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MAY 1999

PRACTICING PROFESSIONALS NEEDED AS MENTORS

MENTORSHIP PROGRAM STARTING UP AT THE COLLEGE OF ARCHITECTURE AND PLANNING

The University of Colorado College of Architecture and Planning announces its High Potential Student Mentorship program beginning Fall 1999. Practicing professionals in the fields of architecture, landscape architecture and planning are needed as mentors.

The objectives of this program are to develop a connection between the student's education and his or her professional career, as well as promote a commitment to graduate study in the College of Architecture and Planning. The program will recruit students in the second semester of their third year of undergraduate

study. The mentorship program would take place in their fourth year.

Students will be nominated by their faculty based on cumulative grade point average, extra-curricular activity and demonstrated leadership. Students will be assigned a mentor from a pool of practicing professionals. The first group of students will come from the Boulder undergraduate program of the College.

Practicing professionals will be identified on a pre-qualified volunteer basis from the professional community, specifically The American Institute of

Architects, the American Planning Association, and the American Society of Landscape Architects. Mentors will receive a mandatory orientation and mentorship instruction.

The CU College of Architecture and Planning Mentorship Program will include a variety of activities such as lecture programs, critiques, career development and fellowship.

Practicing professionals who are interested in participating in this Mentorship Program should contact Allen Harlow at 303.556.6160 or Chris Nims, AIA at 303.595.8585.

IT'S COSTLY TO LOSE GOOD EMPLOYEES

— Sandy Blaha, PA

Can you afford to lose a million dollars? Not many companies can. But did you realize that on average, a company loses about \$1 million with every ten professional and managerial employees who leave their organizations? Assuming your company has a 10 percent after-tax profit, that's a reduction of \$100,000 from the bottom line.

Research at Saratoga Institute has shown that the average internal cost of turnover for exempt personnel is a minimum of one year's pay and benefits, or a maximum of two years' pay and benefits. To obtain a true picture of the cost of turnover, you also have to factor in the external effects on customer sales and retention.

The three costs of turnover
Almost every HR professional knows the turnover rate of his or her company. However, not everyone knows the voluntary and involuntary turnover rates of his or her exempt and nonexempt staff. And, giving an annual report of turnover rates as a percentage of staff to top managers usually fails to elicit any action. It would help if a turnover report focused on the true and full cost of turnover.

The first cost is employee-based. For example: Company A employs 1,000

employees of whom 50 percent are exempt. The firm's average annual salary and benefits package equals \$82,000 and voluntary turnover is 8 percent. Minimal cost of turnover - \$3.44 million (1000 x 0.50 = 500 x 0.08 = 40 x \$82,000 = \$3,444,000).

The second cost is customer retention. As consumers, we all experience the annoyance of dealing with new employees at banks, stores, gas stations, and other retail and service establishments. When aggravated, we take our business elsewhere. This secondary cost is easily calculated by the sales, marketing, or finance departments. To calculate the average value of customers, divide total annual sales by the average number of active customers or clients. This figure can range from a few hundred to millions of dollars. Turnover in sales and service workers negatively affects customer retention. In his book "The Loyalty Effect," Frederick F. Reichheld claims that in some industries, it takes a new sales person two to three years to reach the same level of sales as the worker's predecessor.

The third turnover cost is the marketing and sales cost to win a new customer. Customers must be replaced or your company loses market share. Companies that lose market share

eventually fall into the doldrums of the living dead or go out of business. Here again, the marketing department knows the average cost to attract and capture a new customer. When you put the three costs together, you can see that this equals the total potential cost.

If you showed both the potential and the minimum costs to your senior managers, they might wake up and respond. To be conservative, acknowledge that the separation of every exempt employee doesn't cause the loss of a customer. To be extremely conservative, show only the internal cost. By itself, this is a hair-raising number. Losing employees and finding new ones costs big time.

Four costs of separation

There are four internal sources to consider when determining the cost of separation. They are: the cost of termination, the cost of hiring and training a replacement, the vacancy cost until the job is filled, and the loss of productivity with a new hire.

Termination

When an employee leaves, there are processing and interviewing costs. Typically, this cost is only a few hundred dollars of staff time and materials.

[See **TURNOVER** on page 15]

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CHALLENGE: ACCESS AS A PREMISE

Why is it that when things are going well, we sometimes lose sight of how we are blessed? One event has recently brought this back into focus for me, especially as it relates to accessibility.

When we are not limited in our mobility, I am not sure we truly think about how accessibility really works, and all of the aspects of one's life that can be affected. I recently injured my back and missed almost a week's worth of work in bed. After a month and a half of rehabilitation without results, I had to undergo surgery from which I'm now recuperating. During this period, my mobility has been limited and many other aspects of my day-to-day life have been affected.

Walks that I used to not even think about had to be carefully planned to be sure I could complete them, and shopping was a real issue because I would tire extremely quickly. Brushing my teeth, shaving, and tying shoes were all very difficult because I couldn't bend much. My doctor still doesn't want me sitting for more than 20 or 25 minutes at a time. You can't imagine what that's done to my meetings and my travel schedule.

When this happened, I had plenty of time to reflect on those who are disabled and must deal with these and many other issues for their entire lives. As architects, we deal with ADA requirements daily, but are we just designing to minimum standards, or are we truly trying to put ourselves in the place of the disabled to understand how buildings and sites really work for them?

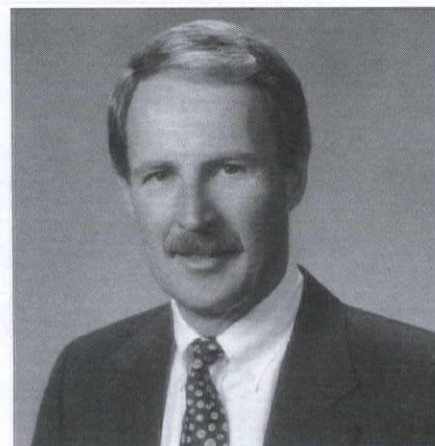
It seems we are too often embroiled in the small details and not looking at the big picture. Architects should—and must—try to incorporate designs in all of their work that is user friendly to all. We need to look at buildings not just

from the perspective we now do, but from that of all potential users. We generally are good at looking at a building's functions and first-time occupants, but what about future use changes and future occupants? We also need to design buildings with the concept of access as a basic premise, not an 'add on' to a finished design.

Technology is continually improving and helping people become more mobile and this will make the design of buildings for everyone's use even more critical.

Peter Orleans, AIA, and Mike Kephart, AIA, made a presentation to the AIA Colorado Board regarding an upcoming series of lectures they will be doing on the Fair Housing Act throughout the state. During their presentation, they showed several examples of how residential plans could be modified for access. It was striking at how easy many of these changes could be made with careful thought.

This example confirmed for me that we can do a better job and we must continue to improve our designs to accommodate all building users. This is a challenge that as architects we must embrace ... and become the leaders of change, not just followers.



—Ned White, AIA

ON THE BOARDS

The Denver architectural firm of Barker Rinker Seacat Architecture has been selected to design a new community center for the City of Longmont. Currently a public process to determine a preferred site and program components for the new center is under way, and the project is on the November ballot. The budget for the center is \$8 million, which does not include site work or acquisition. This will be the 14th community recreation center Barker Rinker Seacat Architecture has designed for the Front Range.

S.A. Miro, Inc. Consulting Engineers has expanded its Denver staff. Joining the firm are Mark Johnson, Ted Krull and Cheryl Bicknell as structural design engineers. S.A. Miro was established in Colorado in 1980, and specializes in structural, civil and analytical/investigative engineering with a professional staff of 38 engineers.

The Colorado Educational Media Association awarded the outstanding Library Design Award to Klipp Colussy Jenks Dubois Architects for the new Raether Library at Colorado Academy in Denver.

FIRM PROFILE AND MEMBERSHIP DIRECTORY OUT SOON

The 1999/2000 Firm Profile and Membership Directory is being compiled now. To ensure accuracy, please be sure to check your Firm Profile listing from last year and make any corrections to it. Or complete the form enclosed with this issue and return by fax to The Newsletter Group at 303-757-3374.

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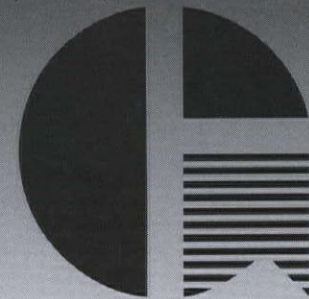
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COLLABORATION BETWEEN ARCHITECT AND ENGINEER CREATES DESIGN OPPORTUNITIES

—Mike Thele, AIA

Which came first Architecture or Structure; the architect or the structural engineer; the chicken or the egg? When architecture comes first with little consideration for the structure, the result is often "accidental architecture" at best. Architects and structural engineers seem to have a classic love-hate relationship.

Many structural engineers don't understand architectural design philosophies and architects often don't understand structural design issues. Being an architect by training and a structural engineer in practice the reader can only imagine my inner turmoil.

But it isn't always that way. Many of the most renowned and cherished architects through history have embraced structural systems as architectural expression. Gaudi, Corbusier, Wright, Kahn, and Jahn all used structural concepts as integral form generators in many of their most successful works.

I began my professional career in 1979 in the structural department of C. F. Murphy Associates in Chicago where Helmut Jahn established his design career. The firm was soon renamed Murphy/Jahn as his reputation grew and he became controlling partner.

Many of Jahn's buildings are a tour de force of structural expression. He spends as much time designing and refining structural layouts and connection details as with any other aspect of design. He finds ingenious ways to expose structural steel framing while conforming to building codes and fire ratings.

The drama of the design process is Jahn's forte. I recall my associates in the design department spending countless hours creating endless variations of lighted glass block and tile designs for the O'Hare Airport United Terminal subway connection and structural connections for the State of Illinois Center atrium in anticipation of the masters review.

Near the end of the day, Jahn would arrive with his entourage wearing a large fedora and his trench coat draped over his shoulders like a cape. He would make his way through the office and then stay late into the evenings conducting his discussions and critiques.

Helmut Jahn's finest designs are the result of a true cooperative collaboration between the architect and all of the attendant design and engineering disciplines.

Since C. F. Murphy and Associates was a full-service architecture and engineering design firm the interaction between the various disciplines was a continuous ongoing process for any project. The discussions were often spirited, enthusiastic and sometimes heated—but (almost) always productive.

Today, most of us do not have that convenience in our own practices. Architects engage the services of consulting engineers when they see fit and the interaction is reduced to a series of meetings, phone conversations, and traded design documents. The challenge is to make our interaction just as productive and spirited in the cold light of today's communication technology.

Collaboration yields excellent architectural design

Real collaboration between architects and engineers has produced the finest examples of architectural design throughout history. But collaboration requires thorough and complete communication and feedback as a project develops. Engineers and architects inherit very different vocabularies from their education and peers creating obstacles in communication. Issues as simple as basic design vocabulary need to be discussed since very few engineering curriculums include such studies.

Elements of scale, proportion and ratio may have a very different meaning to an engineer and the term "lateral force-resisting element" might as well be Greek to most architects. In addition most engineers have little knowledge of architectural history leaving them with no frame of reference in regards to historical precedence and tradition of building styles and construction techniques. Real collaboration takes place when each of the parties has a deeper understanding of the other's criteria, needs, and goals.

Discussion between the architect and the structural engineer should begin as soon as schematic designs begin to unfold. Frequently the structural engineer is not brought into the project

until the design development phase. By then it may be too late to overcome unrealistic demands on the structural materials and elements posed by the design solution that has already been reviewed and accepted by the client. Such situations usually result in forced solutions, brute force engineering and "accidental architecture."

The art of architecture is truly at its core the art of synthesizing many diverse requirements and constraints into a whole expression. Collaboration between talented architects and engineers can turn challenging problems into design opportunities.

The architect must recognize the potential of early involvement by the engineer and the engineer must understand the design issues adequately to offer relevant suggestions. When used properly, the structural engineer can be a safe and effective partner in the development of a successful architectural design.

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AIA Colorado expresses appreciation to the following companies and organizations who are participating in the 1999 AIA Colorado Statewide Sponsorship Program:

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These sponsorships were committed to as of April 12, 1999.

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ENGINEER'S PERSPECTIVE: COMMUNICATION IS KEY FOR SUCCESSFUL PROJECT

—Bill Newell, PA

Principal, Monroe & Newell Engineers, Inc.

During a talk to my son's second grade class on career day, one of the students asked me what was the difference between an architect and an engineer. I thought this was quite a question for a second grader. I gave them the analogy of the human body. The architect would decide the person's height, number of arms, where the head goes, color of eyes, etc.

The structural engineer would design the person's skeleton. The electrical engineer would design the brain and nervous system, and the mechanical engineer would design the heart and lungs. Since my son is now a junior in college, this question has stuck with me for some time.

How does this group of individuals go about designing a person, or a building? It's simple. They must work together and communicate their ideas to each other. Design is a process, not an event. However, project schedules have become so compressed, that the process seems like an event. I am sure that the growing frustration that has accompanied this is shared equally by the architect and engineer.

Once the architect has defined the problem, by designing the basic shape and layout of the building, the architect has

only started the design process. Now the architect and engineers must interact and work together over a period of time to evolve the design. The key phrases here are "work together" and "over a period of time."

Nobody can properly design his or her portion of the project in a vacuum. The architect must constantly keep the engineers informed of his decisions, and the engineers must do likewise. It seems simple; however, I believe improper communication is the single largest cause for frustration during the design process.

Face-to-face meetings still necessary

With the advent of the fax machine and e-mail, we should be able to communicate much faster and easier. Because of the fax we have forgotten the art of face-to-face-communication. The weekly or biweekly job meeting is a necessity if we are to fully develop our ideas and meld them into a good design.

Communication is most definitely a two-way street. Both sides must be capable of instigating the discussion and providing a prompt and, based upon the current information, reliable answer. As the process continues "over a period of time," more information is provided, and

the "reliable answer" may change. This new information may come from the architect, engineer, contractor, or more likely, the owner. We must all be capable of realizing that when the answer changes, it may require changes to a portion of our design. Although this may cause additional work, this is only a part of the process. If this job was easy, anybody would do it.

Focus on similarities, not differences

I often hear the lament that architects and engineers are different. The old right brain/left brain argument. I can never remember which side of my brain I'm supposed to think with. In my case, on many occasions, neither. Instead of concentrating on our differences, I believe

we should accentuate our similarities. We are both eager to design a building that will provide the owner exactly what he envisioned when he started the project. We both perform an extremely difficult task of turning an idea into a complex three-dimensional object. On top of that, we are expected to perform this task without mock-ups or prototypes.

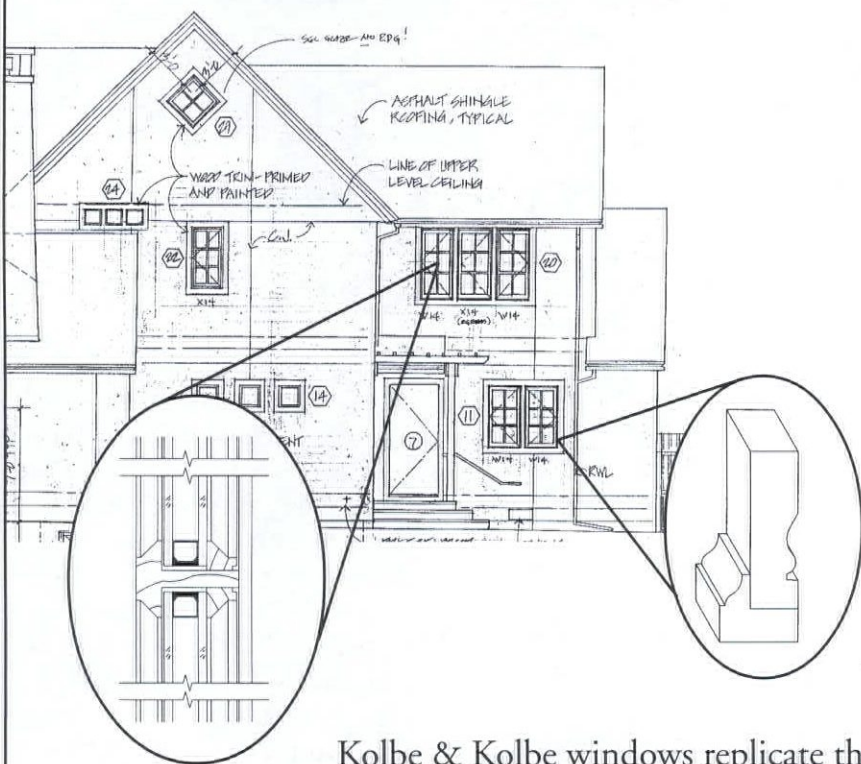
Hopefully, by working together and communicating, we can get all the arms, head, skeleton, brain, and heart in the right place working together properly.

Plan now to be in the 1999/2000 Firm Profile and Membership Directory

The 1999/2000 firm profile and membership directory will be out in just a few months. If you want to reach architects, influential decision makers in the public sector, and the public at large—all at the same time—then the directory is the way to go. This book is the one resource that architects and other decision makers turn to time and again for those who can help them.

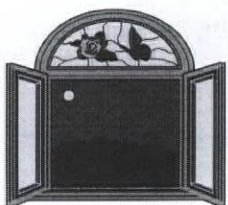
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THE COLORADO STATE CAPITOL—

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— Donald A. Bertram, Esq., AIA

The State of Colorado did not always have a state capitol building. If it doesn't correct serious and potentially catastrophic conditions in the state capitol building, the state of Colorado may be without one again. While the Capitol's future was exciting as the 20th century approached, as the 21st century approaches, its future is much less certain.

In his 1959 monograph, *Building Colorado's Capitol*, historian Paul Harrison begins:

"Atop the gentle knoll overlooking Denver's Civic Center stands an elegant and imposing edifice, The Colorado State Capitol, which is perhaps the most significant public building in the Rocky Mountain West. Coloradans hold it in high esteem not only on account of the important position it occupies in the state's history, but also because of the abundant natural, warm and simple charm that it possesses."

BIRDAUS BASH RETURNS TO DENVER BOTANIC GARDENS

Denver Botanic Gardens has announced its official "Call for Entries" for the extremely popular and colorful BirdHaus Bash display. Artists, architects, students, craftsmen and creative thinkers are invited to submit their hand-crafted creations. Registration for entry is due by 5 PM May 14.

More than 200 birdhouse and bird feeder entries are expected for this year's event which takes flight July 1 to July 18 at the Gardens. The "Most Outstanding" entry will be awarded \$1,000. The winner of the "People's Choice" award, presented by United Airlines and decided by public vote, will receive two complimentary round-trip air tickets for travel within the United States.

All birdhouses and feeders will be auctioned off at a Garden Party on June 30

The history of the Colorado state capitol is more than warm and simple. When it met in Golden in 1867, the Seventh Territorial Assembly of the Territory of Colorado decided on Denver as the state's capital city. A few years later, Denver banker Henry C. Brown donated ten acres of land consisting of two blocks south of Colfax and east of Lincoln Avenue for the site. However, the land sat idle as political squabbling centered in the Territorial Governor's Committee on Arrangements debated the capitol question over the next several years.

In 1890, four years after Colorado gained statehood, the state legislature put the question of the location of the capital on the ballot. At the general election of November 8, 1881, the people of Colorado formally determined Denver would be the seat of Colorado state government.

at 5:30 PM. Proceeds from the auction will benefit the Gardens' youth education programs.

Last year's entries included houses and feeders in every imaginable size, shape, color and material; some were submitted by local television and radio celebrities, and the Denver Broncos, Colorado Avalanche and Colorado Rapids sports teams. The whimsical structures will be displayed both indoors and out during the Gardens' regular summer public hours.

Entries must be submitted to Denver Botanic Gardens by June 14. Please contact Benny Juarez at 303.370.8091 for more information or to obtain registration forms.

Nothing happened on the land Brown donated during this time. Frustrated by the delay, Brown sought to reclaim his property and ultimately took his case to the United States Supreme Court, which disallowed his claim in a decision in 1886. Brown's next project was the incomparable Brown Palace Hotel.

It was not until the Supreme Court decision was handed down that the capitol started to become a reality. A design competition was held, but produced no designs that were considered acceptable. At the end of a second design competition, the proposal by E.E. Myers, a Detroit architect who had recently designed two other state capitols, was accepted.

The contractor, W.D. Richardson from Springfield, Illinois, was hired and began work in 1886. In 1888, Richardson's financial difficulties forced its replacement with a new contractor, Geddes & Seerie. Thousands attended the cornerstone ceremony in 1890. Chartered trains brought people from Colorado and other states who consumed over 30,000 pounds of beef, 40 barrels of lemonade, and various undocumented comestibles.

The exterior was originally planned to be of sandstone but was changed to granite. A special narrow-gauge railroad was constructed to bring the 280,000 cubic feet of granite from the Zugelder quarry south of Gunnison to Salida for transshipment then to Denver. In 1893, the original hardwood floor design was changed to marble. The deposit of Buelah red marble from the quarry south of Pueblo was completely depleted for use as the capitol's floors. More than 200 stonemasons were employed at the construction site.

Some offices were ready for occupancy in 1894 and in 1895, the legislature moved in. Following his appointment in 1898 as architect, F.E. Edbrooke designed the stained glass around the dome. In 1907, the gold leaf was

[See STATE CAPITOL on page 6]

LETTERS POLICY

The Colorado Architect welcomes all letters. Letters must be signed with name, street address and daytime phone number. The opinions expressed do not necessarily represent the opinions of the AIA Colorado Board of Directors or its membership.

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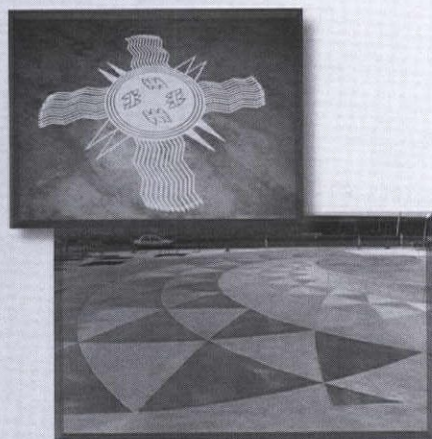
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May Update Symposium, May 6 Fall Forecast, October 21

Plan now to participate in two major events being planned by the University of Denver, (one in conjunction with the Rocky Mountain Commercial Real Estate Expo). For further information, contact the University at 303.871.3432 or visit www.dcb.du.edu/burns.

Successful Project Management for A/E/P & Environmental Firms, May 13

This one-day seminar, presented by Zweig White & Associates, skips the theories and gets right down to the business of teaching proven techniques from the real world. Coursework includes meeting schedules and budgets, managing and motivating staff, client maintenance, time management, fee negotiation, dealing with out-of-scope items, and much more. For further information, call 508.651.1559 or visit www.zwa.com.

Autodesk Training Aboard Alaska Cruise, May 22-29

Westark College/Autodesk Training Center presents special training aboard

a seven-night Alaska Cruise on the MS Westerdam, May 22-29. AutoCAD Architectural Desktop, AutoCAD LT 98, and 3D VIZ R2 will be presented in this "earn while you learn" program, which qualifies for up to 24 AIA/CES Learning Units. For more information, contact Continuing Education, Inc., University at Sea, 800.926.3775 or contactus@continuingeducation.net.

Environmental Thinking, Spring 1999

This lecture, entitled Environmental Thinking, The Art of Architecture in the Age of Ecology, presented by James Wines, is based on the premise that architecture is at the threshold of revolutionary changes in response to a new Age of Information and Ecology. For lecture registration information, call 212.285.0120 or email sitejw@interport.net.

Leading in a Changing World, October 17-22

With emphasis on the management of change, this program explains how to find order in chaos and provides a tool kit of practical skills and techniques to use in addressing change in the corporate environment. Presented by the Center for Management Development, Daniels College of Business, University of Denver. Call 888.567.4709 for more information.

IN PASSING

Fort Collins architect Bill Robb, AIA emeritus, passed away March 22 in Indio, California at the age of 76. Bill has been a community treasure ever since he and his wife Eleanor arrived in Fort Collins in 1953.

He laid the foundation for what would be a long and successful practice in the Fort Collins area, while putting significant effort into his volunteer efforts throughout the local community and all of Colorado. He served as one of the original members of the City of Fort Collins Planning and Zoning Board, the Larimer County Regional Planning Committee, and the AIA Colorado

North Chapter—where he served as president in 1985.

He also served on the Board of Directors of the Colorado Society of Architects/AIA Colorado. He was presented the 1987 Distinguished Professional Service Award by the AIA Colorado North Chapter and under his leadership, the firm RB&B won awards for schools, churches, office buildings, and high-density housing projects.

His family requests any remembrances be sent to St. Joseph's Catholic Church Building Fund; c/o Bohlender Funeral Home; 121 W. Olive; Fort Collins, CO 80524.

MEMBERS IN THE NEWS

Eileen D. M. Koenigsberg, AIA, is pleased to announce the opening of her firm, **Moore Koenigsberg Architecture**. With 14 years of commercial and residential experience in Boston, Denver, and greater Colorado areas, the firm plans to focus on sustainable "green" design and Historic Preservation and Renovation for both commercial and residential projects.

OZ Architecture announces the appointment of **Tina Townsend, Assoc. AIA**, as architectural intern. OZ Architecture has studios in Boulder, Denver, and Colorado Springs, and offers client project management, master planning, full interior design, tenant finish and space planning services.

RB+B Architects, Inc. in Fort Collins is please to announce the following recent personnel changes: **Charles Fielder, AIA**, has been promoted to

Senior Associate. He has 20 years of architectural experience and has been with the firm for three years. He is currently Project Architect for the \$32 million Adams 14 projects and for Wheat Ridge High School in Jefferson County. **Rebecca Spears, AIA**, has joined as a project architect. Rebecca is the current AIA North Chapter President and will work on a variety of school and housing projects. She brings eight years of architectural experience to the firm.

Want your news to appear in this section? E-mail your announcements to AIAenco@aol.com by April 30 for the June issue.

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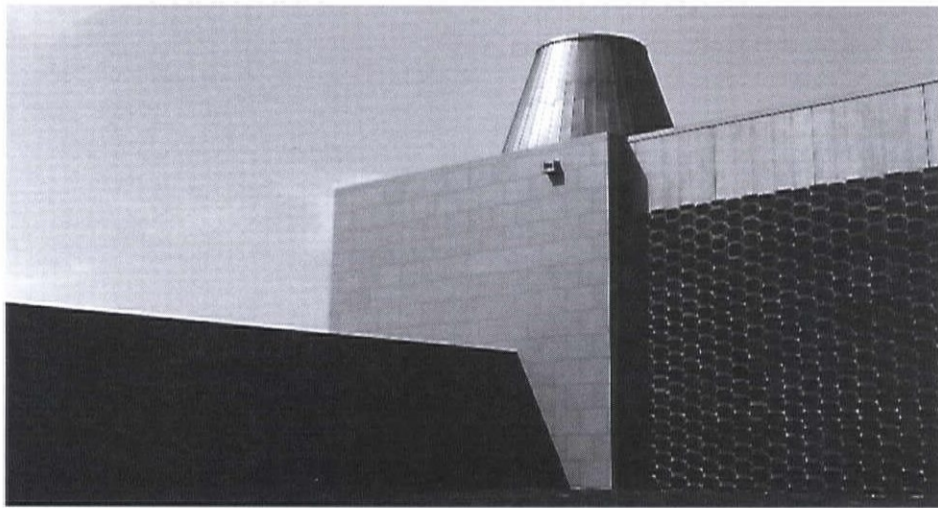
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The Avenue Café Downtown Colorado Springs Architect: Colorado Architecture Partnership

Avenue Café design contributes to the revitalization of downtown Colorado Springs, transforming what was previously a garbage enclosure into a building addition full of energy during the day and throughout the evening. Early architectural inspiration was taken from Russian tea houses and conservatory building types, using steel and glass construction to soften the separation between inside and outside spaces. The new café pays homage to the original adjacent 1890's building by matching the dark green trim surrounding windows and by translating the entry arch into a steel arch of matching proportions at the café rooftop.

St. John's University Science Facility Expansion & Renovation, Collegeville, Minnesota Architect: CSNA Architects

This project is located on a campus with the largest collection of Marcel Breuer-designed buildings in the world. The Breuer archive at St. John's and at Syracuse University in New York, and working drawings for The Whitney

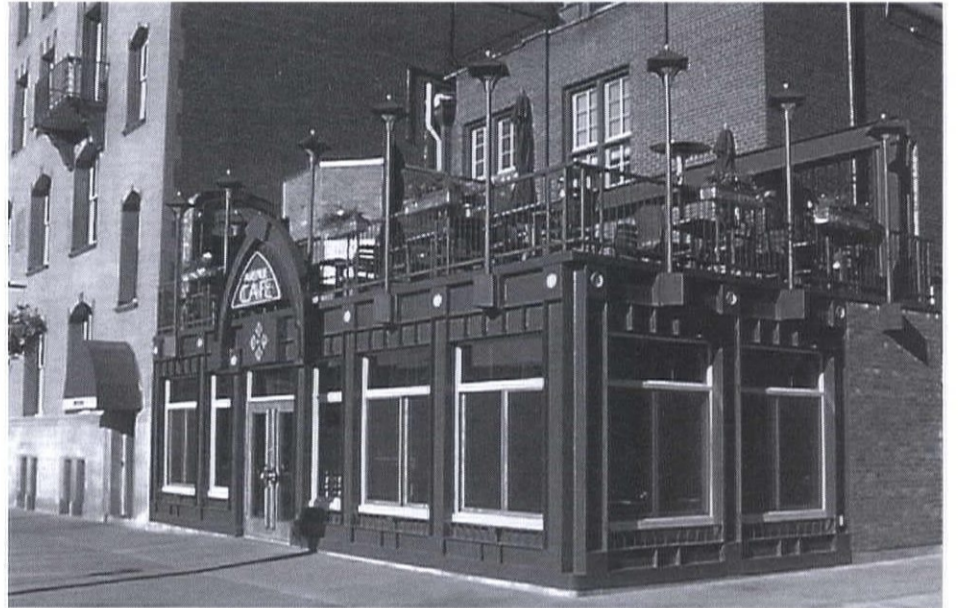


St. John's university Science Facility Expansion & Renovation, Collegeville, Minnesota
Architect: CSNA Architects

Museum in New York City, were used as references for the project. It uses a material palette assembled and detailed according to the precedents of Breuer's work. The building houses undergraduate bench biology functions, and is connected to an original Breuer Science Building at a location planned during its original design.

Pine Creek High School Architect: DLR Group

Sleek forms and careful geometric proportions add innovation to the environment



The Avenue Cafe, Downtown Colorado Springs, Architect: Colorado Architecture Partnership

of the 1350 student Pine Creek High School. The 162,000 SF facility features two academic "houses," one on each level of the building. Designed as a technology "magnet" school, an educational commons area allows teams to access costly technology equipment consolidated for use by the entire house. The focal point is the centralized Media Center situated adjacent to the entry plaza.

Family Development Center - University of Colorado at Colorado Springs Architect: Hagen Cameron Architects

This new Family Development Center for the University of Colorado at Colorado Springs features six distinct child care rooms with an enrollment capacity of 124 children ranging in age from 18 months to 12 years. The center also includes an administrative core with a conference room and a full kitchen. Small observation rooms offer on-site experience to university education classes.

Bowstring trusses allow stepped ceilings in the classrooms, which are arranged along a main corridor axis spanning the length of the building. A special story room, for small class gatherings projects out from the north side of the building overlooking the campus to the north. The rounded masonry shape of this room

is echoed in an outdoor story area at the main entry. Outdoor playground areas for different ages are placed to the west and south of the building.

James W. Nakai & Associates' architectural studio Architect: James W. Nakai & Associates, P.C.

A 1950's office building was transferred into an Architect's Studio utilizing a curvilinear circulation element as its primary form beginning at the Reception Area and culminating within

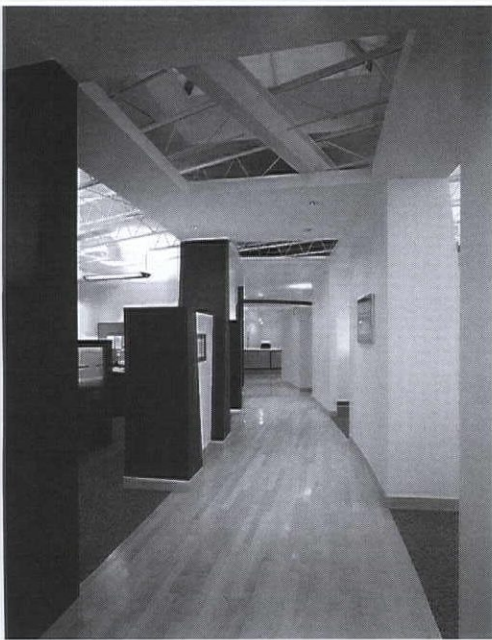
[See AWARD WINNERS on page 6]



The Cliff House, Manitou Springs, CO, Architect: Michael H. Collins, Architects

NEW MEMBERS

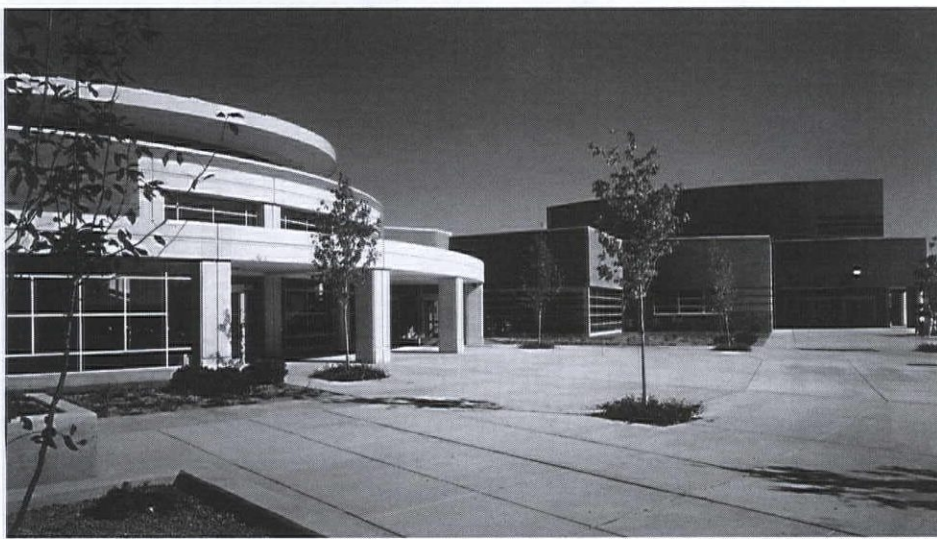
Dani Greer, Assoc. AIA
Greer Studios
Mark H. Kolb, AIA



[AWARD WINNERS, from page 5]

the Charette Room. The element's geometry encourages movement through the space, enhanced by the introduction of skylights, ceiling treatments, exposed roof structure and color accents along the circulation edge. Suspended ceiling "clouds" with juxtaposed orientations were employed to define and accentuate focal areas at the Conference Room, Reception Area and Executive Offices.

James W. Nakai & Associates' architectural studio, Architect: James W. Nakai & Associates, P.C.



Pine Creek High School, Architect: DLR Group

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**The Cliff House
Manitou Springs, CO
Architect: Michael H. Collins,
Architects**

The Cliff House is a historically significant building in downtown Manitou Springs and has a long, illustrious, and integral relationship with the community. Many important historical figures have passed through its doors and become part of the Cliff House's history. Because the Cliff House has stood as a prominent architectural feature for more than 100 years, it has been

referred to as the "Jewel of Manitou" throughout its history.

Listed on the national register of Historic Places, the Colorado Historical Society considered the Cliff House one of the ten most important endangered buildings in the state. The building is positioned as the centerpiece of Manitou Springs. Strong community support has existed for many years for the restoration and rehabilitation of the Cliff House to its earlier magnificent and dazzling details and interiors.

[STATE CAPITOL, from page 3]

applied to the dome and, in 1908, the light atop the dome was installed.

The bright prospects of 90 years ago are dim. The capitol has not received adequate funds over the decades for proper maintenance and periodic system upgrades.

It has been known for some time that the capitol does not meet the minimum requirements of many basic building and life safety codes. The most serious deficiencies involve its life-safety systems. Research Publication number 410 of the Colorado Legislative Council identifies a number of these problems. Correspondence from the City and County of Denver on the state capitol's life safety systems says, "... based on its present condition with the proposed fire protection and life safety improvements, the occupants' safety is compromised."

A 1992 legislative appropriation authorized making a variety of life safety improvements. But, after \$700,000 was spent, it became clear that the building's problems were more serious than anticipated and the scope of the project was growing far beyond expectations. Although many legislators are aware and concerned about this situation, nothing substantial has

occurred to rectify the situation. There now exists no consensus on how to address the current serious situation.

In addition to its life safety and building problems, the capitol lacks a minimum level of capacity to handle contemporary electrical, electronic, and telecommunications needs. It also needs physical improvements to address the needs of persons with disabilities. In short, it needs serious attention. If a fire or other catastrophic event were to occur at the capitol, the loss to Colorado would be immeasurable.

In 1997, an initiative was filed (1997-98 Initiative #18) very late in the year, after the legislature had adjourned, proposing to use moneys from the "Surplus" to fix the capitol. However, because of the late start, the process was postponed until this year.

This year, the **COLORADO STATE CAPITOL INITIATIVE**, A Citizen Initiative to Restore and Renovate the State Capitol Building, (Initiative 1999-2000) has been filed and as of the date of writing this article is awaiting the office Title Setting. The initiative favors no individual or group within the capitol. This initiative would, if approved by the voters:

- ▲ be a voter-approved revenue issue, removing it from the spending cap and spending-increase cap required by Amendment #1;
- ▲ require the General Assembly to appropriate \$140 million by March 1, 2000 for renovation and restoration of the capitol;
- ▲ require all occupants of the capitol move out by October 1, 2001 and would pay for their relocation to a site of their choice for three years;
- ▲ require there be no increase in taxes to achieve the purposes of this initiative.

The 1999 State Capitol Building restoration initiative is an opportunity to preserve and pass on the heritage of the State of Colorado.

For information on how you can become involved, contact:
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DESIGN AND BUILD FROM THE GROUND UP

—Eileen March, Associate AIA

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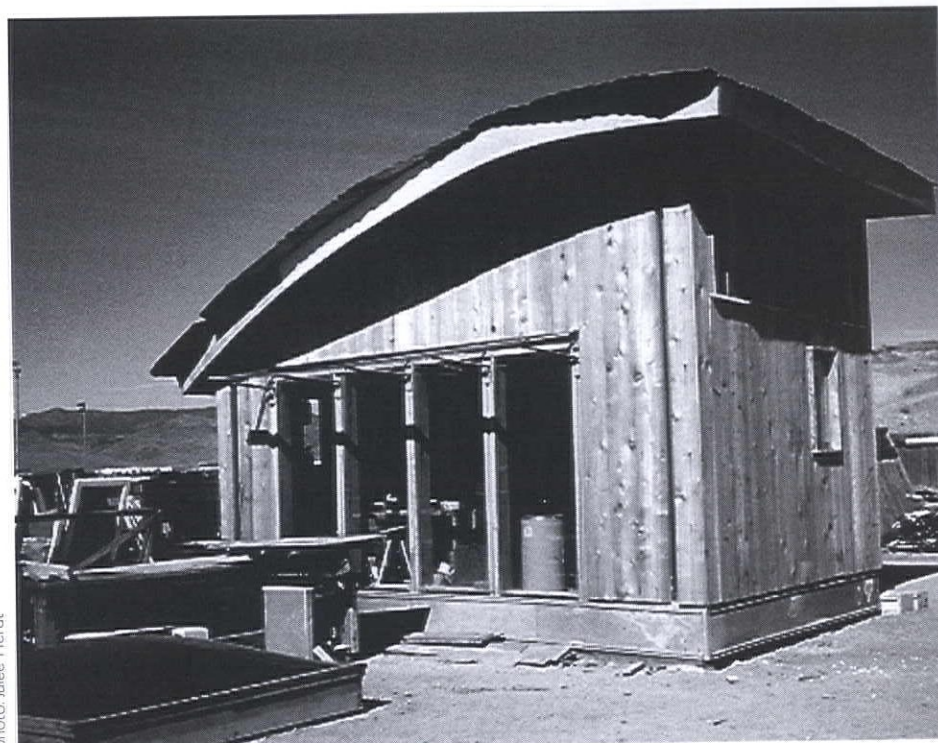
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When Boulder architect Julee Herdt discusses design, she uses her hands. As she talks, she produces bits and pieces of illustrative materials for walls, floors, and other building elements. Her workspace is filled with found objects and potential building components. The space mirrors her practice—an innovative practice where new materials are discovered, and old materials are adapted to new uses. It is a practice that uses the concept of design/build not only as a design tool, but as a laboratory for experimentation and adaptation.

The Architecture Plant, a firm that has become a change agent in the field of sustainable design, was founded by Julee Herdt, assistant professor of architecture at the University of Colorado at Denver. The firm designs and builds using recycled and agriculturally derived materials. Herdt's background in design and exploration with sustainable materials began when she was working as an architect for Morphosis; it influenced her work with that firm, and later with Coop Himmelblau in Vienna.

Herdt's philosophy of design/build relates to how the process strengthens the design of a building. "When you are physically involved in the work, the design continually evolves. You can see how materials work, how they move, how they take a hammer," she says. When using experimental sustainable materials, there is an element of serendipity that is factored into the design. "You can find out what materials do best, what their greatest potential



The Sunbonnet (during construction).

photo: Julee Herdt

is, and find their best use. Sometimes they work in places you didn't expect." In a housing project, Herdt and Architecture Plant partner, Jeffrey Brown, used a bowling alley lane to create kitchen countertops. "The material is virtually indestructible. The laminate was designed to endure some incredible forces, such as a bowling ball being dropped with momentum. The material is beautiful and is great for high use areas. We haven't found any way to damage it, which is always part of the experimentation," says Herdt.

Teaching students the design/build process has been meaningful for Herdt. "One way to describe the process is intelligent play, she says." As a designer, I don't want to know everything. I

want to experiment." The design sequence for an upcoming residential project, in which students will participate, will involve regular construction of models and mock-ups, a continuous hands-on design process. "When you are handling the materials, you tend to express yourself more honestly. You can't hide behind a beautiful drawing," says Herdt. She believes that those who design and build learn to work with their weaknesses and become more expressive and stronger designers.

As part of an Architectural Design/Build Studio at CU, a former student, Eric Thuerk, designed "The Sunbonnet," a 200-square foot passive solar office for the Boulder Energy Conservation Center (BECC). Herdt and students constructed the project for the BECC in 1997. By understanding BECC's mission of showing the public how to recycle solid-waste materials, Herdt and students were able to create a built representation of the client's philosophy. The Sunbonnet was constructed from salvaged building materials at BECC's Resource 2000 "experienced" materials yard in Boulder. The building is a tangible example of how to divert materials from landfills and integrate them into a strong design concept.

The Architecture Plant's current project is a house in the foothills of north Boulder. Known as The Farmhouse, this passive solar residence is designed for low environmental impact and will

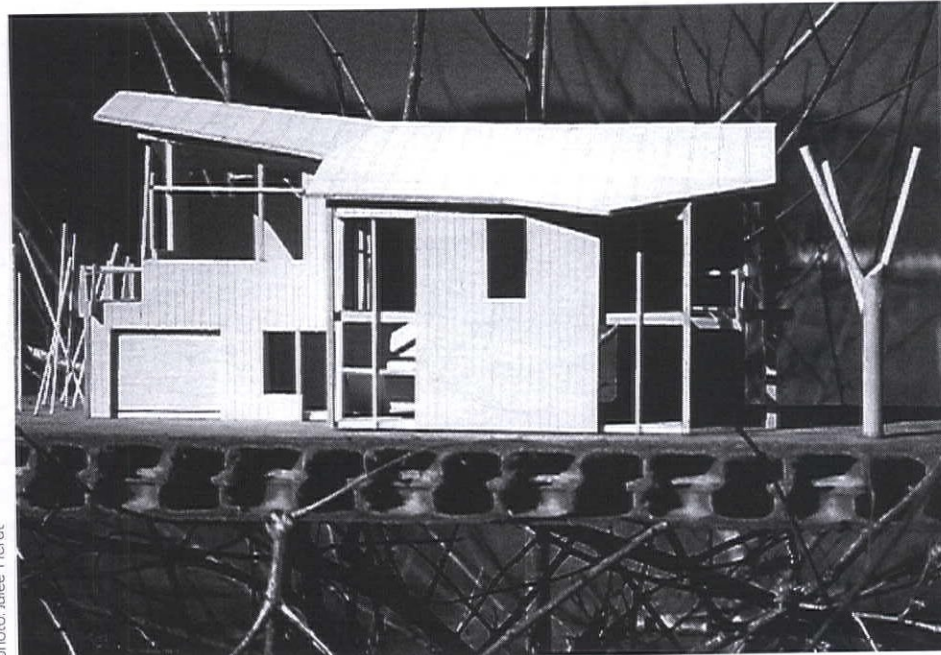


photo: Julee Herdt

The Farmhouse (model)

[See DESIGN on page 8]

[DESIGN, from page 7]

be build almost completely from recycled and bio-based products. Herdt and fellow designer Steven Gates collaborated with the Alternative Research and Commercialization Corporation (AARC) and the U.S. Department of Agriculture in developing the project.

Design solutions for different parts of the house are continually developed as Herdt and her Green Technology students explore different uses for materials. The Farmhouse's "brain-wall" (utility and technology infrastructure) will be partially enclosed by a glass block wall composed of recycled television

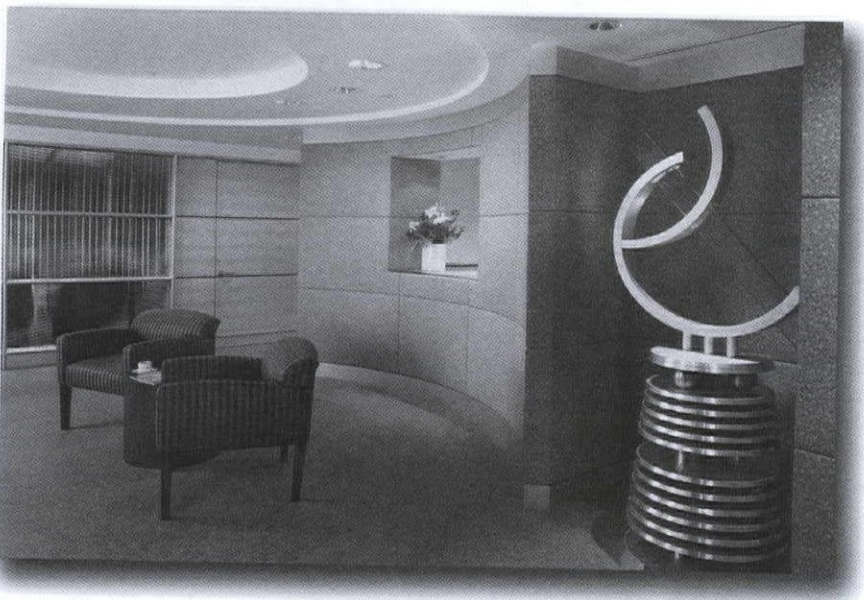
screens, found and reconditioned by one of Herdt's students, Dan Benjamin. Found objects will be used for plumbing and lighting fixtures (see inset). One of the materials used in the project will be Gridcore, which Herdt helped develop and commercialize with the United States Department of Agriculture (USDA), Alternative Agricultural Research and Commercialization Corporation and the Gridcore Systems International team. The material is an engineered, molded fiber, honeycomb panel made from recycled cellulose sources such as liner board, corrugated cardboard, or agricultural fiber like kenaf. Herdt and her students have successfully used the



The Farmhouse (model)

photo: Julie Herdt

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DESIGN AND BUILD THE DETAILS

As part of Herdt's Green Technology course, student were asked to use found objects to construct plumbing and lighting fixtures. This exercise was conducted to contribute to a larger design/build project, The Farmhouse (see article), but also to encourage students to explore re-uses for materials that might otherwise end up in a land-fill. The exercise is timely. House Bill 1145, (recently passed and moving to the Senate), will allow local governments to select their own plumbing codes and approve the use of alternative plumbing materials. If the bill is passed into law, materials that meet health standards and pass examinations by outside laboratories, may be used.

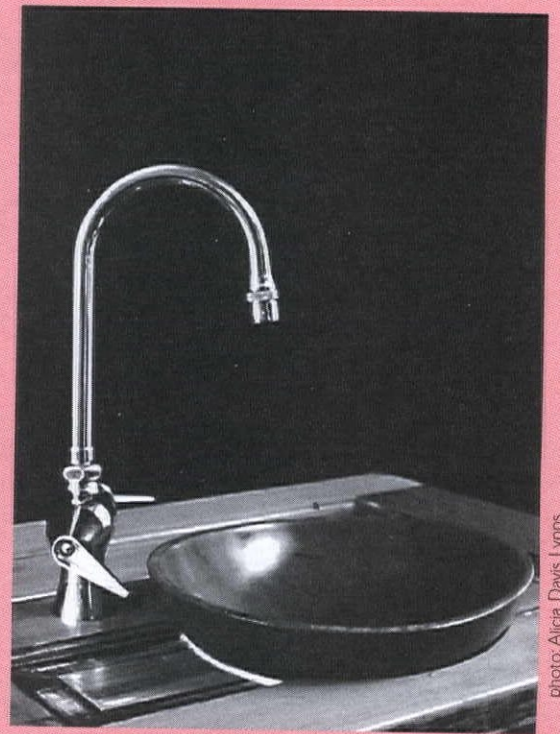


photo: Alicia Davis Lypps

The Mindful Sink

The Mindful Sink, designed and built last Fall by Alicia Lypps, utilizes reclaimed copper pipes, a recycled wood door, reused faucet and reused wood bowl to create a sink that honors the power of water. "The wooden bowl is an atypical sink material—it causes the user to pause and consider how wisely the water is being used," says Herdt.

product in other design/build projects. Now that they have experienced the physical properties of the material it will be used in their current project for walls, cabinets and furniture.

Herdt views construction as an inclusive process that begins with research and development of materials that fill a need. Her firm has recently become involved in real estate development and will continue to work with the

USDA on projects related to construction materials. The opportunities to design and build with experimental and sustainable materials are just beginning.

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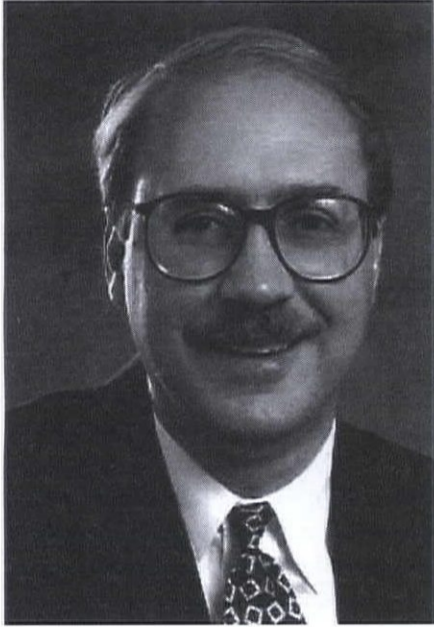
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WHAT EVERY ARCHITECT NEEDS TO KNOW ABOUT DESIGN/BUILD

PART I: BUSINESS AND PRACTICE ISSUES

—G. William Quatman, AIA, Esq.
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—G. William Quatman, AIA, Esq.

and develop strategic alliances with experienced (and trusted) contractors now. Waiting until the owner's RFP hits the street may be too late to assemble the team most likely to get the contract.

A written "teaming agreement" should cover the basics of your relationship, including payment of design fees and proposal costs, who will bond the job, how will you share profits and losses. Currently, there are no published teaming forms, but AIA's C801 Joint Venture Agreement is a good place to start. AIA & AGC will publish a "teaming checklist" later this year. To obtain the current draft, e-mail [Brad Buchanan, AIA](mailto:Brad.Buchanan@bygroup.com), at bbuchanan@bygroup.com.

Licensing

Licensing is one of the key legal issues to consider in design/build, no matter who is the team leader. Colorado law defines the practice of architecture as including "planning and design of buildings" but excludes "the performance of the construction of buildings." So is design/build practicing architecture or not? Until a court or statute says otherwise, you and your partners need to be careful about complying with state licensing laws on design/build projects.

Without the proper licenses (as a contractor or architect), you may be unable to enforce your contracts. Courts in some states hold that design/build contractors are practicing architecture, but others disagree. To be qualified to practice, some states require that more than 50 percent of the shareholders and directors of an architectural firm be licensed professionals in the project state. These laws may drive who owns and controls the design/build firm.

In Colorado, no partnership or corporation can use the term "architects" in its business name unless the majority of the partners, officers, and directors are licensed architects. In addition, corporations, LLCs, or partnerships practicing architecture in Colorado must have at least one officer, member

or partner who is a licensed Colorado architect and who supervises the firm's design work.

Corporations, Joint Ventures and LLCs

Though early claims statistics show fewer claims against architects doing design/build than traditional work, many architects set up a new corporation for design/build. This minimizes the risk of an uninsured loss, bid mistake, or other financial loss.

Colorado licensing law permits joint ventures between architects and engineers, but is silent on partnerships between architects and contractors. Partners have what is called "joint and several liability." What this means is that if Partner A commits a negligent act, the owner can sue Partners A and B jointly, or can sue either partner. A "joint venture" is merely a partnership set up for a limited scope and duration. It is treated as a partnership for all legal purposes.

This is why it can be very risky to enter into joint ventures for projects

without full analysis of the legal and insurance implications, as well as licensing requirements.

Limited liability companies (or LLCs, as they are known), combine the protection from personal liability offered by a corporation and the tax benefits of a partnership. Not all state licensing boards have yet permitted design professionals to practice as LLCs, though Colorado permits this form.

An LLC protects the firm owners just like a corporation, but allows the owner to receive income in the form of distributions just like a partnership. The members of an LLC do not have the personal liability for debts of the business, and there is no joint and several liability.

The next issue of Colorado Architect will address claims, insurance, bonds and public projects.

Design/build is growing at a rapid pace. Owners have grown tired of the disputes that seem to drive construction projects. So they have turned to design/build seeking a better way—with fewer delays, change orders and disputes. Industry analysts predict that 50 percent of all projects will be design/build within the next five to ten years. Are you ready? This is the first of a two-part article on some things you need to know before you jump on board the design/build train.

Design/Build Variations

There are essentially four basic forms of design/build: 1. Contractor-led (the most common); 2. Designer-led (less common, but growing); 3. Joint venture (popular for single project undertakings); and 4. Single entity (mostly large "integrated" firms). Another variation, called "bridging," is when the owner hires an architect to prepare the RFP and a set of schematic plans and elevations (usually about a 30 percent set). Design/build teams then submit qualifications and price proposals to complete design and to build the project.

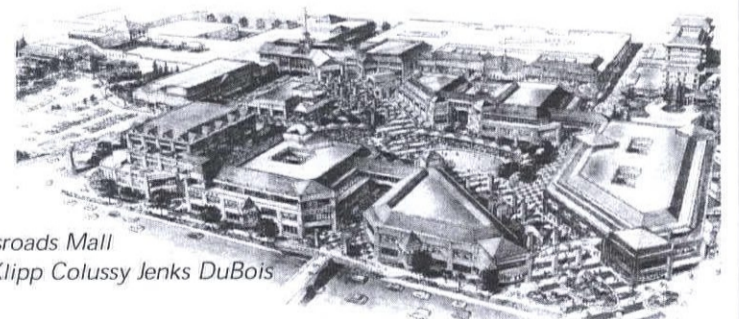
Teaming Up

Design/build teams are often put together quickly to pursue individual projects. Architects should be pro-active



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STRUCTURAL ENGINEERING & ARCHITECTURE COMMITTEE

PAY INCREASES UP FOR SECOND YEAR

Do structural engineers and architects *respect* each other? Do they understand each other? Are they able to *collaborate* effectively? The Denver-based Structural Engineers Association of Colorado is trying for the second time to get their "Structural Engineering & Architecture Committee" going. It's likely to get somewhere this time, because they selected a dynamic and thoughtful young man to chair the committee, Paul Irwin. "Understand," "collaborate," "respect," and "structural art" as discussed below are Paul's starting points for this committee.

Attend just one of these committee meetings and you may view just a little differently your next project meeting with a consulting engineer. Professor David P. Billington at Princeton University has written (in *The Tower and the Bridge*) about "structural art" as perhaps the goal of structural engineers. He defines "structural art" in terms of "efficiency, economy, and elegance." It's not quite the same as Vitruvius' familiar "firmness, commodity, and delight," is it?

Perhaps the difference between structural engineers and architects is not just what part of the plans and specs we work on; perhaps the difference is cultural. On the surface, the meetings address particular topics like slides of candidates for "structural art" in Colorado. We may mount an awards program; two committee members are starting to work with Habitat for Humanity. Underneath it, though, Paul is setting the stage for architects and structural engineers to ask the questions that may help them understand each other and, through that, their own work a little better.

Those of us who attended the committee's February presentation of Charles Keyes (Martin/Martin) and Cab Childress (DU) came away with some new insights, like Keyes' homey: "When structural engineers overspend their fee, it's in the Construction Documents phase. When architects overspend their fee, it's in the Construction Administration phase." Using that test...be honest now, no one's looking...are you more structural engineer or architect? Call Paul for the time of the next meeting.

—Roy Perlmutter AIA, Committee Member

Don't be put off by the heavy "Committee" title. The committee is taking its time getting started, and is just a handful of structural engineers plus one lone architect (me) who is willing to look at practice from structural's point of view first, at least for one hour a month. Sometimes a meeting is just several individuals talking about what it's like working with the other discipline.

The committee was formed by SEAC, but now is "in association" with AIA/Denver. Paul can be reached at: 303.860.9021 (J.R. Harris), fax 303.860.9537, or jrharris@ix.netcom.com. As a member of the AIA Denver Board of Directors, I'm interested in this refreshing committee as a pilot program for eventual collaboration with all our allied engineering and design disciplines, from landscape architects to electrical engineers. I'd appreciate any comments: Roy Perlmutter AIA roy.perlmutter@gte.net 303.755.4100 fax 303.337.8830.

Employees in A/E/P or environmental consulting firms have probably seen their paycheck increase more than normal over the past few years. Among firms that budget for staff pay increases, the percentage has gone up for the second year in a row.

The 1999 Policies, Procedures & Benefits Survey of A/E/P & Environmental Consulting Firms (Zweig White & Associates) shows that from 1994 to 1996, pay increases remained steady at a median of 4 percent—that changed when it rose to 4.5 percent in 1997. Now, for the second straight year, pay increases have gone up with firms reporting a median increase of 5 percent in 1998.

Will this trend continue? The survey participants don't expect it to. When asked to anticipate the pay increase for 1999, the median projected increase was back down to 4.5 percent. This could be in anticipation of a worsening business climate, or perhaps it's a trend towards incentive compensation. For example, in this year's survey, 70 percent of firms report that they include bonuses in their annual budget—that's the highest percentage since Zweig White has been conducting this survey.

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AIA Colorado North Chapter

CORPORATE DESIGN

—David Carson, AIA,
Principal, OZ Architecture

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Of the two primary office building types—speculative and build-to-suit—speculative buildings are, by nature, generic and capable of accommodating a wide variety of company needs and uses. Corporate build-to-suit facilities necessitate a more personal approach—one of the very appealing aspects of this project type. Just as when designing a custom residence, designing for a company requires a deeper understanding of that corporation's personality, 'life style,' employees, past history, and future growth.

In-depth interviewing with a wide variety of department heads, as well as the corporate facilities management is a good basis for creating the understanding we need to develop designs that go beyond being merely functional and become a true identity and 'home' for the company. And we will work closely with the corporate design team to reach for a design that includes everything the firm needs and also incorporates who they 'are' as translated into the building design.

Three examples of corporate headquarters designed within the last three years that are very divergent in architectural style, yet reflect the corporate identity well are the Coleman Headquarters Building in Golden, Star Guide Company's headquarters in Arvada and the Pearl Izumi Corporate Headquarters in Broomfield.

The Coleman Company, which manufactures a wide variety of camping and outdoor equipment, relocated to Golden to be at the foot of the Rocky Mountains. The design OZ presented to Coleman was based on the rustic architecture developed by the national parks. We felt that this look captured the public image of Coleman and the



The Coleman Headquarters Building in Golden. Architect: OZ Architecture

romantic nature of its products, giving Coleman a very special corporate headquarters—one that clearly reflected the nature of their business while functioning well for their needs.

The headquarters accommodates about 75 people in 36,000 square feet. In the rustic spirit, the exterior of this one-story structure embodies the principles of simple, rustic materials in harmony with the site. Natural materials, such as stone and wood, predominate. Interior spaces feature high volumes with exposed wood trusses and day lighting from clerestory windows. Two fireplaces are another unusual feature for a corporate headquarters, yet are in keeping with the camping aspects of Coleman's produce line and worked well in defining the company. Much of the public space was developed to display the history of Coleman camping equipment.

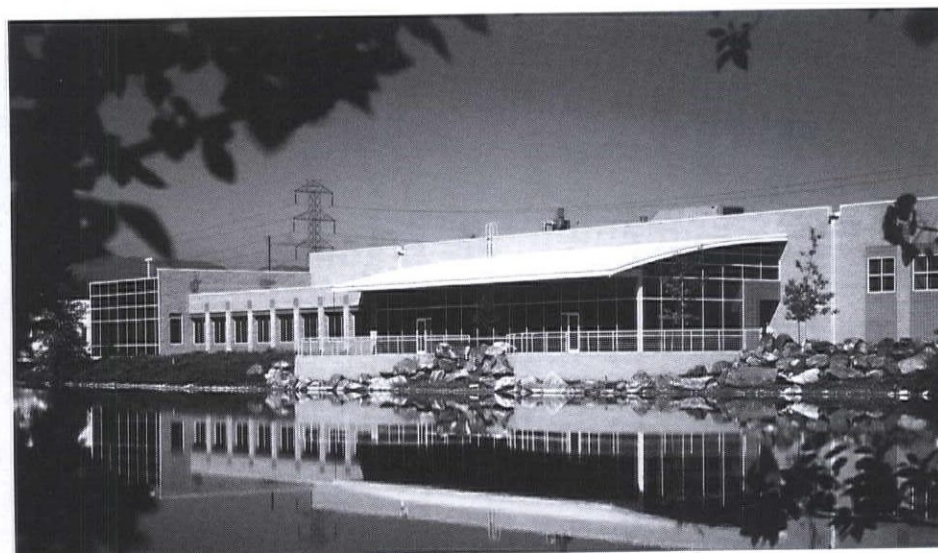
At the other end of the design spectrum is the Pearl Izumi Headquarters. Pearl Izumi designs and manufactures sports apparel for cycling. When OZ got the call for this remodel, Pearl Izumi was looking specifically for a new entrance that would give much

stronger corporate definition to their existing metal, industrial building.

The renovation included the addition of a second-level mezzanine, mechanical systems, entry atrium and a new exterior building image. The existing building is a pre-fabricated metal structure. The lobby/entrance area was opened up with the addition of a glass wall, canopied entrance and a textured metal focal wall that pierces the building, adding interest and drawing the eye. The materials and open feeling of the new lobby and entrance reflect the sleek, aerodynamic lines of its apparel and corporate philosophy.

A final example is the Star Guide Company Headquarters. Star Guide makes precision wire parts for the medical instruments industry. The company was seeking a sophisticated corporate look that was also economical and promoted unity and interaction of employees. Bordered by a residential neighborhood and lake, the 42,000 square foot facility required a design that would blend well with these components. The floor plan seamlessly combines corporate office functions with the process-driven needs of R&D and production. Product moves around the building in a continuous loop with very little cross-traffic of materials. To promote interaction, links were established between the corporate office areas and the production floor and cafeteria. The contemporary flair of the interior reflects the company's high tech image and the exterior blends the use of split-face block, glass, and metal.

In today's economy, it is not enough to create for current needs and uses only. Exit strategies are an essential part of initial design, as is potential growth and expansion. While the corporate



Star Guide Company's headquarters in Arvada. Architect: OZ Architecture

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CAD MANAGEMENT CHANGES ON WAY

—Randy Giesburt, AIA

When I was graduated from college, I was judged on drafting skills by line weight, hand lettering and speed. The only layering involved was the front and back side of a sheet of mylar. With the advent of CAD, architects have had to learn new skills and live through the infancy of PC technology and rudimentary software programs. AIA and CSI have created standardized layering, flag notes, and abbreviations to help our industry get organized.

CSI and AIA are currently spearheading an effort to update and create state-of-the-art graphic standards, drawing set organization, sheet organization, and uniformity in schedules. CSI is working closely with CAD software providers Bentley, AutoDesk, and Vissio to create more than dialog to coordinate layering standards, flag note/specification notes and more. Spell checks will identify standard abbreviations and terminology for the construction industry (e.g. 5/8" drywall would register the prompt "5/8" gyp. board?").

On the 14th of May, Rick Green, RA, CSI, from Albuquerque will be in Denver to give a four-hour seminar on Uniform Drawing Systems (UDS). Rick Green and Anne Johnson will present the current state of UDS and the exciting future of construction documents and related ties to specifications.

Future

According to members of CSI, there will be some dramatic changes in the way our profession will prepare construction documents. They will involve the following:

- ▲ Flag notes will tie directly to specification sections, third-party software will identify with those flagged attributes and will construct specifications at the time you are drawing your CDs.
- ▲ Layers will be a thing of the past, substituted by real line weights and all drawing components will be 3 dimensional with several attributes.
- ▲ Drawings will be drawn in a universal drawing system according to the National Institute of Building Sciences (www.nibs.org).

As technology changes, it would appear that more training will be required, not less, to operate the new software and more powerful computers to keep up with the increase in sophisticated databases. The construction industry seems to be the real winner in the way we prepare our drawings—take-offs for materials and quantities of items would be self-generated. With all drawings being drawn in three dimensions as "cells" and the cells would contain one or several attributes, the

quantity of information provided by a single drawing will be overwhelming.

Most interns come to us with loads of theoretical knowledge and lots of enthusiasm and computer know-how. Hopefully, they will provide us with the

energy to make it through this transitional period. My fear is it will require ever-more construction-based knowledge for our younger, inexperienced interns, not less. Good luck out there and please attend the CSI seminar on May 14.

[DESIGN, from page 11]

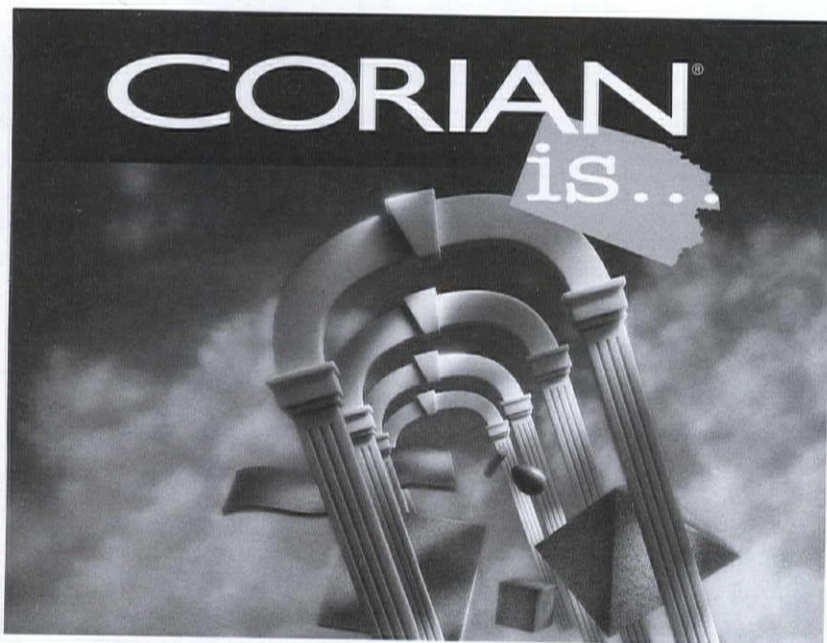
facilities we create are designed to reflect the specific company, they are also adaptable for resale and expansion. The Coleman Headquarters building was resold to Psychometrics, an environmental engineering firm, last year. With minor changes to the interior, the building has continued to prove itself as a strong basic layout. The recently completed Quantum Corporate in Colorado Springs was designed specifically to expand and/or

contract in response to the highly volatile high-tech marketplace.

In each of the above examples, very different facilities were created for very different clients. Yet in each case, the client was pleased with, and felt at home in, their facility. The real benefit for OZ has been the opportunity to develop a deeper understanding of the personalities and needs of each of these companies. Then take this knowledge and apply it to a design for each that results in a unique, highly functional facility.



Pearl Izumi Corporate Headquarters in Broomfield. Architect: OZ Architecture



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BRECKENRIDGE COMMUNITY ICE ARENA

The Town of Breckenridge recently selected Sink Combs Dethlefs to provide architectural services for the design of a new Indoor Community Ice Arena. The new 38,000 square foot facility is being designed to complement the Town's existing outdoor ice rink and will provide shared amenities to both venues. The ice rink will be of regulation ice size and meet all competition regulations. The facility will also provide joint locker rooms with showers, an ice surface to be used by both facilities, and combined concession facilities.

Hospitality rooms are included in the facility to be available for rental uses. This will provide additional revenue generation opportunities to the Town in the summer season. Other facility amenities will include a pro shop, skate rental, and administrative offices.

The design of the project is inspired by the traditional forms of mountain mining architecture. Cedar lap siding, corrugated metal, and standing seam roofing will enhance the project's fit within the community. The project construction will begin Spring/Summer of 1999. The project is estimated to cost \$4.3 million and is anticipated to be ready for occupancy in December 1999.

Sink Combs Dethlefs, established in 1962, is recognized internationally as a leader in sports, entertainment, and

athletic facility design. An award winning architectural firm, The firm has received such honors as Athletic Business Magazine's Facility of Merit Award for the Dal Ward Athletic Center, The Palace at Auburn Hills, and Victor Copps Coliseum, and the award winning City of Evans Community.

[TURNOVER, from page 1]

Employee relations, employee records, security, payroll, and other staff functions spend some time on out-processing the departing employee. In some cases, senior managers may spend more than a few hours counter-offering and trying to persuade the person to stay. These costs usually aren't excessive, but they do interfere with someone doing more value-adding work.

Hiring and Training

The average cost of exempt hires according to Saratoga Institute's 1995 "Human Resource Financial Report (HRFR)" was \$8,300. In cases where reallocations are involved, the cost is much higher. Add to that the average cost of training the new person over the first year. To simplify, you might take what your company spends annually on training as a percent of payroll and apply that. Saratoga's latest research shows an average of just over one percent of payroll is spent on train-

ing. To be even more conservative, say an exempt employee's training expense is only one percent of payroll. If the person makes \$65,000 in salary annually, the training expense would be \$650. It's easy to see that without much effort you can spend nearly \$10,000 to hire and train.

Vacancy

How long does it take to fill exempt positions in your company? The 1995 HRFR average is 75 calendar days. Subtract 11 weekends for actual workdays. Divide revenue per employee (total sales divided by number of full-time-equivalent employees) by the number of workdays in the year. Subtract weekends and holidays to get an average of about 250±. Don't exclude vacation days because they're paid. So, if your revenue per employee was the same as Company A, the calculation would be: \$293,000 divided by 250 days for an average of \$1,172/day. Multiply \$1,172 by the number of days it takes to fill jobs, i.e., 53 (75 minus 22) for a total vacancy cost of \$62,176. Don't forget to back out pay and benefits for the 53 days that the job is open and add in any temporary employee pay you might incur.

Of course the vacant job is covered somehow. You hire temporary workers, cover it with overtime pay to employees, or just gut it out by working everyone harder and not paying them for the extra effort. There's always a cost. Just because you don't see it does-

n't mean it doesn't cost you. Sooner or later, you'll pay for it.

Productivity Loss

The new hire will take some time to reach a standard level of productivity. Without excessive computation, simply reach a consensus about the amount of time it takes the average exempt person to hit full stride. Assume it takes six months.

Let's be generous and assume further that on average an exempt person is 75 percent productive during the learning period. If revenue per employee (a surrogate measure for productivity) is \$293,000 per year, half would be \$146,500 for six months. With 25 percent of that as nonproductive time, the result is a loss of \$36,625. The bottom line cost of turnover using these assumptions is \$108,000±.

At an average of \$82,000 in pay and benefits, this is approximately the cost of 1 1/3 employees you're paying for and not getting any return from. Lose 10 of them, and there goes your million-dollar investment. (The reason this number may seem high is that the average employee in our survey generates almost three times his or her cost.) It's a lot to lose. But you can alleviate your vulnerability by designing a retention strategy that puts you in the driver's seat.

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EVENTS

MONDAY	TUESDAY	WEDNESDAY	THURSDAY	FRIDAY
3 5:00 PM, Denver Foundation for Architecture, AIA Office	4 7:00 AM, Denver Breakfast Seminar, Design Center Noon, 2001 Convention, RNL Design	5 Noon, Committee on the Environment, AIA Office	6 7:30 AM, Design/Build, AIA Office 5:00 PM, South Chapter Reception, Lonn Frye FAIA, Carnegie Library 6-9, AIA National Convention, Dallas	7 North Chapter Gallery Exhibit through June 4, AIA Office
10	11 7:00 AM, Denver Breakfast Seminar, Design Center	12	13 3:00 PM, Arch Photography Seminar, CU Denver, Rm 480 5:00 PM, Denver Board, AIA Office	14 2:00 PM, Government Affairs, AIA Office 3:00 PM, West Chapter Board,
17	18 7:00 AM, Denver Breakfast Seminar, Design Center 3:00 PM, North Chapter Board	19 7:00 AM, South Chapter Board, Desks Inc. 7:30 AM, Urban Design, AIA Office	20 7:30 AM, Historic Preservation, AIA Office Noon, Design Communications, AIA Office 6:30 PM, History & Future of Colorado Architecture	21 11:00, Editorial Board, AIA Office 12:30, Finance Committee, Dixons Lunch, Dixons 2:00, Colorado Board, AIA Office 5:30, Fellows Reception, City & County Building
24	25 7:00 AM, Denver Breakfast Seminar, Design Center	26 11:30 AM, Denver Member Lunch, Rodizio Grill	27	28
31 Memorial Day, AIA Office Closed	For more information on any of these events, call AIA Colorado at 800.628.5598, unless otherwise noted.		29 SATURDAY South Chapter Carnegie Library Workshop	

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JUNE HIGHLIGHTS

4 3-8:00 PM, North Chapter Gallery Reception, AIA Office

19-21 Thomas Jefferson — the Architect, presentation, Colorado Springs

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Design and Build from the Ground Up



PAGE 7

What Every Architect Needs to Know about Design/Build Part I: Business and Practice Issues



PAGE 9

Corporate Design



PAGE 11

This fall, AIA Denver will present the updated national contract series, *Promises, Promises: Forging Healthy Project Relationships*.

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