects

- St. Francis Medical Center, Colorado Springs, Colo.
- St. Mary-Corwin Medical Center Addition and Renovation, Pueblo, Colo.
- St. Thomas More Hospital Addition, Canon City, Colo.
- Penrose Hospital E Tower, Colorado Springs.

The curve of the cubicles was informed by the smokestack that passes through the room and are made of maple-laminated bent plywood. The receptionist desk of maple and steel is another design that plays off the smokestack. The overall design concept is one of introducing these curvilinear forms into a long, linear, cavern-like space, allowing the eye to keep moving from point to point with the juxtaposition of line and curve complementing one another.

The architects and client embraced many unconventional features in the project and, in the process, saved a great deal of money. They exceeded their hopes for the new office space.

"Our finance department loves it, and everybody that comes to see them is awestruck by it," says Howard.

While tight budgetary constraints were the prime factor in exploring this industrial look, the end result is never assured, and in the hands of some architects, it could have appeared as a hodge-podge of unrelated "things" thrown together. But in this case, RTA Architects successfully wrapped themselves around the innovative project and created a responsible reuse of an existing building, thereby saving \$1 or \$2 million, and capitalized on the industrial nature for the new tenants.



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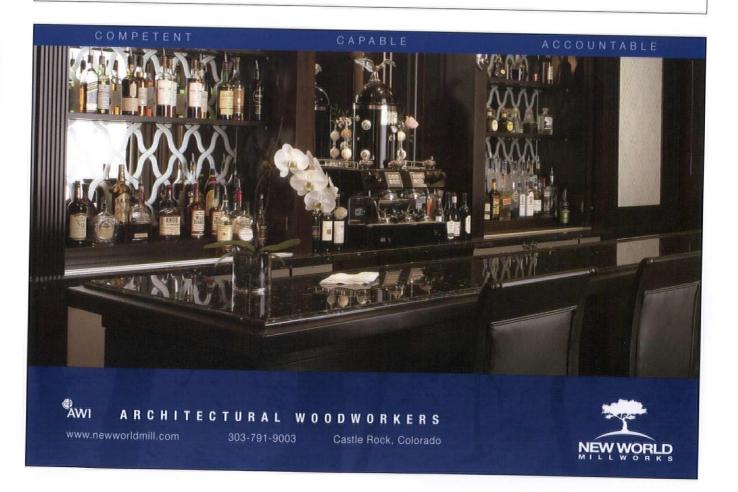
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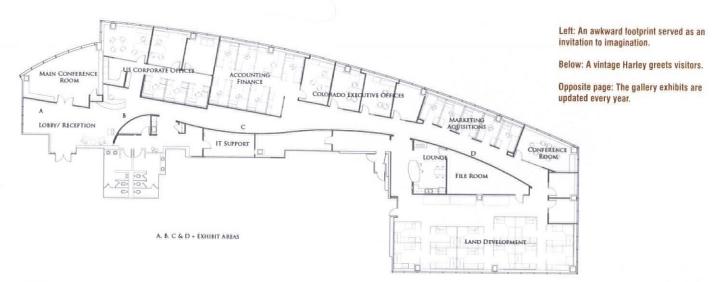




DTJ Design Helps a Favorite Client Make a Sustainable Move

By Clare Cardinal-Pett

prelationship with Carma Colorado Inc., a development company of master-planned communities, by serving as planners, landscape architects and architects on various Carma projects. They worked with Tom Morton, Carma Senior Vice President of U.S. Operations and his Denver-area employees to design a new work environment that emphasizes the company's creative image and commitment to sustainability. At the project's launch, Morton felt that Carma's image was only fully present in its marketing materials.



arma Colorado outgrew its headquarters located in Englewood, Colo., and decided to move to the ground floor of a nearby office building. The new space neighbors the Inverness Conference Center and offers easy access for Carma's clients and business collaborators. The minor relocation did not disrupt existing patterns of everyday life for Carma's employees.

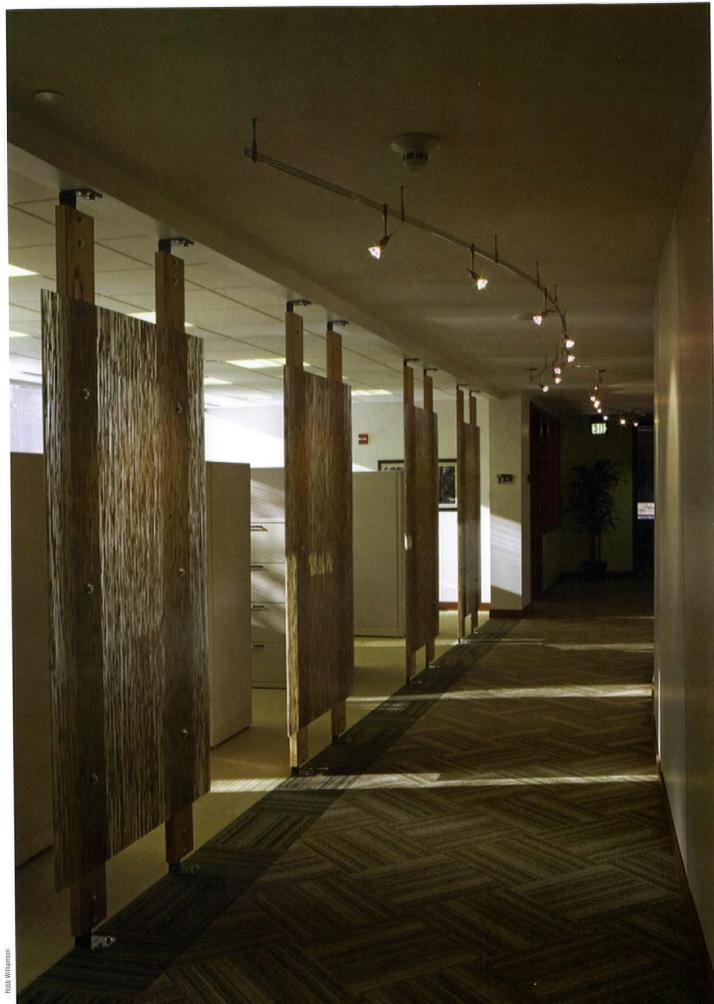
Carma Colorado and DTJ Design share an interest in applying principles of sustainability to large-scale developments and building design. In many ways, Carma Colorado is an ideal client for DTJ Design, which has won numerous awards for its thoughtful, place-specific master plans, community landscapes and amenity buildings. The two companies are both skilled at creating complex and richly nuanced large-scale environments.

Given their shared interests and experience, it seems natural that the developer turned to DTJ Design for the interior remodeling of its new headquarters. The relatively small scale of this particular project—just a little more than 12,000 square feet as opposed to hundreds of acres—made for a more intimate collaboration.

"DTJ's mantra is partners in design," said Leonard Segel, project design architect with DTJ Design. "Carma is a very collaborative partner with their project leaders like Tom Morton. He had many wonderful ideas for the look and feel of the space. Our meetings were very creative; we didn't come in with a solution, it was a sharing process."

DTJ Design spent a great amount of time with Tom Morton, Carma Senior Vice President of U.S. Operations, and other employees looking for the new space. "When people came into the space, I wanted them to





realize that this place is different than all the other developers that they've been to, that these guys walk the talk," said Morton. "I wanted the space to be creative, I wanted it to be a high level of finish and design."

Carma Colorado chose its new location after considering almost a dozen other spaces. The storefront-like character of the final choice is one of its most attractive features. However, the configuration of the space presented challenges.

Top: The reception area, like all circulation spaces, doubles as a gallery.

Bottom: The conference room is simple, yet well-equipped.

Opposite page: Recycled plastic and eco-resin panels with embedded grasses.



"It is a long, stretched out space, almost like a dumbbell, with a lot of area in the front end, a long, strung-out hallway, and then a pool of office space area in the back," said Segel.

"We liked the fact that the space had an irregular shape. Because this building was on a curve, and it was a long and narrow space we had to come up with some creative way to utilize it," said Morton.

To less capable designers, the awkward footprint of the existing space might have suggested a more traditional office space layout with a harshly lit internal corridor, or, perhaps a wide-open plan with little acoustical and functional segregation. DTJ Design's solution is a surprising hybrid between traditional office functions—a technology-enhanced conference room, private workspaces and offices and an employee lounge—as well as a showroom for company identity.







Top: Deep into the headquarters, daylight still leaks into the corridor.

Bottom: The receptionist's desk overlooks the sunny lobby.

Opposite page left: In the breakroom, everyone is reminded to "skate to where the puck is going to be, not where it has been."

Opposite page right: Daylight from the storefront windows spills into the front lobby.

The showroom metaphor seems especially apt when visitors and staffers enter from the street and are immediately welcomed by a vintage Harley Davidson on display. The bike is a symbolic object in the headquarters' gallery, which doubles as a corridor connecting all spaces. The long walk from the Harley to the conference room at the extreme end of the company's headquarters brings the curvilinear geometry of the building's exterior façade into its orthogonal interior. The corridor gallery, dotted with displays, is a meander for employees, clients and business partners.

"We created an opportunity out of that corridor to showcase every one of the Carma offices throughout America," said Segel. "Each one has a display showcasing their current projects with visuals, photos and drawings of the residential communities that are being developed."

The corridor also provides an opportunity for a chance meeting, or for an idea to emerge. Senior Vice President Tom Morton designs the displays to stimulate out-of-the-box thinking. The Harley is his own.

The space encourages creativity and energy, just as Morton desired. "If you look at it just from a sheer efficiency standpoint, it certainly could be more efficient. But that's efficiency from standpoint of numbers people. The efficiencies that we were after were how people use the space and how people like being in the space," he said. "We have a lot of very young people in our office. It keeps them engaged and interested. I think they enjoy working in a cool space instead of coming to work in a cube in a hallway."

The primary office spaces and conference rooms hug the building exterior and make good use of natural daylight. The gallery is artificially lit with high-efficiency light fixtures that double as spots for the displays. As one moves deeper into the headquarters, more daylight from the offices spills into the corridor. The overall effect is quite powerful; it makes the long interior corridor seem less like a necessary passageway and more like a nice place to take a walk. The employee lounge is tucked away deep into the overall space, creating a social bridge between the main gallery corridor and the more isolated land development services' office space.

The project's deft blend of daylight and dramatic gallery lighting not only makes the space a more pleasant work environment, but also saves electricity. While Carma Colorado and DTJ Design were not able to have an impact on the overall building HVAC (heating, ventilating and air-conditioning) system, they made a conscious effort to reduce electrical demand via lighting design and office equipment purchases.

The material palette for the headquarters also demonstrates

Carma Colorado's commitment to sustainable construction prac-

tices. The metal studs and ceiling tiles from the previous configuration were recycled in the remodel. Cherry wood doors from Carma Colorado's old office space were incorporated into the design scheme. The new carpeting is largely made from recycled materials and its manufacture has little negative environment impact. Interior partitions made from recycled plastic, are ecoresin panels with embedded natural objects. Recycling bins are standard components of the office furniture.

The use of environmentally sound materials in the new Carma Colorado office does not announce itself as boldly as the Harley in the front entryway. Quite possibly, some employees and visitors do not realize that the carpet is different than carpet manufactured in a less responsible way. The use of low-volatile organic compound (VOC) paint does not call attention to itself in



the same manner as the inspirational quotes stenciled on the walls. Yes, the flooring is bamboo and many wall surfaces are cork, but those materials are only subtly distinct from their wood and vinyl counterparts.

Carma Colorado's office does not wear its sustainable practices on its sleeve; the materials used in its new headquarters seem almost familiar to the untrained eye. The company is comfortable with its dedication to sustainability. The developers and DTJ Design have been providing green design advice, ideas and encouragement to each other for many years.

In terms of its sustainable design practices, the overall message of the new Carma Colorado office designed by DTJ Design seems to be: "This is easy: everyone should be building with energy consumption and environmental impact in mind." Much still needs to be explored, researched and invented if developers, designers and builders are going to significantly reduce the overall carbon footprint of the human landscape. The partnership of Carma Colorado. and DTJ Design is helping to lead the way.

CARMA COLORADO, REGIONAL OFFICE HEADQUARTERS

Architect DTJ Design (Steve James, principal-incharge; Leonard Segel, project design architect) Location Englewood, Colo.

Construction Cost Withheld at owners' request Scope 12,624 square feet

Purpose To provide innovative office and conference spaces for this company that has been developing residential communities in Canada and the United States for 50 years.

Owner Carma Developers LP
Project Manager Mike Partheymuller
General Contractor Boots Construction
Interior Design DTJ Design
Interior Signage Design Roka Design
Signage Fabrication Rusch Signs

Other notable projects by DTJ Design

- Aspen Lodge recreation center at the Anthem Community, Broomfield, Colo.
- Interlocken Business Park Master planner for this 900-acre office environment, Broomfield, Colo.
- ATLAS Center Architect-of-Record, with CommArts as the designer, for the first LEED Gold building at the University of Colorado Boulder.
- Xilinx Regional Headquarters Design Architect for this 130,000 office building.
- Garden Crossing affordable and "Green" residences, Boulder, Colo.
- One Boulder Plaza mixed use urban residences, retail and office space in downtown Boulder, Colo., with CommArts as the designer.



John Williamson

Peak Experience

Conversion Supports Mountain School's Mission

By Thomas R. O'Donnell

In a school where "recess" can mean grabbing one's skis for a few runs, it is only natural that hallways and rooms echo the outdoors like a shout down a canyon.

he outdoor landscape strongly influenced Ewers Architecture (Golden, Colo.) while designing the plans to convert a former manufacturing plant into a new home for the nonprofit, independent Telluride Mountain School.





Nature "came into the design in trying to create a space that felt like it was going to respond to their curriculum in ways to bring the outside into the school," says Peter J. Ewers, AIA. "We felt that was a good way to reflect their values."

Those values are based on experiential learning. About 100 students—ranging in grades from preschool to high school—engage in outdoor activities, field trips and community service. The curriculum teaches critical thinking, expression and ethics while providing a solid education in core subjects. The younger students (preschool through third grade) follow the Montessori philosophy of child-centered, hands-on learning.

Administrators wanted an open learning environment that encouraged interaction. Classrooms had to be flexible, while serving specific purposes.

The school had to fit into an existing 15,000-square-feet fly rod manufacturing plant. The existing structure never was used for its intended purpose. Occasionally, it had housed ballet performances and an equipment rental company, but it mostly had been vacant for 10 years, Ewers said.

"Telluride being a mountain community, there's not a lot of flat land,"
Ewers said, "so the facility is built into the side of a slope." The top floor of a
three-story office space jutted above grade, but the main part of the manufacturing space was below grade, meeting the slope on one side. The fly
rod company had planned it that way so workers could exit the office section and practice fly-casting on the plant's roof.

The volume of the plant building allowed the architects to design a second floor inside part of it, adding about 1,200 square feet for teacher offices. The openness of the remaining space and the clerestory windows that overlooked it "gave us a lot of flexibility, and we had a lot of fun in that space," Ewers said.

"The architect who designed the building had some odd angles," said Ewers. The design team opted to play the unique angles up, which lead to one of the structure's signature spaces: A main corridor that evokes the narrow slot canyons of the surrounding mountains.

"We played with a couple of different ideas early in the schematic design, and once we drew this one, it kind of rose to the surface...to kind of



Left: Each classroom includes a "cloud," which improves acoustics and houses a projector and lighting. Because they float free of the walls, the clouds also admit natural light from the clerestory windows.

Right: Most classrooms feature an oval "harkness table," where students can share and collaborate. The design makes the most of the clerestory windows to bring in natural light and cut energy consumption.

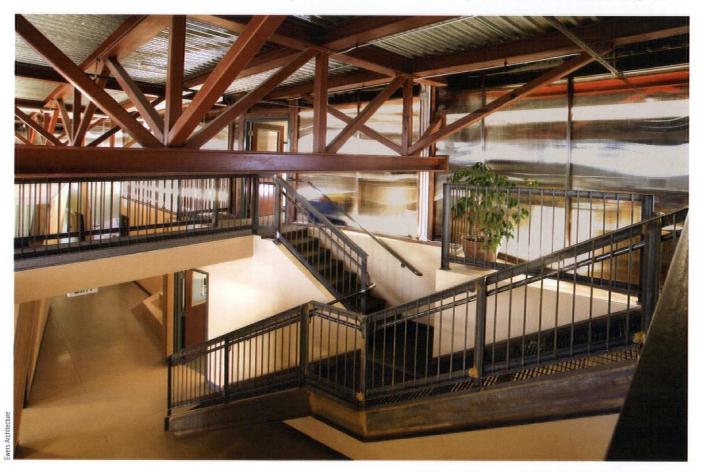
Opposite page: The third floor of the factory offices juts above the main building. It was converted into an airy, well-lit space for the school's Montessori program, which encourages hands-on learning.

respond to the environment and for simplicity of design," Ewers said.

The corridor meanders slightly, with "walls that jut and cant at different slopes and angles." The upper parts of the walls are made of translucent polycarbonate, creating "a nice, sensuous curve out of a very light material that would transmit the light of the clerestory," explained Ewers. A continuous band of fluorescent fixtures at the base of the polycarbonate sections illuminate the upper parts of the hall, but the lower part is intentionally darker to create the feeling of standing deep in a canyon.

"We liked that idea of a slot canyon, and the angles and the jagged cliffs that you'd see and the narrowness and the excitement of seeing this brightness above you," Ewers said. School officials gravitated to the idea of bringing the outdoors in and felt it conveyed the spirit of the school. They saw

Below: The architects took advantage of the factory's high ceiling to add a second floor at one end. The open staircase leads to teacher offices.



Opposite page left: Telluride Mountain School is unusual in that it has no formal gymnasium or auditorium. Students, teachers and available parents gather each morning in a common area near the main entrance for announcements, speakers and occasional performances. Science, math and art rooms are more highly structured and tailored for their purposes than other classrooms.

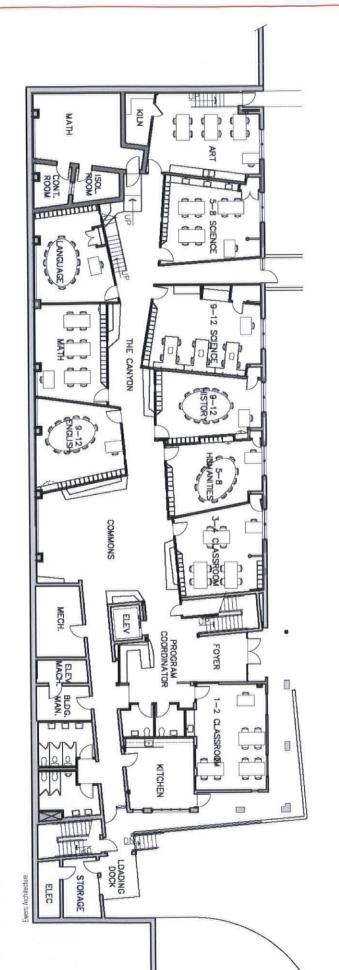
Opposite top right: If the main corridor is intended to portray a canyon, Ewers sees the students as water flowing through a stream. He calls the benches sprinkled through the hall "eddies," where students can swirl about and interact.

Opposite bottom right: The angular walls of the school's main corridor are meant to evoke the feeling of being in a slot canyon. Corners are reinforced with easily renewable bamboo.

the unusual space as a tool to teach about architecture and its ability to transform a space into art, said Ewers.

The corridor's unusual shape is demonstrated in the atypical shapes and angles of the classroom walls. "Each has its own character," Ewers said. However, the rooms share some common elements. Most rooms have a "harkness table" — large oval surfaces that put everyone at the same level. "It's a very open environment, where the students are free to interact with each other and the teacher," Ewers said. The tables are largely made of bamboo, which incorporates the school's sustainable design.

To reinforce the outdoor feeling, each room has a "cloud" over the harkness table. The clouds hang free from the walls to admit natural light from







Architect Colorado 51

TELLURIDE MOUNTAIN SCHOOL

Architect Ewers Architecture PC (Peter J. Ewers, AIA, and Michael W. Heublein)
Location Telluride, Colorado

Budget \$1.3 million

Scope Renovate an existing 14,000 square foot warehouse building (originally built in 1995 for Scott Fly Rod) into an independent pre-K through 12th grade school for up to 130 students.

Purpose The school was previously located in two separate facilities, both of which they had outgrown. In order to allow for more growth, unify the school, and provide an appropriate facility for this experiential school, a new and better facility was required.

Owner Telluride Mountain School (Ernie Patterson, head of school) Structural Engineer KL&A Inc. Mechanical/Electrical Engineer Shaffer Baucom Engineering & Consulting General Contractor Fortenberry Construction

Other notable projects by Ewers Architecture:

- Compass Montessori Secondary School, Golden, Colo.
- The Lowell Whiteman School, Steamboat Springs, Colo.
- West Denver Preparatory Charter School Addition, Denver.
- Off-grid home, Granby, Colo.

Below: The green roof was intended to be used to practice fly casting. Its thickness, more than 30 inches, makes it tough enough to withstand the punishment of young feet. the clerestory, but also have uplighting around the edges and acoustical tile to improve sound quality. The clouds house projectors for the SMART Boards (whiteboards) found in most of the classrooms.

Science rooms are more tailored to their purposes, with appropriate lab equipment and materials. The art room "is really an internal and exterior room," said Ewers, with direct access to an outdoor "classroom," where students can go for inspiration.

The music room posed special challenges because of the school's "Rock & Roll Academy" curriculum. "It's what it sounds like," Ewers says. "They're not playing flutes and cellos."

To keep the budding rockers from disrupting studies elsewhere, Ewers Architecture designed a "box within a box" that is largely disconnected from the rest of the building and tucked into a corner built into the earth. "The floor is floating above the concrete floor," Ewers added. "The walls are all double walls with a lot of acoustical technology."

The plans also included remodeling the third-floor office space into rooms for the preschool and kindergarten programs. That gave the youngest students direct access to the playground built on the green roof, which blankets the lower part of the building.

Most green roofs cannot stand that kind of punishment, but the one the fly rod company installed is almost 3 feet thick, said Ewers. Workers reseeded the surface and installed a secure railing to keep children from wandering off the two-story drop-off on one side.

Head of School Ernie Patterson said when students and staff occupied the building in 2006, "It was like we had been in this facility for years. It was so well thought-out, it wasn't a huge transition."

The building essentially was a blank slate. "Peter was able to take that wide-open floor plan and design something that fit well with the ethos of the school," said Peterson.



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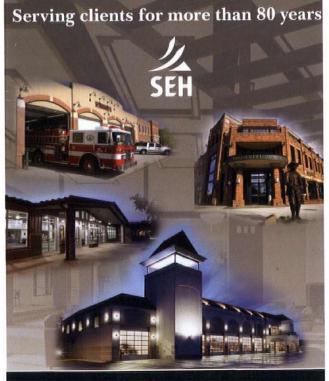
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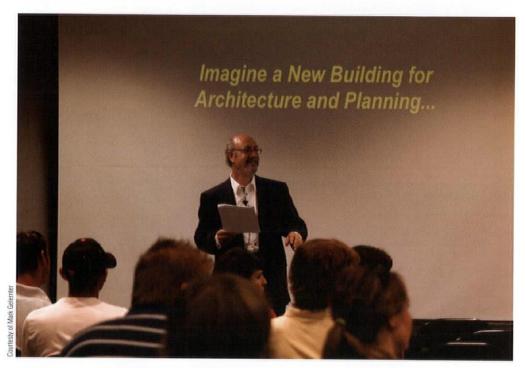


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Dr. Mark Gelernter, Assoc. AIA Dean of CU College of Architecture and Planning Sees Only Opportunities

By Mary Lou Jay



Dr. Mark Gelernter, Assoc. AIA, set himself a difficult task. As dean of the College of Architecture and Planning at the University of Colorado Denver, he is determined to build a new facility for the school, a structure that will serve both as an educational tool and knowledge center for Colorado's architectural community.

he building will incorporate many of the ideas significant in Gelernter's own career: a deep attachment to the culture of the Western United States, an understanding of new global realities and a realization of the need for sustainable design.

Gelernter grew up in Montana, where he became interested in architecture after his father commissioned an architect to design a house for the family. "I sat in on the conversations about it, saw the blueprints and watched the house under construction. I thought this was the greatest thing in the world and I needed to be part of it," he recalled.

After earning a Bachelor of Architecture degree from Montana State University in 1974, Gelernter worked for the firm of Korell and Iverson in Great Falls, Mont. "They were doing very interesting western vernacular design, including some of the condos at Big Sky Ski Resort. It was a great experience for me, and got me interested in the idea of regionally appropriate design, which I still believe in," he said.

A year later, Gelernter returned to MSU as an instructor. "I realized that I had missed the world of ideas," he explained. "While I very much enjoyed practice, I just found it more intellectually stimulating to be at a university where all these great ideas were being considered, where I had the opportunity to try out ideas on students and hear their ideas."

Gaining a wider perspective

A mentor at MSU encouraged Gelernter to pursue a Ph.D. in architecture, so Gelernter chose the Bartlett School of Architecture and Planning at the University College London (UCL). "Some of the papers written by the faculty there had changed my whole way of thinking about design," he said.

During Gelernter's undergraduate years, the prevailing model of design was analysis/synthesis. "My generation was educated not to look at other buildings, if you followed this analysis/synthesis model, you wouldn't be following a preconceived solution, you'd be looking at the problem afresh, and the context of the problem would tell you what the solution would be."

Gelernter further explained: "Bill Hillier [professor of Architectural and Urban Morphology, UCL] turned that completely upside down and proposed another model called conjecture test, which he got from the philosophy of science. In his theory, design starts with a bold conjecture about an idea, but very, very importantly, once you come up with that bold idea you need to test it against the constraints. That suddenly encourages you to look at other buildings and understand how people solved other problems in the past."

Gelernter found centuries of architectural precedents in England. He spent a decade there as student, design tutor and instructor at the Bartlett School. He also undertook research that eventually led to writing two books, Sources of Architectural Form: A Critical History of Western Design Theory, and A History of American Architecture: Buildings in Their Cultural and Technological Context.

"Going to London was an eye opener for me,. I was already starting to head in this direction—thinking that it's important to look at these architectural ideas as a source of architectural form—and suddenly I'm in one of the greatest cities of the world, surrounded by some of the greatest architecture in history," said Gelernter.

He continued: "It also gave me a much richer understanding of the world. You grow up in one place and just assume that the way you do things is the natural and only way to do things. Then you go to another culture and live there for awhile and discover they do things differently. At first you might think it's better or worse, but over time you realize that it's not better or worse, it's just different."

The call of the West

After several years abroad, Gelernter became homesick for the Western United States. "I realized that there was something about the West deep within me that I really missed. It was the culture, the environment, just the sense of the West," he said.

In 1987, Gelernter moved back to the states and became an associate professor, first in University of Colorado Denver's School of Architecture and Planning, and then in University of Colorado Boulder's College of Environmental Design. In 1988, he became director of undergraduate studies of the College of Environmental Design at Boulder. In the early 1990s, when the graduate and undergraduate programs at CU merged, he returned full-time to the Denver campus.

"Going to London was an eye opener for me, I was already starting to head in this direction—thinking that it's important to look at these architectural ideas as a source of architectural form—and suddenly I'm in one of the greatest cities of the world, surrounded by some of the greatest architecture in history."

Dr. Mark Gelernter, Assoc. AlA

Gelernter taught a variety of courses, from architectural history to design studio. He won teaching awards in 1992 and 1993. "The way I teach comes at least a bit from the profound life lessons that I learned from living in another culture," he explained. "My teaching tends to be more about helping students discover their own core values and how that might influence the way that they look at architecture and design."

"Mark tries to engage his students and make them enthusiastic for what they should do," said Dr. Hans Morgenthaler, chair of architecture at the College of Architecture and Planning. "His research is flawless, and he knows how to present his findings in a way that lets everybody understand them."

Gelernter has a passion for sharing knowledge. In 1995, with colleagues Joan Draper, associate professor, and Lynn Lickteig, director of visual resources, he developed the Electronic Library of Colorado Architecture, Landscape and Planning. Although photo and information databases like the Electronic Library are commonplace today, it was the first such database for CU.

"He's really been innovative, sort of shaking us from our ivory tower complacency and really engaging the students much more, caring for the students by having us talk to the practice," Dr. Hans Morgenthaler.

In 1996, Gelernter became associate dean of the College of Architecture and Planning; two years later, he was appointed associate vice chancellor for CU Denver. He left that position in 2003 to become dean of the College of Architecture and Planning.

"While I was the associate vice chancellor, I discovered that I really enjoy managing things in the sense of helping to get structures in place or helping groups of people accomplish their goal more readily, " Gelernter said. "But even though it was very satisfying to work for the good of the university as a whole, I was pretty far removed from my discipline. I started to miss that. I felt that there were many exciting things going on, and that I had really useful ideas about what we might do to help the discipline and the College of Architecture." Christopher Nims, FAIA, Tryba Architects principal, said it was the right fit for Gelernter. "What impressed me most is that he stepped from the vice chancellor to take on the responsibility of being a champion for the college. I think that in terms of contribution that has a higher potential in Mark's eyes than his previous assignments," he said.

Breaking out of the ivory tower

As dean, "one of Mark's most important contributions has been reinforcing the bond between the University and the profession," said Kin DuBois, FAIA, a principal with klipp. "He's championed that as being something that's important to him and the college."

Said Gelernter: "I was a little surprised when I first came back to Colorado to discover that there did not seem to be a strong connection be-



Dean Mark Gelernter, Assoc. AIA with John Barbour, senior instructor of Planning and Design, and Janis Nowlan, assistant dean of Organizational Effectiveness and Outreach at the AIA Colorado 2008 Young Architects Awards Gala.

tween practitioners and the schools here in Colorado. It just seemed like the natural and right thing to do to try and make the partnership closer because everyone benefits."

Those outreach efforts have included the appointment of Nims as the college's director of mentorships and internships. Gelernter served for several years on the AIA Colorado Board, and has started an advisory board of practicing professionals to work with the college.

"Design education has often tended toward either an ivory tower or a trade school, but I don't think that you have to choose one or the other extreme," said Gelernter. "The interesting stuff is in the middle. We certainly are trying to push the boundaries of ideas and generating new ideas and stimulating conversations about the future of design. But at the same time, we should be teaching students those things that will help them get jobs and be productive in offices. They're not mutually exclusive."

"He's really been innovative, sort of shaking us from our ivory tower complacency and really engaging the students much more, caring for the students by having us talk to the practice," added Morgenthaler. "He's positioning the college a little bit outside of the academic and more into teaching students to become part of a practical field."

Making the case for a new College center

Another of Gelernter's goals has been to define the focus of the college. With the faculty, he has identified four major themes that run through its work.

"One is sustainable urbanism, looking at the incredible growth here in Colorado and trying to imagine how we can make that growth positive and life enhancing rather than just a lot of sprawl," he said. Another theme is healthy environments, a category that includes designing a built environment that encourages walking and physical fitness for children and adults, as well as engaging people more in the designs of their own environments.

The third area was historic preservation. The final area of concentration for the college is emerging practices in design, including the digital revolution and BIM (Building Information Modeling).

The college developed research centers to become the locus for each

"My generation was educated not to look at other buildings, if you followed this analysis/ synthesis model, you wouldn't be following a preconceived solution, you'd be looking at the problem afresh, and the context of the problem would tell you what the solution would be."

Dr. Mark Gelernter, Assoc. AlA

"One is sustainable urbanism, looking at the incredible growth here in Colorado and trying to imagine how we can make that growth positive and life enhancing rather than just a lot of sprawl."

Dr. Mark Gelernter, Assoc. AIA

of these themes. "But then we realized that the vision of what we were trying to do in those areas was not being fully supported by our physical facilities. In order to fully realize our vision, we needed a special kind of facility that would be designed to support it," Gelernter said.

As he envisions it, the building will include learning laboratories, where the visualization, fabrication and prototyping labs would all be connected together. There will be an emphasis on globalization, since so many of today's students will work on international projects or work abroad. Gelernter imagines a wall in the new building filled with live digital feeds of the college's projects all around the world.

Sustainable design would be another theme. "We're talking not just about a building that's meeting the criteria for LEED certification, but a profoundly instructive building about sustainability," Gelernter explained.

Finally, Gelernter would like the building to serve as a focal point for the design community. "Imagine some wonderful open spaces in the building where practitioners are working with local community people, visualizing redevelopment of Civic Center Park or the hub of the new light rail system or working on all the other socially important projects going. The building would be a place where all of these ideas can be brought together," he said.

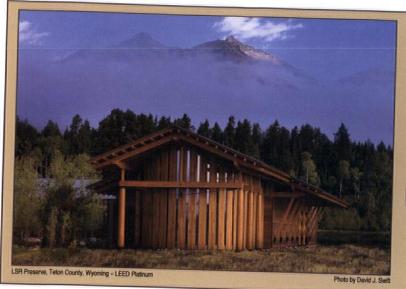
"What he's trying to do is position the college for the 21st century," said Morgenthaler. "That means trying to integrate the changes that globalization has brought to the practice of architecture and trying to increase and teach us to value green architecture and sustainable design."

Since Colorado has very limited support for higher education, Gelernter recognizes that the college will have to rely on philanthropic gifts to cover most of the new facility's estimated \$15 to \$20 million cost. It's a daunting undertaking; the largest gift ever given to the UCD downtown campus from a single donor is \$2.5 million.

But Gelernter remains upbeat as he works to secure funding and to guide the project through the state and university approval process. "If I can raise the money, I hope to get approval from the state sometime about a year from now in the annual Long Bill, which provides funding for prioritized projects. The soonest that we could get funding from the state if we could pull it all together would be in the spring of 2009," he said. After that, the college would likely hold a design competition, with firms building on the information and ideas for the building that the college has already gathered from students, faculty and the profession.

"This building would be so important and transformational for us and our vision of the college is so exciting that I'm optimistic that we're going to make it happen," Gelernter declared.

"Mark lives in the world of opportunities," remarked Nims. "He is dedicated to the design profession and he champions the college in that regard. At the same time, he wants to bring the college to the forefront in terms of the practicing professional communities. Before the College of Architecture and Planning at UCD was one of the best kept secrets in the state of Colorado. It was a sleeping giant, and now it's awakening. Its potential to make a contribution to the future of Colorado is tremendous."



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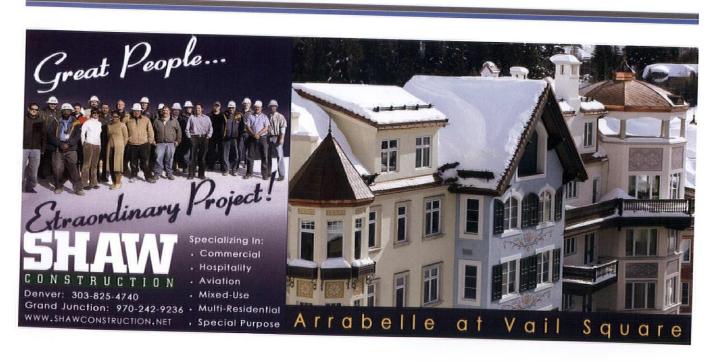
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OntheBoards

By Mary Lou Jay

Westwood Community Center Humphries Poli Architects PC Eric Blase, AIA, project architect

Location Denver Owner Denver Housing Authority Scope 11,000 square feet Cost \$4.2 million Start September 2008 Completion October 2009

The Westwood Community Center will be a revitalizing focal point of Westwood Homes, an affordable housing community intended to help economically distressed residents improve their quality of life.

The primary challenge of the project is accommodating an 11,000-square-feet program on a long, narrow, 13,500-square-feet site. The entrance is positioned to bisect the community's main pedestrian walk though, which links to nearby Federal Boulevard. By siting the building so that the central lobby is part of the path, the design creates a moment of community interaction with the facility.

The building responds to two primary programming needs: increased access to educational resources for residents and an improved maintenance facility to service the 200-unit housing community. The learning site provides more than 2,000 square feet of classroom and computer room space, supported by five learning center staff offices. The facility's maintenance side includes a three-bay garage for vehicles, equipment and materials, as well as workshop and office space for personnel.

Sustainable design principles such as daylighting and the use of recycled and low maintenance building materials will increase the building's efficiency and reduce its environmental footprint.



Colegio Americano de Puebla

Anderson Mason Dale Architects PC in association with Idea Asociados de Mexico Arquitectos

Location Puebla, Mexico
Owner Colegio Americano de Puebla
Scope 762,000 square feet
Cost \$40 million
Start Fall 2008
Completion Fall 2010



The new campus of the Colegio Americano de Puebla will be an educational oasis in the city, with green roofs atop linear classroom bars that shape unique garden courtyards for each academic level. The project will dramatically transform the image of the school in the community while integrating pieces of the original campus to serve as symbols of campus traditions and its commitment to sustainable development.

The organization of state-of-the-art classrooms will create a system of nested learning communities to promote student achievement. A dramatic

new gymnasium and auditorium will anchor each end of the campus, while the unique shape of the original auditorium will be transformed into an exciting new library space for the upper schools. A garden path will link the diverse patios of the new campus, creating a vibrant spine of educational exploration.

The orientation, fenestration, and finish of the new buildings will serve as a model of sustainability. Buildings will maximize natural daylight and ventilation, teaching students about sustainable concepts. LEED Silver Certification is anticipated.

Fractured Residence Studio H:T Inc.

Location Boulder Owner Cornerstone Homes Size 4,300 square feet Cost \$1.9 million Start Fall 2008 Completion Summer 2009 The residence is located on an elevated parcel just north of downtown Boulder. The project uses splayed property line as the catalyst to explore a building that is fractured into two halves. The fissure becomes the focal point as it organizes the sculptural vertical cavernous circulation.

Light is brought into the building through roof level clerestory and vertical slot windows. The reserved one-story street elevation expands to a three-story rear façade that takes advantage of Flatiron views. The east and west walls are solid with few penetrations, while the north and south walls

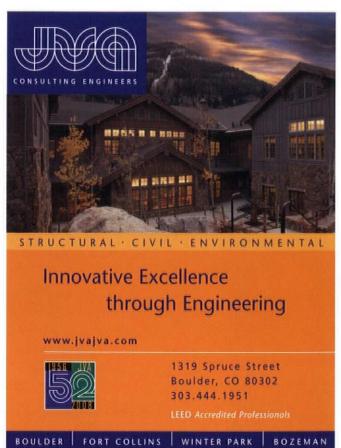
open to courtyards and decks. The south facing decks give access to southern light while emphasizing the horizontal by hovering 20 feet above the ground.

The upper level consists of the public spaces, the mid-level contains the private sleeping functions and the lower floor is reserved for a multi-purpose room and auto storage. The residence becomes a unique response to the site and device to negotiate 40 feet of vertical topography.









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LookingAhead



AIA Colorado 2008 Design Conference Reminder

Plan now to attend the AIA Colorado 2008 Design Conference & Practice Management Symposium, themed *Design Forward*, on Sept. 25 – 27 at Vail Cascade Resort & Spa. The event culminates with the AIA Colorado Design Awards Gala on Sept. 27. Visit designforward.org for more information.

AIA Western Mountain Region 2008 Honor Awards Submittal Requirements Now Available

The AIA Western Mountain Region (WMR) 2008 Honor Awards submittal requirements are available. All AIA WMR members are encouraged to submit nominations by Friday, Aug. 29, at 5 p.m.

Recipients of the 2008 AIA WMR Honor Awards will be recognized at the AIA WMR Awards Banquet on Saturday, Oct. 25, at the Santa Fe Hilton Hotel (New Mexico).

For more information, visit aiawmr.org.

Upcoming Design Awards Galas

Remember the following dates for the AIA Denver, AIA Colorado North and AIA Colorado South 2008 Design Awards Galas. Entry and registration forms are available at www.aiacolorado.org.

AIA Denver Design Awards Gala on Sept. 5 at The Cable Center (Denver).

AIA Colorado North Design Awards Gala on Oct. 17 at Stanley Hotel (Estes Park).

AlA Colorado South Design Awards Gala on Dec. 5 in the Bemis Hall at Colorado College (Colorado Springs).



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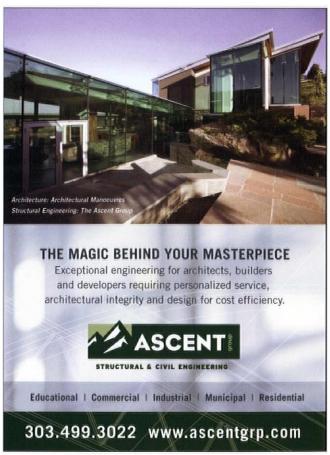


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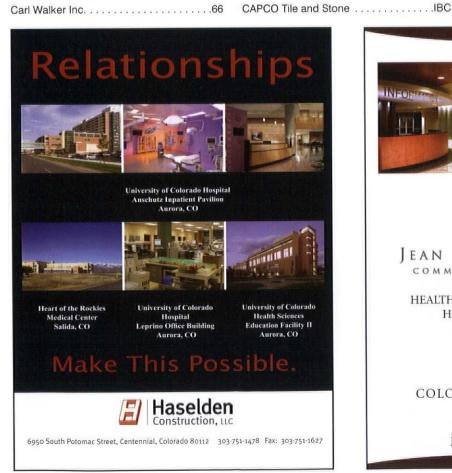
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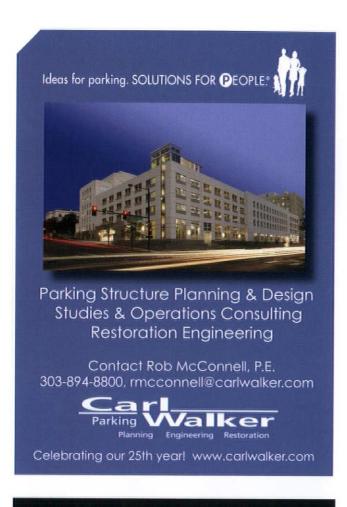
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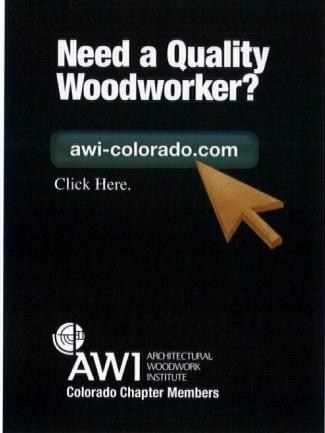
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Rocky Mountain Masonry Institute

24/7 Technical info at www.rmmi.org

Email and Phone Technical Advice 9-5 M-F 303-893-3838 or dianet@rmmi.org blog full of ideas http://rockymountainmasonry.blogspot.com/

Plan reviews & Job site visits

Assistance with LEED planning and documentation: tech@rmmi.org

Free Architecture Lunch n Learns : 2nd Tuesday,

686 Mariposa St, Denver

11:30 a.m. - 1 p.m.

Free Lunch n Learns for Engineers too 1st Wednesday

686 Mariposa St,

11:30 a.m. - 1 p.m

Feb 13 Proposed Changes to the LEED System

March 12 Manufactured Stone: Best Practices

April 9 Masonry in the Landscape

May 14 How to Make Your Single Wythe Wall Perform Better

June 11 Topic TBA

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Aug 13 Topic TBA

Sept 10 A Masonry Tour of Prague and Budapest

Oct 8 So You Bought a Historic Masonry Building...Now What

Nov 12 Review of Documented Green Research on Masonry

Dec 10 Flashing – The Most Important Masonry Detail

STICK Lunches at your office:

Flashing—The Most Important Masonry Detail

Since flashing is usually hidden, it is sometimes substituted or deleted. This can be a huge mistake. Although flashing is not a masonry material itself, it is the critical piece that makes the rest of your detail work. This seminar will help you compare different flashing materials (for cost as well as effectiveness). The class will also teach you where to put the flashing and how to install it so that it will work.



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