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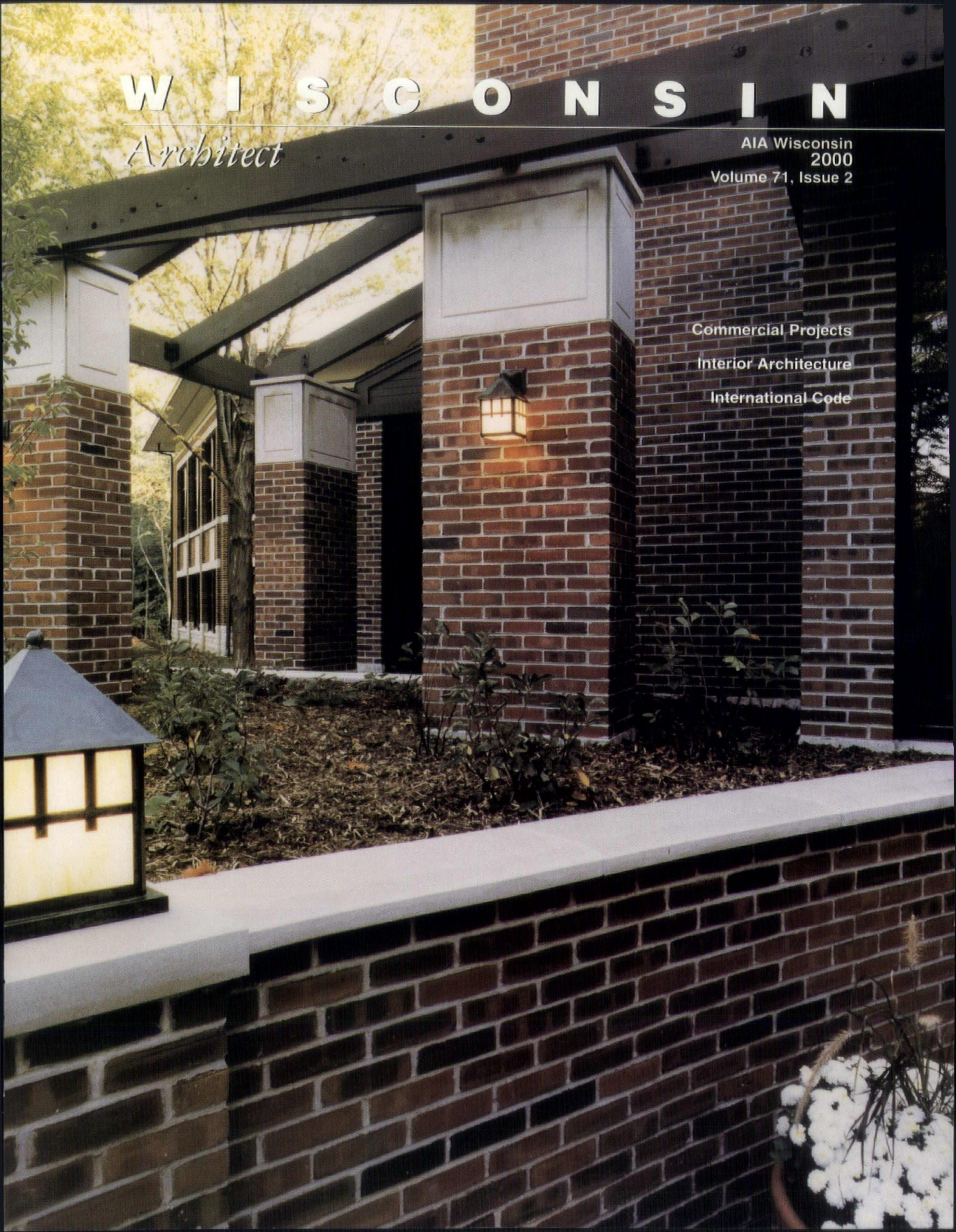

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Next issue: Residential Projects

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Features

Projects

On the Cover
National Funeral Directors Association Headquarters
Architect: Plunkett Raysich Architects
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Departments

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WAPA

Wisconsin Chapter American Planning Association

WAPA Smart Growth Workshop

Wednesday June 21, 2000
8:30 a.m. - 4:45 p.m.
Park Plaza Hotel & Convention Center
Oshkosh, Wisconsin

Fulfilling Wisconsin's new Comprehensive Plan definitions and Smart Growth provisions will challenge planners and public officials throughout the state. **This workshop will be the only WAPA event this year,** and will provide guidance in implementing the new law. Program details will be mailed by May.

Please mark your calendar and plan to attend this planning workshop conference.

For program & registration contact Thomas Favour, Coordinator @ (608)238-4943.
Or mail request to 118 Marinette Trail, Madison, WI 53705
www.uwm.edu/Org/wapa/

At the 2000 AIA Grassroots Leadership Conference, keynote speaker Richard Farson stated that **"Architects design human relationships."** This statement either means that architects are qualified to undertake Cupid's matchmaking role or it describes an important interface between the populace and the built environment. For each person, at each place, each time, the experience is different. This is truly the excitement for our profession.

In the increasingly image-driven arena of commercial architecture, this idea is ever present. To quote a popular advertising slogan, **"Image is Everything™."** Regardless of what type of product or service your client is selling, it's the architect's responsibility to, directly or indirectly, express the owner's image through architecture.

In this issue of *Wisconsin Architect* we highlight eleven commercial projects from across the state, including the offices of two of our colleagues. The presentation of well-detailed commercial architecture to the public expands our sphere of influence beyond our home state and country. This is a well-deserved accolade.

Michael P. Eberle, AIA
Editorial Advisory Board

by Patrick J. Conway, AIA

Masonry Wall Selection Tips

"There are a lot of masonry products and wall systems out there; how do I select the appropriate masonry wall for my project?"

Let's start with Exterior Masonry Wall Systems 101. There are three primary groups: barrier walls, drainage walls and rainscreen walls. Either category can be loadbearing or non-loadbearing.

Barrier walls are typically single-width CMU (concrete masonry units) walls used for retail, commercial, educational and industrial applications. Designed to prevent water from migrating to the inner surface of the wall, they are sometimes constructed with bricks or a composite of brick and CMU. Thick historic walls are barrier walls; modern walls with filled collar joint are also barrier walls. With modern tendencies to design lighter, faster, stronger and cheaper (see *WA* 70:1, p. 14), they are less prevalent.

Drainage walls (often referred to as "cavity walls") are a relatively new wall system used in the last 100 years or so. The cavity was introduced to reduce thermal bridging and water penetration. They are typically brick on CMU back up or sometimes CMU veneer on CMU back up, or even brick on steel stud back up. Such walls are typically used for educational, commercial and institutional buildings. They require a systems design for movement, moisture control and anchorage.

Rainscreen walls are a close cousin to the cavity wall, with modifications. The premise is to eliminate the force that drives water through the veneer. Rainscreen walls are typically the most expensive (initially) and complex masonry walls to build, and they are *required* on all major projects in Wisconsin.

Now that you know your masonry wall types, all you need to do is balance each system's aesthetics, function and budget. Then, select the most appropriate one. Easy, right?

Not exactly. Each of the three primary masonry wall systems ranks very differently when looked at within its respective attribute category. In an IMI survey of 240 architects in Minnesota, for example, function turned out to be the most important wall attribute, followed closely by aesthetics. Budget was ranked last.

When looking at **aesthetics** in this survey, we considered design flexibility, perceived value (strength and permanence) and overall appearance. As expected, aesthetic values tend to be more subjective.

More objective is **function**, where values include constructability, weather resistance (specifically, driving rain and freeze thaw) and durability.

Budget concerns, the most objective, were broken into three areas: initial cost for materials and labor, energy usage and maintenance. Together these attributes equal life-cycle cost.

A final consideration is whether to go loadbearing. Project criteria include compartmentalization, multi-story, infrequent future wall changes and shear walls. Common loadbearing wall applications include apartments and condominiums, hotels, nursing homes, dormitories, offices, schools and residences. The advantage to the owner is low maintenance, fire resistance, quality and strength, and cost effective construction. The advantage to the architect is purity of solution (the wall functions as both structure and envelope) and a sense of permanence, along with environmental strengths, such as sound and fire control and resistance to air and moisture infiltration.

So the short answer is: there is no short answer. You really do need to understand the pros and cons of each of the three primary masonry wall types; then prioritize wall attributes of

aesthetics, function and budget before you can find the best masonry wall type for your project. This includes accounting for such criteria as life expectancy, fire rating, use and abuse profiles, environmental issues, etc.

But before you panic, there is a handy guide. IMI's Wall Comparison Matrix covers the full spectrum of considerations mentioned above, for a quick – albeit unscientific – overview of the choices and considerations, with precast concrete panel, metal panel and double plate glass wall types thrown in as well. The top scorer, from cost to design flexibility to maintenance concerns, is a drainage wall system of stone on CMU back up, followed closely by the same system with brick and a rainscreen wall of brick and CMU back up. For help in determining what may be best for your specific project criteria, contact IMI.

There are many good options and, with a little bit of homework, you are sure to find the right one for your project. Then, let us know when you're ready for Masonry Walls 201.

EDITOR: The author is the International Masonry Institute Wisconsin Area Director. Pat can be reached at: pconway@imiweb.org or (800) 464-0988. This article is second of a six-part masonry series devoted to the use of masonry systems to address masonry topics such as: flashing, movement joints, accessories, codes and standards, wall types, tolerances, workmanship and construction inspection.

IMI is a nonprofit trade organization representing all trowel trades: brick, block, stone, tile, marble, terrazzo, cement finishing and restoration. IMI is funded by the International Union of Bricklayers and Allied Craftworkers and the Contractors who employ them.

by Ron Buchholz, R.A., James B. Smith, P.E. and Nancy Ayres

Wisconsin Architects and the International Building Codes

Professionalism, ethical practice and a desire to protect the public health, safety and welfare are shared by members of AIA Wisconsin and members of the code administration, building inspection and regulation field. Public protection is not only a shared human value, but a responsibility assigned to all those registered to practice the profession of architecture in Wisconsin.

To assist architects in the practice of their profession and to achieve safety in the built environment, the first single family of model building construction codes has been introduced. These codes, the International Codes, have moved through a series of orderly steps that included public review, discussion, formal comment and final approval. In February 2000, the International Codes became available, including the first editions of the *International Building Code* (IBC), *International Residential Code* (IRC) and *International Fire Code* (IFC) as well as the 2000 editions of the *International Plumbing Code* (IPC), *International Mechanical Code* (IMC) and the *International Fuel Gas Code.*

International Code Council

The Building Officials and Code Administrators International, the International Conference of Building Officials, and the Southern Building Code Congress International each previously developed three separate families of model codes. These codes, BOCA/National, Uniform and Standard, respectively, are widely used throughout the United States. Although regional code development has been effective, architects, as well as all members of the building professions, felt that the time had come for a single family of codes, and the three model code groups rose to the challenge.

In response to the rapid evolution of construction materials and technology, and the changing needs of the industry, the three regional code organizations established the International Code Council (ICC) in 1994 as a not-for-profit organization dedicated to developing a single set of comprehensive and coordinated national model construction codes. The purpose of the ICC is detailed in its mission statement:

> *The mission of the International Code Council is to promulgate a comprehensive and compatible regulatory system for the built environment, through consistent performance-based regulations that are effective, efficient and meet government, industry and public needs.*

International Codes

The new family of compatible codes are known as the International Codes. Although the International Codes are new, they are technically sound codes incorporating proven safety concepts and techniques in use across the country for many years. Among the members of the International family of codes are the IBC, IRC, IFC, IMC, IPC and the IFGC mentioned above and the *International Energy Conservation Code*, *International Private Sewage Disposal Code*, *International Property Maintenance Code*, and *International Zoning Code*.

"This is a great accomplishment and shows the commitment of the three model code groups to work together with one voice to improve public safety in the built environment through the production of a single comprehensive and coordinated family of model codes," says Jon Traw, president of ICBO.

The International Codes have received widespread support from leading organizations and groups in the building industry, including the American Institute of Architects, Federal Emergency Management Agency, Building Owners and Managers Association International,

National Association of Home Builders, National Multi Housing Council, American Seniors Housing Association, National Apartment Association, Alliance of American Insurers and numerous other statewide and local associations within the construction industry.

Building, Residential & Fire Codes

The final language of the IBC, IRC and IFC was voted on in St. Louis, Missouri, in September 1999. In February 2000, the IBC, IRC and IFC became available worldwide for review and adoption. Nearly five years in the making and involving the coordinated efforts and talents of thousands of professionals, these International Codes reflect the best aspects of the three model codes.

In developing the IBC, IRC, and IFC each model code group assigned members to technical subcommittees, together covering all chapters of the existing model codes. These committees met frequently to compare code provisions concerning significant subject areas, including administration, occupancies, fire safety, egress and accessibility and structural requirements. Working in most cases from the existing document provisions, they decided which approach or combination of provisions would work best for the entire country.

The 2000 IBC, IRC and IFC contain the most up-to-date requirements for building safety in the United States, as well as internationally. Consolidated and refined by teams of the country's most qualified experts, the far-reaching in-depth method by which they were developed inherently makes the International Codes the best model codes available to date.

Major Issues

Major issues face Wisconsin's architects as they confront building regulations including:

- **Equal Application** - Equal application of the codes is primarily a function of training code enforcement personnel and the integrity of those involved in the process. The model code organizations involved in the ICC have a collective 150 plus years of experience in providing training programs in every aspect of building code enforcement and administration for enforcement professionals as well as related technical training for those subject to regulation under the model code documents. These efforts obviously do not guarantee equal application of the codes, but they go far to promote that possibility. No other organization or organizations in the U.S. have the record of effort and involvement in this arena that is represented collectively by the model code organizations.

- **Due Process** - Like equal application, due process is an issue that must be addressed in the training of code enforcement personnel, but it is also a function of the administrative provisions of the codes. The focus of the International Codes is on the administrative and procedural aspects as well as the technical aspects of the enforcement process. Emphasis on due process is an integral part not only of the code documents themselves, but also of the training and support documents provided to code enforcement personnel active in the ICC process.

- **Lack of Conflict Among Code Documents** - Correlation, coordination and integration are the watchwords of the ICC code system. The single family of codes, the International Codes, developed by the ICC constitute the most comprehensive, best correlated, best coordinated, best integrated package of model construction codes and the only complete family of codes currently available to local, state and federal agencies. The ICC suite of codes is complete for structural, fire and life safety, mechanical, plumbing, etc. The NFPA, for example, does not offer a complete suite, only portions of fire and life safety. The wisdom of this approach to a complete suite of codes is now apparent to others who have chosen not to be a part of the new national regulatory resource; and other organizations are scrambling to try to create imitations of this approach to model building regulatory documents. No other family or potential family of model regulatory documents can approach the level of the ICC codes in the elimination of conflict and confusion among its various elements at this time. It remains to be seen whether or not the level of interorganizational cooperation will be achieved by other organizations proposing to imitate the ICC approach to coordination, correlation and integration of construction codes.

- **Reduced Costs and Liability** - Using the complete suite of International Codes together eliminates incomplete regulation that may result in inadequate safety and possible liability on the part of building owners. Conflicts between differing code documents lead to higher construction costs as various regulatory authorities send the code user in different directions, likely causing delay in projects and redundancy in safety and construction features. Additionally, eliminating conflicts among code documents decreases time demands for regulators, which has staffing implications and speeds up the building permit approval process leading to decreased construction costs for owners and builders.

- **Open Process** - The ICC code development process is open to anyone with an interest in the codes. Code change proposals, motions for action on them, seconds, testimony and discussion may all be submitted by any member of the public in the ICC code process. For unchallenged code changes, the vote of the industry and governmental safety officials within the committee sessions determines the code provisions. Code development committees provide for industry participation in a voting capacity, but final action on all code change proposals takes place at the annual meetings of the model code organizations where voting is limited to member public safety officials who have no vested economic interest in the outcome of the process. This tried and tested process is essentially

the same as the processes that have served the ICC partner model code organizations throughout their respective histories. It assures that no vested interest dominates in the process and that the provisions in the codes reflect a primary concern for the public safety.

- **Cost Effective Requirements** - Architectural economics are part of every project; but materials and labor interests have a constant interest in influencing the codes to reflect their own economic concerns. Without carefully monitored balance in the code development process or an objective third party to serve as arbiter in the code development process, model codes can come to reflect economic interests that have little or nothing to do with the public safety that has always served as the rationale for government's regulatory intervention in the construction industry. In the case of the ICC process, that third party control lies in the hands of regulatory personnel who possess both the requisite technical expertise and the professional interest in the public safety which motivates their involvement in the process. This disinterest of the public safety official in materials combined with an interest in the public safety serve to maintain the focus of the codes on necessary minimum protection which will, nevertheless, provide reasonable assurances to the public that uses the regulated buildings.

Adoption of the International Codes reduces government spending and benefits taxpayers. Government agencies spend far less in resources when adopting the single family of International Codes. A suite of codes eliminates the need to develop reams of amendments to avoid conflict and helps to make regulatory authorities more readily available for current projects.

Wisconsin

The State of Wisconsin's involvement with building codes predates the history that exists among the three groups making up the ICC. The "safe place" law for commercial buildings that went into effect in 1914 was the first-ever statewide building code. Over the decades, adoption of one of the model codes has been discussed. In the past, much of the debate surrounding the adoption of a model code revolved around which of the three would best meet the needs of the state's regulatory officials, industry and residents. Once the ICC was formed, the Wisconsin Division of Safety and Buildings decided the time was right to revisit the subject. A commercial building code council was created to advise the Division of Safety and Buildings on the matter. In addition, specialty councils were formed to align with the ICC technical committees so that comparisons and recommendations would correspond accurately to the work of the ICC. Wisconsin is now well on the way to adopting the 2000 IBC as the "foundation" upon which the state's commercial building code is built. Adoption is planned for July 2001, with the code becoming effective beginning July, 2002.

Adoption of a single set of integrated and compatible codes by the State of Wisconsin will promote more consistency in the application of those codes relating to the built environment. Wisconsin's architects and all members of the construction industry will benefit from having requirements similar to those in adjoining states. Such consistency will lead to better quality construction, ease the burden of those design professionals practicing in multiple states, increase the pool of available "experienced" workers, reduce time needed to instruct new "out-of-state" hires, improve the comfort level in the partnerships between firms/contractors of different states, allow manufacturers to devote more time and money to research and development, streamline the building construction and regulatory process, and allow Wisconsin architectural firms to compete in an equitable manner both nationally and internationally on construction projects.

Wisconsin architects, builders, businesses and building owners that cross various jurisdictional boundaries will benefit because the International Codes will be used not only nationally, but internationally. Business in other jurisdictions, as well as other countries, will be similar because the model codes adopted will be the same as the Wisconsin building code. In addition, business peers from other parts of the country and globe will be resources due to familiarity with the same suite of codes. It is apparent that these factors will add to efficiency and cost saving for owners and builders.

The Future

As in the past, members of AIA Wisconsin will continue to add to the quality and safety of building construction in the state of Wisconsin. As set forth in its mission statement, ICC's goal is to provide a compatible regulatory system that meets the needs of the building profession community as well as those of the local community and its citizens. You are encouraged to become knowledgeable of the compatible family of International Codes and join in support of the International Codes.

EDITOR: If you are interested in additional information, contact the Wisconsin Division of Safety and Buildings at (608) 266-0251 or the ICBO Central Resource Center in Kansas City at (800) 321-4226. The International Codes are available through the ICBO Central Resource Center. Also visit www.icbo.org.

About the Authors: Ron Buchholz, R.A., is Deputy Administrator of the State of Wisconsin Division of Safety and Buildings. James B. Smith, P.E., is Program Manager of the State of Wisconsin Division of Safety and Buildings. Nancy Ayres has been with the International Conference of Building Officials for 26 years in the Kansas City Resource Center.

by Steven J. Strong

A New Generation of Solar Electric Architecture

The last two decades have brought significant changes to the design profession. In the wake of traumatic escalations in energy prices, shortages, embargoes and war, along with heightened concerns over pollution, environmental degradation and resource depletion, awareness of the environmental impact of our work as design professionals has dramatically increased.

In the process, the shortcomings of yesterday's buildings have also become increasingly clear: inefficient electrical and climate conditioning systems squander great amounts of energy; combustion of fossil fuels on-site and at power plants adds greenhouse gasses, acid rain and other pollutants to the environment; inside, many building materials, furnishings and finishes give off toxic by-products contributing to indoor air pollution; and poorly designed lighting and ventilation systems can induce headaches and fatigue.

Architects with vision have come to understand that it is no longer the goal of good design to simply create a building that's aesthetically pleasing – buildings of the future must be environmentally responsive as well. These architects have responded by specifying increased levels of thermal insulation, healthier interiors, higher-efficiency lighting, better glazings and HVAC equipment, air-to-air heat exchangers and heat-recovery ventilation systems. Significant advances have been made, and this progress is a very important first step in the right direction.

However, it is not enough. For the developed countries to continue to enjoy the comforts of the late twentieth century and for the developing world to ever hope to attain them, sustainability must become the cornerstone of our design philosophy. Rather then merely using less of the non-renewable fuels and creating less pollution, we must come to design sustainable buildings that rely on renewable resources to produce some or all of their own energy and create no pollution.

It may come as a surprise to most architects and their clients, but every building designed to rely on fossil fuel will become obsolete within its lifetime as the world's remaining reserves of oil are drawn down and prices rise to the point that simply burning oil for its thermal content can no longer be justified.

Oil industry analysts expect world oil extraction to peak within the next 5-10 years – that is, before 2010. We will then begin the long and irreversible downward slide where demand will greatly exceed supply and prices will escalate exponentially. As the era of cheap oil draws to a close, we must begin in earnest to develop other energy options to power our buildings as well as transportation, agriculture and industry.

One of the most promising renewable energy technologies is photovoltaic. Photovoltaic (PV) is a truly elegant means of producing electricity on site, directly from the sun, without concern for energy supply or environmental harm. These solid-state devices simply make electricity out of sunlight, silently with no maintenance, no pollution and no depletion of materials. Photovoltaics are also exceedingly versatile – the same technology that can pump water, grind grain and provide communications and village electrification in the developing world can produce electricity for the buildings and distribution grids of the industrialized countries.

There is a growing consensus that distributed PV systems that provide electricity at the point of use will be the first to reach widespread commercialization. Chief among these distributed applications are PV power systems for individual buildings.

Interest in the building integration of PV (known as BIPV), where the PV elements actually become an integral part of the building, often serving as the exterior weathering skin, is growing world-wide. Photovoltaic specialists from more than 15 countries are working within the International Energy Agency on a five-year effort to optimize the system. And, architects in Europe, Japan and the United States are now beginning to explore innovative ways of incorporating solar electricity into their building designs.

The Opportunity

Planners have envisioned large central-station utility-scale PV plants covering huge expanses of desert. While this vision has many favorable attributes, the downside includes the cost of the land, site development, structures, electrical distribution, utility interface and real estate taxes. In Europe and Japan, the lack of large open tracks of land effectively has precluded the central-station PV option. Another problem with centralization is the losses inherent in the grid's transmission and distribution system, which can be significant as power is transmitted over greater and greater distances. In addition, centralization fails to take advantage of the modular, distributable nature of PV technology. On the other end of the spectrum, distributed PV is an ideal response to the need for electrification of the mobile villages in developing countries, many of which lie in the sunniest areas of the world.

While both central-station and remote village power markets for PV are viable and growing today, the BIPV market will eclipse both in the years to come. In this market, building owners are already paying for façade and roofing materials and labor to install them. The land is already paid for, the support structure is already in place as the building, the building is already wired, the utilities are already connected and developers can finance the PV as part of their overall project. Another benefit comes from distributing the BIPV installations over a very broad geographical area and a large number of buildings, mitigating the effects of local weather conditions on the aggregate and producing a very resilient source of supply.

Innovative architects the world over are now beginning to integrate PV into their designs; and PV manufacturers are responding with modules specifically for BIPV applications, including integral roof modules, roofing titles and shingles and modules for vertical curtain wall façades, sloping the glazing systems and skylights.

Development of BIPV

The earliest BIPV system was a 7.5-kWp residential application completed in 1980. The Carlisle House, as it became known, was designed by Solar Design Associates and sponsored by the Massachusetts Institute of Technology and the U.S. Department of Energy. The house was all-electric with no fossil fuel burned on-site; and it generated a surplus of electricity, which was exported to the local utility grid via a 'net metering' arrangement.

Other early projects in the United States include the 200-kWp Solarex facility in Frederick, MD (1982) and the 325-kWp Georgetown University Intercultural Center in Washington, D.C. (1985). Aggressive efforts in Europe and Japan, begun in the early 1990s, have pushed the technology toward broader commercial acceptance. Today, more than 15 countries are participating in coordinated international activities, under the International Energy Agency's Task 7 working group, to develop and implement BIPV.

Designing with BIPV

It is essential to appreciate the context within which solar electricity can best function and contribute to a building. BIPV systems are only a part of the solution. We must address both sides of the energy use equation—supply *and* consumption. To maximize the soar contribution, the building should be designed to use energy most efficiently. Energy generated from renewable resources will contribute a great deal more to an energy-efficient building.

A high-integrity of thermal envelope with monolithic air and moisture barriers and superior, high-R-value glazing is desired. Further, passive solar strategies that reduce heating and cooling requirements should be employed along with daylighting and energy-efficient equipment, systems and end-use loads. Advanced mechanical systems such as heat recovery ventilation and geothermal heat pumps should be considered. And, solar thermal systems should be considered for space and water heating. All of these measures are good economic investments; and only within the context of this comprehensive energy-conscious design strategy can BIPV achieve its full potential.

In the past, incorporating PV into a building design required trade-offs and concessions in the architectural design process. Today, as PV manufacturers match products to building-industry standards and architects' requirements, this is changing. Companies in the United States, Japan and Europe are actively pursuing new module designs that displace traditional building materials. We are now also seeing the initial instruction of 'custom color' crystalline solar cells, including gold, violet and green, to add aesthetic variety in BIPV systems. In Europe, BP and Sunware Solartechnik have offered solar cells in colors while, in Japan, Showa Shell, Daido Hoxan and Kajima Corp. are working on similar technologies.

In the United States, in 1992, the U.S. Department of Energy launched a five-year program called "Building Opportunities in the U.S. for Photovoltaics" (PV:BONUS) to encourage the development of BIPV systems. Under this program, BP Solarex of Frederick, MD, a division of BP Amoco, working in conjunction with architectural curtainwall giant Kawner of Atlanta, developed a line of pre-engineered building-integrated PV components for commercial building façades and sloped glazing applications called PowerWall™.

Other PV building products also have been developed under the program, including United Solar Systems' (Troy, MI), tripled-junction amorphous

silicon (a-Si) PV roof shingles and standing-seam architectural metal roofing with PV laminates. BP Solarex is currently developing a line of transparent thin-film modules suitable for overhead glazing systems and vision glass under a second round of the PV:BONUS program, while glass fabricator Viracon (Owatonna, MN) is working on insulating glass BIPV components that will come to compete with and eventually replace architectural glazing.

Other architectural module designs employ glass superstrate, crystalline modules with space between the cells and opaque backings to provide diffused daylighting along with other electric production. Swiss companies such as Atlantis and Solution are making modules in unique sizes and shapes with custom cell sizes and spacings. Pilkington, with its expertise as a glass manufacturer, is building modules that replace conventional façade view and spandrel glass. PowerLight supplies insulated PV roofing systems for flat roofs; and Sanyo, the BMC Solar Industries GmbH, Atlantis and Plaston-Newtec are each building PV roofing tiles.

These new building-integrated photovoltaic components are providing a window into the future toward a whole new generation of solar architecture. With the right design, the sunlight falling on a building and its site can provide much of the power it requires. In urban areas, one can only imagine the power that will be generated by incorporating PV into the thousands of square kilometers of empty flat roofs and other available building surfaces that receive generous amounts of sunlight each day just waiting to be harvested.

Incentives

The U.S. federal government presently offers attractive tax incentives to encourage private investment in solar energy equipment and systems: an investment tax credit and an accelerated depreciation allowance. Both of these incentives apply to building integrated photovoltaic systems.

- **Investment Tax Credit:** A 10% investment tax credit is available on certain solar energy equipment and systems. This credit, otherwise known as the Business Energy Tax Credit, has been *permanently* incorporated as a part of tax code with the passage of the Energy Policy Act of 1992. (U.S. Code Citation: 26 USC Sec. 48.)

- **Accelerated Depreciation:** the federal government offers the five-year accelerated depreciation option for certain solar energy equipment and systems. (U.S. Code Citation: 26 USC section168.)

  The total contribution of these two incentives toward the cost of a BIPV system amounts to 42% for those clients with the federal tax liability.

Net metering is an attractive arrangement whereby the electric utility credits a BIPV system owner, on a one-to-one cost basis, for their surplus solar power produced versus the "conventional" electricity consumed. This allows the BIPV system owner to effectively use the utility grid in lieu of on-site storage.

With net metering, surplus solar-generated electricity in excess of instantaneous loads is fed back into the utility grid, effectively spinning the revenue meter backwards. (This actually happens in many states, whereas some utilities require two single-direction meters.) At the end of the billing period, any power produced in excess of the amount consumed is typically repurchased by the utility at the lower "avoided cost" rate, while any power consumed beyond the level of the power produced is sold to the consumer at the utility's standard rate.

Net metering is a win-win-win proposition, with the utility offsetting its very expensive peak-load kiloWatt-hours with consumer-supplied power in exchange for low-cost off-peak, or base-load, power, while the PV-system owner benefits by using the utility as a backup, avoiding the cost and maintenance of a battery storage system. This synergistic relationship reduces the utility's need for building additional power plants or wheeling power from outside its service territory. The third win is that society benefits from the development of clean power sources based on renewable energy.

Currently, Japan, Switzerland, the Netherlands, Germany and some 28 states in the United States (including Ariona, California, Colorado, Connecticut, Idaho, Indiana, Iowa, Maine, Maryland, Massachusetts, Minnesota, Nevada, New Hampshire, New Jersey, New Mexico, New York, North Dakota, Oklahoma, Oregon, Pennsylvania, Rhode Island, Texas, Vermont, Washington and Wisconsin) mandate net metering. Implementation is currently pending in Montana, Nebraska and Virginia. Net metering is of most value to owners of residential and small-to-medium scale commercial PV applications, where the solar harvest is more likely to exceed the load. When PV is used in larger commercial applications, the load is likely to be greater than the solar harvest at all times and no surplus will be available.

In June 1997, the President of United States announced that the federal government would work with businesses and communities to promote the installation of solar thermal panels and/or PV modules on one million roofs across the United States by the year 2010, with the goal of slowing the release of greenhouse gas emissions.

Under this initiative, the Department of Energy will work with partners in the building industry, local governments, state agencies, solar industry, electric service providers and non-governmental organizations to remove market barriers and strengthen grassroots demand for building applications of solar technologies. The Million Solar Roofs Initiative promises to bring together available national resources, in the federal government and among key national organizations, and focus them on creating a strong market for solar building applications.

Future Outlook

Today, there are more than 500,000 homes worldwide using PV to supply or supplement their electricity requirements, though all but 10,000 are rural or remote off-grid applications. In

addition, there are many thousands of commercial buildings powered by PV systems interfaced with the utility grid in Europe, Japan and the United States.

The potential opportunity for building integrated PV systems is enormous; and many companies are now beginning to work on the development and commercialization of specialized BIPV components and systems. Residential and commercial BIPV will likely be the nearest-term large-scale markets for PV in the developed countries. Residential and commercial buildings provide substantial surface area, allowing architects and systems designers to displace the cost of conventional materials and labor with PV. Building integrated systems produce power at the point of use, avoiding the costs and losses of transmission and distribution; and PV powered buildings send an important message to the world about their owners' environmental philosophy and commitment. This has proved to be a very important motivation for the early market adopters.

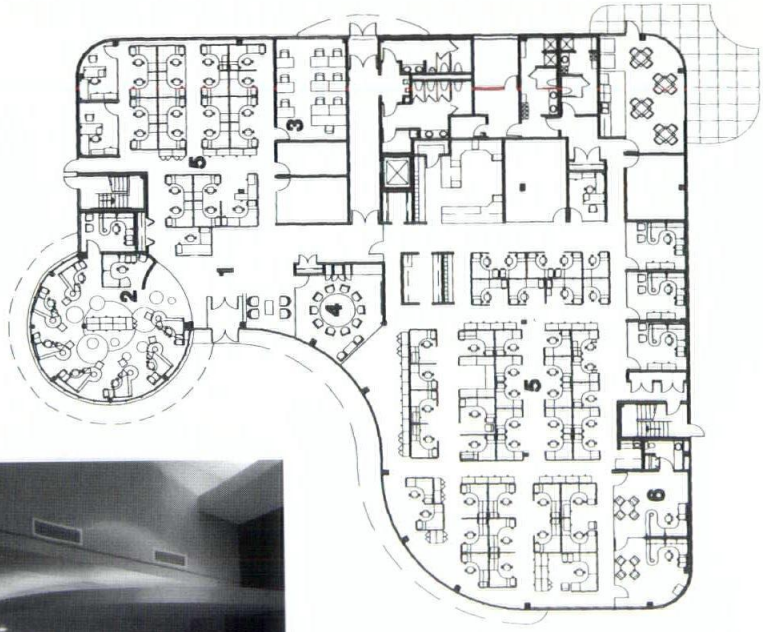
A major change in the world's energy use pattern and systems is coming as the era of cheap oil draws to a close. Over the past two decades, PV has moved from the research laboratory to commercial applications. Technology is now ready for wide-spread commercialization. With the participation of architects and building engineers, the technology is taking a progressively more sophisticated, elegant and appropriate role in building design, putting energy-producing buildings within our reach. As building-integrated PV components become an integral part of the form and aesthetic of the built environment, these systems will contribute greatly to a more sustainable future for their owners, their communities and society at large.

EDITOR: The author is president and founder of Solar Design Associates, Inc., an engineering and architectural firm specializing in environmentally responsive building technology and engineering and integration of renewable energy systems. He is a featured speaker at the AIA Wisconsin Convention, Parti'00.

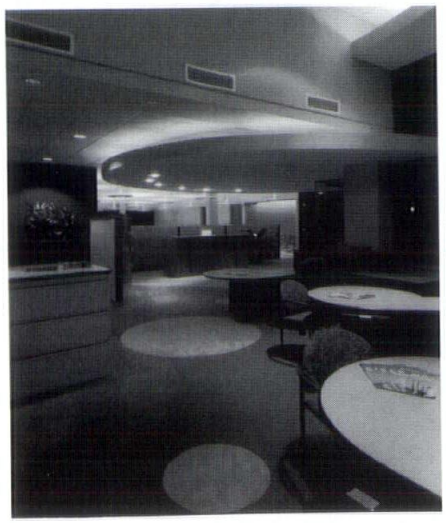
Project	**Adelman Travel**
Location	**Glendale, Wisconsin**
Architect	**Eppstein Uhen Architects, Inc.**
General Contractor	**Jansen Group, Inc.**

Adelman Travel, the largest corporate travel agency in Wisconsin, was seeking a stronger presence in the leisure travel market. The driving forces behind the decision to build were a need for more space and a desire to increase the company's visibility. The goal was to develop a building that stood out, yet respected the surrounding neighborhood aesthetic.

The new site is small, but strategically located at the crossroad of a residential neighborhood to the east and a business area to the north and south. The desire to take advantage of the great traffic site lines prompted a two-story 28,000 square-foot solution situated on the front of the site. The form of the building is a diagonally sliced box that presents a curved face pointed towards the intersection. A circular rotunda highlights this side of the building and creates a lantern-like effect during evening hour operations. The result of the building footprint is an inviting courtyard that coaxes visitors into the main lobby.



The curving façade of brick, glass and copper is symbolic of the continuous motion of global travel. The raked horizontal brick joints permit a flow unhindered by sharp angles. Copper clad overhangs vary in depth to provide a horizontal emphasis that lowers the perceived height of the building and respects the single-family homes to the east.



Interior details capture the carefree nature of travel through the use of color, fabric and circular forms. Bright colors in the rotunda bring to mind a Caribbean vacation and circles of color are scattered randomly on the windswept sand pattern of the carpet. Natural light from the floor to ceiling windows and saucer shaped indirect lighting create an aura of comfort in the open office areas. The building spaces are visually connected by glass partitions.

Photography: Al Gartzke, Howard Kapplan and Eppstein Uhen Architects, Inc.

Project	**Renschler Company Office Interiors Remodeling**
Location	**Madison, Wisconsin**
Architect	**The Renschler Company & Zingg Design**
General Contractor	**The Renschler Company**

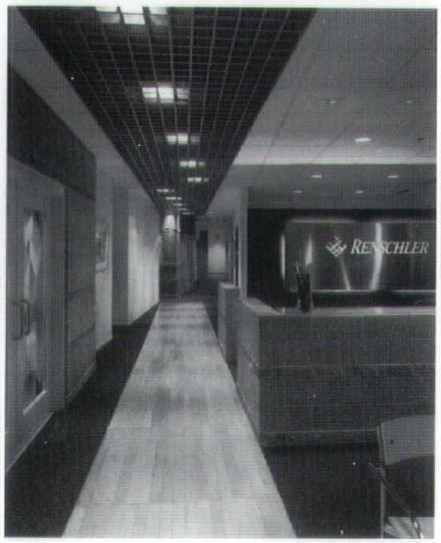
The Renschler Company sought to remodel its office space to create an environment of inspiration for their employees and clients. The office is located in a nondescript one-story multi-tenant office building, and so the interior was effectively the only way to adjust and enhance the perception of the company.

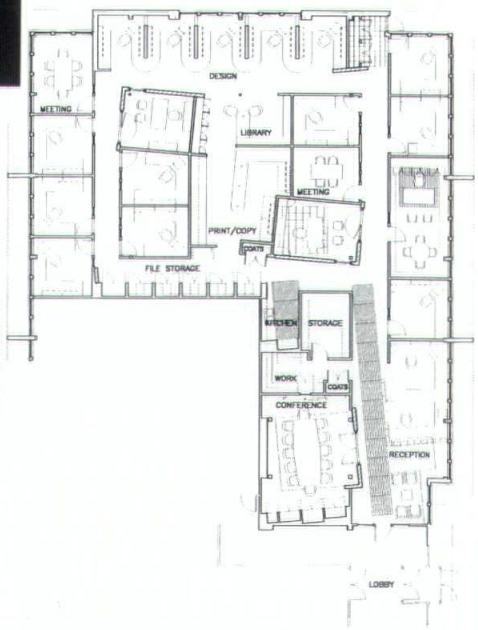
The intent was to showcase the abilities of the company in a spatially and aesthetically exciting office. The floor plan made use of a rectilinear layout with perimeter offices as an outlining grid. Selected new spaces were skewed from the grid, and common, yet non-typical, materials such as rough hewn stone and brick were introduced to accentuate the different functions within the office.

One major design objective was to create an environment that encouraged and enhanced the interdisciplinary teamwork that was critical to the company. This is accomplished by the open cubicle and office spaces, as well as intimate conference and meeting room spaces.

At 6,200 square feet in space, this office can now successfully house the creative energies of this building design and construction company.

Photography: Dale Hall Photography





Project	**Silgan Containers Corporation Technology Center**
Location	**Oconomowoc, Wisconsin**
Architect	**MSI General Corporation**
General Contractor	**MSI General Corporation**

Silgan Containers Corporation manufactures containers to hold food products for major food industry clients. This new two-story regional technology center is located on a 4.8 acre site in the Oconomowoc Corporate Center Industrial/Office Park. The 40,835 square-foot building is of brick, masonry and steel construction with insulated glass and aluminum window framing. The owner desired a signature building that would reflect their corporate image and convey to the community a message of solidity and high technology.

The program called for a variety of spaces, including offices, laboratory rooms and testing and storage areas, arranged in a compact efficient layout solution to meet the budgetary and scheduling restrictions of the project. As the facility was going to be used for testing products in tin cans at varying temperatures, transit conditions, interior coatings and shapes, the close proximity of the labs, testing and office areas were important for easy accessibility and quick communication between departments.

The site played a significant role in the layout of the facility. Situated on the bend of the office park drive, the main entry rotunda is on the corner of the building facing the curve in the street and flanked by office wings on both sides. Lab rooms and offices were located on the perimeter of the building, with windows to provide natural lighting and exterior views to create a pleasant working environment.

The arrangement of the building, as well as the structural elements, were designed with future expansion in mind.

Photography: Kehoss Studios

Project	**Third Wave Technologies, Inc. Corporate Headquarters**
Location	**Madison, Wisconsin**
Architect	**Strang, Inc.**
General Constractor	**Kraemer Brothers**

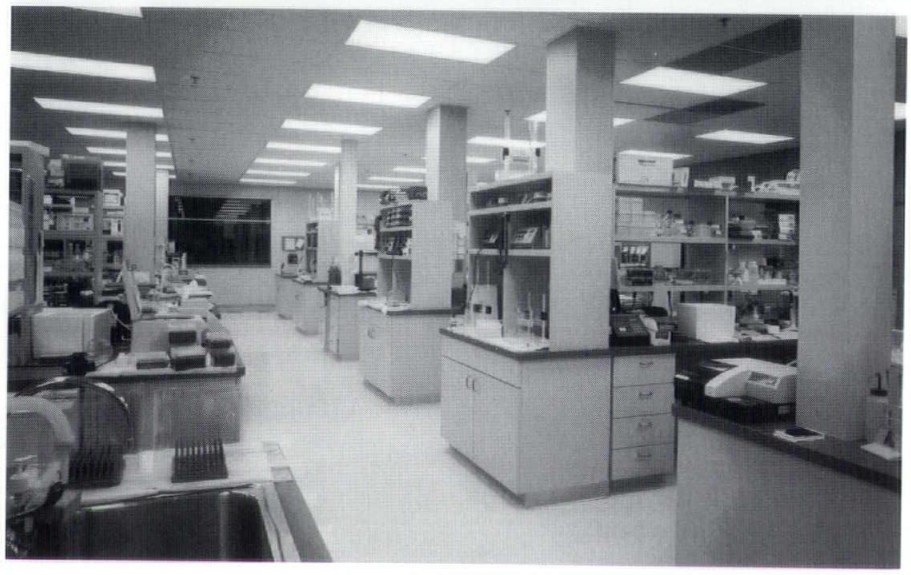
Third Wave Technologies was established as a research and development firm in 1993 for the life science and diagnostic markets. The focus is on innovative tools for DNA-based research, diagnostic and therapeutic monitoring. Due to dramatic increases in demand for their services as well as employee growth, Third Wave needed a new corporate headquarters facility. The fact that Third Wave would be leasing the new building from University Research Park (URP) added to the design challenge: the building must meet the programmatic requirements of Third Wave, but also be adaptable enough to accommodate future tenants and possess a high degree of curb appeal.

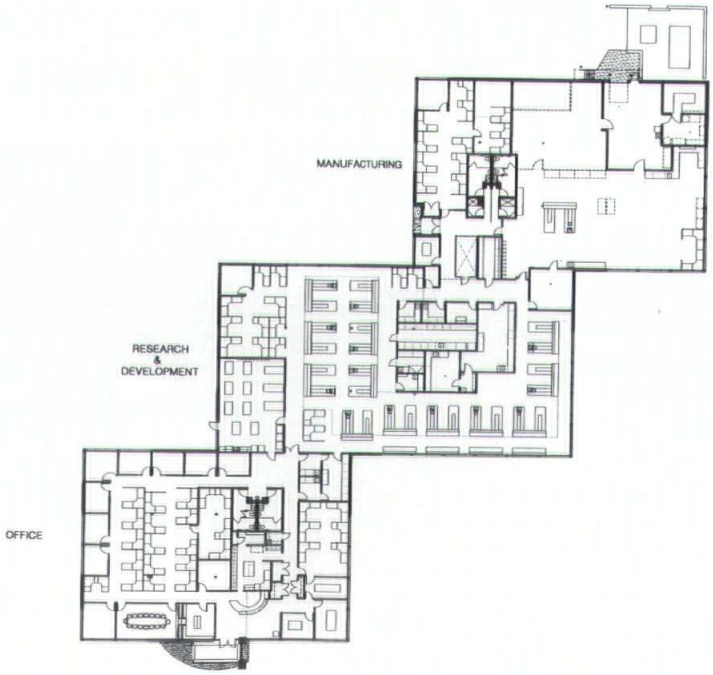
The solution developed was a single-story building comprised of three 8500 square-foot offset building masses for office space, research and development, and manufacturing. A number of highly specialized spaces are incorporated into the design, including a micro lab, instrument room and a level 3 bio-safety lab to support mutation detection, genetic identification, thermostable nucleases and nucleic acid detection.

Third Wave's company name and logo were used as a basis for thematic consistency throughout the design and are reflected in the stepped massing of the building, which is juxtaposed with the wave-like forms of the landscape. A double-helix theme, from the company logo, is incorporated in the tile patterns throughout the building. A modular floor plan and flexible materials respond to URP's requirements.

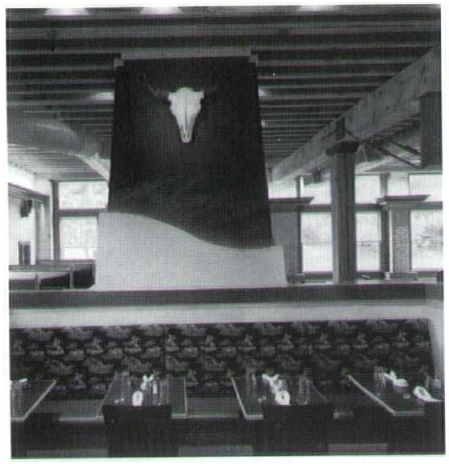
All in all, this functional, economical and imaginative building achieves the requirements of both tenant and owner and is now being used as a benchmark for similar research and development facilities.

Photography: Eric Oxendorf





Project	**El Dorado Grill**
Location	**Madison, Wisconsin**
Architect	**Linville Design**
General Contractor	**Krupp Construction**



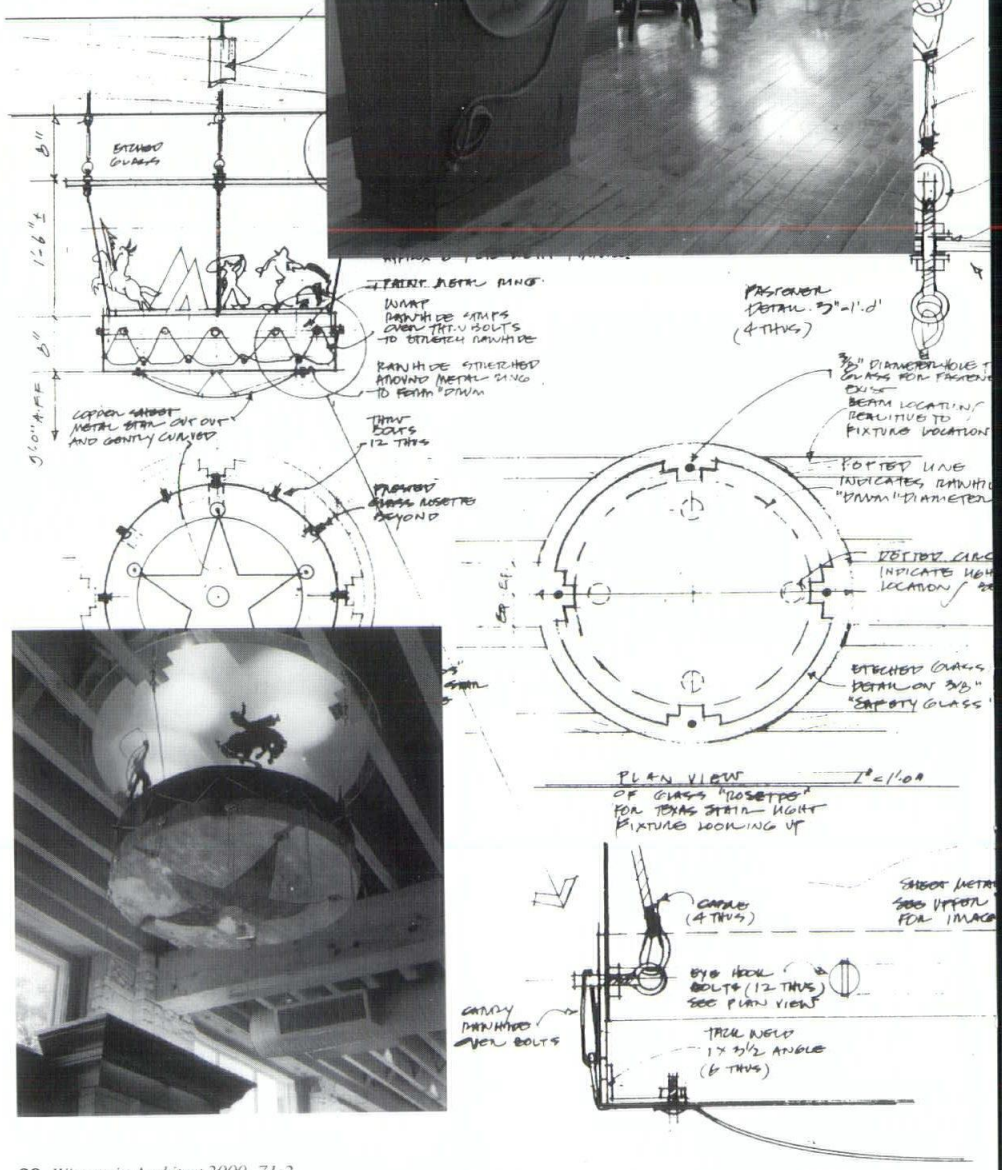
A predetermined, lease-negotiated, square-footage space created a situation that required the architect to mold the facility program to the preordained footprint. Originally a historic candy factory, the building had spent the past several decades as a retail equipment warehouse.

Of the many design challenges afforded by the building, the need to create warmth and light in an industrial building type was foremost. By concentrating on the exposed preexisting beam structure, wood flooring, and brick walls and by cleaning and sandblasting these materials, the intent was not to make everything new again, but to bring the materials to a state of patina, create the glow and romance of age without the grime created by operating next to a coal-fired power plant for many years.

Lighting was concealed by architectural detail, primarily though incorporating a light source within the exposed beams, which created a filtered sunlight effect. Through the use of textural finishing, the walls added to the atmosphere, with gold and blue colors to more deeply apply the western theme. The etched back bar has shadow boxes with western memorabilia and the use of leather and conchos on the booths are just a few of the details that add to the design solution.

Overall, the design creates an atmosphere of mystic western history in a subtle and unintrusive way.

Photography: Zane Williams



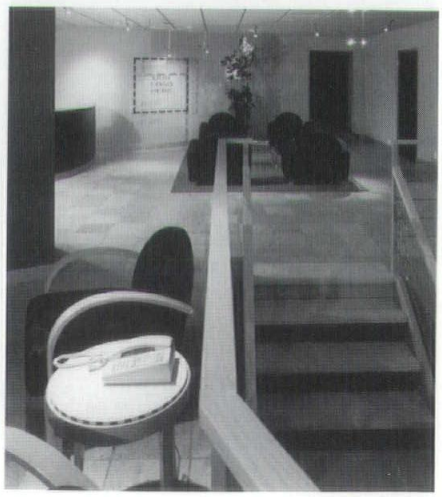
Project	**Cramer-Krasselt Company**
Location	**Milwaukee, Wisconsin**
Architect	**the Zimmerman Design Group**
General Contractor	**Comerford Development Resources**

Cramer-Krasselt is a prestigious advertising firm located in Milwaukee. After reviewing a number of alternative site locations, they chose to stay in the same location and remodel the 28,000 square-foot area that occupies two floors.

Included in the program were 48 semi-private offices, as well as 34 staff workstations, plus a variety of client presentation and conference rooms, libraries and multi-purpose areas. The owner desired a highly innovative and creative space, but the office had to stay open during construction, and the costs were required to stay within the $25 per square-foot limit set by the building management.

The space is situated in a renovated six-story building, and the design solution was limited by the existing architectural envelope and the 16'6" column spacing. An elevator bank and exit stairs are centered between the original building and a newer addition to the south, which dictated a central mixing space, vertical transportation route and lobby waiting area.

An angular pedestrian thoroughfare was established, creating a dramatic corridor presentation. The angular theme was then carried on through centralized client presentation rooms, perimeter executive offices and a core of workstations. All the spaces share natural exterior lighting.



The interior design scheme is accomplished by departmental color groupings to give identity to the customized staff workstations. Natural materials such as glass block, corrugated metals, painted drywall, etched glass, concrete stone and maple hardwoods kept the budget in check while providing a creative and inspiring environment.

Photography: Purcell Architectural Photography

Project	**Eye Contact**
Location	**Madison, Wisconsin**
Architect	**Linville Design**
General Contractor	**Krupp Construction**

A number of design challenges were presented by this remodeling/expansion project for an eye wear retailer. Eye Contact presented a straightforward program of infusing the existing and newly acquired neighboring space with a modern urban context.

The site was a mid-block downtown building constructed in the 1920s. Among the challenges were dark underdeveloped windows, an unknown structural system, ADA barriers, an uninviting entry and the need to effectively separate the exam and clinical activities from the retail portion of the business.

The design solution called for the display windows to be redesigned to allow for a more invitational entry by the use of materials and lighting. The layout organizes the store by zoning the various activities. Jewel displays for the more expensive items were developed and provide a unique setting and control at the same time, while general merchandise was made easily accessible, inviting the public deeper into the space and the displays beyond.

The indirect lighting concept and the surface materials used add a warm and personal touch to the space that create a feeling of casual elegance.

Photography: Joe DeMaio

Project	**Zingg Design Office**
Location	**Middleton, Wisconsin**
Architect	**Zingg Design**
General Contractor	**Poulsen Enterprises**

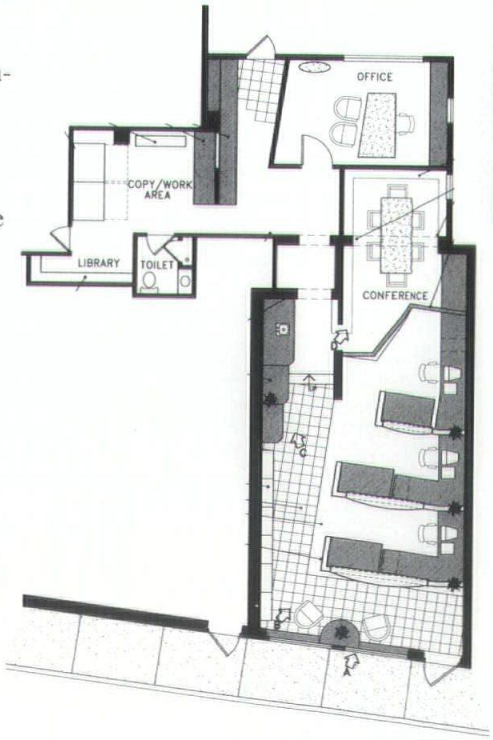
This 1,430 square-foot renovation project called for two retail spaces to be converted into a single office space with maximum curb appeal in a downtown location. The design goal was to emphasize the creative and innovate side of architecture. The site offered excellent street frontage; and the interior allowed for an exposed ceiling and structure.

The office was intended to be used as a teaching tool for clients and to feature open workstations with numerous different materials, finishes and lighting effects. Among the materials selected were wood veneer panels, plain sliced white oak, birdseye maple, natural teak, ash and ribbon striped mahogany to give clients the opportunity to view these wood types in use. Also utilized was natural stone, solid surfacing, a variety of decorative paint finishes, ceramic tile and wafer board for the ceiling and baseboard.

Lighting effects were designed to show the effect of light play in space. Cable lighting with low voltage halogen fixtures provided a unique way to accent and highlight the space, while miniature track lighting was used in a waterfall effect on the steeped cabinetry and at each workstation.

The overall affect is a space that is functional and aesthetically engaging while offering architectural clients the opportunity to see a variety of solutions within the office.

Photography: Poast Photography



Project	**Bull's Eye Credit Union**
Location	**Wisconsin Rapids, Wisconsin**
Architect	**Redmond Design**
General Contractor	**Redmond Group**

The program for this prominently located credit union called for the remodeling of the existing facility and an expansion to deliver improved services. Two-phase construction allowed the building to remain open throughout the project.

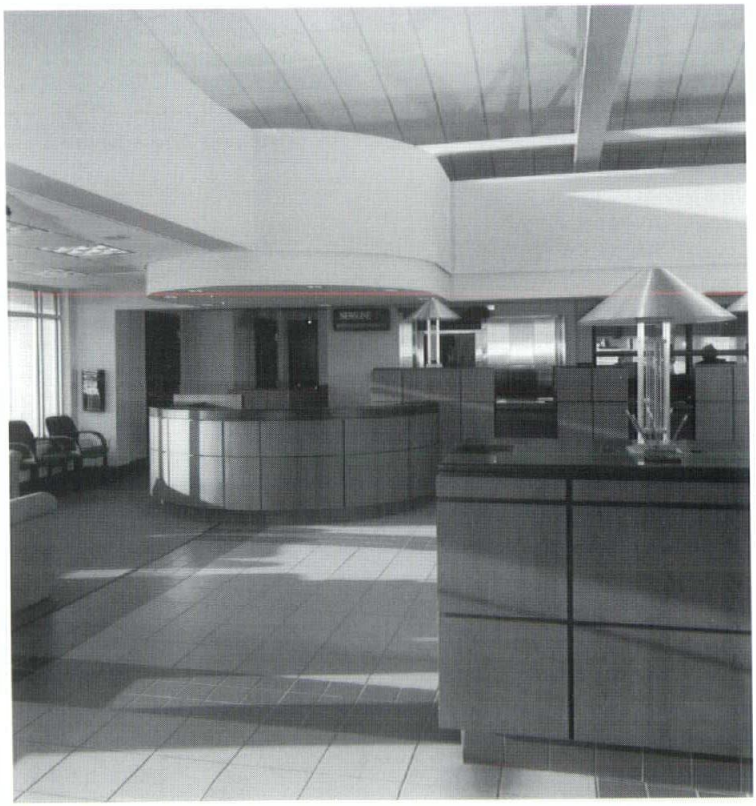
The design extended vehicular circulation to all sides of the building, allowing members to enter the front of the site, park and enter the lobby area, or to circulate to the back of the site for drive-up teller and ATM services.

A careful balance of minimal demolition and maximum reuse of existing building and site elements, due to a limited budget, was achieved by major budget allocation to new roofing, mechanical systems, interior alterations and furnishings, while only minor modifications to the site paving, drainage, signage and landscaping were required.

The recycled, previously hidden roof structure was exposed to the building interior and exterior to provide high-ceilinged, open public gathering space at the building center flanked by member service offices and the teller line. A glass clearstory provides light to the interior and opens to the street.

Use of cool white colors and woods combine to provide the formal atmosphere expected in an financial institution, with an inviting and welcoming aesthetic.

Photography: Edward J. Purcell



Before

Project	**General Electric Medical Systems Product Showcase**
Location	**Waukesha, Wisconsin**
Architect	**Welman Architects, Inc.**
General Contractor	**ABCO**

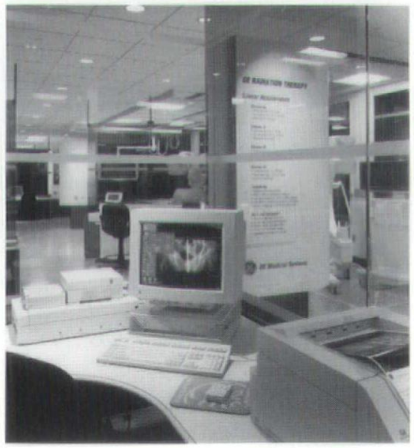
This project involved the renovation of an existing office space into a new products showcase. The client's goal was that this portion of the facility should become the showroom front door for visitors and employees, provide a hospital/clinical environment for the display of imaging equipment, be informational but flexible to accommodate the frequent product changes in medical technology and create an area that will develop as a source of pride for employees.

The design solution called for the Showcase to be striking and dominant. This was achieved on the exterior portion by the creation of a white painted, steel canopy with detailed lighting, landscaping and signage. A "working lab" concept was developed, which allowed the equipment to be fully functional while within the gallery setting. A high tech appearance was developed to match the display items; and the entry corridor acts as a glass walled galleria.

Inside the Showcase, each piece of equipment is given its own pod with a computer station for monitoring and presenting the equipment. Information "sails," essentially pedestals and flexible tech centers, were custom designed to heighten the viewing experience. A hidden network of floor trench ducts and ceiling supports allow for complete floor plan changes.

Opposite the Showcase is the greeting center, where customers can wait for demonstrations. The GEMS Showcase is now the focus for all new products at GE.

Photography: Ed Purcell



Project	**National Funeral Directors Association**
Location	**Milwaukee, Wisconsin**
Architect	**Plunkett Raysich Architects**
Contractor	**The Jansen Group**

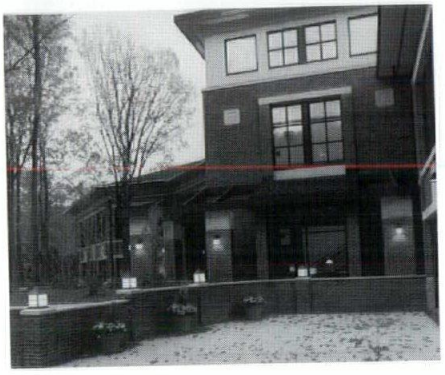
This 35,000 square-foot facility features a two-story office building located on a seven-acre heavily-wooded site with hard drops of exceptional size. The building is composed of a brick exterior, steel structure and steeply pitched shingle roof.

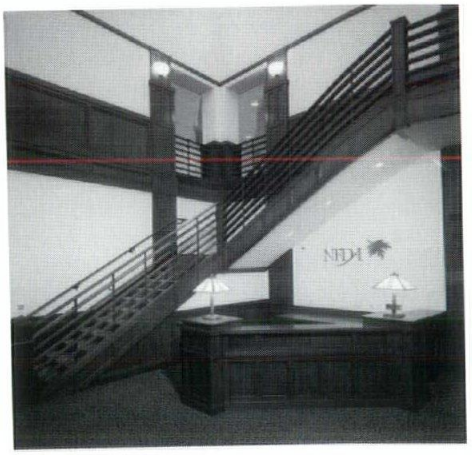
The process of designing a functional building while respecting the natural environment was a major project goal.

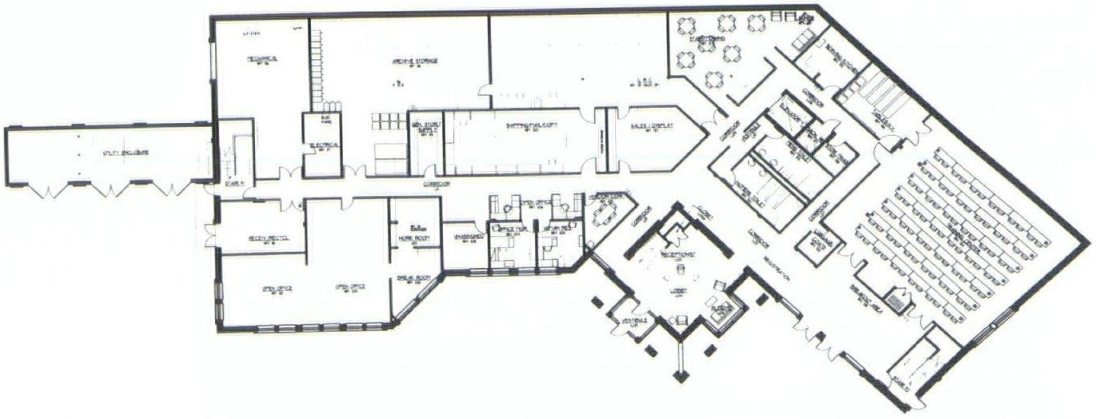
Extensive field visits and surveying of the existing trees were done to determine the best building location in terms of grade and preservation of the most and best trees. The facility is built into the grade to soften its height impact on the site. The final plan features angled walls to preserve trees, capture views and create an informal form that brings a relaxed quality to the building.

The exterior uses handmade bricks for their informal character and stone to complete the palette of natural materials. Windows are typically large, with many floor to ceiling windows to take advantage of the views of the trees. The tower entry anchors the informal composition; and the vertical quality of the space reflects the surrounding site. This space accords treetop views from the waiting room. The interior of the building makes use of the earthtone colors; and oak is used extensively throughout the interior to relate the inside of the building to the outside.

Photography: J & J Images







by Kevin J. Connolly, AIA

The Small Firm "Wave"

To paraphrase the futurist Alvin Toffler, "Architects are using second wave practices in a third wave world."

Though the larger firms are beginning to make great strides in embracing new technologies and practices, it's the small firms, which I believe are the backbone of the profession, that are finding it harder to move onto this new wave. Changes in clients' business structures and geographical reach, evolving computer technologies, pressures from non-architectural competitors, demands for non-traditional services, growing competition for employees and other third wave indicators are forcing small firm owners into uncharted waters. The time we spend rising to these perpetual challenges is constantly diluting our potential (as well as our fees), causing us to lose sight of what is important and arguably putting us into a gradual downward spin.

Despite the apparent gloom, the future of the small firm is brighter than ever. But, for most architects the brightness seems more like glare in a dirty windshield . . .while going 80 mph! Let me offer you a pair of sunglasses and suggest to you where I believe the small firm profession is heading.

B2B or Not 2B

There are a growing number of business-to-business (B2B) sites on the Web. Many internet analysts agree that B2B commerce will dwarf the B2C (business-to-consumer) commerce that now exists. Services range from information and tools for sale to "application service providers" (online programs for rent) to one-on-one personal support. If small firms can embrace these technologies, they will begin to recapture some of their billable hours and refocus their attention on architecture.

Many of these on-line services are gravitating towards a single source provider, offered to architects through formal membership organizations. The benefit to this single source approach is that programs and services can be integrated for ease of use. In addition, because these organizations are not trying to be all things to anyone who clicks on a membership button, services such as CAD standards and marketing support can be membership specific allowing for consistency and compatibility within the organization.

Once firms have joined the formal organization and are benefiting from the support services, an even greater opportunity exists to add value and strengthen the firm.

Collaboration

With many firms nationwide sharing similar resources, formats and vision, a formal design community will emerge. Small firms will capitalize on their personal service while having large firm tools, resources and networks available to them through this private organization. Architects will assemble teams of fellow associate architects from around the country to service a nationwide customer, or will call upon fellow associates of complementary expertise to secure a new project.

Because of the formality of the organization, many of the typical partnering "bugs" will have been eliminated. These organizations are governed by the members keeping the interests of the entire membership in focus. Additionally, because of its private nature, marketing and other firm specific support can become more effective.

Knowledge Ecology

As these organizations mature, associate architects will begin to build knowledge as a community. Centers of information will begin to grow into a holistic "knowledge ecology." This becomes the true value of such organizations.

From this collective intelligence, architects will access service and procedure tools, proven design methodologies, shared customer

relationships and other knowledge only a private organization can build. Construction drawings, specifications and cost data will be accessed from a central, integrated database. Planned as well as spur-of-the-moment collaborations can occur, building even more knowledge and exponentially increasing the value of the entire enterprise.

Members of these organizations become effective facilitators and integrators of knowledge, which will lead to better building performances and images, moving our customers towards greater profitability and improving the quality of life for the facilities' users.

Formal Organizations

In a book entitled *Mastering the Art of Creative Collaboration* by Robert Hargrove, John Seely Brown, chief managing engineer at Xerox's Palo Alto research labs asserts, "...the isolated entrepreneur, the free agent and the amorphous self organizing group, such as a pack of consultants without real accountability or alignment, are not likely to be very successful unless they limit themselves to situations of minimum complexity, ...a lateral leader or organizing maestro, as well as formal organizations are needed to congeal the partial insights or knowledge of individuals and groups into robust social knowledge."

The lateral leadership of the architect combined with the support of a formal organization positions our profession on the threshold of a new era. When small firms move their practice into the "third wave," we will find greater freedom and opportunity for individual expression and ultimately become of greatest service and highest value to our customers, our facilities' users and society.

EDITOR: The author is president of Triglyph Architectural Organization, a formal organization of independently owned small architectural firms. He can be reached at 414-289-0900 or at kjconnolly@triglyph.net.

by Thomas Ward

Finding Quality Staff

In consulting, more than in any other business, your people are your product. People represent your intellectual capital and your competitive advantage; they are what differentiates your firm. In other words, your staff is your bottom line.

The market for quality staff is growing tighter. At the top levels, baby-boomers are retiring earlier than expected due to retirement accounts fattened by a hot stock market. In the middle is a hot job market, and at the bottom are an insufficient number of graduating architects and engineers to meet demand.

With plenty of projects available, most firms are busy to capacity. Many professionals tell us that they are too busy to think about looking for a different position. In fact, we have run across a number that have left their firm to go out on their own! And, if their business fails, someone will probably scoop them up—*pronto*!

But the proposition of ***finding and keeping quality staff is manageable***. The most successful firms make this a 24-hours-a-day, 7-days-a-week priority. They have a plan that addresses their firm's long-term staffing needs, and they systematically work at it. These firms also use a variety of tools whose use is determined by their strategy and timing.

Of these tools, your staff will be the single most successful tool you can use. Confirmed in a recent *Wall Street Journal* article, firms hiring candidates referred by staff have the highest hiring success (15-20% of all hires) and retention rates among recruiting tools. Many firms pay bonuses to the staff member referring the new hire. Those bonuses range from a few hundred dollars to $5,000 per hire, depending on the position being filled.

Another long-term plan is to incorporate undergraduate degree seekers in your staff. By hiring college students, you'll win on several fronts. Since your environment is the one they'll begin to mature in, many will prefer to join your firm after they graduate. That gives you access to the young staff you need to keep your firm balanced. You and your staff also will be able to evaluate these interns based on your actual work history with them, making your decision of who to retain after graduation easy.

Recruiting experienced professionals can take more time, especially the ones you are approaching. But once high quality people are identified, they should be pursued, even if no opening exists. Since these relationships often take time to develop, use the time to begin building trust and by helping your prospects gain a better understanding of your firm, culture and vision. You can use lunches, dinners, a social after-work meeting or even a public or firm event as your setting. The idea is to keep a number of these prospects in the "pipe line" so that when you need staff, you are in a position to hire quality staff more quickly.

An add-on tool you can use is to put candidates you know and want to pursue on your firm's mailing list. This is a great way to indoctrinate them into your culture without them being on staff. Newsletters, firm press releases, award notices and so on can give a prospect a positive look at the inside of your firm.

Finally, have a story to tell. People, whether a laborer or a senior partner, don't buy into jobs. They will, however, buy into your story. Each position has its story, as does each firm. Before approaching a candidate for your opening, jot yourself an outline of your "story." You'll find more candidates asking questions about your story, which is a sign of their interest.

If you remember to keep a long-term focus and make it a continuous process, you'll fill most of your openings on your own!

EDITOR: The author is owner of Resource Staffing Consultants, a Consulting, a staffing firm specializing in providing services to A/E/C firms. He can be reached at (920) 822-1772 or tward@netnet.net.

Become part of the

2000 Consultant Directory

A directory to aid architecture firms, clients and the public will be published as part of WISCONSIN ARCHITECT magazine . . . the first annual *Consultant Directory*. Approximately 3,500 copies will be distributed. To be listed, a company must offer services to design and construction professionals in Wisconsin.

The charge for being included in the 2000 *Consultant Directory* is **$100.00 per listing, $50.00 per additional address and $50.00 per additional category listing.** Advance payment is required and due by **September 15, 2000**. The directory will be published in December 2000.

Wisconsin Architect magazine is the official publication of AIA Wisconsin, a Society of The American Institute of Architects. If you have any questions, contact Brenda Taylor at (608) 257-8497 ext. 102.

To be listed in the *Wisconsin Architect Consultant Directory*, please fill out the following information and return this form with payment to: Wisconsin Architect, 321 S. Hamilton St., Madison, WI 53703.

Company Name: _____

Street Address: _____

City: _____ **State:** _____ **Zip Code +4:** _____

Phone: _____ **Fax:** _____

Web Page: _____ **e-mail:** _____

Contact Person: _____

Second address information (additional charge):

Please provide Street Address, City,State, Zip+4, Phone, Fax, e-mail and Contact Person for additional locations (attach separate sheet).

DESCRIPTION OF SERVICES:

Please provide a brief description, no more than 100 words, of your company's services (attach separate sheet . . .typed).

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- ☐Accessibility/ADA Code
- ☐Accounting/ Financial Management
- ☐Acoustical Design
- ☐Architectural Coatings
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- ☐Owner Representation
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- ☐Plumbing Design
- ☐Precast Concrete
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Firm Award

The Zimmerman Design Group has been selected to receive the 2000 AIA Wisconsin Architecture Firm Award.

The Architecture Firm Award is the highest honor that AIA Wisconsin can bestow on a member-owned firm. It is awarded in recognition of outstanding achievement in the advancement of the architectural profession.

In selecting the Zimmerman Design Group for the award, this year's distinguished jury noted the firm's significant contributions in architectural design, building technology, education and research, community leadership, public service and awareness and service to the AIA. "We were impressed with the firm's consistent body of work and commitment to design throughout its distinguished history, as well as with its commitment to firm organization, including excellence in the leadership of the firm, emphasis on continuing education for employees and support for community involvement and service," the jury commented.

The Architecture Firm Award will be presented during a special Awards Luncheon on Wednesday, April 12, at the Monona Terrace Community & Convention Center. This event is being held in conjunction with the 2000 AIA Wisconsin Convention.

The jury for this year's Architecture Firm Award included two public members and an architect member. Public jury members were Katherine C. Lyall, Madison, president of the University of Wisconsin System, and Brian C. Rude, Coon Valley, assistant minority leader of the Wisconsin Senate. The architect member of the jury was Edward J. Kodet Jr., FAIA, Minneapolis, regional director on the national AIA Board of Directors.

"Having spanned almost the entire 20th century adds some special significance to receiving the Architecture Firm Award in 2000," according to David L. Stroik, AIA, President of the Zimmerman Design Group. "Since our founding in 1906, the world has evolved several times over, wars have changed the map, technology has advanced exponentially and will continue to impact design and construction. Through all of this, what has remained the same is the relationship we have enjoyed with our clients, peers and colleagues who have favored us with this award."

"Being selected to receive this prestigious award is a tribute not only to ZDG's new millennium staff, but also to the generations of professionals who have contributed to our success in the past 95 years," commented Gary V. Zimmerman, FAIA, the CEO/Board Chairman of the Zimmerman Design Group.

The firm was established in 1906 as the partnership of Brust, Philipp and Heimerl Architects. Industrial and residential projects comprised its early work. Over the next 75 years the firm evolved, grew and completed a diverse portfolio of projects. In 1981, the firm changed its name from Brust-Zimmerman, Inc., to the Zimmerman Design Group. Today, the firm employs a staff of 100 in offices in Milwaukee and Wauwatosa, providing a full range of professional design services for corporate and institutional clients.

Members of the AIA Wisconsin Firm Award Committee are: Mary Lawson, AIA, Madison, chair; John Horky, AIA, Milwaukee; Thom Miron, AIA, Appleton; and Roger Roslansky, AIA, La Crosse. For information on the Architecture Firm Award and nomination requirements, please contact the AIA Wisconsin office. Nominations for next year's Firm Award program will be due by no later than January 15, 2001.

Distinguished Service

At its February meeting, the AIA Wisconsin Board of Directors unanimously approved awarding *Citations for Distinguished Service* to the University of Wisconsin – Milwaukee School of Architecture & Urban Planning; Daniel J. Roarty, AIA, Green Bay; and Richard W. Eschner, AIA, Shorewood.

UWM SARUP was recognized for its 30 years of service to the profession. Roarty was honored for the development of the "AIA Report Card" that allowed members to evaluate the programs and services provided by the AIA at all levels. Eschner was recognized for his leadership and dedicated service as the chair of the AIA/DFD Liaison Committee. The *Citations* will be presented at the Annual Meeting on April 12 at Monona Terrace in Madison.

AIA Convention Delegates

If you are attending the national AIA Convention in Philadelphia on May 4-6, this is your chance to be an official delegate for your local AIA Chapter.

As a delegate, you will be able to vote for national AIA officers and on other matters of business coming before the membership at the Annual Business Meeting on Saturday, May 6. To request a delegate card, please call the AIA Wisconsin office or contact your local AIA Chapter President.

Golf Outing

Reserve Monday, June 26, for the 27th annual Architect/Exhibitor Golf Outing at Old Hickory in Beaver Dam.

This special event is for AIA Wisconsin members and Parti'00 exhibitors. The scramble begins with a shotgun start at 1:00 p.m. Dinner is included. Contact the AIA Wisconsin office for further details.

Residential Directory

The next issue of *Wisconsin Architect* magazine will feature a directory of member-owned architecture firms interested in residential projects. The directory also includes tips on selecting and working with an architect. For information on this directory, please contact Brenda Taylor at the AIA Wisconsin office.

QBS Grant

Wisconsin's Qualification Based Selection (QBS) program has been awarded a $2,000 national QBS Facilitator Grant by the AIA, ACEC, NSPE and APWA. The grant will be used to enhance public owner awareness of the QBS program that promotes the selection of architects and consulting engineers on the basis of qualifications.

The Wisconsin QBS program is offered as a public service and supported by AIA Wisconsin and the Wisconsin Association of Consulting Engineers. Started in 1986, it assists public owners establish an objective step-by-step process for selecting architects and engineers for their particular projects.

For more information on the Wisconsin QBS program or to schedule a presentation by the QBS Facilitator, contact Christine Sloat at (608) 524-1397.

Terrace Town 2000

In late January, 500 fourth-graders from 20 elementary schools in Dane County participated in "Terrace Town 2000" at Monona Terrace.

With the help of AIA Wisconsin members, these students learned about architecture and urban planning by developing box cities. AIA Wisconsin was pleased to be a sponsor of this special educational program.

The Wisconsin Architects Foundation also sponsored a hands-on program, "Build It Wright," that offered a fun-filled educational experience for children of all ages as they explored the design principles of Frank Lloyd Wright with Froebel blocks.

Mark A. Pfaller, FAIA

Wisconsin has lost a long-time and dedicated leader of the architectural profession. Mark A. Pfaller, FAIA, Elm Grove, died in March at the age of 78.

During his distinguished career, Pfaller contributed in many significant ways to his profession and community as well as to the AIA at the local, state and national levels. He was an inspiration to his fellow architects as well as to allied design and construction industry professionals.

Mark A. Pfaller served as the President of AIA Wisconsin in 1965, when it was known as the Wisconsin Chapter of the American Institute of Architects. He previously had chaired the state Convention. From 1966-71, he chaired a special and successful campaign to establish an accredited school of architecture in Wisconsin.

In 1972, he was advanced to the College of Fellows of The American Institute of Architects, an honor reserved for only a small percentage of AIA members. He subsequently served on the national Fellowship jury. For over ten years, he also was on the national AIA Documents Committee, serving several terms as its chair.

In 1988, Mark A. Pfaller's distinguished leadership and service to the profession was recognized with the presentation of the AIA Wisconsin Golden Award. This is the highest honor that can be bestowed on an AIA Wisconsin member. He subsequently served a second tour of duty as a Director-At-Large on the AIA Wisconsin Board of Directors.

Mark A. Pfaller was a second-generation architect; and the family tradition continues with his son, Mark F. Pfaller II, AIA, Elkhart Lake. His many friends and colleagues will miss his leadership, inspiration and good humor. His legacy, however, will continue in the buildings, institutions and organizations that he helped to create.

People & Places

Alfred Ganther, Jr., AIA, Oshkosh, **Palmer R. Haynes, AIA**, Mt. Horeb, **Jerome Kowalski, AIA**, Milwaukee, and **John Thomas Maher III, AIA**, Milwaukee, have been approved for Emeritus membership in The American Institute of Architects. Congratulations!

Emeritus member **Abe Tannenbaum, AIA**, Glendale, recently saved the life of a man who became unresponsive in a whirlpool at his health club. According to the local newspaper article, Tannenbaum also rescued a drowning friend in 1982.

The profession recently lost two colleagues. Emeritus member **Edmund J. Schrang, AIA**, Oconomowoc, died in December at the age of 92. **Rachael K. DePrey, Assoc. AIA**, Madison, died in February at the age of 47.

Dave Stroik, AIA, West Bend, has been named president of the Zimmerman Design Group. He succeeds **Gary V. Zimmerman, FAIA**, Hartland, who will remain the chief executive officer and chairman of the firm.

Robert G. Graves, AIA, Madison, has been promoted to the position of chief executive officer of Flad & Associates.

Andrew S. Weber, AIA, Port Washington, has joned the Kohler Company as the senior architectural project engineer. He can be reached at (920) 459-1880.

Randy R. Morrison, AIA, Bayside, has joined the higher education team at Kahler Slater, Milwaukee.

Enberg Anderson Design Partnership, Inc., Milwaukee, has named **Russell E. LaFrombois, AIA**, Whitefish Bay, and **William G. Robison, AIA**, Milwaukee, as senior associates.

Eppstein Uhen Architects, Inc., named **T.J. Morley, AIA**, Greenfield, and **G. Chales Bruscato, AIA**, Milwaukee as principals.

Professional Affilliate member/ photographer **Eric Oxendorf,** Milwaukee, spoke at the recent United States Capitol Historic Society Conference in Washington, DC, about his series of interior architectural photographs of State Capitol domes.

The Wauwatosa Chamber of Commerce honored Haag Müller, Inc., Grafton, with its Civic Appreciation Award 1999 for Building Renovation for the firm's work on the Wisconsin Athletic Club located in the original fire station constructed in 1905. Congratulations!

Eppstein Uhen Architects, Milwaukee, received a Concrete Design Award from the Wisconsin Ready Mixed Concrete Association for the Rockwell International parking structure in Milwaukee. Plunkett Raysich Architects, Milwaukee, claimed two of the prestigious WRMCA awards for its work on the Medical College of Wisconsin's Health Reasearch Center in Milwaukee and the Howard Young Medical Center in Woodruff.

Workshop Architects, Milwaukee, has been awarded the "Excellence in Architectural Design Award 1999" by Governor Thompson and the Division of Facilities Development for the Down Under project in the James L. Connor University Center at UW-Whitewater.

AIA Wisconsin executive director, William M. Babcock, Madison, received an AIA National Service Award in recognition of his contributions on the AIA/CES Providers Council.

Craig Eide, Associate AIA, Milwaukee, was inadvertantly ommitted from the recently published AIA Wisconsin Membership Directory. He can be found at Plunkett Raysich Architects, Milwaukee, phone (414) 410-2951.

Lynn Javoroski, Assoc. AIA, Juneau, can be found at the Milwaukee County Dept. of Public Works-A/E Division, phone (414) 278-4991.

Membership Action

Please welcome the following members to AIA Wisconsin:

AIA
Paul J. Cassem, AIA, NW
Edward Haydin III, AIA, SW
Ronald J. Mastalski, AIA, SW
John W. Sutton, AIA, SW
Alfonso Torres, AIA, SE
John C. Vetter, AIA, SE

Associate AIA
Jody Daniel Andres, NE
Mary Jane Brunner, NW
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