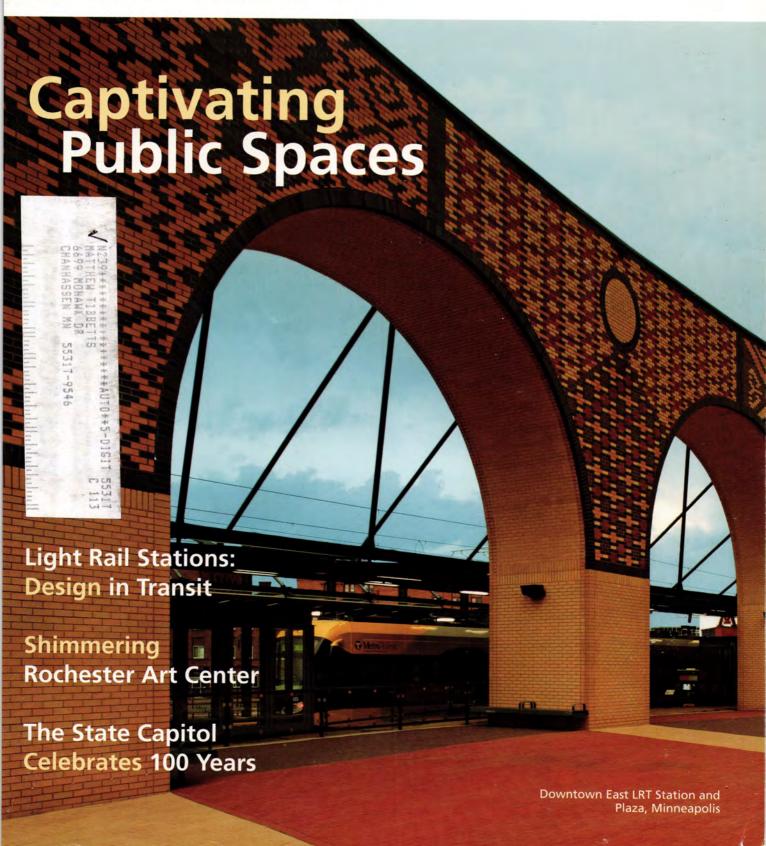
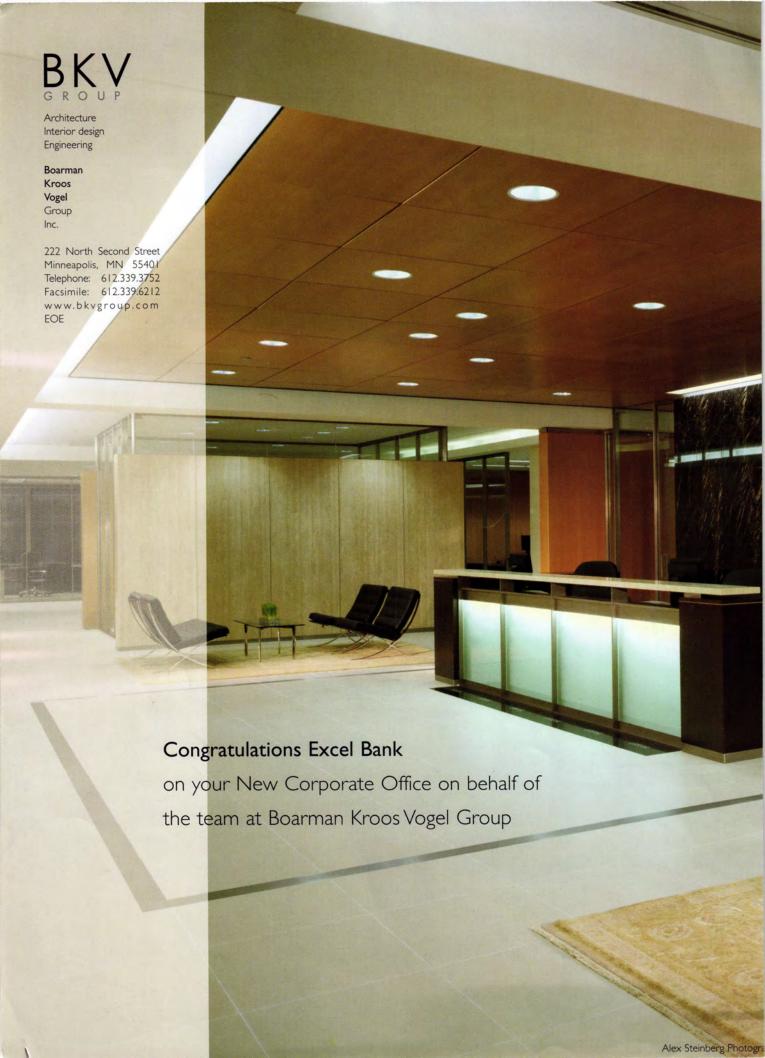
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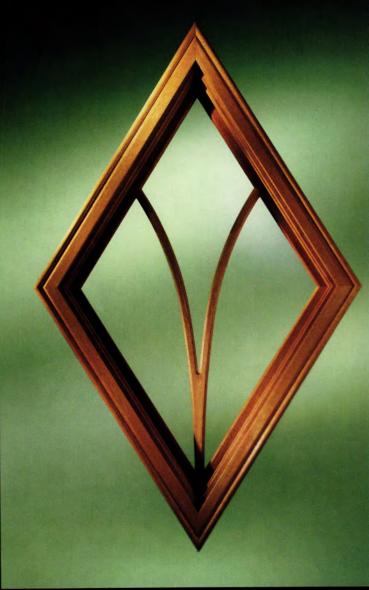
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Architecture

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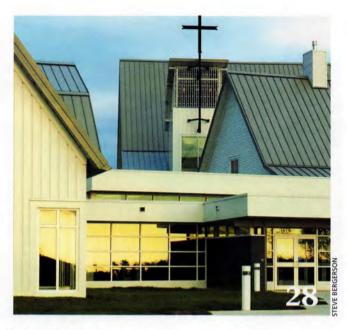
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Mission Statement

Architecture Minnesota, the primary public outreach tool of the American Institute of Architects Minnesota, is published to inform the public about architecture designed by AIA Minnesota members and to communicate the spirit and value of quality architecture to both the public and the membership.





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Heavy Trash

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ROBERT ROSCOE is head of his own firm, Design for Preservation, Minneapolis.

LINDA SHAPIRO is a Minneapolisbased freelance writer. n interesting title with which to begin an issue on public spaces, don't you think? It's certainly not meant to characterize the buildings profiled in these pages. On the contrary, I think you'll find the highlighted projects—from distinctive light rail stations to a gleaming art museum—to be especially engaging.

No, "Heavy Trash" is the name given by Marmol Radziner + Associates to mischievous installations they've designed and built in the City of Los Angeles. Those of you who attended Ron Radziner's presentation at the AIA Minnesota convention in November know the story. It all began several years ago when the Department of Recreation and Parks in Los Angeles fenced off a public park near the Marmol Radziner office in response to complaints by area residents that homeless people were sleeping on the park benches at night. Dismayed on a number of levels by this absurd remedy, Marmol Radziner staff decided to take action.

Their response? After careful preparation, they erected a raw-steel staircase—painted Day-Glo orange for visibility—up and over the seven-foot fence. Soon park-goers were picnicking and throwing frisbees in the gated area. The story was picked up by the *Los Angeles Times* and local TV stations, triggering a public discussion about the barricading of the park, but seemingly no attempts were made by law enforcement or the media to identify the perpetrator. It took the city nearly a month to dismantle and remove this piece of very heavy trash.

Empowered by the experience, a number of Marmol Radziner staff began meeting on Thursdays at 7 A.M. to plan their next installation. After some discussion, they hit upon the issue of public transportation on the Westside of Los Angeles, where wealthy homeowner groups have blocked every attempt to build a transit line. Their idea was to announce, by means of large, official-looking signs, complete with route map and hotline number, the construction of a fictitious subway line running from downtown to the beach in Santa Monica. In keeping with the city's other color-coded subway routes, Marmol

Radziner dubbed their creation "The Metro Aqua Line." "Since it was going to the ocean, aqua seemed like a reasonable color," Radziner deadpans.

On the morning of the "event," seven groups of four to five



people donned hard hats and other construction apparel, loaded their billboard into a truck, and bravely set out for their assigned location on the Aqua Line. Radziner's team was preparing to install their sign on a median when a police car pulled up behind them. The officer sat there for 30 seconds before speeding away, apparently convinced by the hard hats, flashing emergency lights, and carefully arranged orange cones that everything was on the up and up. "When it's all over, I'm always glad I've done it," notes Radziner, "but in the middle of it there are moments that are quite terrifying."

As you can imagine, the hotline—a pager with a voicemail component paid for with cash and using a false name—received hundreds of calls. Some neighbors were elated, others were angry, and Metro Transit Authority officials were deeply confused. After the firm explained their actions to the media via anonymous press releases and interviews, the mischief became a hot conversation topic around town. The full story prompted one hotline caller to ask, "Are you trying to ignite class warfare?" No, just healthy public debate.

Risk, imagination, and a sense of humor are three key ingredients to any public project—even the unconventional ones. Here's hoping the spirit of Heavy Trash carries on.

Clu Hulen

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PROJECT South Mall, Riverbend Commons, University of Minnesota

ARCHITECT Ellerbe Becket, Inc. MASON CONTRACTOR Gresser Concrete/Masonry

FIELD BRICK (dark) Three blends of Sioux City Brick nationally recognized natural ironspot velour modulars. (Available in Modular, Norman and Utility)

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Calendar

Through January 23

Architectural Art and the Process of Design: Recent Projects by Northern Minnesota Architects

Tweed Museum of Art, University of Minnesota-Duluth Duluth, Minnesota 218-726-8222

www.d.umn.edu/tma

This exhibition presents many different aspects of the architectural design process including preliminary sketches, material samples, models, and finished designs. Work by several firms from AIA Northern Minnesota is represented to illustrate the process of how buildings grow from an architect's desk to their final form.

February 26-28

The 4th Savannah Symposium: Architecture and Regionalism

Savannah College of Art and Design Savannah, Georgia 912-525-5220

www.scad.edu/dept/arlh/symposium4/

This biennial symposium stimulates interdisciplinary dialogue among scholars, urban designers, community leaders, faculty, and students on a topic that has relevance in both historic and current affairs. This year the conference addresses the built environment and regional identity, and explores the ways in which regionalism has been and continues to be redefined.

Through February 27

Josef and Anni Albers: Designs for Living

Cooper-Hewitt National Design Museum New York, New York 212-849-8400

www.cooperhewitt.org

The exhibition surveys the two artists' contributions to modern life of well-designed objects for everyday living, from the 1920s through the 1950s. Josef was a painter, printmaker, writer, and teacher, and Anni, his wife, a textile artist; the exhibit explores their shared artistic vision and design philosophy.

Through May 15

OPEN: New Designs for Public Space

National Building Museum Washington, D.C. 202-272-2448

www.nbm.org

Using recent projects from around the world, this exhibition explores the role of public space in an age of heightened security and increased electronic interaction. "OPEN" addresses how public spaces are defined, designed, and protected and what forms they will take in the future.

INSIDER LINGO By Gina Grensing

Embodied Energy

While embodied energy sounds like what you'd find in a local gym full of twenty-somethings, it is more accurately the total energy performance of any processed product, from a paper clip to a building. Imagine all of the steps required to make and use a brick—from extracting the clay to molding the brick, firing it in a kiln, and transporting it to a job site. Add up all the energy used in each step and



you'll have the embodied energy of that brick.

Calculating embodied energy is no easy task, requiring collection of large amounts of data. However, computing this information provides a much fuller picture of the environmental performance of a building. The term first appeared in a 1983 report from Victoria University of Wellington in New Zealand, where the warm climate has twenty-somethings in the gym getting beach-worthy. ❖

New Release

A whimsical new book titled *Phone Booths by Famous Architects* treats readers to a parody of famous buildings. Written and illustrated by Steve Schaecher, a registered architect, the book surveys hypothetical phone booth designs, from ancient structures like the Roman



Federal Discourse Bank

"Calltoseeum" to modern projects like Santiago Calatrava's "Milwaukee Talkie Station." The third book in the *By Famous Architects* series (previous volumes highlighted outhouses and mobile homes) published by Pomegranate Communications, *Phone Booths* includes hilarious cartoons and text to celebrate and shed light on famous architects and building styles. Frank Lloyd Wright's "Guggenheim Phone Cone" has a fanciful twist—it mimics the shape of the world-renowned museum. The user of this phone booth can watch her change spiral down around her as it rolls to its pay slot. (www.pomegranate.com) *



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AIA Minnesota 2004 Honor and Divine Detail Awards

he AIA Minnesota Honor Awards program serves as a tribute to architectural excellence by recognizing outstanding buildings, clients, and architects. During the AIA Minnesota 70th Annual Convention and Products Exposition, held in November, the 2004 Awards jury convened to review 119 submissions to AIA Minnesota's Honor Awards competition. The jurors were: Jeanne Gang, AIA, principal, Studio Gang Architects, Chicago; James Stewart Polshek, FAIA, partner, Polshek Partnership Architects, New York; and Ron Radziner, AIA, design principal, Marmol Radziner + Associates, Los Angeles. They selected ten projects to receive Honor Awards and one for a Divine Detail Award. Rochester Art Center is highlighted in this issue (see page 22); the others will be featured in coming issues.



Bigelow Chapel

Honor Awards

Rochester Art Center

Rochester, Minnesota Hammel, Green and Abrahamson, Inc. Minneapolis, Minnesota

Humboldt Mill Condominiums

Minneapolis, Minnesota Julie Snow Architects, Inc. Minneapolis, Minnesota

Dalseth Family Dental Clinic

Apple Valley, Minnesota
ALTUS Architecture + Design
with Coen + Partners
(landscape architect)
Minneapolis, Minnesota

San Fernando Cathedral Renovation & Cathedral Centre

San Antonio, Texas Rafferty Rafferty Tollefson Architects, Inc. St. Paul, Minnesota

General Mills Headquarters, Visitor's Lobby Renovation

Golden Valley, Minnesota Hammel, Green and Abrahamson, Inc. Minneapolis, Minnesota

SunsetRidge Townhomes

Minnetonka, Minnesota Meyer, Scherer & Rockcastle, Ltd. Minneapolis, Minnesota

Great Plains Software

Fargo, North Dakota Julie Snow Architects, Inc. Minneapolis, Minnesota

Grandview Community Center

Grandview, Missouri
Ankeny Kell Architects
(design architect) with Gould
Evans Goodman Associates
(architect of record)
Minneapolis, Minnesota

Matthew Cabin

Brainerd, Minnesota Salmela Architect Duluth, Minnesota

Bigelow Chapel

New Brighton, Minnesota Hammel, Green and Abrahamson, Inc. Minneapolis, Minnesota



Grandview Community Center

Divine Detail Award

"The Poetry of Trees" Minnesota Landscape Arboretum's Treehouse Design

Chanhassen, Minnesota Cuningham Group Architecture Minneapolis, Minnesota



Dalseth Family Dental Clinic

forming

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Wells Federal Bank – Mankato, MN Architect – I&S Engineers and Architects

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2004 Minnesota Preservation Awards

he Preservation Alliance of Minnesota, a nonprofit organization dedicated to preserving, protecting, and promoting Minnesota's historic resources, named 16 projects and groups as honorees in the organization's 2004 Minnesota Preservation Awards. The program, now in its 20th year, is designed to recognize historic preservation efforts large and small across the state in a variety of categories including adaptive reuse, preservation, restoration, community efforts, stewardship, and advocacy. The 2004 honorees are:

Chaska History Center, Chaska

Client: City of Chaska Architect: MacDonald and Mack Architects, Minneapolis

District 12 School House, Oakdale

Owner: Oakdale Lake Elmo Historical Society

Historic City Hall, Pelican Rapids

Client: City of Pelican Rapids Architect: Schultz Torgerson Architects, Fargo, North Dakota

Historic Dayton House, Worthington

Client: Historic Worthington Architect: River Architects, Inc., La Crosse, Wisconsin

LaPak/Larson Site and Farmhouse, Shoreview

Client: City of Shoreview Architect: Miller Dunwiddie Architects, Minneapolis



Van Campen House, Cannon Falls



Monastery Main Building, College of St. Benedict, St. Joseph

Monastery Main Building, College of St. Benedict, St. Joseph

Owner: The Sisters of the Order of St. Benedict Architect: GLTArchitects, St. Cloud

St. James Opera House, St. James

Client: St. James Opera House Restoration Project, Inc. Architect: Paulsen Architects, Mankato

St. Luke's Church, Browns Valley

Owner: Browns Valley Historical Society

St. Peter Herald, St. Peter

Client: St. Peter Herald Architect: Vetter Johnson Architects. Minneapolis

Van Campen House, Cannon Falls

Client: Midwest of Cannon Falls Designer: Laurel Ulland, Minneapolis



St. Peter Herald, St. Peter

Winona County Courthouse, exterior restoration, Winona

Client: County of Winona Architect: Kane and Johnson Architects, Rochester

Bed and Breakfast Award

Cedar Rose Inn Bed and Breakfast, Alexandria Owners: Florian and Aggie Ledderman

Community Effort Award

City of Waseca and City of St. Cloud

Advocacy Award

Friends of the Pioneers and Soldiers Cemetery, Minneapolis

Stewardship Award

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Project: Uptown Lightrail Transit Location: Minneapolis, MN Roofer: John A. Dalsin & Sons Architect: LSA Design, Inc. System: Carlisle FleeceBACK® Fully-Adhered with FAST® 100 Adhesive

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Setting the Agenda

Lee Tollefson, FAIA, takes the reins as AIA Minnesota's 2005 president

BY CHRISTOPHER HUDSON

or years, AIA Minnesota board members encouraged Lee Tollefson to take on leadership positions within the organization. He would usually reply that full-time work as an architect and part-time work as a teacher prevented his further participation. But his thinking changed when, during the process of applying for national Fellowship status, he got a close-up look at the work of AIA Minnesota leadership and staff. Their commitment to the organization spurred him to take the leap, and he is now set to become AIA Minnesota's 2005 president.

A native of southwestern Minnesota, Tollefson attended Gustavus Adolphus College before transferring to the University of Minnesota, where he received a B. Arch. He then entered the Louis Kahn Studio at the University of Pennsylvania in Philadelphia, earning an M. Arch. in 1971. After completing an internship with Ralph Rapson & Associates, he joined Rafferty Rafferty Mikutowski in the mid-1970s, established his own firm in 1978, and merged with the Raffertys in 1985 to form Rafferty Rafferty Tollefson Architects. Tollefson has led a number of award-winning church projects including the renovation of St. Joseph Abbey Church in St. Benedict, Louisiana, and has served for the past 20 years as a chief architectural consultant for St. John's University in Collegeville, Minnesota. He was inducted into the AIA College of Fellows in spring 2003.

Tollefson believes AIA Minnesota is strong as an organization but can be even better, and that now is the time to plan for the future. He proposes charting a five-year plan with clear and measurable interim goals. "I hope I can bring a logical order—what I jokingly refer to as the 'Norwegian perspective'—to our long-range planning, a concrete way of thinking about it, so that we can look back on the first year and know that we accomplished our

interim goals and then use them as steppingstones for the next four years."

The long-range plan will focus on three main initiatives: designing the architect of the future, taking the lead in the area of sustainable design practices and environmental planning, and creating livable communities.

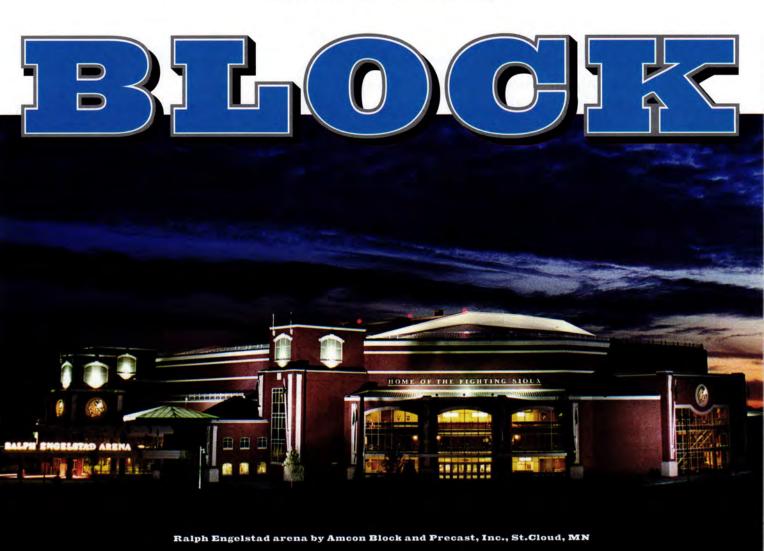
With regard to designing the architect of the future, Tollefson notes that change is happening all around us—in the areas of construction, technology, and the environment, to name just a few—and thus the architectural profession will have to change as well. "We'll need to attract a more diverse group of people with a broader range of knowledge and a broader set of skills who may require different training," Tollefson observes. His plans for tackling this issue include pursuing a grant such as the Latrobe Fellowship sponsored by the AIA College of Fellows and then using the financial resources to research the topic in partnership with the University of Minnesota's College of Architecture and Landscape Architecture (CALA).

Tollefson would also like to see the organization as a whole and its individual members play an active role in leading the public toward a more sustainable built environment and a less contaminated environment overall. A key component of this effort will be getting architects, contractors, and other members of the design and construction team to take more responsibility for the vast amounts of energy their work consumes. They can do this by enhancing their own education on environmental issues and by helping their clients make informed decisions about the environmental impact of their buildings. Through collaboration with other organizations such as the U.S. Green Building Council and the



Continued on page 60

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Local News, National Spotlight

BY BETTE HAMMEL

A striking 48-story condominium tower designed by Barbour LaDouceur Design Group, Minneapolis, is proposed for 10th Street and Nicollet Mall in Minneapolis. Early in the design process, the two principals were doodling on paper napkins, trying to relate the building to its musical neighborhood in a metaphorical way. They were focusing on a narrow highrise when Janis LaDouceur drew a sweeping curve lengthwise through the building. That single stroke gives the

tower a unique contemporary signature. The curve will become a stainlesssteel edge cutting through a façade of stone and glass. Plans call for the tower to be illuminated on top.

Most of the residential units facing the Mall will be open-loft-style, with two or three levels of office space and street-level retail and dining below. On the Marquette side, the tower will end just behind the historic Handicraft building, which Barbour LaDouceur Design Group plans to restore.

The historic Head House and Sack House.

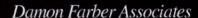
once part of a major grain elevator and handling complex run by the Farmers Equity Cooperative on St. Paul's Upper Landing, will soon be transformed into a riverfront restaurant and interpretive center. Pending resolution of parking issues, Meyer Scherer & Rockcastle (MS&R), Minneapolis, will begin the renovation. Most of the original complex, built by the city in the 1920s to serve the grain industry, was demolished a decade ago, but Gregory Page of the St. Paul Riverfront Corp. saw great possibilities for recreational use in the two remaining buildings. The first-floor restaurant will feature huge operable glass garage doors overlooking Upper Landing Park and the river. The interpretive center is slated for the second floor.

According to MS&R project manager Rhys MacPherson, the seven-story head house tower will be resurfaced with new concrete, while the original red brick façade of the sack house will remain. "In place of old conveyor systems, we will place a new pedestrian bridge crossing the parkway and leading into the second floor," MacPherson says. The soon-to-be-renovated buildings, renamed "City House," were placed on The National Register of Historic Places in fall 2004. •

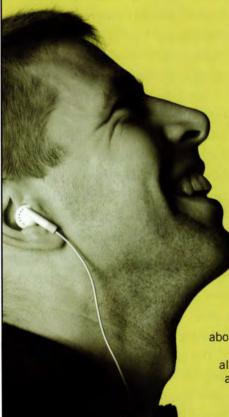
The new National Museum of the American Indian, designed by a team of architects including Douglas Cardinal and clad with rough-hewn Minnesota buff stone, stands out among the classical buildings on the National Mall in Washington, D.C. The curvilinear design recalls a softly undulating canyon wall sculpted over time by wind and water.

Dolomitic limestone, famous for its color, texture, and windswept look, was a natural choice for a museum devoted to Native American history and culture. In 1996, Cardinal called Vetter Stone Company of Kasota, Minnesota, to request a special stone for the project. Over the next eight years, the company devised and refined a new technique for splitting curves in the stone face. "We split the stone to over 50 different radii, both concave and convex curves, no straight walls," says company president Howard Vetter.

The museum opened in September to long lines and wide acclaim. Other notable design features include a teepeeshaped five-story atrium and a 23-foothigh welcome screen just inside the main entrance. The latter greets visitors in hundreds of Native languages from across the Americas.



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Badger Association of the Blind and Visually Impaired > Milwaukee, WI

The two new Heritage Collection™

PRODUCT PROFILE

Heritage Collection™ Designer Concrete Brick series expands

Heritage Collection™ Designer
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Project Profile:

Badger Association of the Blind and Visually Impaired

The building had to convey a sense of strength, security and permanence both to its residents as well as the surrounding neighborhood. It had to be a prominent, but not overwhelming,

fixture in the community. And the **Heritage Collection™ Designer Concrete Brick** line was there for the Badger Association of the Blind and Visually Impaired on the west side of Milwaukee.

"The building was surrounded by old-style residences," said designer Tadgh McInerney of AG Architecture in Wauwatosa. "And there's a school and some public buildings, so there's quite a bit of masonry in the area."

The project, on Hawley Road, included 25,000 Bisque-colored Heritage Collection™ Series II bricks. It also consisted of 10,000 Auburn-colored split-face concrete masonry units. Completed in summer 2003, the \$4.6 million project assumes 69,090 square feet.

The structure won honorable mention from the Wisconsin Concrete Masonry Association and the American Institute of Architects. But perhaps more importantly, the building took into account the visual impairments – and tactile needs – of the building's clients.

"We used a highly textured brick, especially on areas within reach on the exterior on the lower levels," McInerney said. "We had to have something they knew would be theirs."



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Profiles in Design®

ARCHITECTURAL SOLUTIONS COURTESY OF COUNTY MATERIALS CORP. . SIDE TWO



PRODUCT PROFILE

Hollowcore Roof & Floor Systems: Park it, and forget about it.

When designing the luxurious Eagle's Point at the St. Croix condominium complex overlooking the St. Croix River in Prescott, Wis., Tushie Montgomery Architects of Minneapolis wanted to get something out of the way early on.

"Parking lots are sort of the bane of architects," project designer Jesse Hamer said with a chuckle. "Being able to incorporate it inside was advantageous to us, and it wound up being advantageous for the end user. Especially up in this area, with the winters, everybody wants to park inside."

Hamer's firm used 10,000 square feet of 12-inch hollowcore plank, and 20,000 square feet of 8-inch hollowcore to bury the parking for the 43-unit complex. They also used 400 linear feet of inverted T beams and 800 linear feet of columns. Being alongside a river meant builders couldn't dig too deeply, so they half-buried the parking facility.



"Hollowcore is something we use a great deal," Hamer said of the prestressed, precast product. "Anytime we want underground parking, we use it. In this case, because we had such a tight site, we really had no other place to put the parking."

It all adds up to a riverfront structure that has single-loaded corridors, extensive decking and patios, and is a vast complement to the historic grain mill that once occupied the site. And parking the lot under hollowcore allowed designers to maximize the available living space as well, by adding rooms along the side of the garage that faces the river.

"We have some rooms on the same level as the parking garage," Hamer said. "Along the river, if you look, you'll see windows. That gives us glass all the way up the side."

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Danebod Gym Hall

Tyler, Minnesota

BY ROBERT ROSCOE

or more than a century, Danebod-four buildings erected by a Danish Evangelical Lutheran community on a 75acre site on the outskirts of Tyler, Minnesota-has served as the nucleus of Danish culture for the entire Midwest. The name "Danebod" (the last d is silent) derives from a 16th-century Danish queen who inspired her country to repel a German invasion. Danish immigrants settled this southwestern Minnesota locale in the 1880s and established farms, followed by a lumber cooperative, a shipping cooperative, a cooperative grain elevator, and a cooperative creamery, all accomplished through strong social solidarity. The four structures, listed on The National Register of Historic Places-the Danebod Folk School, the Gym Hall, the Stone Hall, and the Cross Church—were each built in a simplified Greek Cross floor plan to signify a religious purpose.

In May of this year, the Preservation Alliance of Minnesota placed the Gym Hall on its 10 Most Endangered Historic Properties of 2004. The Alliance notes: "The Gym Hall still serves its original function as a place for music, dramatic performances, social occasions, and folk dancing." Sadly, the building is showing signs of roof sag and other problems that threaten its structural integrity. Structural engineering studies indicate that undersized collar ties connecting each pair of sloped rafters have caused the roof sag, which in turn has allowed the tops of walls to bow outward. Volunteers, many from a local Lions' Club, have bolstered walls with cables, but more comprehensive structural remediation is necessary. The Danish community in Tyler is still active, although not the major force it once was, and its income from events and programs is meager. Comprehensive remedial work is outside of Danebod's budget.

The Gym Hall, a two-story wood-frame structure built in 1904 as a physical education facility, features a recessed entry set under a gable. Its wood lap siding with flat wood window and door trim differs from the other three structures, which have masonry walls. Two square towers flank the recessed entry, with simulated crenellation corbeling slightly outward from the tops of the tower walls, which border small square spires. The interior is a nearly completely open floor plan with a stage at one end. Walls and vaulted ceilings are clad with tongue-and-groove-type



Danebod Gym Hall still hosts a number of social activities including dances, plays, holiday events, and cultural programs.

beaded pine paneling with a varnish finish, now mellowed with age, enriching the interior. In general, the exterior and interior remain unaltered from original construction. The other three buildings also remain true to their original architecture.

Glen Olsen, a construction management consultant who has been assisting local efforts with Danebod, comments, "This campus was built by liberal Danes with the purpose of providing immigrants with orientation and education to this new land. What is so important is the fact that the whole complex is still intact and still serving the local community." Locals hold dances and other social events in the gym, the Lions' Club performs a play there every spring, and the building seems to be the venue of choice for many private and public events. Olsen is part of a Danish "camper" user group, one of several that bring Danish-Americans from all parts of the Midwest to the Gym Hall every summer to participate in cultural activities. At the heart of the summer camps are the folk school educational programs that place a Danish emphasis on citizenship, athletics, nature study, science, and the Lutheran faith.

Continued on page 62

THE BEST BUILDINGS ON EARTH ARE STILL BUILT BY HAND



More than a million bricks laid in a series of unique patterns, textures and colors make the Veterans Administration Health Care Facility in Detroit, Michigan, a striking example of masonry design by architects Smith, Hinchman & Grylls Associates. But masonry was chosen for more than its beauty and flexibility of design. Buildings built of masonry by skilled union craftworkers will outperform, outshine and outlast any others. Add to that the speed and efficiency of union masonry contractors, and you have a prescription for health care facilities that satisfies any schedule and budget. We're The International Masonry Institute, and we'd like to help you design and construct the best buildings on earth. Visit us on the World Wide Web at www.imiweb.org, or call us toll free at 1-800-IMI-0988 for design, technical and construction consultation.







Capitol Investment

Now a century old, the Minnesota State Capitol requires continual repair and restoration.

Can the state find the political will to keep its own house from crumbling?

BY PHILLIP GLENN KOSKI, AIA

or almost a century, four horses, two women, and a single male figure atop the Minnesota State Capitol have watched downtown St. Paul evolve from a scrappy frontier town into a many-towered modern city. They have seen roads torn up, laid down anew, and torn up again. They witnessed the first jet planes roaring overhead and a massive trench being dug for Interstate 94. They've seen the capitol grounds grow and expand, memorials dedicated, and a civic campus of government buildings rise around them.

Appropriately, this entourage of gold-plated figures, sculpted by the renowned classical artist Daniel Chester French, is collectively named

The Progress of the State. Throughout 2005, as the capitol building enters its second century of public service (it was dedicated in January 1905), Progress will hold court as Minnesota enters yet another chapter of civic life and self-governance. The centennial celebration invites us to take stock of an institution with great staying power, and it offers a great excuse to get reacquainted with our most public building.

Which is easy enough. On any given day except holidays, visitors to the capitol can tag along on a 45-minute guided tour, sponsored by the Minnesota Historical Society, that navigates the building's main public spaces—the central Rotunda, the Senate and House Chambers, the Supreme Court, and the Governor's Reception Room. When the weather agrees, the tour includes a trek to the high terrace at the base of the dome, where visitors can view, up-close, the equine backside of *Progress* and share the sweeping prospect it has so long enjoyed.

Designed by Cass Gilbert, one of the most respected architects of his day, the capitol is both a gorgeous monument and a hardwork-



The State Capitol Rotunda

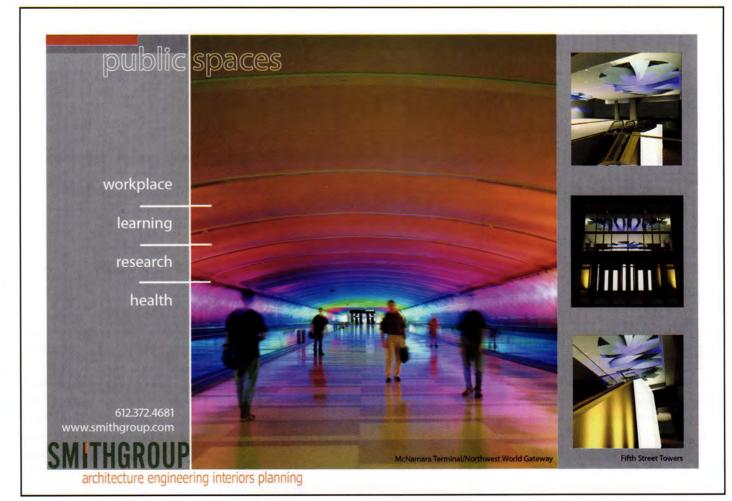
ing piece of architecture. In the strictest sense, the capitol is an office building and public meeting hall-a commodious and opulent fit of form to function. It's the place where the sausage-grinding of the political process takes place: legislators discussing issues and strategy; lobbyists back-slapping and hand-shaking; staffers delivering memos; the media lurking and pouncing on every delicious sound bite before it fades forever into the imperious stone hallways. During legislative sessions, the building is a cavern of political theater-a mob of souls trying to make law and write history.

On quiet days, when the legislature is not in session, the capitol tells a loftier story.

Like many Beaux Arts public projects of the time—from museums and courthouses to the Library of Congress—the building takes every opportunity to celebrate the legacy and aspirations of the institution it houses. In the capitol, explained architect Gilbert, "the rich and poor alike may find the history of the state and the ideals of government set forth in an orderly and appropriate way in noble inscriptions, beautiful mural paintings, and sculpture...."

Wandering through the ornately decorated rotunda, galleries, and meeting chambers is like opening a handsomely illustrated book on Minnesota history at the turn of the 20th century. The luminous gold-leafed inscriptions of thinkers like Thomas Jefferson, Patrick Henry, and Abraham Lincoln stream above doorways and columns like a Renaissance tickertape news banner. Murals and framed paintings combine angelic allegorical figures, idealized pastoral settings, and historical scenes recounting the state's exploration, early settlement, and agricultural and industrial develop-

Continued on page 64



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Public Space, Public Good

BY KRISTINE F. MILLER

n October 15 and 16, the College of Architecture and Landscape Architecture at the University of Minnesota hosted an HWS Cleveland Symposium titled Public Space, Public Good. The idea for the symposium came out of many discussions with colleagues and students in the college and my own research on public spaces in New York City and on ethics, law, and the built environment.

It seemed important to hold a symposium on ethics and design at a college of architecture and landscape architecture because it is the responsibility of educators both to prepare students for design professions and to encourage them to question, challenge, and even shift the ethical norms that underlie these fields.

The relationships between public space and the public good are, without question, complex. To understand these relationships we must examine all aspects of public space: its production, its reception, how it changes over time, and the public lives it supports. We must recognize that the shifting political, economic, social, and technical settings in which practitioners operate affect the form and function of public spaces, and in some cases determine them.

Landscape architecture, architecture, and urban design all refer simultaneously to professions, academic disciplines, and physical places. Professions, disciplines, and places shape and are shaped by ethical considerations-that is, what we think is good and right. Design processes and their products also respond to shifting ethical ideals, including the role of space in shaping common civic life, the role of the designer as a public practitioner, and the relationships between public and private realms.

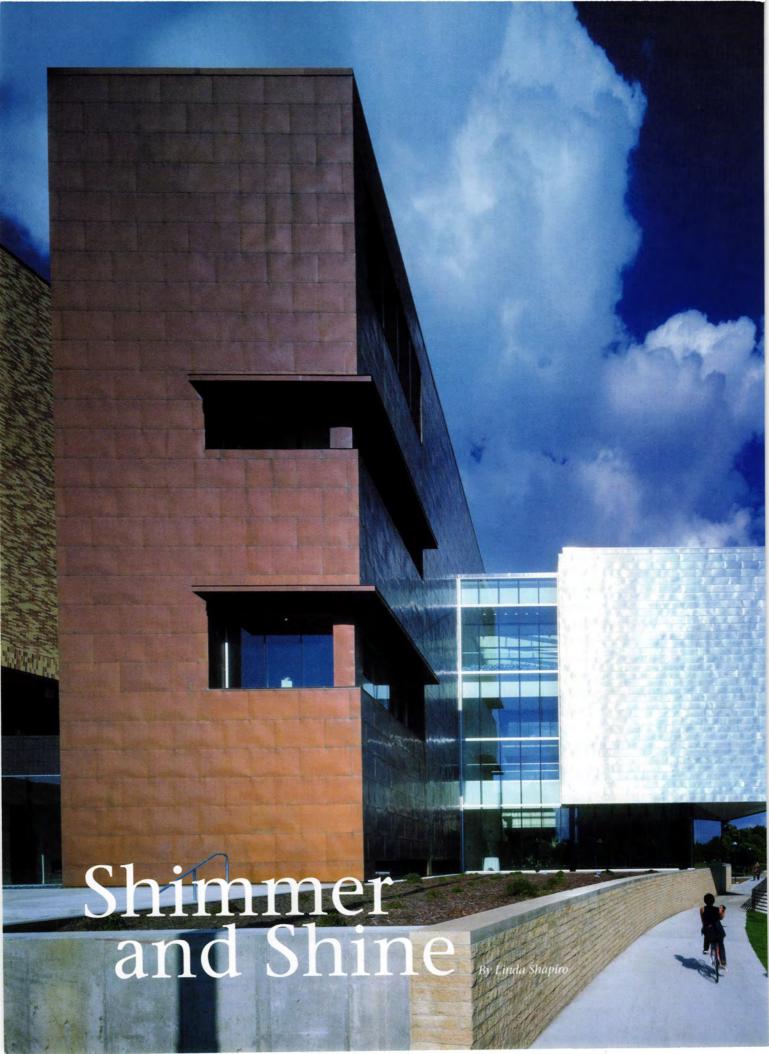
To address these issues, we invited a group of speakers that included practicing landscape architects, architects, urban designers, design historians, and critics. Each presenter examined the relationships between public space and the public good through a case study of a particular project or projects to ground what would otherwise be very abstract discussions within the material, social, and political histories of specific urban places. For example, landscape architect Walter Hood compared his experiences working on two park redesign projects in Oakland, California. Architectural historian Dianne Harris analyzed the kinds of public life that the New Millennium Park in Chicago supports and represents. Lynda Schneekloth and Robert Shibley of the Caucus Partnership discussed the challenges of community planning on a regional scale.

While each presentation was excellent as a work in itself, the most memorable part of the symposium came at the very end, when presenters were asked to take part in a final open panel. By this point, all of the participants had been through nine papers and three discussion sessions and were no doubt exhausted. But within the first minute it was clear that the group had rallied and had plenty to disagree about. What followed was a passionate yet collegial discussion of what is good and right in design.

As with most symposia, participants were left with more questions than answers. But this is, I think, exactly where we should begin: with questions informed by practice and research that reflect a range of ethical positions and that offer a range of ideas about the role of public space in public life. *

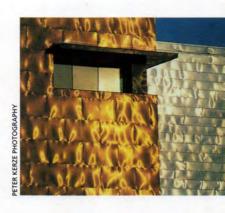
How we live or exist is what urban design and planning are all about.

-Ada Louise Huxtable





Rochester Art Center glitters by day and glows by night



ited on a narrow strip of land between the Mayo Civic Center and the Zumbro River, the new Rochester Art Center, designed by Hammel, Green and Abrahamson, Minneapolis, serves as both a dramatic setting for contemporary art and an extroverted community gathering place. "We wanted to expand what the art center does beyond its walls and to bring the outside in-in every way possible," says RAC director B.J. Shigaki. The HGA team, led by project designer Kara Hill, AIA, accomplished this by creating a visceral interplay of open and enclosed, internal and external spaces.

Completed in May 2004 at a cost of only \$7 million, the 36,000-square-foot building replaces a much smaller two-story facility built in 1956 on the northeast side of the civic center. "The population of Rochester had quadrupled since the 1950s," says Shigaki. "We needed greater programmatic spaces to respond to the needs and diversity of the community." Opportunity to grow came in 1999 when the civic center, seeking to expand to the northeast, offered the art center a sliver of land along the river.

Designing the new facility presented a number of challenges, including working within the site dimensions, maintaining a connection between downtown and Mayo Park (the new facility intervenes), and creating views in a building that requires opaque exhibition spaces. The design team's solution is a geometric sculpture composed of a rectangular copper tower, a glass atrium, and a zinc-clad box that cantilevers over a bike path and the river. The blockish three-story tower, with recessed horizontal windows carved out of the southwest corner, serves as a structural counterpoint to (and back-span for) the floating box. In contrast, the zinc walls appear thin, with irregularly spaced



Design team (left to right): Jim Butler, AIA; Cheryl Amdal; Kara Hill, AIA; Bob Lundgren, AIA; Dan Grothe

Left: Rochester Art Center's lustrous zinc box hovers over a bike path and the Zumbro River. Top right: The tower's light-gauge copper shingles are contoured by heat and light.



Above: From the interior, the river appears to flow through the building. Below: Translucent glass panels enclose the tower-side stairs. Opposite: A view west to downtown Rochester from the second-floor atrium bridge.

windows resembling punch-card slots pulled tightly to the front face. Conjoining the tower and box, the lofty atrium frames views west to downtown and east to the tree-filled park.

Visitors enter Rochester Art Center through a vestibule that connects the building to the larger civic center to the north. After passing the gift shop and through the reception area, patrons enter the atrium, the central area from which the rest of the building flows. Since much of the interior and exterior is visible from here, the atrium affords

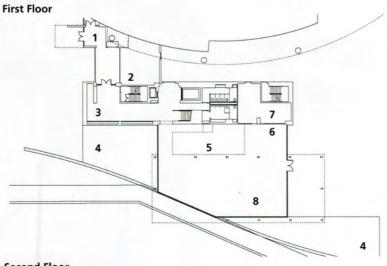
a clear sense of location both within the building and in relation to the surrounding landscape. Glass panels and skylights bring in natural light and reflect it back onto the metal exterior, creating a glitter of light and shadow.

The glass-enclosed Grand Lobby begins at the base of the atrium and continues beneath the zinc box, offering a serene 180-degree view of the river, gardens, and downtown. Standing in the lobby, one has a sense of the river flowing through the building. Outside, a sinuous stone river wall, stretching east-west from the entrance drive to the park, borders the gardens and a terrace seating area that wrap the lobby. Not surprisingly, the Grand Lobby has become a sought-after space for weddings and receptions, special events like concerts, and civic group meetings.

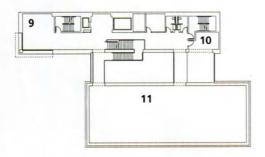
The upper floors are accessed via a suspended staircase that weaves between the tower and atrium. Translucent glass panels encase the tower flights, while the open atrium flights and landings offer views of the city and park. "As you walk up the stairs, you have an urban view. Descending gives you the natural view," says Hill. The atrium stairs and the second- and third-floor bridges are lined with glass-paneled stainless steel railings.

The galleries on the upper floors, like the lobby below, feature lightly polished concrete floors, white plaster walls, and track lighting-a neutral environment that allows artwork to speak for itself. The Burton and Judy Onofrio Gallery fills the entire second floor of the zinc box; the smaller Accent Gallery and the Davies Printing Audio-

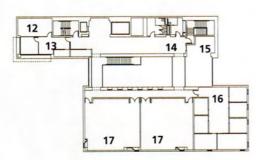




Second Floor



Third Floor



First Floor

- 1. Entry
- 2. Sales Gallery
- 3. Reception
- 4. Gardens
- 5. Atrium
- 6. Café
- 7. Kitchen
- 8. Grand Lobby

Second Floor

- 9. Accent Gallery
- 10. Davies Printing
- **Audiovisual Room**
- 11. Burton and Judy
- Onofrio Gallery

Third Floor

- 12. New Media Art Lab
- 13. Education
- 14. Atrium Gallery
- 15. Board Room
- 16. Offices
- 17. Art Studios



visual Room are located on the tower side. Stateof-the-art temperature and moisture control has enabled the museum to attract larger, higher-caliber shows including "Visions from America: Photographs from the Whitney Museum of American Art, 1940–2000," which opens January 15.

The third floor houses offices, two classroom studios, and the narrow Atrium Gallery, a space designed for site-specific installations by emerging regional artists. Studio window seats overlooking the river have become favored perches on which to sketch or paint. In the tower-side New Media Art Lab, instructors lead classes and workshops on digital photography and video.

Rochester Art Center is also kid-friendly, partly because of the project's limited budget of \$170



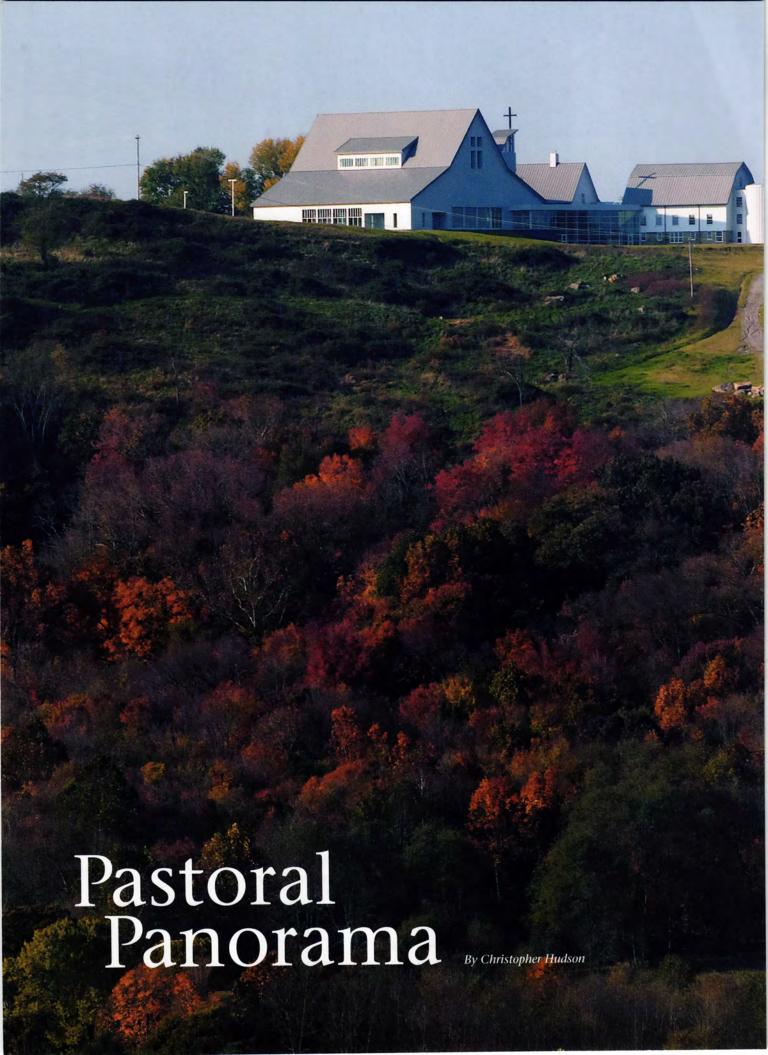
The Burton and Judy Onofrio Gallery features a simple material palette of concrete and plaster.

per square foot. Use of inexpensive and durable materials like concrete and plaster has enabled children to work on floor and wall spaces without risk of damaging expensive surfaces. For example, a group of schoolchildren recently created a button-art mural on an atrium wall. "We offer opportunities for children and adults to be involved in projects that utilize all areas and surfaces of the building," says education director Kris Douglas.

But for all its functional elegance and glassy views, Rochester Art Center leaves its most lasting impression as viewed from the exterior. The tower's light-gauge copper panels, contoured by weathering, create visual texture, while the zinc box shimmers in the sunlight and is reflected in

the river. And the materials have already begun to change, the copper taking on a rich patina streaked with green and gold, the zinc mellowing to a soft pewter finish. At night, the opaque tower and box recede and the glassed-in lobby becomes an illuminated stage for its occupants. "There is nothing exclusive about this building," says Hill. "People sit in the garden and watch what is going on inside. At night, when the interior is lit and there are people moving around, it's like a performance piece."

Rochester Art Center Rochester, Minnesota Hammel, Green and Abrahamson, Inc. Minneapolis, Minnesota





Bringing daylight into the lofty sanctuary are two large dormers and expansive floor-level windows. A window at the base of the gambrelcanopied bell tower illuminates a glass-panel sculpture designed by St. Paul artist Alexander Tylevich; the mobile hangs over a serene baptismal font just inside the sanctuary's main entrance. At night, the sanctuary is lit by a combination of hanging can fixtures with recessed and track-lighting accents.

Elsewhere, the 50-seat weekday chapel, located near the main entry for easy access, features a steeply pitched gable roof and reuses furnishings from the St. Theresa facility. The spacious fullpreparation kitchen, connected to the social hall via a circulation corridor, exceeded the stringent demands of the culinary enthusiasts on the building committee.

Linking all of the functional spaces is an irregularly shaped gathering area—the piazza bounded by three glass curtain walls, the largest





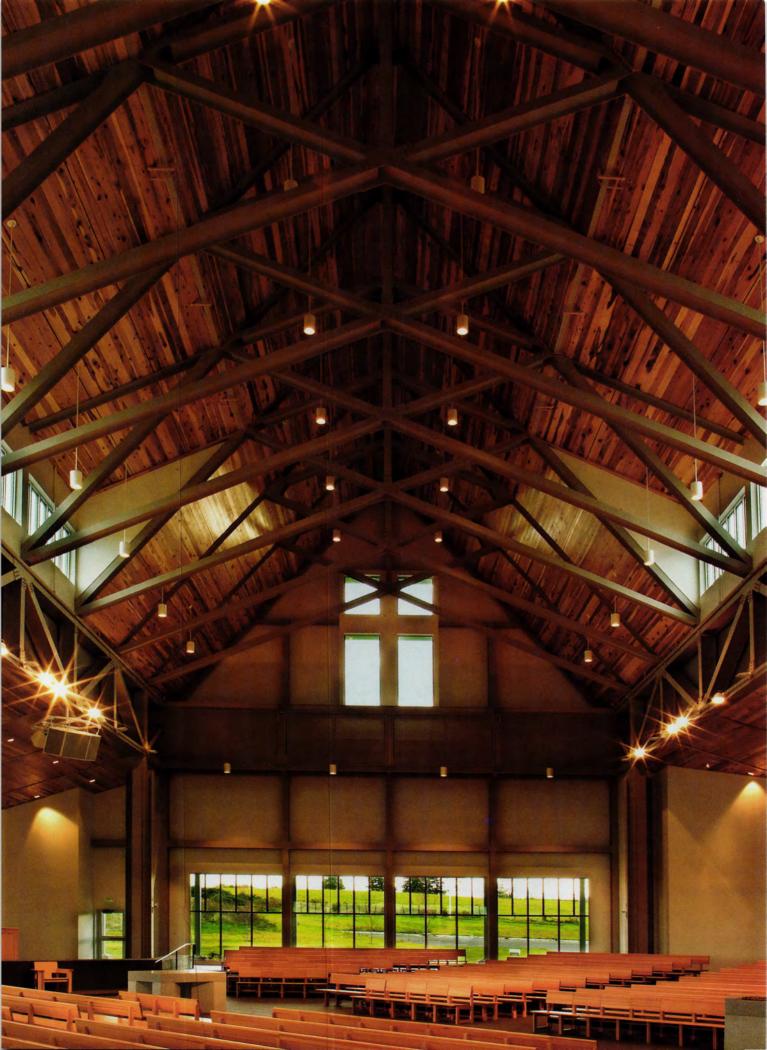
Above: View to the northeast from the gathering area. Opposite: The exposed steel structure of the open sanctuary.

of which offers a spectacular view of rolling rural landscape to the northeast. The gathering area features the same charcoal-colored porcelain floor tile used in the social hall, sanctuary, and weekday chapel, as well as an exposed steel structure, a crisp wood-slat ceiling, canned lighting, and a narrow skylight that runs between the social hall and administration area. The parish living room and fireplace, situated directly across from the social hall's main entry, serves as an extension of the gathering area and is also used for wake services. Tucked beneath the main-level gathering area and offices are meeting rooms and additional office space.

Not surprisingly, the pastoral staff and congregation are delighted with their new home. Father Colombo credits RRT's willingness to address all questions and concerns along the way. "I assembled a very small building committee because, first of all, I do not like committees," Father Colombo says with a laugh, "and second, I wanted to avoid having too many opinions. I'm not a very patient person, but thank God Craig and his team were very patient." The result of this collaboration between firm and client is a nostalgic yet progressive design perfectly suited to the landscape and the needs of a new church community.

St. Francis de Sales Parish Church Morgantown, West Virginia Rafferty Rafferty Tollefson Architects, Inc. St. Paul, Minnesota







Project

Hartley Nature Center demonstrates the ecological values it teaches



Design team (left to right): Ken Johnson, AIA; Dee Schmidt; Greg Cooper; Brian Morse, AIA; Ron Stanius, AIA; Rick Stanius, AIA

lesson in sustainable building practices, Hartley Nature Center, in Duluth's 640-acre Hartley Park, is the long-awaited home for a nonprofit organization that teaches children about the environment. For years, Hartley staff had an office in an off-site elementary school and used a parking lot in the park for visitor orientation, until a mix of public and private funds made possible the remarkable structure that stands today.

Designed by SJA Architects, Duluth, the 7,500-square-foot Hartley Nature Center combines outdoorsy materials with a few modern touches, including a solar-paneled, semicircular roof overhang that transitions to trellis over the building's main entry, and an eye-shaped clerestory. The building is clad in redwood board-and-batten and clapboard siding and field-

stone. The interior, which includes a lobby/exhibit area, offices, a conference room, and two classrooms that can be divided into four, features an exposed wood ceiling and other wood detailing, an interior clerestory running parallel to and below the exterior clerestory, and concrete floors.

From the beginning, Hartley staff, led by executive director Peter Gravett, and the City of Duluth sought an energy-efficient building constructed of sustainable materials that would have minimal impact on its natural surroundings. Because children come to learn about the park's ecosystems, the building itself needed to serve as a model of how best to care for the environment. Thus the building was sited a safe distance from the park's wetlands, next to an existing gravel parking lot, and in a natural



A view from the south: Metal rods shaped like tree branches protect the lower windows from broken glass and vandalism.

clearing so that the fewest possible trees would need to be removed. After construction, the area was reseeded with native plant species.

The redwood used on the exterior, the white ash in the interior, and the various other types of wood used for framing and trim are all Forest Stewardship Council (FSC) certified. "Despite the changing priorities and budgets over the years for this project, Hartley staff held firm on this goal," notes design partner Brian Morse, AIA, SJA Architects. "All the wood used in the project was harvested in a sustainable manner, no clear-cutting." Other sustainable materials include the 100-percent-recycled aluminum that lines the roof, recycled latex paint, plantbased wood finishes, and recycled-content carpet and ceiling tiles.

In addition to boasting eco-friendly siting and materials, the building was designed for energyefficiency with the seasons in mind. The wide roof overhang limits solar heat gain in summer when the sun is high, though some daylight reaches the exhibit area through the upper clerestory. In winter, low-angle sunlight enters the exhibit hall through floor-to-ceiling windows; it also reaches the classrooms in back after passing through the two clerestories. Depending on the season, warm air trapped in the clerestory is either vented through a clerestory window or circulated through the building via ductwork.

The building is also heated by fluid-carrying coils that originate ten feet below ground, where the temperature is roughly 55 degrees Fahrenheit year-round. The fluid is first warmed to



In winter, low-angle sunlight passes through the exterior and interior (top left) clerestories and into the classroom area behind the lobby.

60–70 degrees by solar electricity and then circulated through an in-floor radiant heat system. The red concrete floor thereby becomes a cozy and comfortable surface for children to sit on. In summer, the concrete is naturally cool, and in fact the building has no air conditioning system, only ceiling fans.

Not one but two solar-panel systems generate electricity for the center: the panels mounted on the roof, and another set attached to a post in the parking lot that adjusts to the angle of the sun for maximum exposure. With the aid of energy sen-

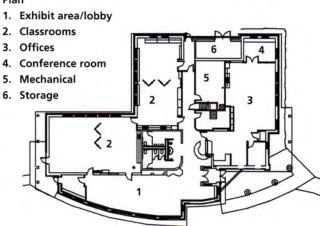
sors, Gravett says, the roof system is roughly 20 percent efficient in winter; the tracking system, however, is about 95 percent efficient. Because the building is linked to the regional power grid, excess energy can be purchased by Minnesota Power.

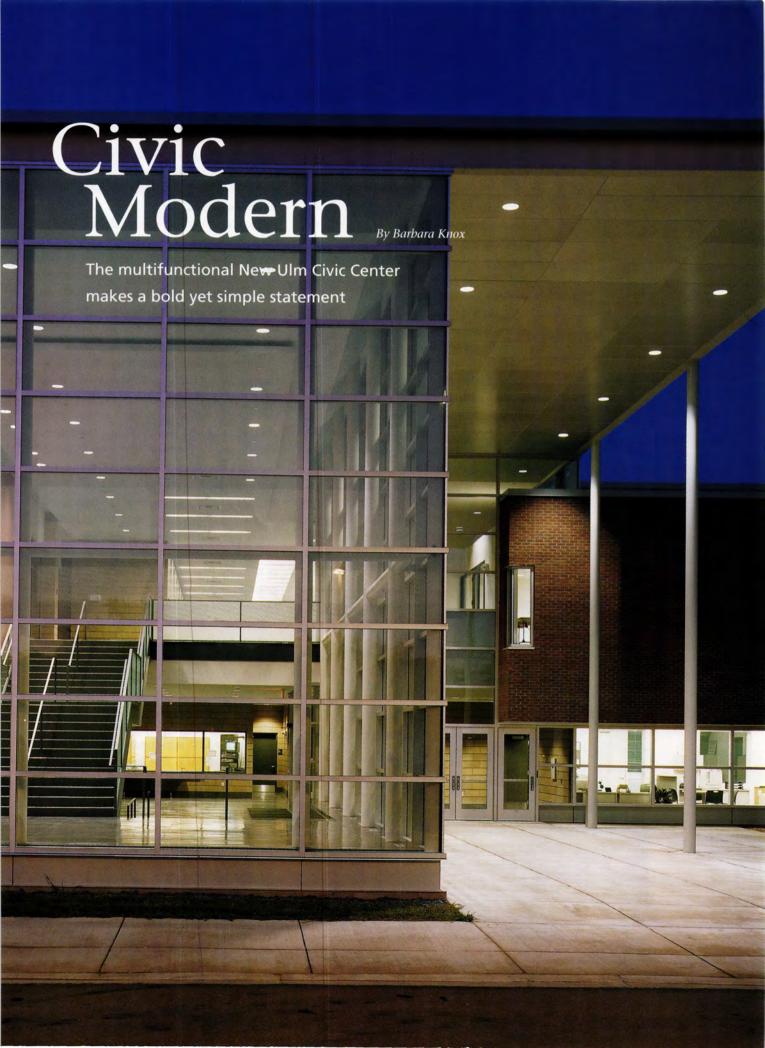
The pedestrian path leading up to Hartley Nature Center is also eco-friendly. To prevent rain runoff and flooding of a nearby trout stream and underground water table, the design team used pervious paving systems to allow rainwater to trickle through more gradually. Even the wider access road—a city requirement for fire or medical emergencies—is composed of a plastic grid system that allows vegetation to grow through the paving.

Through daylighting, energy-efficient heating and cooling systems, and use of natural and recycled building products, Hartley Nature Center exemplifies ecological sensitivity. Children and adults who visit the center to learn about the surrounding habitat also learn how the building itself is helping to sustain it.

Hartley Nature Center Duluth, Minnesota SJA Architects Duluth, Minnesota

Plan







Design team (clockwise from top left): Ted Rozeboom, AIA; Ben Braun, Assoc. AIA: Peter Graffunder, AIA: Cornel Bandelin, AIA; Roxanne Lange; Glenn Waguespack, Assoc. AIA: Victor Pechaty, AIA; Andrew Kordon, Assoc. AIA

isitors who head to New Ulm for special events like the annual Oktoberfest or Heritagefest know that this small southern Minnesota city boasts an unusually rich architectural history that reflects its German heritage. From the famous Hermann Monument to the historic Wanda Gag and John Lind homes to the many outstanding examples of 19th-century Bavarian architecture, the architectural fabric of New Ulm is both diverse and well preserved.

Well, diverse to a point. When city officials began working with Rozeboom Miller Architects, Minneapolis, on a new civic center, project architect Victor Pechaty, AIA, couldn't help noting that New Ulm's impressive architectural legacy did not include a single example of German modernism, arguably the most seminal design movement to come out of Germany. Says Pechaty: "At one of our early design meetings, we talked about the history of the Bauhaus, about Mies van der Rohe and Walter Gropius, and I suggested that this was a direction we should explore for their new civic center." Pechaty made his case to the community's design committee-made up of

city council members and related city staff, a representative from the Brown County Fair Board, and interested community membersand a modernist civic center for New Ulm began to take shape.

The New Ulm Civic Center is actually a collaborative venture between the City of New Ulm and the Brown County Fair Board, which owns the property. After completing a larger city-wide master planning project to determine how existing public buildings in the city could be better used, Pechaty and his team began work on the 78,000-square-foot civic center in 2001.

The program was straightforward: The community needed two new ice sheets and a multifunctional space that could be used for Brown County Fair events, local conventions, special interest gatherings like the Home and Garden Show, and the occasional performance. Pechaty's design solution houses the two main arena volumes in precast concrete boxes that are slipped past one another, creating an outdoor courtyard on each end of the building and a pair of entrances to serve the discrete needs of the clients. The west entrance addresses the city, the east entrance faces the fairgrounds, and the building itself functions as a threshold between the two areas.

Outside, concrete wall panels arranged in a custom textured block pattern evoke a patchwork of midwestern farmland as viewed from above; the textured surface is animated by changing light and shadow. Both entry courtyards are lined with a point-loaded steel structure clad in masonry and glass. Pechaty specified glazed aluminum curtain wall with a clear anodized finish (so that gathered community members could see and be seen) and a rich red brick that recalls similar brick used on many of New Ulm's most significant buildings.

Inside, staircases in both glass-enclosed lobbies lead visitors to a second-floor concourse that Pechaty calls a "social mixing box." Alongside the stair in the west lobby hangs a simple 24 by 40-foot sheet of red-painted gypsum board framed in aluminum-a nod to Barnett Newman's abstract expressionist Vir Heroicus





Sublimis (1951). Since budget was limited, Pechaty chose highly functional, inexpensive finishes such as integrally colored, charcoal-gray concrete floors and railings made of welded steel bars painted gray and infilled with translucent glass. Metal halide light fixtures get a boost from the 80-foot-long linear skylight that dumps daylight into the interior; by night, the skylight becomes an almost sculptural element overhead, as it is lit by fixtures reflecting off white-painted gypsum board. Underneath the concourse, Pechaty tucked offices and locker rooms, which

The mechanical engineer recommended that additional monies be invested in the civic center's mechanical systems. Typically, buildings that house ice sheets use a mechanical process that sucks heat out of a refrigerant to create a super-cool liquid that circulates beneath the ice sheet; excess heat is then expelled from the building. The engineering team added heat exchanger equipment to transfer that heat back to water, then circulate the water through the building's concrete slabs to warm the rink areas and lobbies. The client understood the

open directly onto the two ice sheets.

long-term benefits of the sustainable system and made the commitment to invest additional dollars up front.

Some two years after completion, civic leaders still enthuse about the facility. "Although our original intent for this building was narrower in scope, we're coming up with more ideas for use every day-this building has really expanded options for our community," notes city manager Brian Gramentz. New Ulm mayor Joel Albrecht agrees: "When we started to meet about this project, I shook my head and said it would never happen. We had to get too many people to agree to a direction, and we had to accomplish too many things in one building. But everyone in the community really pulled together as they saw the value in this project. And after two years of use, I'm amazed at how accommodating and functional this building is."

New Ulm Civic Center New Ulm, Minnesota Rozeboom Miller Architects, Inc. Minneapolis, Minnesota

Above: A textured pattern of concrete wall panels was inspired by an aerial view of patchwork farms. Opposite: The west lobby includes an angular staircase with steel and translucent-glass railings, and a large sheet of red-painted gypsum board that echoes the work of artist Barnett Newman.

Design in Transit

PUBLIC TRANSPORTATION NEVER LOOKED SO GOOD

By Camille LeFevre, with an introduction by Christopher Hudson

t's one of Minnesota's feel-good stories of 2004: the once-embattled Hiawatha Light Rail Transit (LRT) line, the area's first non-bus metro transit since streetcars last traversed Minneapolis in the 1950s, opened in June to great fanfare and a larger-than-anticipated ridership, and the route extended from 12 to 17 stations in December. Why all the hoopla? Sleek, quiet, and environmentally friendly (i.e., electric) vehicles are one reason, and eye-catching, individually designed stations are another.

The latter concept is the brainchild of Steve Durrant, director of Planning and Urban Design at URS Corporation, the firm commissioned by the Minnesota Department of Transportation to manage the Hiawatha project. Initial plans called for three station designs: one for downtown stops, another for city neighborhood stations, and a third for suburban locations. Durrant, however, saw an opportunity to create a string of civic landmarks while increasing community participation in the project. In short, he enlisted five Minneapolis architecture firms—Barbour LaDouceur, Cuningham Group, ESG Architects, Julie Snow Architects, and Meyer, Scherer & Rockcastle—to collaborate with local artists and neighborhood residents on the design of distinctive architectural statements for each locale. The idea found favor with the State Designer Selection Board.

Of course, not all went according to the original plan. The Warehouse District station was added to the north end of the route, the Nicollet Mall station was redesigned, and the City of Minneapolis hired HGA to design a combination parking garage/LRT stop to replace the original design for the Downtown East station, to name a few major changes. In addition, the project's design-build construction approach, in which the architects handed over their conceptual designs and partially completed construction documents to the design-build contractor, resulted in a number of design tweaks along the way. Overall, however, the original designs remained largely intact.

In the following pages, Camille LeFevre highlights one station by each of the original five firms plus HGA. It's our hope that these profiles prompt you to take a closer look—or perhaps a first look—at one of the most unique public transit lines in the country. Enjoy the ride! —C.H.



38th Street station by MS&R



Nicollet Mall station by ESG Architects



Cedar-Riverside station by Julie Snow Architects



Franklin Avenue station by Barbour LaDouceur Design Group

Hiawatha LRT **Fast Facts**

Opening: Partial service between Fort Snelling and Minneapolis Warehouse District began June 26, 2004; full service to the airport and Mall of America began December 4, 2004.

Ridership projection: 9,500 per day in 2004; 19,300 per day in 2005; 24,800 per day by 2020.

Length: 12 miles, connecting four of the Twin Cities' most popular destinationsdowntown Minneapolis, the Metrodome, Minneapolis/St. Paul International Airport, and the Mall of America in Bloomington.

Stations: 17

Light rail vehicles: 24-26 cars, each 94 feet long and articulated with 66 seats. Each car can carry 187 passengers at full capacity. Equipped with luggage racks and bicycle storage hangers.

Power: Electrically powered by wires 16 feet overhead.

Top speed: 55 mph, with a general service speed of 40 mph and slower speed downtown.

Accessibility: Fully ADAcompliant stations and transit with four wheelchair locations per vehicle. Level boarding at each train door. Ramps and tactile edges at all stations. Elevators at stations on bridges.

Cost: \$715.3 million

Construction approach: Designbuild with separate contracts for light rail vehicles and airport tunnels.

Corridor development potential to year 2020: 7,150 new housing units, more than 19 million square feet of new commercial development, and more than 67,000 new jobs.

Fort Snelling Statio

CUNINGHAM GROUP ARCHITECTURE

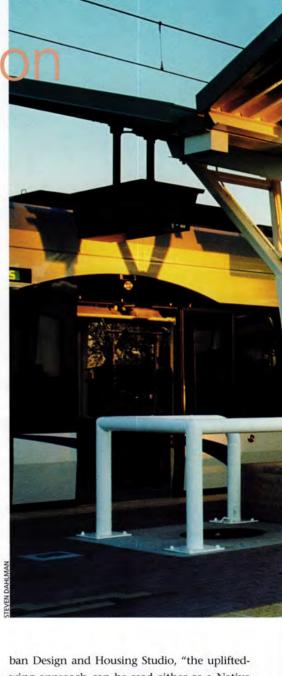


Design team (left to right): David Stahl; Roger Kipp, AIA

he open plain on which the Fort Snelling station is located speaks of the Native Americans who long called it home, the white settlers whose army built a fort there, and the modern realms of business and commerce signified by the international airport located nearby. In designing a light rail station that, in turn, would reflect this diverse history, Cuningham Group Architecture, Minneapolis, in collaboration with Minneapolis artist Brad Kaspari, introduced forms that distinguish this station and its sense of place.

White-painted steel supports rise from Kasotastone bases (a material used in historic sites throughout the area) and branch upward to define the waiting areas on the platforms and support the V-shaped canopy. The design team used similar structural components in the Veterans' Administration Medical Center station, the next stop on the Hiawatha line, but used brick bases for the steel supports, which culminate in a green pitched roof with a light monitor. "Because both stations are sited on former military/reservation land, they share a similar historical context," says Kaspari of the shared design elements.

The steel, V-shaped canopy of the Fort Snelling station is both functional and metaphorical. From a practical standpoint, it channels rainwater into a collection area on either end, which is then funneled into a circular drain below. Symbolically, the sharply pitched roof conveys the idea of wings: those found in nature—as of a bird soaring-and the mechanical wings of airplanes flying overhead. "In this design," adds David Stahl, design leader for Cuningham's Ur-



wing approach can be read either as a Native American reference to sacred eagles or to the aerospace industry of the 1960s, when the main terminal for the Minneapolis-St. Paul facility was built."

A Native American-inspired symbol, which the Metropolitan Council describes as a "common Lakota motif of a seedpod that looks like a helicopter when it falls from cottonwood trees," zig-zags like a red bolt of lightning



across the glass panels of the white-paintedsteel shelters. Brick pavers in the arrival court are arranged in a pattern that recalls the historic Fort Snelling drum.

This area of the station was also supposed to include concentric rings of stone, trees, flagpoles, and seasonal plantings, intended to express the multi-layered history of the area at the confluence of the Minnesota and Mississippi Rivers. This aspect, however, wasn't incorporated into the completed station; nor were the canopy undersides painted sky blue so as to continue the architecture's sense of lightness and open views.

Nonetheless, this freestanding station—located outside of the urban center and beyond any residential neighborhoods-succeeds in creating a sense of arrival and departure.

"When you drop your car off near this station to commute downtown, there's no mistaking this station for anything else," Stahl says. "This is where you get on the light rail. It's utilitarian, but a step up in grandeur."*

50th Street Station

MEYER, SCHERER & ROCKCASTLE





Design team (left to right): Garth Rockcastle, FAIA; Karen Wirth

rtwork abounds at the 50th Street station, designed by Meyer, Scherer & Rockcastle, Minneapolis, local artist Karen Wirth, and others. Perched at the edge of Minnehaha Park, the station reflects the bucolic neighborhood setting, and its natural and cultural history, through a silver-metal "hedge" in which a fretwork of picket fences, leaves and branches, and wagon-wheel shapes overlap (by artist Deborah Mersky); in words from Native American stories clustered together in the shapes of tree trunks on the shelters' glass panels (Joann Verberg); in the finely detailed, etched metal plates-embedded in the brick walkways-that depict such local fauna as American toads, pumpkin sunfish, and crows (Greg LeFevre); and in the structure of the station, as well.

A row of steel columns, placed in slightly staggered positions rather than in a straight line, gradually branch into tree-like supports for the glass (or "tree") canopy, until the structure itself leaves off and a row of real trees takes over. "This approach alludes to a transformation from city to nature," explains Garth Rockcastle, FAIA, principal, "as it moves from architecture to landscape architecture."

MS&R also designed the two stations before (or after, depending on the direction of travel) 50th Street. "We were the only team that had three consecutive stations," Wirth explains, "and we approached the project as if the three were a unit. Travelers move sequentially

through each station, so we wanted a visual relationship among them." The 38th Street stop (see photo on page 40) is a single-platform station designed with soffit and eave details, layers of roofing over entrances, and a horizontal "porch" to reflect the Craftsman bungalows so well known in this neighborhood.

The platform at the 46th Street station is split, as the station is sited at a crossroads between St. Paul and Minneapolis where grain was once transported between mills and markets. Echoing the roofs of neighborhood houses and the simple roofs of a farmers' market, the transit shelters are structured to double as weekend market stalls.

The platform at the 50th Street station is split and the sections placed kitty-corner to each other. "We wanted all of our stations to have a presence from various vantage points, so what you see from the road or the train or platform provides different levels of reading and experience," Wirth says.

Meetings with neighborhood constituencies provided input and insight in the form of historic documents, original photography, and written materials, which "informed our early thoughts about how to use text at the station," Rockcastle says. For her part, Wirth says she "approached all of these stations as if they were site-specific sculpture, so each station would reflect not only what the neighborhood asked for, but convey a history, a mood, and a feeling about the people who have lived here in the past and now live here." *



Lake Street Station

IULIE SNOW ARCHITECTS



Design team (left to right): Bob Ganser; Julie Snow, FAIA; Tim Bicknell, AIA. Not pictured: Ken McQuade, AIA; Tatsu Tanaka; Lucas Alm

levated over Lake Street and adjacent to the Hiawatha Boulevard overpass, the Lake Street station hovers like an abstract sculpture of steel and glass. Escalator towers, connecting with pedestrian access below, feature panels of colored glass: pink, orange, and yellow on the south end; lavender, blue, yellow, and purple on the north tower. In between the towers are steeland-glass shelters with green-glass roof panels. Running along the east and west lengths of the station are overlapping horizontal glass panels riveted to a steel framework, a structure that creates a "floating" windscreen and a transparent sense of enclosure.

The design originated out of community meetings with the four neighborhoods that intersect at Lake and Hiawatha, says Julie Snow, FAIA, principal, Julie Snow Architects, Minneapolis, whose design team collaborated with Minneapolis artist Tom Rose. The station was a first step in the area's ongoing renaissance as a transit-oriented, mixed-use hub, and needed to span the urban commercial corridor with distinction and presence.

"Community members were more interested in their future as a neighborhood than in their past," Snow says of discussions during the community meetings. "They wanted to convey the impression that they're a neighborhood with a trajectory; they wanted a structure that could be a landmark."

Neighborhood representatives were especially captivated by the sculptural scaffolding erected around the Washington Monument in Washington, D.C., at that time. Designed



by Michael Graves, FAIA, principal, Michael Graves & Associates, Princeton, New Jersey, the scaffolding was both decorative and functional, as it supported workers renovating the monument. "So we thought maybe there's a way to make this station more present from Lake Street by incorporating a scaffolding piece, then adding light and glass to that," Snow recalls.



Unfortunately, lighting elements initially included in the design weren't realized in the final construction: a light sculpture on top of the escalator towers (the height of the towers was shortened, as well); abstracted documentary photographic images of neighborhood people and scenes in half-tones on the glass panels of the escalator towers; and bands of neon light running along the length of the station track.

According to JSA project manager Bob Ganser, however, "the station succeeds at the most basic element of its design, the structural system. It's the thing most consistent with what we originally designed, it works spatially and structurally, and it creates a volume you can see up and down both Lake and Hiawatha. So it works as a landmark. It has a distinct presence."❖

Downtown East Station

HAMMEL, GREEN AND ABRAHAMSON

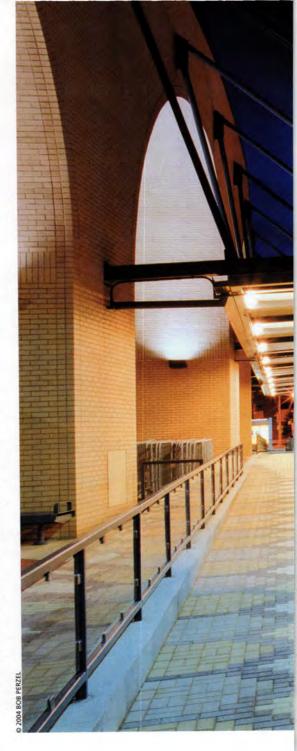


Design team (left to right): Brian Fitzgerald, AIA; Phillip Koski, AIA; Jim Butler, AIA; Andrew Leicester

he site for a light rail station near the Hubert H. Humphrey Metrodome had already been designed by the late Victor Caliandro, AIA, Cuningham Group Architects, Minneapolis, when the City of Minneapolis decided the site was underutilized and went back to the drawing board. A land swap with the *Star Tribune* expanded the former sports plaza, and the city hired Hammel, Green and Abrahamson, Minneapolis, to begin design work.

The project's first phase was a two-level underground parking garage, which included bridge construction to support a light rail station. Above ground, the city saw an opportunity for a public plaza that could be enjoyed by the Elliot Park and Mill District neighborhoods, visitors to the Metrodome, and the business community alike. So Phillip Koski, AIA, then with HGA and now principal of Inland Office for Tomorrow's Architecture, Minneapolis, teamed with Minneapolis artist Andrew Leicester to define an urban space that addresses the unique combination of industrial, immigrant, and sporting influences in the area.

"We met with representatives from the City of Minneapolis, visited Elliot Park and took photographs and talked with representatives, and studied the form of the Stone Arch Bridge for inspiration," Koski says. The design team grappled with the station's predetermined location at mid-block, which divided the site into two triangles. On the Metrodome



side, they connected the station to a monumental series of arches that recalls a Roman aqueduct, creates an arcade-like feel, and offers an archetypal sense of how sports have long been an integral part of civilization.

The brickwork of the arches echoes the redbrick homes of nearby Elliot Park. In addition, the brickwork patterns were abstracted from textiles contributed by schoolchildren, which in turn reflect the ethnic diversity of the immigrant populations that settled in the era. The stations' corrugated metal roofs, glass walls,



and triangular trusses of steel and cable, which link the station to the arches, reference the industrial aesthetic of the adjacent Mill District.

"We feel this station is a good representation of public space, as it draws on the local geographic history instead of imposing forms and history from someplace else," Koski says. "The curving arcade helps to enclose the awkward triangular plaza to the south, and on the station side creates a sense of arrival. And the materials are simple, but colorful and textural. There's a human scale to a lot of the design; a brick is the size of your hand and you can relate to that."

The station and the adjoining plaza are poised to attract increasing numbers of riders and visitors as residential development continues to boom in the area. Elliot Park is undergoing a revival. Condos and townhomes are shooting up along the Mississippi riverfront. "Eventually, the area around the station will be a mixed-used community," Koski says. "So we created something that's a hub and connection for everyone who lives, works, or plays here." *

Government Center Station

BARBOUR LADOUCEUR DESIGN GROUP



Design team (left to right): Janis LaDouceur, AIA; John Barbour, AIA; Kurt Gough, Assoc. AIA

he design of the light rail station poised between Minneapolis's Municipal Building-a stately Richardsonian-Romanesque building also known as City Hall—and the towering, contemporary Hennepin County Government Center creatively overcomes a unique set of aesthetic and site challenges. Because the site is directly located in front of City Hall, typical construction of two stations on opposite sides of the tracks would have blocked the building's triple-arched façade and adversely affected the historic plaza. In community meetings, representatives from city government, Hennepin County government, and teachers who lead school groups on tours of these government facilities asked for clear views of the historic plaza and its buildings, as well as a destination of which they could be proud.

Barbour LaDouceur Design Group, Minneapolis, in collaboration with St. Paul artist Seitu Jones, began by dividing each of the stations in two in order to preserve the open axis between the central arched entrance of City Hall and the central atrium of the Hennepin County Government Center. Then the design team set about creatively linking the four smaller stations into a single composition for visual continuity and clarity.

"We came up with the idea that the stations are like little cars on a train that got pulled apart," says Janis LaDouceur, AIA, principal. "We put a round end on one side of each sta-



atrium. The stations' glass roofs, slanted to shed rain and therefore be self-cleaning, allow travelers to look up at City Hall from inside.

The artwork envisioned for these stations, and not yet installed, includes glass panels etched with excerpts of speeches made by Minnesota politicians and city leaders. The



idea arose during community meetings when the teachers (many from the area surrounding the Franklin Avenue station, which Barbour LaDouceur also designed) told the design team how schoolchildren, year after year, answered the question, "What is government?"

The response, "Government is the set of rules we agree on so we can live together," caused the design team to recall past speeches, particularly those about civil rights. "These words of government," LaDouceur says, "would be etched on panels that overlap as you look through multiple windows, creating a jumble decipherable only on closer examination."

Unlike the Franklin Avenue station, which declares its presence with a red-painted steel structure (see photo on page 41) that conveys the vitality of the multicultural community and with elevator towers that reach out to the neighborhood, the Government Center stations have a firm yet pristine aesthetic. "We conceived the station as an integral part of the whole plaza," explains John Barbour, AIA, principal, "with these little glass pavilions as a place of sanctuary, where you can look out but still feel enclosed."

Adds LaDouceur: "The stations, metaphorically, mean so many things. In my mind, they're also like little crystal jewelry boxes." *

Warehouse District Station

FINESS SWENSON GRAHAM ARCHITECTS



Design team (left to right): David Graham, AIA; Rich Peske; Burt Coffin; Tracey Jacques, AIA

wo different downtown communities-one of historic industry, the other of modern commerce with a growing theater district-meet at the Warehouse District station. Accordingly, in designing the station, Elness Swenson Graham Architects, Minneapolis, collaborating with Minneapolis artist Karen Wirth, was charged with making an architectural statement that straddles, and embraces, the two neighborhoods.

During community meetings, recalls Tracey Jacques, AIA, senior designer, ESG, "representatives from the Warehouse District felt strongly that the station should be transparent and not have a lot of presence." In addition, Charlie Nelson, who oversees historicism in architecture and design for the Minnesota Historical Society, told the design team "to interpret, not replicate, the Warehouse District's historical look," according to Jacques.

Conversely, representatives from the area's other constituency, Hennepin Avenue and the theater district, "wanted the station to boldly announce itself," Jacques says. So Wirth went out into the communities to "find common ground," Jacques explains. "She did these great photographic surveys of structures and patterns in the neighborhoods. From those surveys, we drew inspiration for the platform and the form of the station. So the station responds to the differing conditions from the two constituencies with a design that transitions subtly from one end of the platform to the other."

The 1st Avenue end of the station, which faces the historic Warehouse District, features traditional paving materials, and brick knee walls with a criss-cross pattern framing small, black-and-white photos-printed onto ceramic tiles-of people and scenes that reflect the area's history. "History is built into the knee walls," Jacques says. Another signature element on this end of the station is an "abstracted street light," he explains, "so from the warehouse side there are dark-green light columns with traditional-feeling light fixtures on top."

As the station moves east toward Hennepin, the brick is left behind for steel columns. The design was to be complemented by up-lighting of the steel roof canopy, a screen of animated horizontal lighting elements, and a dramatic artist-designed 85-foot light tower announcing the station location at the Hennepin end. These lighting aspects have not yet been realized. Nor have the lighting elements of the Nicollet Mall station (see photo on page 40), also designed by ESG with Minneapolis artist Tom Rose, been installed: back-lit art panels beneath the undulating roof canopy, and colorful super-graphics on the rooftops.

Still, as riders' final destination at the north end of the Hiawatha line, the Warehouse District station "tells a story about the two neighborhoods or business environments the station is a part of," Jacques says, "conveying the energy and life of those areas while bridging their influences." *





Protest group at the state capitol, 1933.

Civic Centennial

The Minnesota State Capitol celebrates 100 years of playing host to history By Nancy A. Miller

n a raw, rain-soaked morning recently, one man conducted a solo demonstration on the steps of the state capitol building in St. Paul. At the time, the legislature was not in session and the capitol grounds were empty. The man scarcely attracted even a glance of interest from the rare passerby, and no media were there to document his presence or message. Nevertheless, the demonstrator quietly made a purposeful circuit up and down the grand stairs of the capitol, with a homemade

has been the site of politics and legislation that shaped the physical, cultural, and economic lives of the state in the 20th century. It also has been a site of public life—a place where Minnesotans have gathered to mourn, rally, protest, celebrate, and recreate collectively. The capitol is the one building in Minnesota that represents the population of the entire state.

Whether or not a neoclassical building in the western tradition speaks for Minnesota's increasingly diverse population may be debated. However, citizens representing a vari-

The capitol provides not just a backdrop for monuments and gatherings, but a benchmark against which citizens can measure their ideals and accomplishments.

placard bearing his political statement. Certainly, the man could have found a busy street corner either in downtown St. Paul or Minneapolis, where many more people would have seen his message. But the scale and symbolic power of the architecture and site of the capitol gave the man's actions a sense of gravity unique among buildings in Minnesota, both public and private. Nowhere else could he have so solemnly conveyed the depth of conviction in his political statement.

Designed by Cass Gilbert, and occupied in 1905, the Minnesota State Capitol marks its centennial in 2005. The year will be filled with events and stories about the capitol, from the history of the building's design and construction to its current—and urgent—need for maintenance and repair (see additional coverage on page 19). Beyond its physical circumstances, the capitol

ety of communities regularly gather at the capitol-in the domed rotunda and in public rallies on the streets, lawn, and steps in front of the building. Historian Thomas O'Sullivan, author of North Star Statehouse: An Armchair Guide to the Minnesota State Capitol (1995), notes that the capitol's public landscape "provides not just a backdrop for monuments and gatherings, but a benchmark against which citizens can measure their ideals and accomplishments."

As is often the case with large public investments, the building and grounds of the state capitol, as we find them today, developed out of decades-long debates over the design, materials, construction, art, decoration, context, and, of course, cost of the project. In the midst of design and construction, a struggle between the conflicting Minnesota characteristics

of humility and pride tied up the project. Fierce public battles ensued over the stone used to build the capitol—whether it would be common local stone or a more luxurious foreign stone, and whether the interior would be finished in common local woodwork, or would be, as one of the capi-

the frontier history and spirit of the state. Others—including Cass Gilbert—countered that the Minnesota State Capitol ought to be designed in a manner that would attract national attention, and contribute to the development of an American monumental style. Such a style had most recently

Although the design of the capitol grounds has evolved in the direction of Gilbert's plans, the public landscape scarcely can be said to represent the architect's original vision.

tol commissioners stated the case, "finished with the most beautiful of native and foreign stone, and made an object of art, educative of the taste of our people and inspiring their pride."

Some argued that the building ought to represent a uniquely midwestern architecture that would evoke

been on display at the popular and well-attended World's Columbian Exposition, held in Chicago in 1893. The so-called White City of the fair showed Americans the power of classical design and urban planning. The spectacle of the fair included broad, clean, well-lit streets, in a well-regulated environ-





Thousands of farmers (above) gathered in the Rotunda in 1935 to hear Governor Olson speak on farm relief. A starving cow and horse (left) were brought to the capitol to dramatize the farmers' demands.

ment that eliminated the physical and visual clutter that was so common in American cities at the time, from tenement houses to advertising billboards. In the model of the Chicago World's Fair, building and site were designed together, to the greater effect of both.

So it was that Cass Gilbert, in advocating a classical design for the capitol, also argued for the development of an appropriate public setting for the building. Although the legislature was inclined toward penny-pinching, architect Cass Gilbert got nearly everything he wanted for the building, including supplemental appropriations for the expensive foreign stones. However, the public landscape around the capitol developed slowly. As late as 1931, Gilbert presented plans to the Capitol Board of Commissioners that showed his grand vision of the approach to the capitol-a version of which he had promoted since 1902-with axial connections between the state house, the cathedral, downtown St. Paul, and the river.

Although the design of the capitol grounds has evolved in the direction of Gilbert's plans, the public landscape scarcely can be said to represent the architect's original vision. The state was slow to acquire land, and as late as the 1940s Park Avenue to the west of the capitol was lined with rowhouses and other 19th-century structures. No sooner had the state constructed something similar to Gilbert's vision for a symmetrical landscape, with three axial streets



St. Paul Winter Carnival Ice Palace (above) on the capitol grounds in 1937, with The Progress of the State (also referred to as the Quadriga) in the foreground. Farmers demonstrating (right) at the capitol in 1985.

meeting in front of the capitol, than I-94 sliced through the city, rudely interrupting the central axis from the capitol steps to the river. Still, these apparent shortcomings have not slowed or stopped Minnesota residents from embracing the capitol grounds as a symbolic site of public gathering.

Often referred to as Minnesota's front lawn, the public grounds of the capitol have been the site of activities over the past 100 years that ranged from Winter Carnival events to emotionally charged political protests. The capitol grounds in the challenging years of the 1930s saw numerous gatherings of laborers and farmers from

across the state; they rallied to draw attention to their plight and plead for economic relief. In one of the more lively demonstrations, in 1935, 2,000 farmers dramatized their situation in a rally that included leading a malnourished cow and horse up the steps of the capitol. The rally culminated with the farmers crowding into the capitol rotunda, where Governor Floyd B. Olson addressed the group. Fifty years later, a crowd estimated at 10,000 rallied at the capitol during the farm crisis of the 1980s.

In lighter moments the capitol grounds have hosted celebratory public events, such as those associated with

the annual Winter Carnival. In 1937 St. Paul attempted to deflect concerns about the sorry state of the economy with the construction of an ice palace in front of the capitol. The looming dome of the capitol either aggrandized or diminished the frozen structure, depending on one's perspective. Beginning in 1983 and continuing for 20 years, until the event was moved to Harriet Island in St. Paul, the capitol grounds accommodated hundreds of thousands of residents and tourists at the Independence Day festival called Taste of Minnesota. Each fall the Twin Cities Marathon completes its 26-mile circuit at the steps of the capitol, and in 1987 150,000 gathered at the capitol to celebrate the Twins' unlikely World Series victory.

The monumental building and formal grounds of the state capitol complex represent a grand vision that spans time and generations. By the tens of thousands and alone, in raucous celebration and silent protest.

Minnesotans intuitively understand and have embraced that vision on the state's front lawn. *

Nancy A. Miller, an adjunct assistant professor at the College of Architecture and Landscape Architecture (CALA), University of Minnesota, is coordinator and co-chair of the committee organizing the CALA symposium on Cass Gilbert and the design of the capitol building, scheduled for October.

Many events celebrating the capitol's centennial are being planned for 2005. Events and tours will address a variety of topics related to the building, including art and sculpture, architecture, construction, women's history, the Civil War, and citizen participation in government. Contact the following organizations for the latest information on centennial activities: Minnesota Historical Society, 651-296-6126, www.mnhs.org; Capitol Area Architectural and Planning Board, 651-296-7138, www.caapb.state.mn.us



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setting the agenda

Continued from page 13

Minnesota Environmental Initiative, and by using the State of Minnesota B3 (Buildings, Benchmarks, and Beyond) program and the LEED-certification program, they will be able to design and construct to a higher environmental standard.

The third plank of the five-year plancreating livable communities-certainly sounds like a worthy endeavor, but what exactly is a "livable" community? According to Tollefson, the term implies safety and comfort but also quality of design, materials, and construction. "I tell my students, if you take away only one thing from your education, it should be an understanding that you and only you as an architectural professional have the ability to create a higher-quality living environment. Engineers and product manufacturers can help with sustainability, but only the architect can make our cities more visually pleasing."

In the 1980s, Rafferty Rafferty Tollefson contributed to the revitalization of St.

Paul's Lowertown neighborhood by leasing an office there, renovating it, and taking on numerous planning and renovation projects nearby. Tollefson and his wife also purchased a home in Lowertown. "Architects have an obligation to the communities in which they live and work to make them better, more livable. If you think that cities can be fixed up and old buildings rehabilitated, then lead by example. Many of our members are doing this very thing." Tollefson plans to enlist the help of AIA Minnesota's own Committee on the Environment (COTE) and Minnesota Design Team and CALA's Metropolitan Design Center and Center for Rural Design in the effort to create more livable communities.

Grateful for the push he received from AIA Minnesota leaders, Tollefson hopes to return the favor by encouraging members to become more involved in the organization. To sum up, he borrows from John F. Kennedy: "Ask not what AIA can do for you—ask what you can do for AIA. And by extension, what can we accomplish together as an organization that we can't do alone?" •



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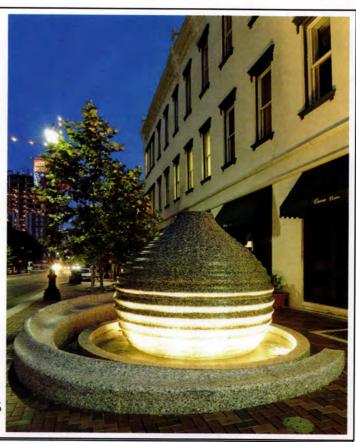
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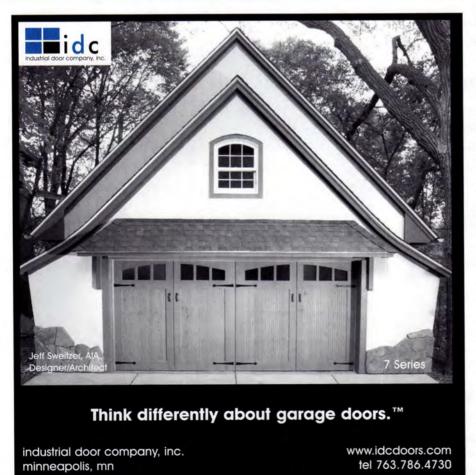
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endangered

Continued from page 17

Emily Durand, an administrator in the College of Human Ecology at the University of Minnesota, grew up in a fifth-generation Danish family in Tyler, and values her education at Danebod. Her ethnic pride has been honed by the continuing folk school education, promoted as a life-long endeavor. Her favorite memories of Danebod are the Abelskriver Days, when the community feasts on special pancakes and sandwiches, and Christmas in the Gym Hall, when all the lights are turned off except for those on the large Christmas tree at the center of the gym. And one other memory: "Folk dancing," she says, "there was always folk dancing."

Peter Shea, a Fellow in the Department of Philosophy at the University of Minnesota, has extensively studied the folk school movement in Minnesota and in the United States, and calls the Danebod campus in Tyler one of the truest examples of the synthesis of living culture and architecture. "As this place grew," he says, "the cultural development formed the architecture it needed, and those buildings guided the culture until they reached the point where they both have not gotten any better than they need to get." As a result, he observes, Danebod has preserved both tradition and architecture in such a way that additional fellowship halls and ancillary facilities are unnecessary. "What Danebod has become," he says, "is something you can't build today."

Because of Danebod's unique life force, Shea implies, the Gym Hall falls outside of the typical endangered building scenario, whereby preservationists wage a battle to keep a threatened structure standing while searching for a new use to continue its history. This preservation model may work for a decorous old mansion saved from demolition by an advertising agency or a bedand-breakfast. Or for an historic building assigned to serve history as an interpretive museum. But Shea finds it unthinkable that Danebod could ever become an interpretive center. Instead, Danebod has become tradition woven into modern lifethrough its summer camps, community events, and of course folk dancing. *

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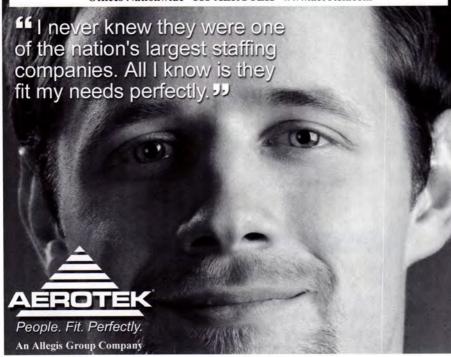
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citizen architect

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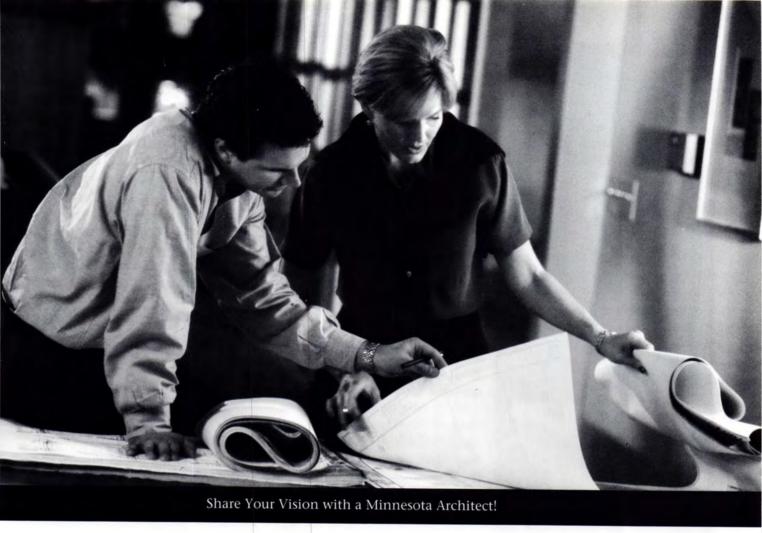
ment. The more patient observer will also find scattered throughout the capitol more subtle embodiments of the state persona. Corncobs are spun into plaster moldings. Showy lady's slippers bloom at the top of column capitals. Throughout, bas relief five-pointed stars pepper the moldings and friezes with untiring regularity (the star form evoking the state motto, "Star of the North").

Yet even as the capitol honors events that occurred before its completion, it has, like any structure that stands for 100 years, accrued its own history and lore. Nowhere is this more evident than in the portrait paintings of the state's former governors. Governor Floyd B. Olson, for example, who served during the years of the Great Depression, holds a radio microphone—a symbol of the modern age and the tool of a master communicator. Rudy Perpich is pictured with his wife Lola in an unprecedented and not universally appreciated deviation from tradition. More recent, and perhaps most intriguing, a stern Jesse Ventura stands before a brooding landscape that includes a golf course, an LRT train, and a miniature statuette of The Thinker.

As a vessel of the state's accumulated history, the capitol serves to remind all of us of Minnesota's distinguished legacy of self-government. Who, then, it is important to ask, serves as caretaker for the ongoing physical preservation of this public resource?

The answer is, predictably, a political one. By state statute, chief responsibility falls to the Capitol Area Architectural and Planning Board (or CAAP Board), a largely regulatory body responsible not only for the oversight of the capitol's preservation, but also the orderly development of the grounds and the urban neighborhood in which it is situated. Additionally, tours, interior artifacts such as artwork and furniture, and upholding federal standards for rehabilitating historic buildings are the curatorial responsibility of the Minnesota Historical Society (MHS), a quasi-public agency that relies heavily on public funds

Continued on page 66



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citizen architect

Continued from page 64

to maintain many of the state's treasured historic resources.

Neither organization, however, receives a reliable funding source for repairs and preservation. Like any other state agency, they are required to submit bonding requests to the legislature or, as a stop-gap measure, to seek "emergency" repair funds through the Department of Administration. Bonding requests for building projects are considered in even-numbered years. Approval of these requests, however, is dependent on the temperament and political bent of elected officials (as of this writing, the 2004 legislative session has failed to pass any bonding legislation), which makes funding for repairs a reliably unpredictable undertaking.

On the other hand, the work it takes to maintain a 100-year-old building like the capitol is a matter of scientific certainty. Roofs do not last forever and need to be replaced. Stonework needs regular re-pointing and repairs. Carpets wear out, chairs begin to creak, and paintings need to be cleaned.

As the CAAP Board, the Historical Society, and the Department of Administration prepare to celebrate the first 100 years of Gilbert's masterpiece, they are keenly aware that the ongoing maintenance of the building requires more than replacement of light bulbs and floor wax. Rainwater has seeped through the deteriorating roof into the upper floor of the building, resulting in permanent and highly visible damage to ornamental plaster work and painted decorations, as well as spalling of the original Kasota stone pilasters. In some areas, signs warn visitors of falling plaster.

Nancy Stark, executive secretary for the CAAP Board, estimates that more than \$60 million will be needed to fund basic repairs and preservation projects for the next ten years. That's a considerable chunk of money, especially in tight economic times. By statute, the ten-member CAAP Board is chaired by the lieutenant governor, currently Carol Molnau. Leadership by the reigning administration does not, however, guarantee political support. Publicly committed to curtailing state spending, the governor and many legislators fear that improvements

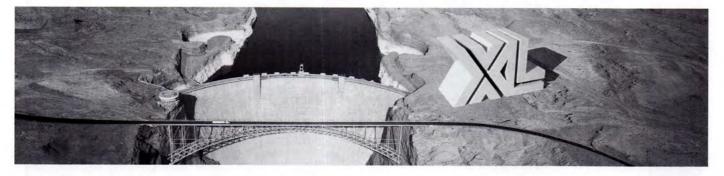
made to the capitol will make them appear both disingenuous and self-serving. Why, the argument goes, should elected officials spend money to feather their own nest while asking the tax-paying public to make do with diminished levels of government services?

The answer is twofold. First, while elected officials use the building to conduct their business, they are only temporary tenants, with lease terms expiring or being extended every election cycle. We, the citizens of Minnesota, are the long-term landlord. Second, the building is a public facility that serves many useful purposes outside the administration of government. According to Carolyn Kompelien, capitol historic site manager since 1988, the facility was used by some 222,000 non-elected persons in 2003. Roughly 130,000 took advantage of the capitol tours, and of those almost half were Minnesota schoolchildren. The biggest draw of all the state's historic sites, the capitol is a highly effective and inspiring learning tool for adults and students alike. (See also Nancy A. Miller's brief history of public gatherings at the capitol on page 54.)

In an era when elected officials refer to state government in business terms, the governor as a CEO, and Minnesota residents as customers, important policy decisions are often based solely on the bottom line and return to investors. As in any business, it is easy to overlook quality-of-life considerations that don't appear on a spreadsheet. Sure, we could run state government inside a pole barn, but there are many good reasons we don't, and shouldn't. Just as Gilbert used his talents and position of influence to shepherd the capitol's construction, we must articulate the value and merits of architecture in the public life of the state.

Writing in the magazine *The American Architect* in 1929, Gilbert argued the benefits his design would have for future generations. As masterful with words as he was with stone, wood, and plaster, Gilbert made his case eloquently: "[The capitol] encourages just pride in the state, and is an education to oncoming generations to see these things, imponderable elements of life and character, set before the people for their enjoyment and betterment. The educational value alone is worth to the state far more than its cost . . . it is a symbol of the civilization, culture, and ideals of our country."





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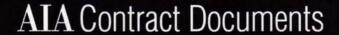
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Kurt Rogness

730 Second Avenue South, Ste. 1100 Minneapolis, MN 55402-2454 Tel: 612/338-8741 Fax: 612/338-4840 E-mail: kerogness@leoadaly.com www.leoadaly.com Established 1915

Other Offices: Atlanta, GA; Austin, Dallas, Fort Worth, Houston, San Antonio, San Marcus and Waco, TX; Hong Kong; Honolulu, HI; Las Vegas, NV; Los Angeles, CA; Miami, FL; Omaha, NE; Phoenix, AZ; Washington, DC

AIA

Charles M. Ault	PE
Michael Alexander	PE
Robert G. Egge	AIA
Howard F. Goltz	AIA
Jerome A. Ritter	AIA
=	
Firm Personnel by Discip	line
Civil Engineers	4
Structural Engineers	15
Mechanical Engineers	18
Electrical Engineers	11
Architects	42
Other Professional	3
Administration	15
Total	112

Leo A. Daly, Minneapolis (formerly Setter Leach & Lindstrom) offers Civil, Structural, Mechanical, Electrical, and Technology Engineering. As a full-service Planning, Architecture, Interior Design and Engineering Firm with over 1,000 employees, Leo A. Daly is experienced designing a broad range of new construction and renovation projects.

General Dynamics Advanced Information Systems Computer Facility, Bloomington, MN; B1 Bomber Weapons System Simulator, Ellsworth Air Force Base, SD; Visitors' Quarters, Kunsan Air Force Base, South Korea; Stater Bros. Markets, San Bernardino, CA; Murray County Memorial Hospital Surgery Suite, Slayton, MN; Fairview Healthcare Clinic, Zumbrota, MN

DARG BOLGREAN MENK, INC.

7575 Golden Valley Road, Ste. 210 Golden Valley, MN 55427 Tel: 763/544-8456 Fax: 763/544-8914 E-mail: info@dbm-inc.com www.dbm-inc.com Established 1966

Gene Bolgrean Harry D. Menk	PE
-	
Firm Personnel by Dis	cipline
Structural Engineers	4
Technical	2
Administrative	1
Total	7

Complete structural engineering services for commercial/retail, office/warehouse, academic, industrial, governmental, medical/ health, housing, religious and parking facilities. With expertise in steel, concrete, masonry and wood, DBM has engineered new construction, additions and renovations/ restoration on over 5,000 projects in 21 states.

Stillwater Mills on Main, Stillwater, MN; Holtkoetter Distribution Facility, South St. Paul, MN; Shakopee Public Works Addition, Shakopee, MN; ReMAX Office Building, Apple Valley, MN; Straus Building Renovation, St. Paul, MN; Tesoro Refinery Addition, Bismarck, ND

DATA CORE ENGINEERING, INC.

1700 West Highway 36 700 Rosedale Towers Roseville, MN 55113 Tel: 651/604-3200 Fax: 651/639-9618 E-mail: info@dcedesign.com www.datacoreeng.com Established 1991

D. Lane Hersey PE		
Jeff Westlund RCDD Bill McGuire Firm Personnel by Discipline Electrical Engineers 2	James W. Giefer	PE
Bill McGuire Firm Personnel by Discipline Electrical Engineers 2	D. Lane Hersey	PE
Firm Personnel by Discipline Electrical Engineers 2	Jeff Westlund	RCDD
Electrical Engineers 2	Bill McGuire	
Electrical Engineers 2		
		cipline
Technical 9	Electrical Engineers	2
	Technical	9

Continued on next column

Total

Data Core is a technology consulting firm. We provide technology planning and design services to architects and engineers for the integration of computer, audio/visual, telephone and other communication and security camera systems for both new construction and renovation projects.

Technology Upgrade, Saint Paul Public Schools; Citywide Offices Network, City of South St. Paul. MN; Minnesota Counties Insurance Trust, St. Paul, MN; Technology Upgrade, Owatonna Public Schools;, MN; Network and Intranet Support, Cretin Derham Hall, St. Paul, MN; Technology Design, Douglas County Metro Center, Superior, WI; Prior Lake High School, Prior Lake, MN

DLR GROUP

9521 West 78th Street Minneapolis, MN 55344-3853 Tel: 952/941-8950 Fax: 952/941-7965 E-mail:

minneapolis@dlrgroup.com www.dlrgroup.com Established 1966

Other Offices: Chicago, IL; Colorado Springs, CO; Des Moines, IA; Farmington, NM; Honolulu, HI; Milwaukee, WI; Omaha, NE; Orlando, FL; Overland Park, KS; Philadelphia, PA; Phoenix, AZ; Portland, OR; Sacramento, CA; Seattle, WA

Griff Davenport	AIA
Matt Johnson	AIA
Kelly Artz	PE, RCDD
Marlene Evenson	AIA
Jon Crump	AIA
Tom Sindelar	AIA
-	
Firm Personnel by I	Discipline
Structural Engineer	s 2
Mechanical Engine	
Electrical Engineers	
Architects	16
Other Professional	6
Administrative	9
Total	43
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DLR Group has been providing exceptional engineering and design services since its inception in 1966. As a full-service architectural and engineering (mechanical, electrical, structural, civil and technology/communications) firm, we are a national leader in the design of corporate, industrial, educational, sports, justice and health care facilities, and associated building systems.

East Central School District. New K-12 School, Sandstone, MN; Richfield School District, Multiple Projects, Richfield, MN; Scott County Iail, New Iail and Law Enforcement Center, Shakopee, MN; B.H. Whipple Federal Building, Building Renovations, Minneapolis, MN; Anoka Ramsey Community College, Campus Expansion, Cambridge, MN; Global Industries, Office/Showroom/Warehouse, Brooklyn Center, MN

Total

DOLEJS ASSOCIATES INC. 1624 North Riverfront Drive

Mankato, MN 56001 Tel: 952/435-6790 Fax: 507/388-9225

E-mail: dolejs@hickorytech.net Established 1977

Other Offices: Burnsville, MN

Joseph Dolejs	PE
Christopher J. Dolejs	PE
Michael Dolejs	PE
Firm Personnel by Discip	line
Mechanical Engineers	3
Electrical Engineer	1
Technical	10
Administrative	1

Dolejs Associates provides Mechanical and Electrical Design Services for the building industry. Building types include educational, recreational, churches, engineered housing, hotels, restaurants and public works. An experienced and stable staff provides expertise in HVAC, plumbing, fire protection, temperature control, lighting, power, communication and life safety systems.

Hosanna! Lutheran Church, Lakeville, MN; Sartell Elementary School, Sartell, MN; Public Works Facility, Lakeville, MN; Community Center, St. Peter, MN; Real Life Co-op Housing, Burnsville, MN; Bethany College Math and Science Building, Mankato, MN

AIA

334

DE

DUNHAM ASSOCIATES, INC.

8200 Normandale Blvd., Ste. 500 Minneapolis, MN 55437 Tel: 952/820-1400 Fax: 952/820-2760 E-mail:

info@dunhamassociates.com www.dunhamassociates.com Established 1960

Kathleen Kolbeck PE, LEED AP Dale Holland PE, LEED AP PE, LEED AP Jay Rohkohl Ron Feldhaus PF. Darrell Martin Chuck Macv

Firm Personnel by Discipline Mechanical Engineers 36 **Electrical Engineers** 24 Registered Communications Distribution Designesr (RCDD) 2 LEED Accredited Professionals 10 Commissioning Specialists 8 Other Professionals 3 7 Administrative **Total Staff** 70

Dunhan Associates provides mechanical and engineering consulting engineering along with building commissioning, telecommunications systems design, sustainable design, LEED certification, and Computational Fluid dynamics modeling for HVAC analysis. We provide our clients with specialized expertise in all business markets: Commercial, Education, Healthcare, Hospitality, Retail, and Aviation.

Siemens PT&D, Minneapolis, MN; Target Data Center Commissioning, Minneapolis, MN; Ramsey County Public Works, Arden Hills, MN; St. Francis Regional Medical Center, Expansion, Shakopee, MN; Edina Public Schools, Deferred Maintenance and Secondary Campus, Edina, MN; Minneapolis/St. Paul International Airport Terminal Expansion, St. Paul, MN

ELLERBE BECKET

Fred Richter

Total

Stove Wernershach

800 LaSalle Avenue Minneapolis, MN 55402 Tel: 612/376-2000 Fax: 612/376-2271 E-mail: info@ellerbebecket.com www.ellerbebecket.com Established 1909

Other Offices: Kansas City, MO; San Francisco, CA; Washington, DC; Dubai, United Arab Emirates

steve wei	Heisbach	I C
Al Wenze	l	PE
Jon Iverso	n	PE
Doyle Tra	nkel	PE
Dan Dick		PE
_		
Firm Perso	onnel by Discip	line
Civil Engi	neers	1
Structural	Engineers	15
	al Engineers	41
Electrical	Engineers	26
Architects		139
Other Pro	fessional	47
Technical		21
Administr		44

Ellerbe Becket's engineering team has a proven history of success in the execution of technically complex projects, including new construction, renovation and building systems retrofits. The team offers experience in a wide range of facility types, including hospitals and clinics, mission critical facilities, laboratories, corporate workplace, learning environments and heating/cooling plants.

St. Rita's Medical Center, Medical Center of the Future, Lima, OH; Empower/Dubai International Financial City (DIFC) Cooling Plants, Dubai, United Arab Emirates; University of California -San Diego, Rady School of Management, LaJolla, CA; Confidential Insurance Company, Data Center Critical Power Upgrade, Bloomington, IL; Abbott Northwestern Hospital, Neuro/Ortho/ Spine Patient Care Center, Minneapolis, MN; University of Nevada - Las Vegas, New Student Union, Las Vegas, NV

ENGINEERING DESIGN INITIATIVE, LTD (EDI)

420 N. 5th Street, Ste. 565 Minneapolis, MN 55401 Tel: 612/343-5965 Fax: 612/343-5982 E-mail: lnemer@edilimited.com Established 2002

lav Hruby PE PE Larry Nemer Larry Svitak PE

Firm Personnel by Discpline Mechanical Engineers and **Electrical Engineers**

9

EDI provides innovative M/E engineering solutions for a variety of building types. EDI is committed to delivering designs that are energy-efficient, maintainable and sustainable. We are passionate in our creative design, attention to detail and commitment to teamwork from the establishment of initial performance goals through validation by commissioning.

Camp Ripley, Northern Armories, MN; Grinnell College, Commissioning Services, Grinnel, IA; SPPS Washington Middle School, Boiler Replacement, St. Paul, MN; Sawyer Community Center, Cloquet, MN; St. John's Abbey Guesthouse, Collegeville, MN; SPPS Central High School Technology Upgrade, St. Paul, MN

ERICKSEN ELLISON AND ASSOCIATES

2635 University Avenue West, Ste. 200 St. Paul, MN 55114 Tel: 651/632-2300 Fax: 651/632-2397 www.eeaengineers.com Established 1954

William F. Thiesse PE PE Jim Art Todd Peterson PE Michael Richards PE Firm Personnel by Discipline

9 Mechanical Engineers 7 **Electrical Engineers** Technical 1 Administrative 3 Total 20

A mechanical/electrical engineering firm designing building systems for higher education, K-12, libraries, churches, judicial/corrections, municipal, recreational, residential, retail, medical, corporate and industrial clients. Systems include: HVAC, plumbing, ground source heat pumps, fire protection, specialty lighting, critical power, voice/data communications, sound reinforcement, security/surveillance, and facility infrastructure planning.

Minneapolis Central Library, Minneapolis, MN; Sherburne County Courthouse and Jail; Eagle Brook Church, Lino Lakes, MN; St. Cloud State University Stadium and Recreation Center, St. Cloud, MN; Bloomington City Hall/Police Station/Arts Center, MN; Grinnell College Campus Center, IA

ERICKSEN ROED & ASSOCIATES, INC.

2550 University Avenue West, Ste. 201-S St. Paul, MN 55114 Tel: 651/251-7570 Fax: 651/251-7578 Established February 1985

Alfred "Bud" Ericksen	PE
Thomas E. Amundson	
James D. Roed	PE
Robert A. Curtis	PE
William T. Buller	PE, SE
Robert J. Quinn	PE
Michael A. DeSutter	PE
David J. Pluke	

Firm Personnel by Discipline
Structural Engineers 22
Technical 17
Administrative 3
Total 42

Full service structural engineering for retail, medical, commercial, educational, computer centers, high-rise offices, housing, parking facilities, sports and recreational facilities, as well as conduct investigations of existing structures for remodeling and renovation. We are registered as Professional Engineers in Minnesota and throughout the United States as well as the owner of the ER-POST - Precast Building System (patent pending).

Department of Human Services Building and Parking Ramp, St. Paul, MN; Guthrie Theater and Parking Ramp, Minneapolis, MN; Fairview Southdale Hospital Expansion, Parking Ramp and Skyway, Edina, MN; University of Minnesota Riverbend Commons Dormitory and Parking Ramp, Minneapolis, MN; Target Retail/Office Building - 900 Nicollet, Minneapolis, MN; Bookmen Stacks Housing Tower and Parking Ramp, Minneapolis, MN

FLONOMIX INC

6561 Promontory Drive Eden Prairie, MN 55346 Tel: 952/937-0775 Fax: 952/937-9454 E-mail: info@flonomix.com Web: www.flonomix.com Established 2002

Heejin Park	PhD, PE
Haesun Park	PhD
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Firm Personnel by Discipline Mechanical Engineers Microbiologists

Flonomix, Inc. has been offering computational fluid dynamics (cfd) analysis for various engineering applications, especially for the HVAC/IAQ industry to achieve better indoor air quality through optimization of designs and enhancement of ventilation effectiveness. Among projects that Flonomix has been involved with are computational air flow simulations for smoking lounges, clean rooms, operating rooms, computer cluster rooms, institutional environments, underground parking structures, casinos, hotels, atriums, theaters, and shopping centers.

The University of Minnesota, Minneapolis, MN; Pine City Elementary School Auditorium and Classroom Simulation, Pine City, MN; Dominion Center Simulation, Plymouth, MN; Ecolab, St. Paul, MN; Heritage Middle School: Energy Recovery Unit Modifications: Project Plan, West St. Paul, MN; Analytical Investigation of Wall Moisture Problems (with IEA), MN

FOSTER, JACOBS & JOHNSON, INC.

345 Canal Park Drive, Ste. 200 Duluth, MN 55802 Tel: 218/722-3060 Fax: 218/722-1931 E-mail: mail@fjj.com Established 1922

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James R. Johnson	P
Charles F. Jacobs	P
Firm Personnel by Disc	rinline

Thin I cisoffice by Discipling	-
Mechanical Engineers	5
Electrical Engineers	2
Technical	7
Administrative	2
Total	16

Continued on next column

Full Service Mechanical and Electrical consulting services, including design and preparation of contract documents for fire protection, plumbing, HVAC, controls, lighting, power distribution, communications and lifesafety systems and construction administration. We offer computer-aided selection of M/E equipment and generate drawings using Auto Cad with "soft desk" building services.

Blue Cross/Blue Shield Adjudication Centers, Virginia and Aurora, MN; City of Duluth Public Works and Utilities Maintenance Garage, Duluth, MN; Grand Rapids Middle School, Grand Rapids, MN; Minnesota Air National Guard Aircraft Maintenance Complex, Duluth, MN; University of Minnesota, Duluth Kirby Plaza Addition and Remodel, Duluth, MN; Virginia Regional Medical Center/SMDC Medical Office Building, Virginia, MN

FUTRELL FIRE CONSULT & DESIGN, INC.

8860 Jefferson Highway Osseo, MN 55369-1500 Tel: 763/425-1001 Fax: 763/425-2234 E-mail: scottf@ffcdi.com www.ffcdi.com Established 1989

Scott A. Futrell

Rich Pehrson	Ph	ıD,
	PE (MN, S	SD)
_		
Firm Personnel I	by Discipline	
Fire Protection E		2
Technical		4
Administrative		2
Total		8

PE (WI)

Fire Protection Engineering, fire sprinkler, fire alarm and fire suppression system design, risk analysis, plan and engineering report reviews, special instructions, commissioning, expert witness, third-party review and project management.

U.S. Steel, Mountain Iron, MN; 3M Company, Nationwide; University of Minnesota, Various Projects Minneapolis Campus, MN; St. Paul Public Housing Authority, Front High Rise, St. Paul, MN; MN Air National Guard, Duluth, MN; CENEX Inver Grove Heights Warehouse, Inver Grove Heights, MN

GAUSMAN & MOORE ASSOCIATES, INC.

1700 West Highway 36 700 Rosedale Towers Roseville, MN 55113 Tel: 651/639-9606 Fax: 651/639-9618 E-mail: gmmail@gausman.com www.gausman.com Established 1935

Other Offices: Duluth, MN; Portland, OR

PE

lames W. Giefer

James A. Keller	PE
D. Lane Hersey	PE
Robert B. Full	PE
_	
Firm Personnel by Discipli	ine
Mechanical Engineers	7
Electrical Engineers	8
Fire Protection Engineer	1
Other Professional	1
Technical	36
Administrative	12
Total	65

Gausman & Moore provides mechanical, electrical, fire protection, and technology design engineering services. Areas of Special Expertise include sustainable design (LEED Accredited), mission critical power systems, forensic investigations, lighting design, and health care.

Target Stores, Nationwide; Saint Paul Public Schools, MN; Minneapolis Public Schools, MN; University of Minnesota Duluth, Weber Music Performance Hall, MN; United Hospital, St. Paul, MN; Hennepin County Medical Center, Minneapolis, MN; Target Technology Center, MN

GME CONSULTANTS, INC.

14000 21st Avenue North Minneapolis, MN 55447 Tel: 763/559-1859 Fax: 763/559-0720 E-mail: skillackey@ gmeconsultants.com www.gmeconsultants.com Established 1981

Other Offices: Duluth, Crosby, International Falls, MN; Menomonie, Janesville, WI; Chicago, IL

William C. Kwasny	PE
Thomas P. Venema	PE
Gregory R. Reuter	PE, PG
_	
Firm Personnel by Dis	scipline
Civil Engineers	18
Other Engineers:	

Geo-technical, Material, Environmental 18 Other Professional 45 Technical Administrative 15 Total Staff 79

GME Consultants provides Geotechnical, Material, and Environmental engineering nationwide with a particular focus on the Upper Midwest. Geo-technical services range from sub-surface explorations and soil reports for single-story buildings to advanced testing for high-rise towers. Specialized testing includes air and water infiltration testing of doors and windows.

Forest View Elementary School, New Hope, MN; Public Safety Building, Mound, MN; Grant Park Tower, Minneapolis, MN; Target Plaza, Minneapolis, MN; Dean Lakes Development, Shakopee, MN; The Quarry Northeast Retail, Minneapolis, MN

HALLBERG ENGINEERING, INC.

1750 Commerce Court White Bear Lake, MN 55110 Tel: 651/748-1100 Fax: 651/748-9370 www.hallbergengineering.com Established 1984

Joseph W. Hallberg	PE
James R. Penkivech	PE
Larry A. Jensen	PE
Firm Personnel by Discip	line
Mechanical Engineers	12
Electrical Engineers	6
Technical	18
Administrative	5
Total	41
_	

Mechanical, electrical, technology and facility management engineering services for educational, retail, commercial, institutional, health care and correctional facilities. Our Commissioning group performs mechanical and technology commissioning for new and existing facilities. The Schools for Energy Efficiency (tm) (SEE) Program provides schools with the tools to save energy and avoid energy costs.

Aeropostale Stores, Nationwide; Famous Footwear Stores, Nationwide; Rainforest Café, San Antonio, TX; ALDI Grocery Stores, Nationwide; Turck Hall, Wallace Hall and Kagin Commons, Macalester College, St. Paul, MN; Earle Brown Elementary, Brooklyn Center, MN; Buffalo Hospital, Buffalo, MN

HAMMEL, GREEN AND ABRAHAMSON

701 Washington Avenue North Minneapolis, MN 55401 Tel: 612/758-4000 Fax: 612/758-4199 E-mail: info@hga.com www.hga.com Established 1953

Other Offices: Rochester, MN; Milwaukee, WI; Sacramento, Los Angeles and San Francisco, CA

Leigh Harrison	PE
Kenny Horns	PE
Yan Shagalov	PE
Jeff Harris	PE
Chuck Cappellin	PE
Firm Personnel by Discipli	ine
Civil Engineering	7
Structural Engineering	29
Mechanical Engineering	40
Electrical Engineering	27
Industrial Engineers	2
Architects	204
Other Professionals	32
Technical	45
Administrative	92
Total Staff	478

HGA has engineering expertise in the design of a broad range of facility types. In addition to traditional HVAC, structural and electrical systems, HGA has specialists in clean environments, industrial processes, central plants, utility infrastructure, existing condition surveys, facility assessments, telecommunications systems design, healthcare technology, applications design, structural special inspections, and specialty lighting. HGA engineers serve both prime consultants and sub-consultants.

CentraCare Health System, St. Cloud, MN; General Mills, Golden Valley, MN; Walker Art Center Expansion, Minneapolis, MN; MN Departments of Agriculture and Health, St. Paul, MN; Honeywell, Minneapolis, MN; Northfield Hospital, Northfield, MN

INSPEC, INC.

Dwight Benoy

Administrative

Total

5801 Duluth Street Minneapolis, MN 55422 Tel: 763/546-3434 Fax: 763/546-8669 E-mail: fking@inspec.com www.inspec.com Established 1973

Other Office: Milwaukee, WI: Chicago, IL

Gary Patrick	AIA
Mike Remington	PE
David W. Campbell	AIA
Firm Personnel by Discip	oline
Civil Engineers	7
Structural Engineers	2
Architects	3
Technical	48

PE

23

83

Inspec offers our clients smart engineering for roofs, walls, pavements and waterproofing. Our services include survey and evaluation, failure investigation, design and consultation, expert witness testimony, construction administration and observation, on-site and lab testing, and customized facility management programs. We also specialize in historic building renovation and outdoor athletic facilities.

Glensheen, Duluth, MN; Minnesota State Capitol, St. Paul, MN; American Swedish Institute, Minneapolis, MN; Minnesota State Colleges and Universities (54 campuses), Statewide; Anoka County, MN; University of Chicago, Chicago, IL

CID

KARGES-FAULCONBRIDGE, INC.

670 West County Road B St. Paul, MN 55113 Tel: 651/771-0880 Fax: 651/771-0878 E-mail: kfi@kfi-eng.com Established 1996

William J. Karges, Jr. PE James A. Faulconbridge PE

Firm Personnel by Discipline Mechanical Engineers 15 **Electrical Engineers** 3 Chemical Engineers 1 Commissioning 8 Other Professional 25 Administrative 6 Total 58

Karges-Faulconbridge, Inc. (KFI) is a unique engineering firm of engineers, designers, professional estimators, and commissioning specialists registered in 50 states and the District of Columbia, and KFI's new office building is LEED certified Gold. KFI provides engineering and construction management services for industrial, institutional, healthcare and commercial organizations. KFI clients rely on this unique combination of skills and experience to address issues of constructability, phasing, maintenance and operations early in the design stage, conserving time and resources.

Soybean Extraction Plant, Cenex Harvest States, Fairmont, MN; Minnesota Veterans Home. Infrastructure Improvements, Hastings, MN; New Vegetable Oil Refinery, AGP, Hastings, NE; Robbinsdale School District 281. Ventilation Systems, Robbinsdale, MN; Estimating for Minneapolis-St. Paul International Airport Expansion,, Bloomington, MN; Commissioning Osseo Schools, Osseo, MN

KRECH, O'BRIEN, MUELLER & WASS, INC.

6115 Cahill Avenue Inver Grove Heights, MN 55076 Tel: 651/451-4605 Fax: 651/451-0917 E-mail: jkrech@komw.com www.komw.com Established 1987

James H. Krech PF. Michael J. Lisowski PE Daniel J. O'Brien AIA Brady R. Mueller AIA

Cindy Douthett Nagel Firm Personnel by Discipline Structural Engineers 3 Architects 5 Architectural Interns 2 Other Professional 2 **Technical** 3 Administrative 2 17 Total

KOMW offers structural engineering, architecture, interior design and construction management services. Registered structurally in 24 states, typical structural projects include industrial, commercial, institutional, ecclesiastical, forensic, agricultural, blast resistance, and hazardous waste containment. Specialties include granular material storage, hazardous liquid containment, corrosive environments, blast resistance, and aluminum greenhouse design.

Minnesota Diversified Industries, Grand Rapids, MN; Silver Tree Suites Condominiums, Deep Creek Lake, Maryland; Oak Hills Park Warming House and Shelter, St. Louis Park, MN; Crossroads Church, Lakeville, MN; Buell's Landscape Center, Hastings, MN; International Union of Operating Engineers Local 49, Training Facility, Pine City, MN

LANDFORM

510 1st Avenue North, Ste. 650 Minneapolis, MN 55403 Tel: 612/252-9070 Fax: 612/252-9077 E-mail: info@landform.net www.landform.net Established 1994

Other Office: Phoenix, AZ

Continued on next column

Darren Lazan RLA Stephen Johnsten PE Carolyn Krall AIA Kendra Lindahl AICP Marlin "Butch" Larsen PE

Firm Personnel by Discipline Civil Engineers 16 Architects 2 19 Other Professional Technical 12 Administrative 8 Total 57

Landform provides civil engineering, planning, landscape architecture, land surveying and architectural services. Our broad range of local and national clients includes developers, architects, corporate/commercial groups, builders, cities and other government entities. Specialties

are retail, hospitality, office, residential, medical, campuses and institutional.

Mound Harbor Renaissance.

Mound, MN; Applebee's, Multiple Midwest Locations; Methodist Hospital, St. Louis Park, MN; Stone Bay, Orono, MN; Andover Clocktower Commons, Andover, MN; The Retreat

at Garden Gate, Woodbury, MN

LARSON ENGINEERING OF **MINNESOTA**

3524 Labore Road White Bear Lake, MN 55110 Tel: 651/481-9120 Fax: 651/481-9201 E-mail: info@larsonmn.com www.larsonengr.com Established 1979

Other Offices: Naperville, IL; Appleton, WI; Norcross, GA; St. Louis, MO; Phoenix, AZ

Lee Granquist PE Kesh Ramdular PE Henry Voth PE Firm Personnel by Discipline 6

Civil Engineers Structural Engineers 25 Technical 7 8 Administrative Total 46

Larson Engineering of Minnesota offers engineering services in both STRUCTURAL (including architectural, curtain wall and industrial), and CIVIL (including pavement management and athletic facilities).

Continued on next column

STRUCTURAL: Sauk Rapids High School, Sauk Rapids, MN; Arizona Cardinal Stadium (CW), Phoenix, AZ; Wynn Las Vegas Hotel (CW), NV. CIVIL: Centennial Track Reconstruction, Montana Words Housing Development; Excel Energy Pavement Management Programs

LHB

21 West Superior Street, Ste. 500 Duluth, MN 55802 Tel: 218/727-8446 Fax: 218/727-8456 E-mail: joellyn.gum@lhbcorp.com www.lhbcorp.com Established 1966

Other Offices: Minneapolis, MN

William D. Bennett Joseph D. Litman PE Jay B. Bergman PE Timothy E. Korby PE David M. Sheedy PE David T. Williams PE

Firm Personnel by Discipline Civil Engineers 12 Structural Engineers 9 Mechanical Engineers 8 **Electrical Engineers** 5 Licensed Laned Surveyors 3 Architects 21 Other Professional 18 Technical 41 Administrative 28 **Total Staff** 145

LHB provides survey, civil, electrical, mechanical, and structural engineering. We design engineering systems for buildings, site development, and infrastructure for clients in government, public works, education, healthcare, pipeline, workplace, industrial, and housing. LHB's high performance design considers social, environmental, and economic concerns. Our building performance design helps manage ownership costs.

St. Louis County Courthouse HVAC Replacement, Phases I and II, Duluth, MN; St. Paul Port Authority Westminster, Junction Business Center Site Development, St. Paul, MN; MnDOT Glen Road Interchange Bridge Nos. 82029 and 82031, St. Paul. MN; Chatfield Wastewater Treatment Facility Expansion, Chatfield, MN; Enbridge SEP II 450 Miles of 24" Pipeline, Wisconsin to Illinois; Woodland Avenue Street Improvement, South I Phase, Duluth, MN

LIGHTOWLER JOHNSON **ASSOCIATES**

700 Main Avenue Fargo, ND 58103 Tel: 701/293-1350 Fax: 701/293-1353 www.lightowlerjohnson.com Established 1954

Other Offices: Detroit Lakes and Moorhead, MN

PE

AIA

Stevan Dewald

Steve Goldade

Total

Steve Goldade	7 417 3
Timothy Olson	PE
Winton Johnson	PE
Troy Tooz	PE
Cameron Merkel	PE
-	
Firm Personnel by Discipli	ine
Civil Engineers	2
Structural Engineer	2
Mechanical Engineers	5
Electrical Engineers	3
Registered Land Surveyor	1
Architects	4
Other Professional	1
Technical	23
Administrative	3

Lightowler Johnson Associates performs mechanical, electrical, structural, and civil engineering design services. We specialize in industrial, commercialand hospitality projects. We work with architects and private clients to create exceptional projects.

Soybean Processing Plant, Brewster, MN; HOM Furniture Store, Fargo, ND; SDSU Residence Hall, Brookings, SD; Becker County Human Services Addition, Detroit Lakes, MN; Holiday Inn Express, Jacksonville, FL; I.R. Bobcat Rooftop Units, Gwinner, ND

LOUCKS ASSOCIATES

7200 Hemlock Lane, Ste. 300 Minneapolis, MN 55369 Tel: 763/424-5505 Fax: 763/424-5822

home@loucksmclagan.com www.loucksmclagan.com Established 1976

Other Offices: Loucks McLagan, St. Paul, MN

	
Thomas G. Loucks	
Jeffrey A. Shopek	PE
Paul J. McGinley	PLS
Michael J. St. Martin	PE
John Bergh	

Continued on next column

Firm Personnel by Disci	pline
Civil Engineers	9
Other Professionals	6
Technical	35
Administrative	4
Total Staff	54

Services include site layout, grading, storm water conveyance systems, water quality retention ponds, wetland mitigation, EAW/EIS documents. Phase I and II ESAs, groundwater contamination, ALTA title surveys, site feasibility studies, comprehensive plan amendments, rezoning, permitting and approvals for industrial, commercial, retail, corporate campus, assisted living community, senior co-op, townhome and education facilities.

Allianz Corp. Facility, Golden Valley, MN; Protein Design Lab (PDL), Brooklyn Park, MN; Boston Scientific, Maple Grove, MN; Gramercy Co-op Senior Housing, Statewide Locations, MN; North Quadrant/Sibley Mixed Use, St. Paul, MN; Minnesota State Fair, St. Paul, MN

LUNDQUIST, KILLEEN, POTVIN & BENDER, INC. (LKPB)

1935 W. County Road B2, Ste. 300 Saint Paul, MN 55113 Tel: 651/633-1223 Fax: 651/633-1355 www.lkpb.com Established 1969

Leonard A. Lundquist	PE
John M. Killeen	PE
Peter A. Potvin	PE
Gayland J. Bender	PE
Stephen J. Gentilini	PE

Firm Personnel by Discipline	
Mechanical Engineers	8
Electrical Engineers	6
Technical	18
Administrative	8
Total	40
- 1	

Lundquist, Killeen, Potvin & Bender, Inc. (LKPB) is a mechanical and electrical consulting engineering firm that was founded in 1969. The firm provides services to clients in diverse settings such as post-secondary education, health care, corporate, commercial, municipal and recreational environments.

Continued on next column

Middlebury College, New Library, Middlebury, VT; Regions Hospital, Master Planning, St. Paul, MN; University of Minnesota Landscape Arboretum, New Visitor Center, Chaska, MN; Mill City Museum, Minneapolis, MN; Carlson Towers, Minnetonka, MN; Minnesota State Capitol, Infrastructure Upgrades, St. Paul, MN

MATTSON/MACDONALD, INC. 1516 West Lake Street, Ste. 102 Minneapolis, MN 55408 Tel: 612/827-7825 Fax: 612/827-0805 E-mail: davem@ mattsonmacdonald.com Established 1983

David H. Macdonald	PE
Stephanie J. Young	PE
Firm Personnel by Discip	line
Structural Engineers	8
Technical	3
Administrative	1
Total	12
<u>-</u>	

Structural engineering services for commercial, educational, industrial, institutional and residential buildings. Design of new buildings, renovation and restoration of existing buildings. Experienced in the restoration and adaptive re-use of historic buildings.

Milwaukee Road Depot Restoration, Minneapolis, MN; Stone Arch Lofts, Minneapolis, MN; Wayzata City Hall and Library, Wayzata, MN; Uptown Transit Station, Minneapolis, MN; Hosanna Lutheran Church, Lakeville, MN; Boutwells Landing Seniors Community, Oak Park Heights, MN

MBJ, INC.

12 South Sixth Street, Ste. 810 Minneapolis, MN 55402 Tel: 612/338-0713 Fax: 612/337-5325 E-mail: jglasper@mbjeng.com www.mbjeng.com Established 1955

Other Office: Duluth, MN

Daniel E. Murphy	PI
Michael J. Ramerth	PF
-	
Firm Personnel by Disciplin	ne
Structural Engineers	31
Technical	9

3

43

Continued on next column

Administrative

Total

Provides structural engineering services for all building types including educational, medical, commercial, parking, technology, historic, entertainment, religious, hospitality, and housing totaling approximately \$450 million in new construction annually. Services include feasibility studies, analysis, design, construction documentation, field observation, special inspections and parking ramp condition surveys. Member U.S. Green Building Council.

UMD James I. Swenson Laboratory Science Building, Duluth, MN; Grande Market Place, Burnsville, MN; Edina Public Schools, Southview Middle School and Valley View High School, Edina, MN; Abbott Northwestern Heart Hospital, Minneapolis, MN; Wells Fargo Operations Center, Shoreview, MN; SEI Data Center, Oaks, PA

McCONKEY JOHNSON SOLTERMANN, INC.

241 Cleveland Avenue S., Ste. B2 St. Paul, MN 55105 Tel: 651/698-5626 Fax: 651/698-5628 E-mail: mjseng@qwest.net Established 1978

Richard W. Johnson PF. Christian Soltermann PE

Firm Personnel by Discipline 3 Structural Engineers 2 Technical 1 Administrative 6 Total

Structural engineering consulting services for commercial, industrial, institutional, public and residential projects. Structural assessments of existing structures. Design office that stresses cooperation, communication and a knowledgeable exchange of ideas. Licensed in 11 states.

Project for Pride in Living, Headquarters, Minneapolis, MN; Lot 270 Condos, St. Paul, MN; Owatonna Lakes and Rivers Cinema 10, Owatonna, MN; Wally McCarthy's Hummer, Roseville, Rogers, MN; Beltrami County Office Building, Bemidji, MN; Bankwest of Rockford, Rockford, MN

MICHAUD COOLEY ERICKSON

333 South Seventh Street, Ste. 1200 Minneapolis, MN 55402 Tel: 612/339-4941 Fax: 612/339-8354 E-mail:

rtaylor@michaudcooley.com www.michaudcooley.com Established 1946

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Dean A. Rafferty	PE
Douglas C. Cooley	PE
Monty L. Talbert	
Joseph A. Tennyson	

Firm Personnel by Discip	line
Mechanical Engineers	59
Electrical Engineers	46
Administrative	13
Total	118

MCE designs HVAC, plumbing, fire protection, electrical, illumination, security, life safety, audio visual, building automation, voice data and other special systems. Feasibility and deficiency studies, reports and master planning. Tenant representation and fit-up services, commissioning, facilities management and IAQ analysis.

Wells Fargo Shoreview Operations Center, Shoreview, MN; University of Minnesota, Regis Center for the Arts, Minneapolis, MN; Humphrey Terminal, Bloomington, MN; Boston Scientific, Maple Grove, MN; Target Stores, Nationwide, U.S.A.; Guthrie Theatre, Minneapolis, MN

MJP ASSOCIATES, LTD.

4362 Oakmede Lane White Bear Lake, MN 55110 Tel: 651/426-7037 Fax: 651/426-6643 E-mail:

mike@mjp-associates.com www.mjp-associates.com Established 1993

Michael J. Preston	PE
Firm Personnel by Discipl	line
Structural Engineers	1
Administrative	.5
Total	1.5

Specialized structural engineering services tailored to high-end residential projects, specialized component evaluation, and miscellaneous structures including investigative studies, feasibility studies, structural analysis and design, preparation of contract documents, and construction observation.

Continued on next column

Park Nicollet Heart and Vascular Center Monumental Stair; Exterior Metal Stud Design, Various Walgreen Pharmacies; Sundeep Residence, chanhassen, MN; Leaf Observation Tower, Red Wing, MN; Field Stone Retaining Wall Designs, Various Locations

REIGSTAD & ASSOCIATES, INC.

192 West 9th Street, Ste. 200 St. Paul, MN 55102 Tel: 651/292-1123 Fax: 651/292-8015 E-mail: greigstad@reigstad.com www.reigstad.com Established 1979

Other Office: Biloxi, MS

Gordon H. Reigstad	PE, PhD,
_	SE
Firm Personnel by Di	scipline
Structural Engineers	12
Technical	14
Administrative	4
Total	20

Provides structural design for all types of projects utilizing steel, concrete, masonry, and timber systems, along with pre-stressed and post-tensioned concrete and space frame systems. Specialty structural designs include multistory floating buildings, along with marine design, barge modifications, mooring dolphins and, since 2001, providing anti-terrorist designed structures for military.

University of Minnesota, Mankato Athletic Facility, Mankato, MN; Lawson Parking Garage Renovation, St. Paul, MN; Hard Rock Casino, Hotel, and Parking Garage, Biloxi, MS; Epic Convention Center, Madison, WI; U.S. Joint Maritime Operations and Training Facilities, Camp Leieune, NC; University of Alabama Stadium, Mobile, AL

RLK-KUUSISTO, LTD.

6110 Blue Circle Drive, Ste. 100 Minnetonka, MN 55343 Tel: 952/933-0972 Fax: 952/933-1153 E-mail: info@rlk-kuusisto.com www.rlk-kuusisto.com Established 1959

Other Offices: Hibbing, Duluth and Ham Lake, MN

John dietrich	ASLA
Vern Swing	PE
John Jamnick	PE
Michele Caron	PE
Gary Brown	PE
loe Samuel	PE

Continued on next column

Firm Personnel by Disci	pline
Civil Engineers	44
Architects	5
Other Professionals	31
Technical	2
Administrative	12
Total	99

RLK-Kuusisto, Ltd. is a professional consulting firm specializing in civil engineering, transportation, surveying, planning and landscape architecture. We provide services to developers, property owners, and municipalities who focus on commercial, residential, industrial and infrastructure redevelopment. Specialized services are site development approval, value engineering, and are comprehensive to site specific engineering design and detail.

National Market Center, Blaine, MN; Valley Green Corporate Center, Shakopee, MN; Gift of Mary Children's Home, Eagan, MN; Crystal Shopping Center Re-development, Crystal, MN; Savage Crossings, Savage, MN; Upsher-Smith Corporate Campus, Maple Grove, MN

SCHOELL & MADSON, INC. 10580 Wayzata Boulevard, Ste. 1 Minnetonka, MN 55305 Tel: 952/546-7601 Fax: 952/546-9065 E-mail: mail@schoellmadson.com

www.schoellmadson.com Established 1956

Other Office: Elk River, MN

Dana Swindler

Total

Kenneth Adolf	PE
Daniel Nickols	RLS
John Karwacki	PE
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Firm Personnel by Disc	ipline
Civil Engineers	9
Other Professional	15
Technical	22
Administrative	3

49

Civil engineering (commercial, residential, industrial, retail), municipal, site planning, landscape architecture, system studies, design and construction/ contract administration. Land surveys, ALTA, CIC, GPS, Topographic, Construction and As-Built. Wetland, natural resource services, environmental site assessments, cultural resources/archaeological assessment, regulatory compliance and permitting.

Shakopee Public Utility Service Center, Shakopee, MN; Wooddale Church, Eden Prairie, MN; Wolf Lake Professional Center, St. Louis Park, MN; Stone Creek Village, Plymouth, MN; Gander Mountain, Lakeville, MN; Sandstone Federal Correctional Facility, Sandstone, MN

SEBESTA BLOMBERG

2381 Rosegate Roseville, MN 55113 Tel: 651/634-0775 Fax: 651/634-7400 www.sebesta.com Established 1994

Other Offices: Boston, MA; Chicago, IL; Ames, IA; Rochester, MN; Rosslyn, VA; Dallas, TX; Colorado Springs, CO; Shanghai PR China Contact: Brad Kafka

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James J. Sebesta	PE
Paul J. Blomberg	PE
Rebecca T. Ellis	PE
John A. Carlson	PE
Dean r. Sharpe	PE
Oleksa P. Breslawec	PE

Firm Personnel by Discipline Mechanical Engineers 77 **Electrical Engineers** 26 Chemical Engineers 5 Civil Engineers 4 Structural Engineers 2 **Environmental Engineers** 4 Architect 1 Other Professional 73 Administrative 31 Total 223

Sebesta Blomberg is a specialty engineering and management consulting firm providing services to institutional, industrial, health care, energy and government markets nationwide. Services include: utility infrastructure modernization and optimization, building systems design and analysis, commissioning, architectural lighting, controls and automation, process engineering, power generation, transmission and distribution, facilities management support, training and documentation, and construction services.

University of Minnesota, Minneapolis, MN; The Pentagon, Arlington, VA; 3M, Saint Paul, MN; University of Maryland at College Park, College Park, MD; Mayo Foundation, Rochester, MN; Minnesota Historical Society, Saint Paul, MN

Continued on next column

SHORT ELLIOTT HENDRICKSON INC. (SEH®)

Butler Square Building, Ste. 710C 100 N. 6th Street Minneapolis, MN 55403 Tel: 612/758-6700 Fax: 612/758-6701 www.sehinc.com Established 1927

Other MN Locations: St. Paul, Minnetonka, St. Cloud, Brainerd, Cannon Falls, Duluth, Virginia, Grand Rapids, Gaylord, Glencoe, Rochester and Worthington

Other Locations: Chippewa Falls, Rice Lake, New Richmond, Wausau, Madison, Appleton, Sheboygan and Milwaukee, WI; Chicago, IL; Lake County and Gary, IN; Sioux Falls, SD; Cheyenne, WY; Boulder, Denver, Grand Junction, Westminster, Fort Collins and Pueblo, CO; Cedar Rapids, IA; Helena, MT; Houghton and Novi, MI; Omaha, NE

David Pillatzke

Nancy Schultz

Michael Thielen

Administrative

Total

WHICHACI THICKH	1 1
Steve Schreurs	PE
Steve Gausman	AIA
Firm Personnel by Disciplin	ne
Civil Engineers	230
Structural Engineers	11
Mechanical Engineer	3
Electrical Engineers	12
Environmental Engineers	9
Sanitation Engineers	14
Architects	22
Other Professional	127
Technical	258

Full-service professional consulting firm specializing in civil, structural, electrical, mechanical, traffic, transportation, environmental and water resources engineering, architecture and landscape architecture; GIS; community planning and construction administration. Projects include municipal building, water, wastewater, highway, airport, flood control and industrial/educational/institutional sector projects.

U.S. Fish and Wildlife Interpretive Center, Oak Harbor, OH; Mound Public Safety Facility, Mound, MN; Airport Control Tower, St. Cloud, MN; Fortune Bay Golf Resort Club House, Vermilion, MN; Arrival/Departure Building, Redwood Falls, MN;

Continued on next column

Government, Forestry and Maintenance Facility for Washburn County, Shell Lake, WI

STEEN ENGINEERING, INC. 5430 Douglas Drive North Crystal, MN 55429 Tel: 763/585-6742 Fax: 763/585-6757 E-mail: steen@steeneng.com Established 1993

PE
PE

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Firm Personnel by Discip	line
Mechanical Engineers	13
Electrical Engineers	10
Administrative	3
Total	26

Steen Engineering provides all aspects of Mechanical and Electrical Engineering design from feasibility studies to construction administration for its clients. We have design experience in corporate, municipal, medical, hospitality, institutional and retail providing HVAC, plumbing, fire protection, lighting, power distribution, life safety, automatic temperature control, energy and analysis and deficiency studies.

Grand Lodge Hotel and Waterpark of America, Bloomington, MN; Buffalo Wild Wings, Nationwide; New Life Christian Center, Princeton, MN; Hotels/Motels (AmericInn, Country Inn & Suites, Hilton Garden Inn, Holiday Inn, Marriott); The Shoppes at Arbor Lakes Tenant Fit-ups, Maple Grove, MN; Numerous Independent, Assisted and Skilled Nursing Facilities, Nationwide

PE

AIA

117

803

STRUCTURAL DESIGN ASSOCIATES, INC.

6860 Shingle Creek Parkway, Minneapolis, MN 55430 Tel: 763/560-5300 Fax: 763/560-5400 E-Mail: sda@sdaeng.com www.sdaeng.com Established 1989

Other Office: Brainerd, MN

Gregory J. Duerr	PE
— Firm Personnel by Discip	line
Structural Engineers	6
Technical	3
Administrative	1
Total	10

Continued on next column

Structural Engineers providing design, construction documents, reports, and construction administration services for projects in the educational, industrial (manufacturing, warehousing, equipment supports, and repairs), commercial, municipal, medical, and renovation fields. Services provided to Architects, Owners, Contractors, Developers and others.

Waconia Middle School, Waconia, MN; Buffalo High School, Buffalo, MN; Green Bay Packaging Addition, Wausau, WI; Conference Center for Andersen Windows, Bayport, MN; Redwood Falls Hospital Addition, Redwood Falls, MN; Brentwood Hills Apartments, Inver Grove Heights, MN

TKDA 1500 Piper Jaffray Plaza 444 Cedar Street Saint Paul, MN 55101-2140 Tel: 651/292-4400 Fax: 651/292-0083 E-mail: aefacilities@tkda.com www.tkda.com Established 1910

Other Offices: Grand Rapids, MN; Aurora, IL

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Richard N. Sobiech	PE
William E. Deitner	PE
Robert A. Boyer	PE
Vincent T. Montgomery	PE
Dean A. Johnson	AIA
Firm Personnel by Discipl	ine
Civil Engineers	79
Structural Engineers	2
Mechanical Engineers	6
Electrical Engineers	4
Planners: Transportation,	
Urban/Regional	3
Architects	8
Landscape Architects	2
Technical	55
Administrative	33
Total Staff	192

Planning, design, and construction engineering for mechanical, electrical, structural, municipal, water, wqastewater, highway, bridge, railroad, airport, architectural, and landscape architectural projects.

Block 19 Parking Ramp, St. Paul, MN; College of St. Scholastica Wellness Center, Duluth, MN; Saint Paul College Trades Area Classroom Renovation, St. Paul, MN; North St. Paul City Hall, Police and Fire Station, North St. Paul, MN; Hennepin County Recycling Center Expansion, Brooklyn Park, MN; McLeod County Materials Recovery

Facility, Hutchinson, MN

ULTEIG ENGINEERS

5201 East River Road, Ste. 308 Minneapolis, MN 55421-1027 Tel: 763/571-2500 Fax: 763/571-1168 E-mail: info@ulteig.com www.ulteig.com Year Established 1944

Other Offices: Detroit Lakes, Fargo and Bismarck, ND; Sioux Falls, SD

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Bob McCauley	PE
Dan Sargeant	PE
Walt Gregory	RLS
Mark Sornsin	PE
Todd McInerney	PE
Loren Winters	PE
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Firm Personnel by Discipline Civil Engineers 19 Structural Engineers Mechanical Engineers 5 **Electrical Engineers** 25 Fire Protection Engineer 1 Registered Engineer Designer 1 Surveyors 38 Architects Other Professional/Technical 63 Administrative 27 Total 220

Commercial Electrical for electric, data, emergency power, and security systems; Mechanical Engineering for HVAC, automation/ temperature contro, and plumbing; FIRE Protection Engineering for protection and suppression; Structural Engineering for a variety of buildings and structures; Site Design for commercial and private development, parks, and sports complexes; Civil Engineering for water, wastewater, and stormwater systems; Hydrology and Hydraulic Services; Municipal Engineering; Airports, Bridges and Transportation Engineering; Survey Services, including legal; topograhic; ROW acquisition; construction staking; ALTA; GPS, platting; and underground utilities.

Village in the Park Senior Housing Building, St. Louis Park, MN; New Horizon Day Care Centers, Minneapolis Metro Area, MN; King Science Hall Addition, Minnesota State University at Moorhead (MnSCU System), Moorhead, MN; St. Joseph's Hospital, Brainerd, MN; Joint Use Facility, Moorhead/Clay County/Mn-DOT, MN; Bismarck Municipal Airport Terminal, Bismarck, ND

VAN SICKLE, ALLEN & ASSOCIATES, INC.

2955 Xenium Lane North, Ste. 10 Plymouth, MN 55441 Tel: 763/559-9100 Fax: 763/559-6023 E-mail: sstangeland@ vansickleallen.com www.vansickleallen.com Established 1978

Other Offices: Hutchinson, KS

Richard Van Sickle
Scott Stangeland
S. (Shawn) Shahriar
Keith Jacobson
Gene Haldorson
Bernie Jansen

Firm Personnel by Discipline
Civil Engineers 4
Structural Engineers 15
Project Managers/Designers 5
Technical 12
Administrative 4
Total 40

Structural and Civil Engineering services for commercial, corporate, educational, retail, government, health care, hotel, senior housing and parking facilities. Engineering and planning for industrial and agribusiness including food and dairy processing facilities; shipping and handling facilities; grain storage, handling and processing; ethanol facilities; manufacturing; and power plants.

New Guthrie Theater, Minneapolis, MN; Fort Snelling Army Reserve Building, Fort Snelling, MN; Southdale Square, Edina, MN; Meridian Crossing, Richfield, MN; Sysco Food Warehouse Expansion, Moundsview, MN; Apple Valley City Hall, Apple Valley, MN

WENZEL ENGINEERING INC.

10100 Morgan Avenue S. Bloomington, MN 55431 Tel: 952/888-6516 Fax: 952/888-2587 E-mail: weieng@mcleodusa.net www.wenzelengineering.com Established 1990

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Lowell E. Wenzel	PE
Patricia A. Cole	PE
Jeff A. Segar	PE
Steve Rivard	PE

Continued on next column

Firm Personnel by Discipline Structural Engineers 4 Technical 1 Administrative 1 Total 6

Wenzel Engineering, Inc. is a Structural Engineering Firm dedicated to understanding and meeting our clients' goals. Our experience includes new facilities, renovations, additions, and investigations for commercial, industrial, public, retail, educational, religious and healthcare clients.

Iowa State Capitol Renovation, Des Moines, IA; American Indian Resource Center, Bemidji State University, MN; Marketplace Lofts, Hopkins, MN; Lamoreaux Building Addition, Minneapolis, MN; Pfizer Corporation, Holland, MI; Leech Lake Tribal College, Cass Lake, MN

WESTWOOD PROFESSIONAL SERVICES, INC.

7599 Anagram Drive Eden Prairie, MN 55344 Tel: 952/937-5150 Fax: 952/937-5822 E-mail: wps@westwoodps.com Established 1972

Other Offices: St. Cloud and Brainerd, MN

Dennis Marhula	PE
Dwight Jelle	PE
Martin Weber	PE
Paul Greenhagen	LS
Richard Wiebe	LA
Bruce Grivna	LS
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Firm Personnel by Disc	ipline
Civil Engineers	17
Other Professional	
(LA & RLS)	24
Technical	68
Administrative	11
Total	120

Westwood is a Minnesota-based, full-service engineering consulting firm, specializing in land development, and providing planning, landscape architecture, surveying, civil engineering and traffic services to private and public agencies. Westwood was established in 1972, and now operates three Minnesota offices, with the headquarters in Eden Prairie and branch offices in St. Cloud and Brainerd, MN

Continued on next column

West Ridge Market, Minnetonka, MN; Super Targets, Lakeville and Blaine, MN; Evermoor, Rosemount, MN; Liberty on the Lake, Stillwater, MN; Cobblestone Lake, Apple Valley, MN; Minneapolis Traffic Operations Project, Minneapolis, MN

WIDSETH SMITH NOLTING

7804 Industrial Park Road Baxter, MN 56425 Tel: 218/829-5117 Fax: 218/829-2517 www.wsn-mn.com Established 1975

Other Offices: Alexandria, Bemidji, Crookston, MN; Grand Forks, ND

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Bruce Buxton	PE
Don Anderson	PE
Reed Becker	AIA
Kevin Donnay	AIA
Paul Richards	AIA
David Kildahl	PE
_	
Firm Personnel by Di	isciplina

Firm Personnel by Discipline
Civil Engineers 22
Structural Engineers 3
Mechanical Engineers 4
Electrical Engineers 1
Sanitary and Transportation
Engineers 3

 Engineers
 3

 Architects
 14

 Other Professional
 14

 Technical
 61

 Administrative
 18

 Total Staff
 140

WSN is a fully-integrated engineering, architecture, land surveying and environmental services firm. Our engineering group includes: Civil - primarily municipal and water resources; Structural - project specific, industrial and bridges; Mechanical/Electrical - HVAC, plumbing and lighting. Our complete team solves a variety of design and construction issues from planning to completion.

ISD 181 Forestview Middle School, Baxter, MN; Sanitary District (ALASD) System Improvements, Alexandria Lakes Area, MN; City of Crookston Well System Improvements, MN; Tastefully Simple, Inc. Office and Warehouse Renovation and Expansion, Alexandria, MN; Crow Wing County CSAH 20, MN; Water Tower #3, Bemidji, MN

YAGGY COLBY ASSOCIATES

717 Third Avenue SE Rochester, MN 55904 Tel: 507/288-6464 Fax: 507/288-5058 E-mail: info@yaggy.com www.yaggy.com Established 1970

Other Offices: Mendota Heights, MN; Mason City, IA; Delafield, WI

Donald Borcherding	PE, RLS
Chris Colby	AIA, CID
Scott Samuelson	PE
Jose Rivas	AIA
Robert Ellis	
Dale Allen	PE
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Firm Personnel by Die	cinlina

Firm Personnel by Discipline Civil Engineers 45 Structural Engineers 2 Transportation Engineers 9 Geo-technical Engineers 2 Architects 5 Other Professional 40 Technical 51 Administrative 26 180

Municipal, Transportation, Land Development, and Building and Site Services including grading and utility plans, storm water management, water and wastewater treatment and permitting, parking lots, traffic studies, geotechnical and structural design, boundary and topographical surveys, construction grading, subdivision plats, ALTA's, agency permitting, landscape plans, wetland delineation, and environmental studies.

St. Bernard's Catholic Church, Stewartville, MN; Mayo NE Clinic, Rochester, MN; Merchants Bank, Lakeville, MN; GatewayTerrace, La Crosse, WI; Menards South, Rochester, MN; Grandview Commons, Burnsville, MN

Rochester Art Center

Location: Rochester, Minnesota Client: Rochester Art Center Architect: Hammel Green and Abrahamson, Inc. (HGA) Project principal: Hal Henderson, AIA Project manager: Bob Lundgren, AIA Project lead designer: Kara Hill, AIA Project architects: Cheryl Amdal and Jim Butler, AIA Landscape architect: Ted Lee Lighting designer: Pat Hunt Additional project team member: Dan Grothe General contractor: Market & Johnson Mechanical engineering: Vicki Violet (HGA) Electrical engineering: Terry Tangedahl (HGA) Civil engineering: Mark Flumerfelt (HGA) Structural engineering: Tony Staeger (HGA) Stone: Winona Travertine Limestone, Biesanz Flooring systems/materials: Market & **Johnson** Window systems: Ford Metro Architectural metal panels: Progressive **Building Systems** Concrete work: Market & Johnson Millwork: Ken Giese Photographer: Peter Kerze Photography

St. Francis de Sales Catholic Church

Location: Morgantown, West Virginia Client: Diocese of Wheeling-Charleston Architect: Rafferty Rafferty Tollefson Architects Principal-in-charge: Craig Rafferty, FAIA Project manager: Chip Lindeke, AIA Project architect: Chip Lindeke, AIA Project lead designer: Craig Rafferty, FAIA Project team: Mark Nesset, AIA; Jan Knutson, AIA; Dick Rafferty, FAIA; George Rafferty, FAIA; Lee Tollefson, FAIA; Ed Durand, AIA; Martin Thompson, AIA; Scott Anderson, AIA; Lisa Parker; Leon Wang; David Heller, AIA; Giang Tran; Rob Rafferty Liturgical consultant: James Moudry Structural engineering: BKBM Engineers -Ron LaMere, Katie Russell Mechanical engineering: LKPB Engineers -Len Lundquist, Rick Patterson Electrical engineering: LKPB Engineers -

Civil engineering: McMillen Engineering -Chad Stafford Lighting designer: LKPB Engineers -Rick Rustad Interior design: Rafferty Rafferty Tollefson Architects Landscape architect: Riverview Landscape Architecture - Michael Biafore Acoustical/audio consultant: Robert F. Mahoney, Curtis Kasefang Code consultant: Joseph Faust Liturgical artists: Alexander Tylevich, Bill Hoppen General contractor: March Westin Company - Jerry Beafore, Ron Beafore Mechanical contractor: Wayne Crouse -**Ed Walters** Electrical contractor: Barnes & Brass -Rick Wallace Fire protection: Heritage Fire Protection -Phil Hutcheson Flooring systems/materials: Sanders Floor Covering - Charlie Crandall, Crossville Ceramics Ceilings/drywall: Blackhawk Interiors -Joe Whipkey Woodwork: March Westin Company Window/curtainwall systems: S & M Glass Architectural metal roofing/siding panels: Don Miller Roofing - Donnie Miller Concrete work: March Westin Company Structural steel: March Westin Company Precast floor plank: Pittsburg Flexicore Sanctuary seating: Ratigan-Schottler Manufacturing Appointments: Cold Spring Granite, St. Paul Fabricating/Decorating, Gruppo

Hartley Nature Center

Architectural Metals

Photographer: Steve Bergerson,

unless otherwise noted

Location: Duluth, Minnesota

Interior design: SJA Architects

Client: Hartley Nature Center/City of Duluth Architect: SJA Architects, AIA Principals-in-charge: Kenneth Johnson, AIA (design); Ronald Stanius, AIA construction documents); Rickar Stanius, AIA (construction administration) Project architect: Brian Morse, AIA Project team: Greg Cooper; Dee Schmidt

Civil engineering: SEH - John Hinzmann, John Krysiak

Structural engineering: Krech & Ojard Consulting Engineers - Dave Krech, Craig Jouppi

Mechanical engineering: Foster Jacobs & Johnson, Inc. - Jim Johnson (principal), Quentin Olson (lead mechanical designer)

Electrical engineering: Foster Jacobs & Johnson, Inc. - John Pilegaard, Nick Kujala

Lighting designer: Foster Jacobs & Johnson, Inc. - John Pilegaard Photographer: Jeff Frey

New Ulm Civic Center

Location: New Ulm, Minnesota Client: City of New Ulm Architect: Rozeboom Miller Architects, Inc. Principal-in-charge: Ted Rozeboom, AIA Project designer: Victor Pechaty, AIA Project architect: Victor Pechaty, AIA Job captain: Cornel Bandelin, AIA Project team: Ben Braun, Assoc. AIA; Peter Graffunder, AIA; Andrew Kordon, Assoc. AIA; Roxanne Lange; Glenn Waguespack, Assoc. AIA Structural engineering: LS Engineers Mechanical engineering: Dolejs Engineers Electrical engineering: Dolejs Engineers Civil engineering: Bolton-Menk Inc. Landscape architect: Damon Farber Assocates Landscape project team: Damon Farber, Craig Nelson General contractor: Heymann Construction Precast concrete wall panels: Gage Brothers Concrete Products, Inc. Window systems: CMI Architectural, New Ulm Glass Architectural metal panels: Copper Sales Una-Clad

Fort Snelling LRT Station

Photographer: Dana Wheelock

Translucent wall panels: Kalwall,

Concrete work: Heymann Construction

W.L. Hall Company

Location: Fort Snelling, St. Paul, Minnesota Owner: Minnesota Department of Transportation Prime consultant: URS Corporation Architect: Cuningham Group Architecture, P.A.

Rick Rustad

Principal-in-charge: Victor Caliandro, AIA
Project manager: Roger Kipp, AIA
Project lead designer: Victor Caliandro, AIA
Project team: John W. Cuningham, FAIA
(project design collaborator), David
Stahl (project designer), Brad Kaspari
(independent artist)

Structural engineering team: Meyer Borgman and Johnson, Inc. Landscape architect: Jim Harbaugh Landscape project team: Craig Nelson Photographer: Steven Dahlman

50th Street LRT Station

Location: Minneapolis, Minnesota
Owner: Minnesota Department of
Transportation
Prime consultant: URS Corporation
Architect: Meyer, Scherer & Rockcastle, Ltd.
Principal-in-charge:
Garth Rockcastle, FAIA
Project manager: Brian Carney
Project lead designers:

Project lead designers:
Garth Rockcastle, FAIA; Karen Wirth
(collaborating artist)

Photographer: Bob Perzel

Lake Street LRT Station

Location: Minneapolis, Minnesota
Owner: Minnesota Department of
Transportation
Prime consultant: URS Corporation
Architect: Julie Snow Architects, Inc.
Principal-in-charge: Julie Snow, FAIA
Project manager: Ken McQuade, AIA
Project architects: Bob Ganser,
Tim Bicknell, AIA

Project team: Lucas Alm, Tatsuhiko Tanaka Artist: Thomas Rose Photographer: Bob Perzel

Downtown East/Metrodome LRT Station

Location: Minneapolis, Minnesota Clients: Minneapolis Community Development Agency; City of Minneapolis Traffic & Parking Services; Metropolitan Sports Facilities Commission

Architect: Hammel, Green and Abrahamson, Inc. (HGA) Principal-in-charge: Steve Fiskum, AIA Project manager: Brian J. Fitzgerald, AIA Project architect: Jim Butler, AIA Project lead designer: Phillip Koski, AIA; Andrew Leicester (artist) Structural engineering: HGA – Rick Abbott, Joy Beers

Ramp structural engineering: Walker Parking Consultants Mechanical engineering: HGA – Tim Anderson and Nancy Green

Electrical engineering: HGA – Leigh Harrison Lighting designer: HGA – Pat Hunt Civil engineering: HGA – Jim Husnik Landscape architecture: Gary Fishbeck, Emanouil Spassov

General contractor: Graham/Penn-Co Construction (ramp); Gen-Con Construction (plaza, arcade & concessions)

Canopy and platform design-build team: TKDA with Minnesota Transit Constructor Photographer: Bob Perzel

Government Center LRT Station

Location: Minneapolis, Minnesota
Owner: Minnesota Department of
Transportation
Prime consultant: URS Corporation
Architect: Barbour LaDouceur Architects
Architect of record: TKDA
Principal-in-charge: John Barbour, AIA;
Janis LaDouceur, AIA
Project team: John Barbour, AIA;
Janis LaDouceur, AIA; Kurt Gough,
Assoc. AIA; Seitu Jones (artist)
Photographer: Neil Kveberg

Warehouse District LRT Station

Location: Minneapolis, Minnesota
Owner: Minnesota Department of
Transportation
Prime consultant: URS Corporation
Architect: Elness Swenson Graham
Architects Inc.
Principal-in-charge: David Graham, AIA
Project manager: Terry Gruenhagen, AIA
Project lead designer: Tracey Jacques, AIA
Project team: Tracey Jacques, AIA;
Terry Gruenhagen, AIA; Richard Peske

Artist: Karen Wirth
Photographer: Dana Wheelock;
Tracey Jacques, AIA; Josh Jansen

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Ralph Rapson & Associates, Inc.; Ralph Rapson, FAIA WHO:

This 50,000-square-foot and 80-foot-high conservatory will serve WHAT:

as a temperate house, sheltering and tempering the micro-climate within and bringing an early spring to Minnesota. The design, based on an irregular nesting of a polyhedron with 11 faces called a hendecahedron, evokes mounds of sparkling diamonds. The structure will house, among other functions, a Minnesota landscape room, a tropical room and ecological area, a children's room, an interactive garden, a bird and insect room, an alpine

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WHERE: University of Minnesota Landscape Arboretum, Chanhassen

Construction is planned for 2007-2008 WHEN:

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