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No Time To Lose

It's happening again. Just as in the 1970s, the costs of nonrenewable fuels are escalating. Power blackouts are rolling through some states. People are struggling to pay utility bills. Yet SUVs keep getting bigger. McMansions keep sprawling farther from the urban core. We're living in a government-subsidized, natural-resource-supported dream world into which reality will crash with greater frequency.

American culture is a privileged one, predicated on a belief in unlimited space and infinite resources. In the 21st century, energy policy is a complicated, multinational issue. But here's a simple fact: "Buildings consume at least 40 percent of the world's energy. They thus account for about a third of the emissions of heat-trapping carbon dioxide from fossil-fuel burning, and two-fifths of acid-rain-causing sulfur dioxide and nitrogen oxides," write David Malin Roodman and Nicholas Lessen in Building Revolution: How Ecology and Health Concerns Are Transforming Construction.

What can architects do? A lot. We are in a period of history ripe with opportunities for architectural leadership and innovation. At AIA National's 2000 Convention, members overwhelmingly approved a resolution to "acknowledge sustainable design as the basis of quality design and responsible practice for AIA architects and, therefore, to integrate sustainable design into AIA practices and procedures." In other words, according to Sandra Mendler, AIA, chair of AIA National's Committee on the Environment, "sustainability is fundamental to quality design, not just an optional niche market."

As Stephan Tanner, AIA, writes in this issue of Architecture Minnesota, architectural practice must undergo a paradigm shift. Architects must move from treating ecological-design technologies as project add-ons to a more holistic, integrated approach in which community, economics and ecology inform design from the start.

In Minnesota, we're blessed with firms, architects and educators who are doing work that makes a difference. In this issue's Practice column, some of them discuss their projects and the barriers they encounter. In Interview, educator Mary Guszowski emphasizes the need for eco-literacy in the CALA curriculum at the University of Minnesota.

Ecological design is part of students' daily round at Wolf Ridge Environmental Learning Center, which added several new ecologically sensitive buildings, designed by RSP Architects, to its northern-Minnesota campus. Sarah Nettleton, AIA, renovated a North Shore cabin starting with the premise, "what is an earth-friendly house?" Taking an integrated, place-based approach, she allowed the cabin's existing footprint, the natural setting and sustainable technologies to inform the design of the cabin, which has become a national model of ecological design.

Such projects demonstrate not only innovation and leadership, but that sustainable design's range extends beyond the use of materials and building technology to land use, planning and community. Minnesota educators, researchers, architects, landscape architects and clients have long taken the lead in investigating and implementing sustainable design. Such dedication can no longer belong to the few.

"Every day the worldwide economy burns an amount of energy the planet required 10,000 days to create," writes Paul Hawken in The Ecology of Commerce. What will it take for people to realize that most of our natural resources are limited? That at our current rate of consumption, the balance is poised to tip, irrevocably, out of our favor? For architects here and worldwide, the opportunity of a lifetime exists in the present. There's no time to lose.
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New Releases

In an impressive follow-up to his The Ecology of Commerce, 1993, Paul Hawken has joined with Amory and L. Hunter Lovins, founders of the Rocky Mountain Institute, to produce Natural Capitalism, Creating the Next Industrial Revolution (Little, Brown and Company, 1999). The label “natural capitalism” is derived from the concept that business interests and environmental advocates can work together in a new economic era. With clarity and using a variety of topics, the book demonstrates how design thinking can be applied to issues that combine economics, social advancement and environmental stewardship. Ken Potts

The comprehensive HOK Guidebook to Sustainable Design by Sandra F. Mendler, AIA, and William Odeill, AIA (Wiley & Sons, Inc., 2000), helps design professionals integrate sustainable strategies into their work. By providing concise definitions of terms and goals, as well as describing an integrated design process that can be easily adopted, the book shows how sustainable-design thinking can improve projects within conventional constraints of budget, schedule and market demand. K. P.

In Daylighting for Sustainable Design (McGraw-Hill, 2000), Mary Guzowski, daylighting expert at the University of Minnesota’s College of Architecture and Landscape Architecture (see page 13), demonstrates practical design strategies for daylighting to create greener architecture. Laced through a triad of issues—the environment, architectonics and human considerations—are specific project examples that provide architects with tools to refashion their own design processes. Her approach blends the dynamic, quantifiable physics of light with the aesthetic values of human perception. Guzowski herself, through her integrative thinking, demonstrates the necessity of designers assuming leadership roles in society. K. P.

A remarkable collection of diverse readings, Sustainable Architecture White Papers (Earth Pledge Foundation, Chelsea Green Publishing, 2001) explores the critical link between our built and natural environments. In more than 50 succinct essays (including a preface by Paul Hawken), leaders in architecture, design, planning, public works and education describe the value of a new architectural strategy that improves communities, minimizes the impact of design and construction on finite resources, and fosters our emotional and physical well-being. C. L.

INSIDER LINGO

Section

Mmmmm! Bursting with plump, indigo berries sandwiched between flaky crust, that piece of blueberry pie on your plate is a visual slice of heaven. Now imagine slicing right through a building, lifting up that confection on your pie server and you’d be looking into an architectural section. Like a piece of pie, a section of a building bursts with interior details. Interior rooms, walls and stairwells are highlighted (with scale and proportion taken into consideration) in between the basic structure (crust) of the building. From the Latin word “sectio” or the French word “secare,” meaning to cut, section shows up in English language use around 1534. Serving tip: view your next section with your architect over coffee. Gina Greene
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In 1971, after a contentious 13-year campaign, the Winona County Courthouse escaped the wrecking ball. Local preservationists—working under the newly unfurled banner of historic preservation—had successfully engaged Winona’s citizenry into acting in the public interest. But during Labor Day weekend last year, loose panels in the courthouse ceiling severed a sprinkler pipe, causing a deluge that turned the courthouse’s detail-rich interior into a series of sodden-plaster caverns. Since then, public officials have once again endangered the Romanesque landmark, as they view its demolition as a “practical” solution.

The building, standing at the corner of 3rd and Washington Streets north of downtown, was designed by the Winona architectural firm C. G. Maybury & Son. It was constructed in 1889 by local contractor Munck and Lohse for $103,000. The walls were built of locally quarried Dresbach sandstone. Local artisans carved the exterior stone and interior oak woodwork. The courthouse’s architecture inspired Sinclair Lewis’s main character in his novel Cass Timberlane. “Cass knew that it was as archaic as armor and even less comfortable,” Lewis wrote, “yet he loved it as a symbol of the ancient and imperial law.”

By the mid-1950s, an expanding justice system, emerging social services and county-records systems made the courthouse crowded and obsolete. The county board decided a new facility would best serve current and projected county needs. Renovation of the courthouse was not given serious consideration. As a result, no repairs were made to the building for more than a decade.

When the option of razing the courthouse became apparent, one of the preservationists, Patricia Frisby, commented that in the past decade the county board paid out “six times more money for fox, crow, woodchuck, gopher and rattlesnake bounties than it did on courthouse maintenance and repairs.”

During the 1960s, threats to historic properties were handled by the state or county historical societies, and occasionally supported by civic-minded individuals. Historic preservation as an organized and citizen-based movement able to direct campaigns in the public interest did not yet exist. Important older buildings were underrecognized and often fell victim to urban-renewal programs. Federal funds to overhaul public buildings like the Winona Courthouse were unavailable. And the economy stimulated widespread corporate expansion, often in areas containing buildings of historical importance.

One professional group understood the situation: the Historic Resources Committee of AIA Minnesota. In the 1960s, the committee changed its focus from honorific study of historic buildings to generating public awareness of historic resources and devising strategies to counteract demolition threats. The committee also built support for local ad-hoc groups imbued with the fervor to save endangered structures.

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Mary Guzowski
Integrating current architectural-education models with eco-literacy is this CALA educator’s mission

BY KEVIN FLYNN, AIA

Mary Guzowski has a mission. As associate professor and director of the Daylighting Lab at the University of Minnesota’s College of Architecture and Landscape Architecture, Guzowski is dedicated to creating interdisciplinary and collaborative approaches to education, research and practice. Her current goal is to create an eco-literacy program at CALA that explores and promotes the interrelationships between ecology and design.

This approach will require profound changes in the way architects think, as well as what and how educators teach. And it will necessitate connections between CALA, practicing architects, communities, business and research. Guzowski is the perfect person for the job. Her experiences as a researcher, author and educator allow her to think and work in a holistic manner; to approach issues from a variety of viewpoints, and embrace a broad range of thought processes and work methods.

Guzowski received a B.A. in fine arts from Kalamazoo College in Michigan and her Masters of Architecture from the University of Washington, Seattle. She’s the author of a new book, Daylighting for Sustainable Design (McGraw-Hill, 2000), in which she explores design strategies for daylighting that create greener architecture (see page 9). Architecture Minnesota talked with Guzowski about ecological design and the need for eco-literacy within the CALA curriculum.

What is eco-literacy, and how does it play a part in architectural education and practice? There isn’t a simple answer. In part, being ecologically literate means to understand the “language of nature,” and to live and act in ways that reflect this understanding. One must understand the principles of ecology: the interdependence of all systems, as well as such concepts as sustainability, ecological cycles, energy flow, partnerships, flexibility, diversity and co-evolution.

“I’m convinced that as our culture becomes more eco-literate, we will change the way we design, build, live and work. We need to be preparing our students—tomorrow’s professionals—for those changes. They can be leaders and stewards of a new method of thinking and creating.

In the profession of architecture, the shift toward this awareness and method of working has been slow. Has the shift been as slow in architectural education?

During the past few years there have been a variety of ecological-design efforts at CALA that have allowed us to begin to define ecologically responsible design and education. But these efforts have not always been connected with other aspects of the curriculum or the profession.

The Greening the College Initiative and the Ecological Design Education Project are two CALA efforts that are trying to make connections between ecologically oriented research, teaching and practice. We are just beginning to create an explicit agenda that we hope will unify efforts and move us forward in creating an intentional ecological curriculum and research focus.

One challenge is how to increase the role of ecological issues without making them separate from other curricular concerns. Ecological design is inherently about interdependence. The danger with separating it

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The State of Sustainability
While architects and clients are becoming aware of ecological design's benefits, barriers to green practice and projects still exist

BY FRANK JOSSI

A dormitory at Northland College in Ashland, Wisconsin, uses wind and solar power to fulfill most of its energy demands. An office and warehouse building in south Minneapolis, the Phillips Eco-Enterprise Center, incorporates 100-year-old bricks from Chicago and employs geothermal wells to heat and cool offices. A Minneapolis church cannot find an organization to salvage various fixtures during its renovation, so it puts the materials at the curb and watches the piles disappear as neighbors choose their treasures.

These projects represent recent efforts—large and small—to incorporate ecological strategies into the design and renovation of buildings. On one level, ecological design (also known as green or sustainable design) is about increasing natural light, air quality and energy efficiency in buildings, while reusing materials from other structures, selecting recycled materials for use and reducing the amount of waste during construction. More broadly, sustainable design is about extracting less material from the earth to build a structure from the outset, then reducing the energy consumption required to maintain it.

According to the World Watch Institute, one-sixth to one-half of the world's wood, energy and water go into buildings, a figure many architects would like to reduce. Advocates are pleased to see sustainable design becoming a serious concern within the architectural community.

"Four to five years ago, a handful of people knew what sustainable design is; now, when we do workshops, the topic is on their radar," says John Carmody, senior research fellow, College of Architecture and Landscape Architecture, University of Minnesota, Minneapolis. "I'm not sure they're at the level of selling it to their clients, but they want to be at that level when clients ask about it."

And clients are beginning to ask. Government agencies and corporations, for instance, are recognizing the advantages of more energy-efficient buildings. The reality is that sustainable-design practices make good business sense. Building owners can save money, for instance, through more efficient heating and cooling equipment, and daylighting techniques.

Mark Wallace, facilities manager for the Minnesota Department of Natural Resources, says the DNR's deputy commissioner, Steve Morse, grew personally interested in sustainable design and directed the department to ensure green-design strategies were incorporated into future buildings. Hennepin County developed a sustainable-design guide—whose coauthors include Carmody, CALA's Mary Guzowski (see page 13) and AIA Minnesota's Committee on the Environment—for construction and renovation of its office and institutional buildings (see Architecture Minnesota, March/April 2000 and www.sustainabledesignguide.umn.edu).

The Minnesota Office of Environmental Assistance produced the document "Sustainable Design Basics: Linking Developer and Community Interests in High Performance Building Design" with assistance from the Cunningham Group, Minneapolis, and LHB Engineers & Architects, Minneapolis. And the state's major power supplier, Xcel Energy, has a program for reducing energy costs.

Called Energy Assets Custom Consulting, Xcel's program offers financial incentives to architects and building owners who have their project designs audited by The Weidt Group, Inc., Minnetonka, which offers a three-pronged strategy for energy savings. Over the past seven years, the program has audited 145 buildings and helped owners create buildings that perform 30 percent or better than the state's energy code.

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A Word On Awards

BY BILL BEYER, FAIA

All humans crave recognition of their work. While architects bemoan society’s general misunderstanding of their profession, they take special solace in peer recognition honoring their designs. But as English cleric Charles Caleb Colton warned, “Honor is unstable and seldom the same; for she feeds upon opinion, and is as fickle as her food.”

AIA Minnesota has run an Honor Awards program for its members continuously since 1957. In 44 years of recognizing design excellence, various juries have conferred 444 Honor, Merit, Honorable Mention, Citation and Interiors awards, an average of 10 per year. If we ignore the various two-tier award schemes (discontinued in 1989) and count only the Honor category, the average drops to five per year. (I’ve excluded the recent Divine Detail for its limited scope and the 25-Year Award for double-dipping.)

Twice in 44 years jurors have given as many as 17 total awards; and thrice as few as five. Last year’s jury chose only four projects for Honor Awards, triggering member muttering about fickle opinion. Some say the heartburn of award scarcity is good for us; too many awards lowers their value. Others wish that more complex or less flashy project types like hospitals or jails might be better recognized.

But an unscientific survey of winners over the past 10 years reveals about a quarter of the awards going to one-room whimsies (8 percent) or single-family residences (16 percent); only a fifth (21 percent) to programatically flashy museums, churches and libraries; and the rest nicely balanced among a dozen project types. The only major project types not represented lately are multiple-family housing and prisons.

Architects long ago figured out that awards are good publicity. In hopes of a wider and more stable flow of honors, AIA Minnesota has periodically tinkered with the programs (as evidenced by the variety of award categories over 44 years). In the mid-1990’s, after a stretch of perceived jury parsimony, the AIA Minnesota Board of Directors directed its Honor Awards Committee to once more redesign the program to elicit a broader, more inclusive honoring of design quality. After last year’s dearth of awards, the “jury” may still be out on the latest redesign.

The Honor Awards Committee annually recruits three jurors from the coasts or other faraway locations, with an eye toward who’s “hot” in the architectural media. The jurors typically have a few harried hours to review a hundred or more projects and reach consensus. Jurors quickly and routinely discard projects because of poor photography, weak graphics or because they don’t embody the aesthetic du jour.

Of course, jurors may arrive with their own agendas for design excellence, which may not fit the expectations of local AIA chapters. Sometimes, as in 2000, jurors find little to their liking in the projects offered up by Minnesota architects eager for honor.

So we endure another year where a jury of our professional peers has determined that our collective Minnesota architecture is not quite as peerless as expected. And we long for the next time, when a different group of jurors cannot help but recognize the real truth and honor it.

“Truth waits for eyes unclouded by longing.”
— Tao te Ching
Many Duluthians long nurtured a dream that, in 1994, began to materialize: a freshwater aquarium to celebrate Lake Superior's natural history. Sisters Caroline and Julia Marshall had already donated a downtown waterfront site. Three Minnesota legislative sessions had provided matching funds for a schematic design. And the California-based architectural firm Holt Hinshaw had delivered that design.

The problem? The aquarium was bigger and more complex than Duluth could afford. "We ran out of money," recalls Kay Nieren- garten, deputy director, Great Lakes Aquarium. "We didn't have the funds to give Holt Hinshaw a free hand and we realized it was
difficult—logistically and financially—to work with an out-of-state firm. Because the schematic design was completed, we decided to take a step back and find a local firm to finish the project.”

Hammel, Green and Abrahamson, Inc., Minneapolis, accepted what Neirengarten calls “the very heavy burden” of transforming the original design into a building that could be realized within budget while honoring the original concept. During summer 1996, principal Loren Ahles, FAIA, and project designer Kara Hill, AIA, studied their challenge.

First, a rendering of the proposed aquarium was being displayed on billboards around town. And even though many Duluthians had dubbed the gray, metal, windowless design the “Darth Vader building” or “Death Star,” HGA felt compelled to retain aspects of the building’s original massing. Second, the proposed interior layout, including the exhibit areas, needed to be reconsidered.

HGA essentially resized and restructured the aquarium, Hill says. The architects removed the top floor to reduce the building’s overall square footage. They introduced an exterior tricolor and material scheme that would help the aquarium correspond to the natural, industrial and waterfront qualities of its setting. They punched windows into
exterior walls to bring natural light to interior exhibit spaces. And they designed a variety of viewing areas, a bay window and a "gangplank" that invite visitors to make their own connections between the exhibits inside the aquarium and Lake Superior just outside its doors.

The architects also simplified the interior floor plan and designed a "water wall" and "immersion experience" to prepare visitors for exhibits. "Using Lake Superior as a lens to understand issues of history, ecology and stewardship of the planet," Hill says, "we tried to create a facility that metaphorically represents the lake and its region."

In July 2000, the Great Lakes Aquarium, America's only all-freshwater aquarium and science center, opened and has since hosted more than 200,000 visitors. "HGA not only took a building we couldn't afford and turned it into one we could afford," says David Lonsdale, executive director, "Kara and Loren also created an intricate, bold building with architectural merit."

Sited near Duluth's Canal Park on the banks of Lake Superior, the colorful building, with its dynamic form, engages viewers from
all directions. For maximum views of the lake, the structure is elevated at the shore's edge. Stairways and a lakeside boardwalk lead to the building, while the bay window and gangplank cantilever toward the lake with sweeping views of Duluth harbor and the Aerial Lift Bridge.

HGA further organized the structure into three fused forms of corrugated metal, Ahles says, and applied colors to those forms that correspond with the natural history of the site using photographer Craig Blacklock's images as inspiration. The gray-green form—symbolizing earth, leaves, trees, algae—rises from the grounded entry to lead visitors into the aquarium's exhibits.

The green form embraces the blue box—symbolizing light, sky, ice, water—that houses the building's water tanks. The rust-colored section—representing both lichen growing on Lake Superior rocks and the iron ore mined in the area—houses the aquarium's retail store, café and restrooms.

The building's three forms also utilize raw materials from the region—including stainless steel, copper and Lake Superior granite—to add a rich layer of materiality to the painted metal panels. The building not only "does a marvelous job of recognizing the tradition and history of the area with its industrial look and use of materials," Lonsdale says, "but it also reflects the
natural history of the area with color that tells a story all of itself."

Inside the 61,000-square-foot facility, visitors are greeted by a 27 X 50 foot water wall constructed of sandblasted glass panels. Embedded in the panels are clear-glass symbols of water—from the international symbol for ecology, to the Egyptian triple wave and Norse rune for stream, to the automotive and alchemical symbols for water—that serve as windows into the first- and second-floor exhibit spaces.

Adjacent to the water wall is an escalator that transports visitors through an "immersion experience" directly to the second floor. "This is an escalator ride in a darkened space where you can let go of the everyday world and get a heightened sense of where you are," Hill explains. "Rock" walls made of wood panels simulate the lake's craggy cliffs, video projections provide images of nature's seasonal changes, fans waft a pine-scented breeze through the space, and a soundscape of crashing waves and bird calls completes the scenario. "It's a quick ride, but cleanses the sensory palate and prepares you for the experience inside," Hill says.
On reaching the second level, visitors are introduced to a variety of pools, ponds and exhibits examining aspects of the lake while making connections to historical, geological, natural and cultural issues. Visitors venturing down stairwells past 12-foot-high fish tanks to the first-floor exhibit area suddenly recognize the cavernous, industrial quality of the interior space, which feels much like the inside of a ship's hull.

Exposed steel beams, the high open ceiling, material accents of stainless steel, copper and stone, and a color palette of grays and blues “provide an excellent backdrop for the exhibits,” Lonsdale says. “HGA kept in mind entirely that this is an exhibit hall and that the exhibits are why people come here.”

The Honor Awards jurors were equally enthusiastic about the Great Lakes Aquarium. “The building captures the spirit of the region in many ways,” they said. “It’s a steel building that recalls nearby industry and lake ships. But it also responds to a language of shoreline, factory and warehouse, while taking on a form of landscape itself. With a consistent concern for relationship to place, the architects demonstrate a clear adaptation of materials that isn’t overly romantic or cartoonish.”

For Duluthians, the aquarium “is a building that hasn’t been without controversy,” Lonsdale says. “Most of Duluth is brick or buff. So to have a building that’s so bold is hard for some people to take. But I think that’s good. Our goal was to make a piece of architecture that stands out and teaches about freshwater ecology. HGA certainly helped us succeed on both counts.”

The AIA Minnesota Northern Chapter recently completed a documentary on the making of the Great Lakes Aquarium, which will air on local PBS stations in March and April. Call your local PBS station for dates and times.

Honor Award
Great Lakes Aquarium
Duluth, Minnesota
Hammel, Green and Abrahamson, Inc., Minneapolis, Minnesota

A water wall, embedded with water symbols from around the world, greets visitors in the lobby (opposite). Throughout the two-level interior are displays and interactive exhibits that allow visitors to explore the natural, cultural and industrial history of the Great Lakes (above left and right).
In the 1990s, the City of Minneapolis decided to consolidate its maintenance facilities. Services from dispatch to fuel storage to police-car and snowplow maintenance were scattered in sundry buildings throughout the city. And those buildings were less than appealing. "These were dark, gloomy, turn-of-the-century facilities," recalls Steve Kotke, director of property services, City of Minneapolis. "We needed a better work environment for our employees."

A master plan grouped several city services and functions on two sites at the northwest edge of downtown Minneapolis: one on Currie Avenue, the other on Royalston Avenue. By adopting an infill strategy, the city could save key buildings. The challenge was to design new facilities to complement an existing urban fabric of diverse scale and materials.

Butting up against the sites are such Minneapolis institutions as Lee's Liquor Lounge and Mary Jo Copeland's two facilities for the homeless: Mary's Place, and Sharing and Caring Hands. Juxtaposed with these smaller-scaled masonry buildings are warehouses and manufacturing facilities, freeways and bridges, billboards and parking ramps.

"Functionality was at the top of our priority list, along with gaining efficiencies in operation," Kotke says. "But equally important was being a good neighbor by building facilities that would be an asset to the neighborhood, not a deficit."
Part of his job, Kotke continues, is “selling” maintenance facilities to reluctant neighborhoods. “Usually what they visualize is flat-roof, cinder-block buildings,” he says. “We wanted to get away from that image. Our architects, in fact, went well beyond that concern to create not only something functional for our employees, but attractive for the neighborhood.”

Both facilities, completed by Architectural Alliance, Minneapolis, in 1999 and 2000, are an assemblage of small- and large-scale functional elements. A materials palette of glass, brick, colored concrete block and metal places the buildings squarely within their industrial setting, generates a common vocabulary that unites the two and expresses an identity for the city's public-works buildings. Glazed glass along street-level areas of both buildings gives the public visual connection to the activities inside, provides interior daylighting and when lit at night conveys a sense of vitality and safety in the neighborhood.

“You can’t use fancy materials on a city operations building; it’s not an appropriate use of taxpayer money,” explains Tom DeAngelo, AIA, principal, Architectural Alliance. “The glass, concrete and metal, especially in this industrial setting, is the right connotation. Our design challenge was to use that palette intelligently.”

The Royalston site—located between the Hennepin County trash burner, an aluminum-manufacturing building, a rail corridor and...
Mary's Place—accommodates a secure lot for police vehicles, building-material storage, employee parking and the new 70,000-square-foot building. Entering the site, employees are greeted by a landmark SnoBoy sign that recalls the site's previous occupant. Employees enter the building, garage and shop from the vehicle yard on the northwest. A garden courtyard is sited outside the employee break room.

A roof line animated by skylights gives the building distinctive character while introducing light to the maintenance shop. A steel-clad light monitor extends above the roof to the east, screening rooftop equipment from view and allowing indirect light into the police-car maintenance bays. Banks of windows in the radio shop give dispatchers a room with a view.

The 185,000-square-foot Currie facility—located between an Xcel Energy compound to the west, a rail corridor and an arterial street into downtown on the north—services vehicles and large equipment, and includes a fueling station, service yard and employee parking. The two-level, glass-front offices on the southeast corner of the site, scaled with reference to Lee's Liquor Lounge on the northeast corner, provide a counterpoint to the large maintenance garage on the west. A high red-brick wall, punctuated by vertical exhaust pipes, cloaks the garage from view while providing passersby with a clear entrance to downtown.

Inside the facility's cavernous shop, windows along the north and south ends and mezzanine clerestory windows bring in daylight. Interior windows between the shop and office areas connect the two functions. Color animates the space: yellow for safety; blue for "Minneapolis, City of Lakes." Outside the facil-
ity, a pedestrian-scaled, steel canopy cantilevers over the building's entrance.

"We've done many facilities buildings over the years and have learned that if they're well-designed, with good materials and clean colors, people take pride in them," DeAngelo says. "City workers, just like anyone else, appreciate daylight and good design."

The Honor Awards jurors expressed similar sentiments about the facilities. "This project isn't ashamed of its basically unglamorous program," they said. "In fact, the architects exploited it to create bold, city-scale statements, especially with the brick wall and light monitor."

Calling the project "humble and straightforward" and "modest but strong," the jurors added that "the forms and disposition of the buildings are very sensitive to place. So much, in fact, that the buildings almost become nonbuildings; their edges and surfaces become part of the urban landscape. The facilities are very quiet in a surreptitious way and surprisingly intelligent."

For his part, Kotke says, Architectural Alliance "just made my job easier. I'm in the process of moving onto another area in town where I have to sell maintenance facilities to a neighborhood. I can show them Currie and Royalston and say, 'This is the type of work we do.' That certainly helps me promote my program of building facilities that complement a neighborhood."

The Currie facility, illuminated at night, adds a feeling of safety and comradery to the downtown-edge neighborhood (top). A two-level, glass-front entrance welcomes visitors (opposite left) and garage areas provide ample room for large-equipment maintenance (opposite right). A long brick wall hides the building's industrial inner workings while adhering to the scale of an existing Minneapolis landmark: Lee's Liquor Lounge (above).
Accenture (formerly Andersen Consulting), a management and technology consulting organization, has a highly mobile workforce. Its 65,000 employees in 250 cities worldwide are typically stationed at their clients' offices. In fact, 80 percent of Accenture's workforce is off-site 60 percent of the time. So in the 1990s, the corporation decided the traditional notion of a dedicated workspace for every employee was no longer economically viable—or necessary.

Taking a cue from the hotel industry and the notion of "hosting" employees when they're in the office, Accenture implemented the "hoteling" concept at several corporate sites. At its downtown-Minneapolis location, the corporation asked Hammel, Green and Abrahamson, Inc., Minneapolis, to renovate its offices in the Andersen Consulting Tower (formerly Metropolitan Centre) to reflect and support their employees' way of working.

"We looked at the project from a real-estate standpoint and from an employee-satisfaction standpoint," says Bob Marshall, director of facilities and services, Accenture. Not only did the corporation require work settings in which individuals could quickly plug in laptops, it needed a variety of work areas for groups.

"Compared to traditional offices where you have a few conference rooms and hundreds of cubicles, Accenture needed a higher proportion of shared or public space," says Phillip Koski, Assoc. AIA, project designer. In addition, HGA placed workstations along the building perimeter so all employees could enjoy natural daylight, made
workspace functions easily recognizable and streamlined navigation throughout the office.

"Our fast-paced work environment is reflected in the design," Marshall says. "The space flows nicely and wayfinding is easy. We have a colorful, open and warm office with a relaxed feeling that's important to employee productivity and comfort."

The 80,000-square foot, three-level facility, completed in 1999, includes a mix of 400 worksettings for some 750 employees who temporarily office there, as well as a full complement of support personnel and service-oriented amenities. Employees reserve workstations on an as-needed basis; reception areas on the skyway level and fifth, sixth and seventh floors accommodate check-in.

Within the overall layout, HGA created three basic work settings. "Huddle rooms," furnished with lounge chairs with tablet arms, encourage brainstorming among employees. The smaller "focus rooms" are for making personal phone calls or writing. "Touchdown spaces," scattered throughout the office, give on-the-go consultants a place to check email or use the phone.

In contrast, residential-looking "soft" rooms, furnished with floor lamps and couches, offer employees a casual atmosphere for relaxing and interaction. Activity-center "pavilions," located at either end of each floor's north/south axis, house printers, copiers and fax machines.

"The design is really a study in contrasts," Koski says. "The individual workstations tend to
have more neutral colors and features. The shared spaces are more finished, comfortable and residential—the kinds of spaces you typically don’t find in a corporate environment.”

In addition to designing an organic floor plan that gives employees easy access to diverse work areas, HGA choose natural materials and subtle colors that create a casual, though energized atmosphere. Clear-coated maple appears in the furnishings and trim of individual work spaces, Koski says, while ebonized walnut is used in the reception areas and denotes areas of interactivity. Residential-size doors, cork flooring, curved walls and planes in textured plaster, custom light fixtures, and glass walls fractured into rectangles and squares give the office a homey feel without sacrificing a contemporary aesthetic.

To distinguish each floor, HGA prescribed a tone-on-tone color palette: blue/green on the fifth floor; orange/red on the sixth; blue/violet on the seventh. Ribbed-glass panels in the elevator lobbies display large numerals for easy floor identification; but the numerals have also been fractured into blocks of color to create, behind the distorting quality of the ribbed glass, a kinetic image that reflects the office’s fast pace.

This feature earned HGA a Divine Detail Award, as well, with the jurors commenting on how the “blurriness” of the glass-paneled numbers captures the fleeting essence of America’s new business culture. Regarding the overall office renovation, the jurors also congratulated the project team on “doing a good job of supporting Accenture’s shift to today’s casual business environment” through its design vocabulary. In addition, the jurors commented on “the pleasant feeling generated through materials that reflect a casual attitude about how the space is used.”

For Accenture, its Minneapolis office represents a “wonderful, creative design that’s way ahead of the curve,” Marshall says. “HGA did a great job of orchestrating our plan.”

Honor Award
Accenture (formerly Andersen Consulting)
Office Renovation
Minneapolis, Minnesota
Hamme, Green and Abrahamson, Inc., Minneapolis, Minnesota

Sixth-floor legend
1. Reception
2. Conference and teaming rooms
3. Enclosed teaming and executive offices
4. Activity center “pavilions”
5. Individual “focus” rooms
6. Plug and play touchdown spaces
7. Breakout lounge
THE SUSTAINABLE-DESIGN PARADIGM

Rather than adhering to a linear, problem-solving approach to sustainability, American architects need to adopt an integrated, holistic model that puts sustainability at the core of architectural design. By Stephan Tanner, AIA

As a Swiss-American architect who practices in both Europe and the United States, and specializes in sustainable design, I’m often asked to describe the differences between “green” architecture in Europe and America. The questions commonly posed are: “Why are Europeans so far ahead when it comes to sustainable design?” and “Are there European sustainable technologies we are not aware of?”

To answer the first question, let’s start with the notion that architecture represents the cultural values of those involved in the creation of new buildings, particularly with regards to sustainable or green architecture. In the United States, many architects still cling to a linear mindset. They view buildings as machines built for a particular function or individual user with the least amount of investment and the best return in the current marketplace.

Such basic energy-saving features as passive-solar building orientation, daylighting or renewable-resource mechanical systems are considered add-ons. Little concern is given to the long-term financial savings sustainable technologies can produce, not to mention their ability to help decrease our depletion of natural resources.

In Europe, however, architects do not view green technologies as components to be tacked onto buildings. Their approach is a more holistic, integrated one. In large part, European buildings are conceived as part of a community/urban fabric, as well as the natural environment. Architecture involves an integrated design perspective that views buildings as part of the holistic workings of a particular place. It is an approach to design that considers all aspects of a place including its economy, ecology and social structure.

This shift in cultural perspective has evolved over the past 20 years. In the 1980s, various environmental, social and economical calamities—including forests dying from acid rain, fallout from the nuclear meltdown in Chernobyl, increased global warming from the use of fossil fuels, collapse of the Iron Curtain and unification of Germany—led to tremendous cultural upheaval. European ground was fertile for change, and experimentation and exploration occurred.

Professionals in the building industry began viewing such disasters or problems as “paradoxes”; as opportunities to more closely examine the intricate play of human behavior and its causes and effects on the natural environment. Through personal experience, Europeans better understood the relationship between their built environment, quality of life and community well-being. Subsequently, their approach to architecture has become one integrated with the principles of energy- and resource-saving sustainable design.

Meanwhile, in the 1970s the United States faced a serious energy crisis. The focus on reducing energy use fostered the development of such alternative power sources as sun and wind, and caused researchers to revisit such ancient technologies as earth-sheltered housing. In fact, the University of Minnesota became a global leader in sustainable-design innovation at that time.
Some of the new ideas investigated worked; many did not. Ultimately most experimentation in sustainable design was abandoned, largely because Americans perceive such a calamity as an energy shortage not as a paradox (ripe for self-reflection, intellectual probing and pragmatic applications), but rather as a problem to be fixed with a simple, one-shot solution. With a silver bullet, if you will.

Which brings us to the second question about sustainable technologies. Because of their fix-it mentality, Americans are keeping pace, if not leading, the development and application of new green building technologies. In our global marketplace, technologies are bought, traded and implemented around the world.

It's not the implementation or quick fix that's difficult, however. Using sustainable technologies as part of an integrated, holistic approach to building design and construction—while taking into account a building's impact on communities, natural resources and economics—is what's so hard for many American building professionals to practice.

An integrated approach to sustainable design is really quite basic: reduce the need for resources throughout the life of the building. Briefly, here's how it works. When architects begin design, they first consider daylighting and natural ventilation, which limit the depth of the building. Scale and site orientation follow. Then they add nonmechanical building components, like operable windows in strategic light locations.

Next they consider the climate, and solve heating and cooling concerns with such building-system solutions as passive solar, thermal mass and highly insulated shells. They look at mechanical systems or technology (such renewable-resource systems as co-generation, photovoltaic cells or the reuse of left-over energy) for additional support for lighting, heating or cooling deficiencies. The end result is a fully climatized, energy-efficient, resource-saving building. The key is the from-the-ground-up, integrated approach.

When it comes to sustainable design, what many American architects still need to learn from their European counterparts is integration. Focusing on specific design solutions or individual building parts does not result in a holistic approach to sustainable design. Rather, the magic lies in the integration and optimization of the whole.

 Architects with great ideas, builders ready for change, suppliers with new inventions in technology, developers setting new expectations and clients with vision—each one taking leadership in discovering the interconnection between architecture, community, economy and the environment—are all pieces of a complete, sustainable-design approach.

So the answer to both questions posed is really an issue of cultural perception. Only when a whole society (not just the building community) changes its approach from simple problem solving to an integrated consideration of paradox, will sustainability be at the core of design.
NATURAL BALANCE

A North Shore cabin renovation issues a passport for architect and client to explore the outer reaches of sustainable design

By Camille LeFevre

In summer 1997, Medora Woods purchased 5.7 acres of woods with a small 50-year-old summer cabin on the North Shore of Lake Superior. A Jungian analyst who studies Americans' increasing psychic and physical disconnection from community, place and nature, Woods wanted to renovate the cabin for year-around use without the materials waste, site destruction, ongoing maintenance and energy consumption such projects usually generate.

Woods wanted the site to dictate the building's size, materials and design. She wanted energy needs fueled via renewable-energy sources. She was willing to explore and incorporate untried sustainable-design technologies. In essence, Woods wanted a cabin that demonstrates a new definition of what it means to build "an earth-friendly house," she says. She turned to her friend, Sarah Nettleton, AIA, Sarah Nettleton Architects, Ltd., Minneapolis.

"From the beginning," Woods says, "we understood ourselves to be in a transformative learning process about what sustainable design is and means. There is no sustainable-design manual with lists of available products and technologies. Every question leads to a dozen more. There is ongoing tension between having a grand idea and making it practical; between wanting to be responsible for the impact of the project and getting it built in a reasonable period of time."

The process succeeded, nonetheless, in producing a 1000-square-foot, sustainable-design demonstration project now visited by architects and builders from around the country. "We did a lot of research that we hope will help other people building and designing sustainably," Woods says. But the cabin, near Tofte, Minnesota, is also a North Shore retreat that Woods calls "very simple and very lovely."

The design process, Nettleton says, "started with connection to place. I asked myself: What does the site tell me about what the cabin needs to be?" The answers included staying within the small footprint of the original cabin, and inviting nature to inspire the architectural design and selection of materials.

The angle of the sun's rays throughout the year, for instance, guided Nettleton to lift and turn the roof (hence its curve) so maximum sunlight warms and illuminates the cabin in winter, and the sun's hot rays are minimized in summer. In addition, clerestory windows admit light into the cabin, which in turn passes through glass borrow lights fit between the curved ceiling and tops of the bedroom walls.

"Because of the glass, when you're in the cabin and look up it feels like one room," Nettleton says, "yet the rooms are private." The ceiling's curve, clad in recycled pine lap siding, provides a woody intimacy while recalling the underside of a wooden boat hull; the type of boats that once plied the waters visible through the cabin's picture windows.

A simple palette of materials, most of them recycled, also creates a seamless aesthetic that joins site...
The angle of the sun’s rays guided Nettleton to lift and turn the roof (resulting in the curve, top), so maximum sunlight warms the cabin in winter (below left) and the sun’s heat is minimized in summer (below right). Glass borrow lights between the curved ceiling and tops of the walls (top and opposite right) and picture windows toward Lake Superior (opposite left) bring light and views into the small cabin.
and cabin. Pine lumber came from the Menomonie tribe's sustainable forest in Wisconsin or was recycled from a local building; was salvaged from the bottom of Lake Superior or ordered from a certified-sustainable plywood mill in Oregon. Scrap lumber from the rooftop deck was reused in casework.

"There's not a lot inside that's arguable with what's outside," Nettleton says. "That's huge in terms of a sustainable-design aesthetic; manifesting a connection to place through materials."

In addition, nearly all construction waste was recycled. The rigid roof insulation is extruded, not expanded—meaning it isn't made with ozone-harming agents—and was cut to size at the manufacturer to decrease job-site waste and trucking costs. The copper roof eliminates batches of asphalt shingles ending up in landfills in the future. Low- or no-VOC paints were used to finish the exterior and interiors.

Energy use also has a tremendous influence on a building's ecological impact. "The first criteria of a green energy strategy is to reduce the load," Nettleton says. Daylighting, insulation to decrease heat loss and a low-energy refrigerator all minimize the cabin's energy use. The small amount of energy needed is generated by photovoltaic panels (installed on the garage roof instead of shingles) and a wind-powered generator, with backup power supplied by "the grid" (the existing electric infrastructure). Grid and renewable-power systems will be monitored, with the goal of reaching zero grid usage over time. A geothermal (or ground-source) heat pump supplies warm water for the cabin's in-floor heating system.

Last, Nettleton applied her expertise in sustainable landscape design to the project. Three native-plant ecosystems were identified at the site and largely preserved. In areas where construction occurred, the excavator cut the vegetation (including seedheads), left the plant material on the ground, then pushed the soil to the side. Disturbed areas were later seeded with the seeded top soil. The geothermal well field was replanted with native shrubs.

"The infrastructure was not in place to support a lot of this sustainable-design approach," Nettleton says. "Because of Medora's willingness to commit to her ideas in realizing this approach to design and construction, she supported my research and our deep look at reinventing the process of sustainable design."

By pushing the limits of sustainable design to new heights of achievement and depths of understanding, the cabin has become a valuable prototype for reducing a building's ecological footprint on all levels. As for Woods, she revels in "this amazing space in which to live and work, and the joy of knowing all the ways in which this cabin and the process of creating it have embodied a sense of connection to something larger than myself."

Tofte Cabin  
Tofte, Minnesota  
Sarah Nettleton Architects, Ltd.,  
Minneapolis, Minnesota
Sustainable Learning

A northwoods environmental-learning center embodies and educates about sustainable design  By Joel Hoekstra

When you're in the environmental-education business, integrity is a matter of practicing what you preach. So it's hardly a surprise that when RSP Architects Ltd., Minneapolis, was hired to design several buildings for Wolf Ridge Environmental Learning Center in Finland, Minnesota, the firm's mandate included minimizing the visual and environmental impact the new structures would have on their sylvan surroundings.

Relocated from Isabella, Minnesota, to its current site in 1971, Wolf Ridge provides experiential, hands-on environmental education to elementary and high-school students from throughout Minnesota and the Upper Midwest. Its campus, located 250 miles north of the Twin Cities, encompasses 1,400 wooded acres along a two-billion-year-old ridge, and includes two large lakes and nearly a mile of the Baptism River. The center also hosts adult programs, master's-degree candidates from the University of Minnesota Duluth and a program for undergraduates. Wolf Ridge currently serves 18,000 individuals annually, necessitating expansion of the campus.

Over the past eight years, RSP has designed a dining-hall addition, a forest-ecology building, a dormitory and, most recently, a science center to accommodate the influx of learners. (A set of original buildings—a classroom structure, dormitory,
administration building, dining hall and power plant—was designed by Setter Leach & Lindstrom, Minneapolis.)

The new facilities, says Michael Plautz, AIA, founding principal, RSP, play off the campus's existing architectural vocabulary while meshing with the woodland setting. They also facilitate learning about the environment and energy conservation, while showcasing such eco-friendly technologies as wind-power generators, solar-energy panels and composting toilets.

The rigorous sustainable-design standards were established by Wolf Ridge founder and recently retired director, Jack Pichotta. “Jack said from the start that he wanted these facilities to be the best performing buildings at this latitude anywhere on earth,” Plautz recalls. “It was a tall order, but exciting to implement.”

RSP’s first project, the forest-ecology building, which sits a quarter mile from the main campus, certainly resembles few other earthly structures. The idea for the building’s design evolved from sketches of a ptarmigan resting in the snow, and the 3,000-square-foot building fans out across its site, its roofs sloping nearly to ground level like wings at rest.

Inside the building, a central lobby and two classrooms with lofted ceilings are illuminated by south-facing, floor-to-ceiling windows. A composting toilet in the
The new dormitory features numerous sustainable-design technologies, including a passive-solar orientation that fills the rooms with sunlight (top). The design for the forest-ecology building, which sits a quarter-mile from the main campus (opposite top and middle), evolved from a sketch of a ptarmigan resting in the snow. The interiors, with lofted ceilings, are illuminated by sun streaming through south-facing windows (opposite below).

lavatory and a large bank of plants fed with recycled gray water serve as reminders that conservation can be applied to almost any aspect of everyday living.

In 1988, RSP completed an additional dormitory for the campus. The 22,960-square-foot building is painted blue-gray and features a recessed entrance and white trim. Its roofline is flush with surrounding trees, making it nearly invisible from the valley below the site.

The interior incorporates several sustainable-design technologies: radiant in-floor heating is fed by Wolf Ridge's wood-burning power plant; water pumped from underground is stored in large tanks in the dorm basement while warming to room temperature before being channeled into hot-water heaters; and energy-efficient fluorescent lighting is controlled by motion detectors.

RSP's crowning contribution to the Wolf Ridge campus, however, is the Pichotta Science Center. The 16,210-square-foot building, completed in 2000, includes four classrooms, a 28-foot-high climbing wall and a 300-seat auditorium. “We've never had a place where we could gather everyone together for a community-wide program,” says Peter Smerud, operations director, Wolf Ridge. The auditorium is also a potential revenue source for the nonprofit organization. Several groups, including the Superior Hiking Trail Association and The Nature Conservancy, have indicated an interest in renting the space for public gatherings.

Two towers bookend the exterior of the science center: one contains the climbing wall; the other the lobby. Organized along an east-west solar axis, the building is designed to make the most of solar rays. The classrooms are tilted 15 degrees off the
main access of the building to maximize solar gain. Clerestory windows flood the lobby with light, even on cloudy days. Windows punctuate the four south-facing classrooms and skylights make lighting virtually unnecessary throughout the building.

More than any other Wolf Ridge building, the science center showcases conservation technologies. Individually controlled air-exchange units within each classroom reduce energy costs while boosting air quality. Plautz and his wife Gloria donated the funds for an 80-foot windmill outside the building, by which North Shore winds generate power to warm water for various domestic uses and charge batteries that power two classrooms. A 6-X-10-foot photovoltaic panel also channels power into the batteries. Housed in a glass chamber just off the lobby, photovoltaic cells can be studied by students and visitors.

All of these features dovetail with Wolf Ridge's mission. For kids in classrooms conducting experiments, the batteries down the hall and the structures outside are reminders of a bigger sustainable-design picture. Likewise, climbers reaching the top of the climbing wall look out over the bluff through small sun-drenched windows.

The point couldn't be more clear: the lessons learned at Wolf Ridge are for taking into the greater, outside world.

**Pichotta Science Center**
**Wolf Ridge Environmental Learning Center**
**Finland, Minnesota**
**RSP Architects Ltd., Minneapolis, Minnesota**
A dirt path into the gorge that was causing severe erosion (above) was made into an official access point with the construction of a stair of limestone slabs (right).

**Urban Wild**

A master plan for the Mississippi River gorge in Minneapolis creates an accessible interface between nature and community  
*By Camille LeFevre*

The Mississippi River is the largest and one of the most historic watersheds in the United States. Within that watershed, the river's only true gorge lies south of St. Anthony Falls, between Minneapolis and St. Paul. Although the gorge falls within the boundaries of the National Park Service's Mississippi National River and Recreation Area, and has national significance as a major migratory-bird flyway, the gorge has been largely unrecognized for its scenic, historic and natural significance.

The Longfellow Neighborhood in Minneapolis, however, has long enjoyed its adjacent river gorge, which is owned and managed by the Minneapolis Park & Recreation Board. Along West River Road between 46th Street and 27th Street East, steep bluffs overgrown with vegetation drop to flat bottomlands along the river. A semi-wild area, the gorge nonetheless sits within an urban context and use has taken its toll.

Rogue paths winding down the slope have caused severe erosion, as have vertical trails carved by mountain bikers. Trees, dead and alive, are cut for bonfires. All-terrain vehicles entering the gorge via the road to the Minneapolis Rowing Club cruise along the river bottoms, tearing up vegetation.

Graffiti appears on trees, rocks and signs.

So in 1996, the Longfellow Community Council's new River Gorge Committee elected to apply its Neighborhood Revitalization Program funds to a master plan that would guide restoration and preservation of the gorge. The Minneapolis Park & Recreation Board hired Close Landscape Architecture, St. Paul, to complete the plan.

"The river is our neighborhood's strongest physical asset," says Lyndon Torstenson, a member of the River Gorge Committee and an education specialist for the National Park Service, "so we have a sense of responsibility toward the landscape and the river."

Through a public process facilitated by the Minneapolis Park & Recreation Board and Close Landscape Architecture, the committee determined its top priority was preserving the gorge's ecological integrity; and yet it wanted trails and access.
points clearly defined to direct and control use in the gorge without harming the area's natural fabric.

“It was really a matter of finding the proper interface between nature and community,” Torstenson says. “Close understood the importance of a wild landscape in the city and how to work with a community planning process. As a result, the firm created opportunities for use and enjoyment of the gorge in ways that are harmonious with its natural values.”

The master plan suggested the creation of four new trail heads and the definition of several new access points that would eliminate erosion problems. Near 27th Street East, for instance, a dirt path into the gorge was made official with the construction of an entrance stair of limestone slabs. Also of limestone is a new semi-circular entrance point to the historic Winchell Trail, which winds along the gorge. At 36th St., the top of an extremely eroded bluff was transformed into a scenic overlook of limestone pavers and walls, benches and wrought-iron railings.

These built elements of the master plan “focus on and draw attention to the area, and invite park users to enjoy nature’s beauty,” says Mary Merrill Anderson, superintendent, Minneapolis Park & Recreation Board. But the neighborhood doesn’t intend to stop there. The master plan also suggests “removing other ad-hoc access points, so the neighborhood can restore some native-plant communities,” says Bob Close, ASLA, principal, Close Landscape Architecture. Vegetation management, in fact, is a critical part of the master plan.

“Much of the gorge is deteriorated oak savannah,” says Deb Bartels, ASLA, project manager. “Buckthorn, an invasive non-native shrub, has taken over; a sign that the indigenous vegetation community isn’t doing well. Clearing out the buckthorn not only helps restore native-plant communities, but improves safety and views for people.”

In the last two years, nearly 200 volunteers from the neighborhood and National Park Service, along with crews from the Minneapolis Park & Recreation Board, have begun cutting buckthorn, and restoring native prairie and oak-savannah plant communities. These volunteer efforts, in addition to Longfellow's application of its NRP funding to river-gorge infrastructure, restoration and preservation, “are fitting examples of community pride,” says Ed Solomon, president, Minneapolis Park & Recreation Board.

“Someone once said good landscape architecture is something you don't really notice,” Bartels says. “We think that's especially true here. Our philosophy with this project has been to heal a landscape that's been damaged, while finding a balance between recreation, aesthetics and preservation.”

The allied commitment between Longfellow Neighborhood, Minneapolis Park & Recreation Board and the National Park Service continues to make the master plan a real, evolving document. “The Mississippi River Gorge Master Plan is not sitting on a shelf,” Close says. “It became active on its completion and parts of it continue to be implemented over time. Bit by bit, we're seeing the restoration of this special place.”

**Mississippi River Gorge Master Plan**

**Minneapolis, Minnesota**

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endangered
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At the same time, journalists began advocating for threatened historic buildings, which helped set an agenda for public consideration of these places in a wider context. As this process gained momentum, the public began to pour the cement for the foundations of the historic-preservation movement. The Winona County Courthouse wasn’t left behind.

In 1970, the Winona County Board commissioned drawings for a new, three-phase courthouse—to be built on the site of the existing courthouse. As these plans neared completion, local residents voiced their children’s concerns about losing what they affectionately called the “Dirty Old Lady.” A few parents helped their children circulate petitions asking the County Board to reconsider demolition of the old courthouse. Shortly thereafter, according to The Winona Daily News, “youngsters were alarmed that their adult leaders were quietly clearing the landscape of their architectural heritage in the name of progress.” This fledgling preservation campaign soon found kindred spirits.

A Minneapolis Star Tribune article in the November 24, 1970 Picture magazine, written by Ronald Ross, noted the battle to preserve the courthouse had been fought for several years by the Winona County Historical Society. But an activist group of younger Winona residents, many of them students, had formed The Committee for a Sensible Courthouse Plan and were using Vietnam War-protest tactics to convey their concerns.

The two groups formed a joint organization, The Winona County Progress and Preservation Association. Reflecting on the growing public sentiment for a return to enriching architecture, preservationist and group leader Patricia Frisby wrote, “We have a building in Winona that still has a human touch, that was built with care, talent and love . . . the feeling people cross oceans to enjoy. It is ours, here, close at hand.”

The organization moved from street tactics to courtroom maneuvering. On January 6, 1971, the Winona County
Board of Commissioners was less than an hour away from opening bids for the new building scheme when a citizen-petitioned court order placed a restraining order on the Board’s proceedings. Subsequently, Board members initiated a plan for restoring the courthouse and building new facilities for additional county functions across the street.

Three decades later, the Winona County Commissioners seem to be burnishing the oft-repeated phrase, “history repeats itself.” While reportedly their hearts tell them to keep the building, their heads say restoration is too impractical. The Winona Heritage Preservation Commission is also repeating history as it works to reawaken public recognition of the courthouse’s importance. A few weeks after the ceiling-tile accident, the commission held a public meeting attended by more people than could fit in the meeting room.

Seeing the once-endangered and once-rescued courthouse now again endangered, the Minnesota Historical Society in October 2000 initiated a reuse study of the building that examines structural integrity, general physical condition and spatial configuration for various occupancy uses. The study was augmented by interviews with several local judges. Charles Nelson, historical architect for MHS, says the team found the building structurally unimpaired and recommended redesign of the court facilities. What runs up projected renovation costs is the expense of removing moldy asbestos-laced plaster and water-soaked material in unventilated areas.

Meanwhile, the Winona County Commissioners are studying whether to construct an all-under-one-roof new structure (which presumably would cause the demise of the historic courthouse), or retain the courthouse and nearby annex and join them to new buildings within a county campus. Several county staff and commissioners favor the all-in-one building after working in county-leased buildings all over town. Mark Peterson, executive director, Winona County Historical Society, however, favors the campus plan.

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endangered
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The campus plan, he says, not only preserves the historic resource and provides updated facilities, but would revitalize the economically underutilized area around the courthouse. In the aftermath of water damage last fall, he adds, many people felt rushed to make a decision about the building. Public sentiment, he adds, caused decision makers to "step back and take a deep breath, so now they are examining options."

An overarching issue presented by this vacant and endangered courthouse is that preservation too often wins the battle then walks away feeling the job is finished. Historic-preservation victories must be followed by consistent building maintenance and repair, and community awareness of the need to care for historic buildings must be nurtured, too. AM

interview
Continued from page 13

from the rest of the curriculum is that it can be viewed as something that is added or subtracted from the process of design—rather than something that is essential.

So what needs to occur is a complete transformation of the educational process?
Ecology is inherently interdisciplinary. If we are to reconsider design education within the context of ecological literacy, one of the most important principles is interdependence. Ecological design is about connections, relationships and context. It is also about systems and process thinking; all living systems are wholes whose structures arise from the interactions and interdependence of their parts.

Contemporary ecological issues are far too complex for any one discipline to fully understand and effectively address. The issues that might fall under the domain of ecological design encompass many scales (global, regional, community, site, building, room, components); topics (site, water, energy, indoor environment, materials, waste); and disciplines (landscape architecture, architecture, interior design, engineering, planning, ecology).

I also believe that we need an interdisciplinary approach to design education because the design professions simply do not have the necessary knowledge and experience to address global ecological concerns alone. We have to build alliances with other disciplines such as hydrology, ecology, biology, geology and sociology. We also
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need to look at creating healthier relationships among the design disciplines.

So, to answer your question, we need to build on the strengths of current design education and let go of methods and processes that no longer serve students, the profession, clients and the earth. Such a transformation would require that we break away from a discipline-centric curriculum and even confinement in classrooms.

In addition to current models, we might consider a variety of educational approaches: internships, classes in the workplace, round-table discussions, fieldwork, collaborations between practice and education, or connections between education and research. We need to look at curricular content and methods of teaching and learning. The educational process should be less hierarchical; we should be teaching each other, with the distinction between student and teacher fluid.

Writer and social critic Ivan Illich tells us that most learning—or the best learning—is not the result of instruction. It is instead the result of unhampered participation in a meaningful setting. The more connections we make apart from the design profession the stronger, broader and deeper our design education will become. My goal is to continue to explore and define the essential concepts, characteristics and principles of ecological design through the development of new educational models, methodologies and philosophies.

How do you envision accomplishing that?
Design education cannot be transformed without collaboration between education, practice and other disciplines. Interdisciplinary approaches to education and practice are critical if we are to move to a deeper level of ecological design understanding. We can also begin to see transformations by working on small changes where they are possible—modifying existing courses, designing new courses, developing more continuing-education opportunities, making connections with local designers who are practicing from an ecological perspective, creating research opportunities and finding others with common interests.

Most importantly, we need to build a community that cares about ecological-design education and practice. The Greening the College Initiative and the Ecological Design Education Project (and other CALA initiatives) are trying to find ways to integrate ecological thinking into what we’re doing at CALA. Many of my colleagues—including John Koepke, head of the landscape-architecture program, associate dean Lance Neckar and dean Tom Fisher—are leaders and allies in this effort.

This is about cultural and community transformation. It involves students, faculty, administrators, researchers and practitioners. It also involves making our thinking less mechanistic and less linear; to move to thinking that is more integrated or weblike, like nature itself.

Isn’t that the natural state of design thinking?
Yes. Design at its best is a method of connecting and synthesizing varied issues, a way of putting pieces into a whole. Ecological design is about connections, relationships and environmental, cultural and spiritual contexts. It’s about systems theory and process thinking. It’s also simply about good design.

Designers are apt to respond favorably to our goals, because they’re accustomed to thinking and working that way already. A big part of the rest of the world, however, is still embedded in the old economy method of linear thinking.

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So in a world that's already overwhelmed with change, how do you initiate a cultural shift and win over the skeptics? We ought not to worry about the skeptics. It's easiest to start with the people who are already converts in order to build momentum. Creating momentum, in fact, is about energy flow—one of the principles of ecology. The more people talking about ecological design, the faster we'll develop a critical mass. But we need more voices.

In his book *Learning to Listen to the Land*, Bill Willers compares the ecological movement to a musician who can hear the music faintly but not clearly enough to play it through. Like the musician, our voices need to grow in strength and clarity. I think our work at CALA will begin to do that. AM

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**practice**

Continued from page 15

touched only a small percentage of the structures built in the region since the program began.

In Minnesota, the degree to which sustainable design has become an integral part of architectural practice is mixed. A number of firms have integrated sustainable design into their practices; they approach design from an ecological perspective or world view, rather than treating green-design strategies as add-ons to a project. But the public and much of the architectural profession still consider sustainable design largely the domain of these firms. And clients for sustainable design are perceived to be mainly eco-friendly companies and organizations, and ecologically aware homeowners.

One roadblock to sustainable design becoming the norm is cost. Not every client will pay higher up-front costs for energy-efficient equipment that generates savings in the long-term. The DNR's new buildings in Windom and Tower, for instance, feature such energy-saving features as natural lighting, lighting motion sensors and energy-efficient heating and cooling equipment. But the buildings "are not as sustainable as we set out for them to be," Wallace says, because the state budget wasn't flexible enough to absorb the higher up-front costs of additional green technologies.

"Incorporating sustainable-design technologies requires that architects and clients shift their time horizon from immediate to long term," says Sarah Nettleton, AIA, principal, Sarah Nettleton Architects, Ltd., Minneapolis, and chair of AIA Minnesota's Committee on the Environment. "A lot of materials and systems are more expensive on the front end, but in the long term there are significant, proven energy savings. You're building for the future."

Nettleton also believes more architects "don't do green design because it takes effort." When a client chose to renovate her North Shore cabin using a fully integrated sustainable-design approach, Nettleton says, "the infrastructure was not in place to support this happening easily" (see page 36). Nettleton engaged in several years of research to find, evaluate and purchase such products as recycled wood, and locate companies that would recycle job-site waste.

"Because retailers in Minnesota did not sell a lot of the products we wanted—even though they do now—I had to arrange with wholesalers to make sales to the contractor and even arrange for the shipping of the materials." Her experience, she adds, "just shows one of the difficulties of doing sustainable design from start to finish. There was no database to look up where to buy or recycle materials. So I was doing primary research."

Another roadblock is client concern about the performance of ecologically friendly materials. The DNR passed on using wheat board instead of particle board, and on recycled carpet and paint. Waterless urinals were a sound idea, but the nightly cleaning they require would have laden the staff with additional and

Continued on page 54
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unwanted duties, Wallace says, leaving the agency with little choice but to select more traditional bathroom fixtures.

So, how can architects quell client concerns? Begin by introducing clients to concepts they may not have considered, including not building anything, says Rick Carter, AIA, vice president, LHB Engineers & Architects, Minneapolis. LHB convinced St. Joan of Arc, a Catholic church in Minneapolis, to construct a small addition rather than a whole new building.

Based on the success of that project, St. Joan of Arc asked LHB to incorporate sustainable-design practices into other projects and asked Carter to address the congregation on the topic. The church falls into the third of LHB clients who, once they hear about sustainability, give the green light to incorporate it. Other clients, like The Green Institute, Minneapolis, approach LHB because of its sustainable-design expertise. The Institute’s Phillips Eco-Enterprise Center (see Architecture Minnesota, January/February 2000) is a showcase for sustainable design, and has received recognition from AIA National as one of the nation’s top 10 “green” structures.

Joel Schurke, principal, Factor 10, LLC, Minneapolis, takes a different approach to getting green buildings built. Developers, he says, largely look away from sustainable concepts. Pressured to earn a faster return on their investment, developers remain less likely to take a chance on sustainable technologies. So rather than trying to convince developers to build ecological structures, Factor 10 has become a developer of sustainable projects.

Two sustainable-design projects with office space for lease are on the boards. Schurke says that, based on the success of the Phillips Eco-Enterprise Center, where Factor 10 has its offices, “there’s amazing market opportunity” for businesses that want to office in sustainable buildings (or what his firm calls “high-performance buildings”).

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<td>— Robert Brown</td>
</tr>
<tr>
<td>— Kim Way</td>
</tr>
<tr>
<td>— Krisan Osterby-Rensen</td>
</tr>
<tr>
<td>Firm Personnel by Discipline</td>
</tr>
<tr>
<td>Landscape architects</td>
</tr>
<tr>
<td>Architects</td>
</tr>
<tr>
<td>Planners</td>
</tr>
<tr>
<td>Civil engineers</td>
</tr>
<tr>
<td>Other construction/ engineering</td>
</tr>
<tr>
<td>Technical</td>
</tr>
<tr>
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<tr>
<td>Site planning/dev. studies</td>
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<tr>
<td>Urban design/streetscapes</td>
</tr>
<tr>
<td>Master/comprehensive planning</td>
</tr>
<tr>
<td>Resorts/hospitality</td>
</tr>
<tr>
<td>— Mayo Sculpture Park, Gonda Building, Rochester, MN: Gustavus Adolphus College, Track and Field Facility, St. Peter, MN; Grand Center Convention Center, Grand Rapids, MI; Roseville City Center, Roseville, MN; Riverbend Commons, Minneapolis, MN; State Farm Mountain States Regional Office, Greeley, CO</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th><strong>ERNST ASSOCIATES</strong></th>
</tr>
</thead>
<tbody>
<tr>
<td>122 West 6th Street</td>
</tr>
<tr>
<td>Chaska, MN 55318</td>
</tr>
<tr>
<td>Tel: 952/448-4094</td>
</tr>
<tr>
<td>Fax: 952/448-6997</td>
</tr>
<tr>
<td>E-mail: <a href="mailto:ernstg@ctinternet.net">ernstg@ctinternet.net</a></td>
</tr>
<tr>
<td>Established 1977</td>
</tr>
<tr>
<td>— Gene F. Ernst</td>
</tr>
<tr>
<td>— Cory W. Tauer</td>
</tr>
<tr>
<td>Firm Personnel by discipline</td>
</tr>
<tr>
<td>Landscape architects</td>
</tr>
<tr>
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<table>
<thead>
<tr>
<th><strong>DAHLGREN, SHARDLOW AND UGAN, INC.</strong></th>
</tr>
</thead>
<tbody>
<tr>
<td>300 1st Avenue North, Ste. 210</td>
</tr>
<tr>
<td>Minneapolis, MN 55401</td>
</tr>
<tr>
<td>Tel: 612/339-3300</td>
</tr>
<tr>
<td>Fax: 612/337-5601</td>
</tr>
<tr>
<td>E-mail: <a href="mailto:dsstaff@dsuplan.com">dsstaff@dsuplan.com</a></td>
</tr>
<tr>
<td>Established 1976</td>
</tr>
<tr>
<td>Other Office: St. Cloud, MN</td>
</tr>
<tr>
<td>— John W. Shardlow</td>
</tr>
<tr>
<td>— C. John Uban</td>
</tr>
<tr>
<td>— Philip Carlson</td>
</tr>
<tr>
<td>— Geoffrey C. Martin</td>
</tr>
<tr>
<td>— Wallace L. Case</td>
</tr>
<tr>
<td>— Jay Blake</td>
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<td>— Firm Personnel by Discipline</td>
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<td>Planners</td>
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<tr>
<td>Environmental studies (EIS)</td>
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<tr>
<td>Parks/open spaces</td>
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<tr>
<td>Urban design/streetscapes</td>
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<tr>
<td>Recreation areas (golf, ski, etc.)</td>
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<tr>
<td>Master/comprehensive planning</td>
</tr>
<tr>
<td>Multi-family housing/PUDS</td>
</tr>
<tr>
<td>Expert testimony</td>
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<tr>
<td>— Burnsville Heart of the City Framework Plan, Design Guidelines and Codes, MN; South Robert Street Redevelopment Strategy, West St. Paul, MN; Hidden Lakes Site Amenities, MN; Larpenteur Avenue Streetscape, Roseville and St. Paul, MN; Dubuque Pedestrian Mall Redevelopment Study, MN; St. Cloud Joint Planning Project, St. Cloud, MN</td>
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<table>
<thead>
<tr>
<th><strong>DAMON FARBER ASSOCIATES</strong></th>
</tr>
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<tbody>
<tr>
<td>253 Third Avenue South</td>
</tr>
<tr>
<td>Minneapolis, MN 55415</td>
</tr>
<tr>
<td>Tel: 612/332-7522</td>
</tr>
<tr>
<td>Fax: 612/332-0936</td>
</tr>
<tr>
<td>E-mail: <a href="mailto:dfarber@dalenlandscape.com">dfarber@dalenlandscape.com</a></td>
</tr>
<tr>
<td>Established 1981</td>
</tr>
<tr>
<td>— Damon Farber</td>
</tr>
<tr>
<td>— Thomas Whitlock</td>
</tr>
<tr>
<td>— Peter Larson</td>
</tr>
<tr>
<td>— Craig Nelson</td>
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| — Jesse Symczyk
| — Benjamin Hartberg |
| — Firm Personnel by Discipline |
| Landscape architects | 9 |
| Administrative | 1 |
| Total | 10 |
| — Work % |
| Residential/decks/gardens | 5 |
| Site planning/dev. studies | 20 |
| Parks/open spaces | 10 |
| Urban design/streetscapes | 30 |
| Master/comprehensive planning | 20 |
| Multi-family housing/PUDS | 15 |
| Cargill Corporate Headquarters Plan, Minneapolis, MN; Canal Park Drive Urban Design and Streetscape Improvements, Duluth, MN; University of Minnesota Campus Entry and Pleasant Street Corridor Plan, Minneapolis, MN; Central Avenue Urban Design Community Action Plan, Minneapolis, MN; Alza Corporation Site Assessment and Headquarters Site Development, New Brighton, MN; The Minneapolis Institute of Arts Site Masterplan, Minneapolis, MN |

<table>
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<tr>
<th><strong>HAUCK ASSOCIATES, INC.</strong></th>
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<tbody>
<tr>
<td>3620 France Avenue South</td>
</tr>
<tr>
<td>St. Louis Park, MN 55416</td>
</tr>
<tr>
<td>Tel: 952/920-5088</td>
</tr>
<tr>
<td>Fax: 952/920-2920</td>
</tr>
<tr>
<td>Established 1990</td>
</tr>
<tr>
<td>— Robert P. Hauck</td>
</tr>
<tr>
<td>— Susan K. Simon</td>
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<tr>
<td>— Firm Personnel by Discipline</td>
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<tr>
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<tr>
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<tr>
<td>Neighborhood amenities/ renovation</td>
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<tr>
<td>— Target North Campus, Brooklyn Park, MN; Bemidji State University Master Plan, Bemidji, MN; UC Davis M.I.N.D. Institute, Sacramento, CA; Downtown East LRT Plaza, Minneapolis, MN; Minnesota Retirement Systems, St. Paul, MN; Mary Greeley Medical Center, Ames, IA</td>
</tr>
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<table>
<thead>
<tr>
<th><strong>HAMMEL GREEN AND ABRHAMSON, INC.</strong></th>
</tr>
</thead>
<tbody>
<tr>
<td>1201 Harmon Place</td>
</tr>
<tr>
<td>Minneapolis, MN 55403</td>
</tr>
<tr>
<td>Tel: 612/337-4100</td>
</tr>
<tr>
<td>Fax: 612/322-9013</td>
</tr>
<tr>
<td>E-mail: <a href="mailto:info@hga.com">info@hga.com</a></td>
</tr>
<tr>
<td>Web: <a href="http://www.hga.com">www.hga.com</a></td>
</tr>
<tr>
<td>Established 1953</td>
</tr>
<tr>
<td>Other offices: Rochester, MN; Milwaukee, WI; Sacramento, CA</td>
</tr>
<tr>
<td>— Principal: Gary Fishbeek</td>
</tr>
<tr>
<td>— Contact: Ted Lee</td>
</tr>
<tr>
<td>— Firm Personnel by Discipline</td>
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<tr>
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<td>Planners</td>
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<tr>
<td>Interior Architects</td>
</tr>
<tr>
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<tr>
<td>Master/comprehensive planning</td>
</tr>
<tr>
<td>Plazas/courtyards/rooftop gardens</td>
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</table>

<table>
<thead>
<tr>
<th><strong>ERICKSON ASSOCIATES</strong></th>
</tr>
</thead>
<tbody>
<tr>
<td>122 West 6th Street</td>
</tr>
<tr>
<td>Chaska, MN 55318</td>
</tr>
<tr>
<td>Tel: 952/448-4094</td>
</tr>
<tr>
<td>Fax: 952/448-6997</td>
</tr>
<tr>
<td>E-mail: <a href="mailto:ernstg@ctinternet.net">ernstg@ctinternet.net</a></td>
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<tr>
<td>Established 1977</td>
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<td>— Gene F. Ernst</td>
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<tr>
<td>— Cory W. Tauer</td>
</tr>
<tr>
<td>Firm Personnel by discipline</td>
</tr>
<tr>
<td>Landscape architects</td>
</tr>
<tr>
<td>Administrative</td>
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<tr>
<td>Total</td>
</tr>
<tr>
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</tr>
</tbody>
</table>
**HOISINGTON KOEGLER GROUP INC.**
123 North Third Street #100
Minneapolis, MN 55401-1659
Tel: 612/338-0800
Fax: 612/338-6838
E-mail: hkg@hkgi.com
Web: www.hkgi.com
Established 1982
- Mark Koegler RLA, ASLA
  - Firm Personnel by Discipline
    - Landscape architects: 8
    - Urban planners: 3
    - Administrative: 2
    - Total: 13
  - Work %
    - Site planning/dev. studies: 15
    - Parks/open spaces: 10
    - Urban design/streetscapes: 20
    - Master/comprehensive planning: 20
    - Multi-family housing/PUDS: 5
    - Redevelopment planning: 30
- Hastings Greenway Strategic Plan,
  - Design
  - Landscape architects: 2
  - Urban planners: 1
  - Administrative: 1
  - Total: 4
  - Work %
    - Site planning: 20
    - Parks/open spaces: 10
    - Urban design/streetscapes: 20

**KEENAN & SVEIVEN, INC.**
15600 Wayzata Boulevard, Ste. 108
Wayzata, MN 55391
Tel: 952/475-1229
Fax: 952/475-1667
E-mail: keenansveiven@gateway.net
Established 1990
- Kevin Keenan RLA, ASLA
  - Firm Personnel by Discipline
    - Landscape architects: 3
    - Technical: 6
    - Administrative: 1
    - Total: 10
  - Work %
    - Residential/decks/gardens: 100
    - Mills Residence, Edina, MN
    - Ingrist Residence, Edina, MN
    - Renckens Residence, Orono, MN
    - Vlahos Residence, Deephaven, MN
    - Pohlad Residence, Edina, MN
    - Fallon Residence, Edina, MN

**DAVID A. KIRSCHT ASSOCIATES, INC.**
5500 Lincoln Drive
Edina, MN 55436-1666
Tel: 952/938-4030
Toll free tel: 888/938-4030
Fax: 952/938-0026
E-mail: dakgolf@goldengate.net
Established 1922
- David A. Kirscht RLA, ASLA
  - Firm Personnel by Discipline
    - Landscape architects: 2
    - Administrative: 5
    - Total: 7
  - Work %
    - Site planning/dev. studies: 15
    - Golf courses: 50
    - Master/comprehensive planning: 10
    - Multi-family housing/PUDS: 10
    - Office/commercial: 15
    - Heritage Golf Course, 18-Hole Executive, Elk River, MN; Eagle Valley Golf Course, Woodbury, MN; Village Green and The Meadows Golf Course, Moorhead, MN; Superior National Golf Course, Nine-Hole Addition, Lutsen, MN; Fred Richards Golf Course, Edina, MN; Cub Foods, Eden Prairie, MN

**LANDMARK DESIGN, INC.**
4045 Watertown Road
Maple Plain, MN 55359
Tel: 952/476-6765
Fax: 952/475-8984
E-mail: gregk@landmarkdesignmn.com
Established 1979
- Greg Kellenberger RLA, ASLA
  - Firm Personnel by Discipline
    - Landscape architects: 2
    - Administrative: 5
    - Total: 7
  - Work %
    - Residential/decks/gardens: 60
    - Site planning/dev. studies: 10
    - Residential/golf/equestrian communities: 30
  - Greenhaven Golf Course, Clubhouse/Site Masterplan, Anoka, MN; Bear Path Golf and Country Club, Eden Prairie, MN; Piper Residence, Medina, MN; Schueler Residence, Shorewood, MN; Parisi Residence, Shorewood, MN; Johnson Residence, Hopkins, MN

**LHB ENGINEERS & ARCHITECTS**
21 West Superior Street, Ste. 500
Duluth, MN 55802
Tel: 218/727-8446
Fax: 218/727-8456
E-mail: joelynn.gum@lhbcorp.com
Web: www.lhbcorp.com
Established 1965
- Mark S. Anderson RLA, ASLA
- Gary C. Findell RLA, ASLA
- Bruce D. Chalupsky RLA, ASLA
- Matthew Fair-Jones RLA, ASLA
- Mike A. Fischer AIA
  - Firm Personnel by Discipline
    - Landscape architects: 5
    - Architects: 24
    - Planners: 1
    - Civil, mechanical, structural, electrical engineers and interior designers: 20
    - Technical: 35
    - Administrative: 26
    - Total: 120
  - Work %
    - Residential/decks/gardens: 5
    - Site planning/dev. studies: 20
    - Parks/open spaces: 10
    - Urban design/streetscapes: 20
    - Recreation areas (golf, ski, etc.): 10
    - Master/comprehensive planning: 20
    - Multi-family housing/PUDS: 15
    - City of Plymouth, Highway Buffer Zone, MN; Lake Superior College Master Plan, Duluth, MN; Good Fellowship Community Center Master Plan, Duluth, MN; University of Wisconsin-Superior 25-Year Master Plan, Superior, WI; Railroad Island Master Plan for Housing Development, St. Paul, MN; Lowertown Depot Mixed-Use Sustainable Village Master Plan, St. Paul, MN

**LOUCKS ASSOCIATES**
2700 Hemlock Lane, Ste. 300
Minneapolis, MN 55369
Tel: 763/424-5505
Fax: 763/424-5822
E-mail: home@loucksmclagan.com
Web: www.loucksmclagan.com
Established 1976
- Other Office: St. Paul, MN
- Work %
  - Paul Kangas RLA, ASLA
  - Tom Loucks
  - Jeff Shopek PE
  - Paul McGinley RLS
  - Mike St. Martin PE

- Continued on next column

**LSA DESIGN INC.**
250 North Third Avenue
Minneapolis, MN 55401
Tel: 612/339-8729
Fax: 612/339-7433
E-mail: flasher@lsadesigninc.com
Web: www.lsadesigninc.com
Established 1989
- James B. Lasher RLA
- Harold Skjelbostad RLA
- Graham Sones PE
- JoAnn Olsen AIA
- Kyle Williams AIA
- Mark Henderson PE
- Firm Personnel by Discipline
  - Landscape architects: 4
  - Architects: 4
  - Planners: 1
  - Civil engineer: 1
  - Technical: 1
  - Administrative: 2
  - Total: 13
  - Work %
    - Site planning/dev. studies: 20
    - Parks/open spaces: 10
    - Transit facilities: 70
    - Uptown Transit Station, Minneapolis, MN; Robbinsdale Transit Station, Robbinsdale, MN; Eagan Station Phase II Parking Deck, Eagan, MN; Highway 52 Corridor Aesthetics, Rochester, MN; Burnsville Transit Station Phase II Parking Deck, Burnsville, MN; Cedar’s Parking Deck, Elizabeth, IN
**THE McSHERRY GROUP, INC.**
410 Hayward Avenue North
Oakdale, MN 55128
Tel: 651/731-0308
Fax: 651/731-0421
E-mail: mcscherrygroup@aol.com
Web: www.mcscherrygroup.com
Established 1990

- Alan A. Kretman  RLA, ASLA
- Scott P. Ferguson  ASLA
- Paul D. Schimmowski  PE, ASCE
- Douglas L. Fell  PE, ASCE
- Steve J. Rivard  ASCE
- Seth D. Spychala  ASCE

- Firm Personnel by Discipline
  - Landscape architects 2
  - Civil engineer 1
  - Structural engineer 3
  - Technical 4
  - Administrative 3
  - Total 13

- Work %
  - Residential/decks/gardens 5
  - Site planning/dev. studies 35
  - Environmental studies (EIS) 5
  - Parks/open spaces 10
  - Urban design/streetscapes 5
  - Recreation areas (golf, ski, etc.) 10
  - Master/comprehensive planning 40

**PARSONS**
(formerly d/b/a Barton-Ashman Associates, Inc.)
113 Third Avenue South, Ste. 350
Minneapolis, MN 55401
Tel: 612/332-0421
Fax: 612/332-6180
E-mail: william.s.midness@parsons.com
Web: www.parsons.com
Established 1919

- Wm. Scott Midness  RLA, ASLA
- Joel L. McElhany  RLA, ASLA
- Jeffrey A. Feulner  ASLA
- Mark E. Gander  AICP
- John H. Payton  PE
- David B. Warzala  PE

- Firm Personnel by Discipline
  - Landscape architects 3
  - Planners 1
  - Traffic and transportation engineers 7
  - Civil engineers 12
  - Environmental/technical artists 2
  - Total 32

- Work %
  - Site planning/dev/ studies 40
  - Environmental studies (EIS) 5
  - Parks/open spaces 20
  - Urban design/streetscapes 25
  - Master/comprehensive planning 10

**OSLUND, AND. ASSOC.**
115 Washington Avenue North
Minneapolis, MN 55401
Tel: 612/359-9144
Fax: 612/359-9625
Established 1998

- Principals:
  - Thomas R. Oslund  RLA, FAAR, ASLA
  - Jay Coatta

- Contacts:
  - Tadd Kreun  RLA, ASLA
  - Joseph Favour  RLA, ASLA
  - Misa Inoue

- Firm Personnel by Discipline
  - Landscape architects 4
  - Architects 2
  - Administrative 2
  - Total 8

- Work %
  - Residential/decks/gardens 5
  - Site planning/dev. studies 30
  - Parks/open spaces 5
  - Urban design/streetscapes 5
  - Interior landscape/plantings 5
  - Recreation areas (golf, ski, etc.) 10
  - Master/comprehensive planning 40

**RLK-KUUSISTO, LTD.**
6110 Blue Circle Drive, Ste. 100
Minnetonka, MN 55347
Tel: 952/933-0972
Fax: 952/933-1153
E-mail: duhrhammer@rlk-kuusisto.com
Web: www.rlkuusisto.com
Established 1959

- John Dietrich  RLA, ASLA
- Steve Schwanke  AICP
- Chuck Poppler  PE
- Ken Weber  PE
- John Jannick  PE
- Tom Fast

- Firm Personnel by Discipline
  - Landscape architects 6
  - Planners 2
  - Civil engineers 19
  - Surveyors 39

**SANDERS WACKER BERGLEY, INC.**
365 East Kellogg Boulevard
Saint Paul, MN 55101
Tel: 651/221-0401
Fax: 651/297-6817
E-mail: wsanders@swbinc.com
Web: www.swbinc.com
Established 1979

- William D. Sanders  RLA, FASLA
- Larry L. Wacker  RLA, ASLA
- David Wanberg  AICP
- Greg Johnson  RLA
- Bill Bleckwenn  RLA, ASLA
- Jim Harbaugh  RLA, ASLA

- Firm Personnel by Discipline
  - Landscape architects 7
  - Planners 2
  - Administrative 1
  - Total 10

**SFR CONSULTING GROUP, INC.**
One Carlson Parkway North, Ste. 150
Minneapolis, MN 55447-4443
Tel: 763/475-0010
Fax: 763/475-2429
E-mail: bwarn@sfrcounseling.com
Web: www.sfrcounseling.com
Established 1963

- Robert Roscoe  PE
- Peter Fausch  PE
- Barry Warner  RLA, FASLA, AICP
- John Larson  RLA, ASLA
- Ken Grieshaber  RLA, ASLA

- Firm Personnel by Discipline
  - Landscape architects 11
  - Planners 8
  - Environmental 6
  - Transportation 18
  - Traffic 12
  - Civil engineering 22
  - Parking 4
  - Graphic 5
  - Highway engineering 28
  - Water resources 10
  - Structural 8
  - Survey 6
  - Technical 25
  - Administrative 1
  - Total 170

- Work %
  - Landscape Architecture/Urban Design 100
  - Urban design/streetscape 35
  - Parks/paths 25
  - Master planning 25
  - Site planning 10
  - Campus 5

- Avenue of the Arts, Minneapolis, MN; Harriet Island Regional Park, Saint Paul, MN; Near Northside Redevelopment (Public Realm), Minneapolis, MN; First Street Urban Park Concept, Saint Paul, MN; Campus Exterior Design Standards, University of Minnesota; Midtown Greenway Plan and Design, Minneapolis/Hennepin County, MN.
**TOLTZ, KING, DUVALL, ANDERSON AND ASSOCIATES, INC. (TKDA)**

444 Cedar Street, Ste. 1500
Saint Paul, MN 55101-2140
Tel: 651/292-4400
Fax: 651/292-0083
E-mail: johnson.da@tkda.com
Web: www.tkda.com
Established 1990

- Dean A. Johnson  AIA
- Robert L. Gray  RLA, ASLA
- John Hinzman
- David A. Mayer

**Firm Personnel by Discipline**

<table>
<thead>
<tr>
<th>Discipline</th>
<th>Architects</th>
<th>Planners</th>
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<td>24</td>
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- Site planning/dev. studies 25
- Parks/open spaces 25
- Urban design/streetscapes 15
- Recreation areas (golf, ski, etc.) 5
- Master/comprehensive planning 10
- Athletic fields/track 20


**URS/BRW**

700 Third Street South
Minneapolis, MN 55415
Tel: 952/370-0700
Fax: 952/370-1378
E-mail: steve_durrant@urscorp.com
Web: www.urscorp.com
Established 1956

**URS/BRW**

700 Third Street South
Minneapolis, MN 55415
Tel: 952/370-0700
Fax: 952/370-1378
E-mail: steve_durrant@urscorp.com
Web: www.urscorp.com
Established 1956

- Other Offices: Milwaukee, WI; Denver, CO; Phoenix, AZ; Seattle, WA; Chicago, IL; 130 other cities in 39 countries

- Steve Durrant  RLA, ASLA
- Miles Lindberg  RLA, ASLA
- Bob Kost  RLA, ASLA
- Arijis Pakalns  AICP
- Tom Harrington  RLA, ASLA
- Bill Weber  AICP

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E-mail: wsp@westwoodps.com
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- Other Offices: St. Cloud and Brainerd, MN

- Tim Erkilla  RLA, ASLA
- Greg Kopischke  RLA, ASLA
- Ed Hasek  RLA, ASLA
- Dan Spjoral  RLA, ASLA
- Paula Mestelle  RLA, ASLA
- Cory Meyer  RLA, ASLA

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Fax: 952/938-1504
E-mail: awidby@mnsm.com
Established 1989

- Alan Whidby  RLA, ASLA

- Firm Personnel by Discipline

<table>
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<tr>
<th>Discipline</th>
<th>Architects</th>
<th>Planners</th>
<th>Resource mgmt, infrastructure eng., transportation engineering/planning, construction srs., environmental sciences, graphic designers</th>
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- Site planning/dev. studies 20
- Environmental studies (EIS) 5
- Parks/open spaces 10
- Urban design/streetscapes 5
- Multi-family housing/PUDS 10
- Master/comprehensive planning 25
- Public infrastructure/G.I.S./Survey/Traffic 25

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Web: www.yaggy.com
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- Ron Fiscus  RLA, ASLA
- Don Borchering  PE, LS
- Chris Colby  AIA, CID
- Mark Root  RLA, ASLA
- Jose Rivas  AIA
- Wade DuMond  RLA, ASLA

- Firm Personnel by Discipline

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- Site planning/dev. studies 25
- Environmental studies (EIS) 10
- Parks/open spaces 10
- Urban design/streetscapes 30
- Multi-family housing/PUDS 20
- Master/comprehensive planning 20
- Multi-family housing/PUDS 5

Team Tires Plus Stores in CO, OK, MN, IA, WI, IL, KS, MO; IBM Site Master Plan, Rochester, MN; Comprehensive Plan Industrial Park, Red Wing, MN; Downtown Streetscaping, Lake City, MN; Site/Landscaping Improvements, Apache Mall, Rochester, MN; Chester Woods Regional Park, Olmsted County, MN
**Great Lakes Aquarium**
Location: Duluth, MN  
Client: Lake Superior Center  
Firm of Record/Contract: Hammel Green and Abrahamson, Inc.  
Project principal: Dan Archen, FAIA  
Design principal: Loren Ahles, FAIA  
Project designer: Kara Hill, AIA  
Project manager: Greg Haley  
Project architect: Bob Lundgren  
Architectural team: Cheryl Amdal, Tim Carlson, Dan Grotte, Elizabeth Welty, Ginny Lackovic, Nina Broadhurst, Rebekah Ebling  
Mechanical engineer: Chuck Cappellin, Tim Anderson  
Electrical engineer: Terry Tangedahl  
Structural engineer: Tony Staeger, Zina Dvoskin  
Specifications: Alex Gintner  
Pre-design architect: Hinshaw Architects, Programming and Conceptual Planning and Design  
Landscape architect: Coen + Stumpf + Associates  
Exhibit design: Deaton Museum Services  
“Wet” exhibit design: Bios  
Life-support systems: TA Marand Consultants  
Lighting: Schuler & Shook  
Acoustics: Omnivent Technologies  
Tank design: Rutherford & Chekene  
Civil engineering: LHB Engineers & Architects  
Associate architect: Melander, Melander & Schilling  
Codes: MountainStar Group  
Vertical transportation: Lorch Bates  
Construction manager: Adolphson & Peterson  
Construction Management Inc./Johnson Wilson  
Photographers: Richard Barnes, Don F. Wong

**City of Minneapolis Public Works Facilities Currie Maintenance Facility**
Location: Minneapolis, MN  
Client: City of Minneapolis Department of Public Works  
General contractor: Knutson Construction  
Architect: Architectural Alliance  
Design principal: Thomas DeAngelo, AIA  
Managing principal: Peter Vesterholt, AIA  
Project manager: Tom Hysell  
Project lead designer: Ken Shehean  
Project team: Peter Schroeder, Matt Lynse, Marcus Webb, Sam Olbeken  
Interior design: Jill Johnson  
Structural-engineering team: Wells Engineers - Frank Jordan, Charles Lewis  
Mechanical-engineering team: Cain Ouse Associates - Scott Thomas  
Electrical-engineering team: Cain Ouse Associates - Jay Cain, Jay Hruby  
Civil-engineering team: Parson-Barton Aschman Associates - Jim Knutson  
Project manager: City of Minneapolis Project Management Office - Gary Criter  
Landscape architect: Parson-Barton Aschman Associates - Thomas Ritzer  
Face brick: Minnesota Brick and Tile  
Window systems: Vista Wall, Kalwall  
Architectural metal panels: McGrath  
Millwork: Paul’s Woodcraft  
Photographer: Peter Kerze

**Accenture**
Location: Minneapolis, MN  
Client: Accenture  
Architect: Hammel, Green and Abrahamson, Inc.  
Principal-in-charge: Anita Barnett  
Project manager: Todd Messerli  
Project architect: Phillip Koski, Assoc. AIA  
Project lead designer: John Crosby  
Interior design: Paula Storsteen  
Mechanical-engineering team: Michaud Cooley Engineering team: Michaud Cooley Lighting designer: Michaud Cooley  
Construction manager: Grier  
Cabinetwork: Aaron Carlson  
Cork, carpet: Prince Street  
Millwork: Aaron Carlson  
Photographer: John Miller, Hedrick Blessing

**Tofte Cabin**
Location: Tofte, MN  
Client: Medora Woods  
Architect: Sarah Nettleton Architects, Ltd.  
Project architect: Sarah Nettleton, AIA  
Project team: Jim Larson, Dimple Sheth, Aaron Mullins, Don Rowe, Christine Albertsson, AIA  
Structural engineer: Mattis & MacDonald, Better Engineering  
Mechanical engineer: Jim Keller, Gausman & Moore  
Electrical-engineer: Gausman & Moore, Solar Design Associates  
Lighting designer: Schuler & Shook  
Interior design: Doran Thayer  
Feng Shui consultant: Carol Hyder  
Ecologist: Chel Anderson  
Daylighting consultant: Mary Guzowski, director, Daylighting Lab, CALA  
Energy consultant: David Ejadi, AIA, The Well Group  
Construction manager: Joel Schurke, Factor 10  
Landscape architect: Sarah Nettleton, AIA  
General contractor: Tofte Construction  
Landscape contractor: Kerker, Inc  
Renewable-energy contractor: Carlson Bros. Stone: custom, hearth, Lake Superior  
Green Granite

**Royalston Maintenance Facility**
Location: Minneapolis, MN  
Client: City of Minneapolis Department of Public Works  
General contractor: Arkay Construction  
Architect: Architectural Alliance  
Design principal: Thomas DeAngelo, AIA  
Managing principal: Peter Vesterholt, AIA  
Project manager: Tom Hysell  
Project lead designer: Ken Shehean  
Project team: Peter Schroeder, Marcus Webb, Sam Olbeken  
Structural-engineering team: Wells Engineers - Frank Jordan, Charles Lewis  
Mechanical-engineering team: Cain Ouse Associates - Scott Thomas  
Electrical-engineering team: Cain Ouse Associates - Jay Cain, Jay Hruby  
Civil-engineering team: Parson-Barton Aschman Associates - Jim Knutson  
Project manager: City of Minneapolis Project Management Office - Gary Criter  
Landscape architect: Parson-Barton Aschman Associates - Thomas Ritzer  
Face brick: Minnesota Brick and Tile  
Window systems: Vista Wall, Kalwall  
Architectural metal panels: McGrath  
Millwork: Paul’s Woodcraft  
Photographer: Peter Kerze

**Pichotta Science Center**
Location: Wolf Ridge Environmental Learning Center, Finland, MN  
Client: Wolf Ridge Environmental Learning Center  
Architect: RSP Architects Ltd.  
Principal-in-charge: Michael James Plautz, AIA  
Project architectural team: Mitch Steinhoff, Carrie Riegraft-Brunder, Assoc. AIA  
Project lead designer: Michael J. Plautz, AIA  
Structural engineering: Michael A. Fowler, P.E.; Timothy LaBissoniere, P.E. Clark Engineering Corporation  
Mechanical engineering: Martin Lunde, P.E.; Barbara Tate-Lunde, Dectra Corporation energy advisor: Martin Lunde, P.E.; Barbara Tate-Lunde, Dectra Corporation  
Lighting: Carla Gallina (formerly of Sebasta Blomberg & Associates, Inc.)  
Interior design: RSP Architects Ltd. in concert with Wolf Ridge Environmental Learning Center construction manager: Pete Filippi, Construction Analysis & Management, Inc.  
Cabinetwork: custom case work by Lance Service Center  
Flooring systems/materials: carpet, vinyl-composition tile, ceramic tile installed by T.L. Construction  
Window systems: Anderson Glass Company  
Concrete work: T.L. Construction  
Millwork: custom casework by Lance Service Center  
Photographer: Peter Kerze

**Mississippi River Gorge Master Plan**
Location: Minneapolis, MN  
Client: Minneapolis Park & Recreation Board (with funding from the Longfellow Neighborhood Community Council)  
Landscape architect: Close Landscape Architecture  
Principal-in-charge: Bob Close, ASLA  
Project manager: Deb Bartels, ASLA  
Landscape project team: Bob Close, ASLA, Deb Bartels, ASLA, Bruce Jacobson, Jean Garbarini, ASLA  
Photographers: Jerry Swanson, Lyndon Torstenson
“We’re developing projects that will enhance the principles of sustainable design,” says Schurke, who serves on the AIA Minnesota and National environment committees. He plans to conduct energy simulations in the pre-design phase of the buildings to optimize energy efficiency, and develop exterior glazing systems that use sunlight and shade to heat and cool structures.

In the near future, as energy costs skyrocket, so may awareness of design’s impact on the environment grow. As public concern for environmental sensitivity grows, clients will increasingly see the advantages of sustainable design. As the number of high-profile sustainable-design projects increases, the research and learning curve for architects will decrease. Then, as this hopeful scenario proposes, more architects will integrate sustainable design into their practices with an eye toward nurturing a greener built environment. AM

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In August 1904, St. Paul received a distinguished and unusual visitor: Yukio Ichikawa, a gardener from the Japanese Imperial Household. Ichikawa (whose name was sometimes spelled Ichikawa or Itcikawa) arrived at the invitation of Twin Cities patent-medicine magnate Rudolph Schiffman, who wanted to give St. Paul a garden landscaped in an authentic Japanese style. Ichikawa’s mission, while in Minnesota, was to scout possible locations for the garden, which he would design.

The visitor expressed great satisfaction with the grounds of Como Park, then an 18-year-old reserve containing a greenhouse, landscaped gardens and two lakes. Ichikawa—who posed for formal portraits in a frock coat, top hat and waxed mustache—pronounced the park “almost ideal for the proposed work, and the spot selected is the north shore of Cosey Lake,” the Minneapolis Journal reported.

Schiffman, his wallet fattened by the sales of an especially successful asthma powder, had picked the perfect moment to donate a Japanese garden to the city. Just a few hundred miles to the south, in Schiffman’s hometown of St. Louis, the World’s Fair (also known as the Louisiana Purchase Exposition) was drawing millions of visitors. One of the fair’s biggest attractions lay within the grounds of Japan’s exhibits: a 150,000-square-foot tea garden dramatically sited on a hillside. In this garden, Ichikawa had reproduced sections of the palace grounds of the Mikado Mutsuhito, filling the garden with waterfalls, bridges, stone lanterns, imported plants and a dwarf bonsai tree that dated back to 1677.

Sometime after the fair ended on December 1, 1904, the garden was dismantled and parts of it—trees, shrubs and sculptures—were sent north to St. Paul. When it opened in 1905, St. Paul’s three-acre Japanese Tea Garden included bamboo entrance gates, a waterfall that fell into Cosey Lake, six-foot-high carved rock lanterns and plots of Japanese plants.

Park visitors enjoyed the garden until at least 1909, after which it vanishes from Como Park records. Park employees now speculate that rising water in Cosey Lake may have inundated or threatened the shoreline, leading to the removal of the Japanese Tea Garden. At any rate, the garden was gone when the lake was drained to clear space for the Como Golf Course in 1928.

Yukio Ichikawa went on to supervise the renovation of portions of Japan’s Ritsurin Park. Rudolph Schiffman moved from St. Paul to Pasadena, California, in 1905. He died in 1926 and left behind a fortune of $15 million. All that remains of the Japanese Garden he envisioned are four stone lanterns, which were lit for the first time in memory of a Como Park ceremony in 1998. Fortunately, the park acquired another Japanese landscape design, the Como-Ordway Memorial Japanese Garden, in 1979. Jack El-Hai