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Cover: Tropical Exhibit Building, Minnesota Zoological Garden. See page 14.

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EDITORI/AD

A 120° Temperature Variation

It must be the contrast of the extremes which makes every season in Minnesota so precious and so highly prized. Few areas in the country are allowed such extremes-a 120° F variation in temperature is unusual. But then we are getting used to the idea that many things about Minnesota are unusual. We also ask: Is our architecture. Minnesota architecture, unusual? Of course, there is no more a "Minnesota Architecture" than there is Wisconsin or Missouri architecture. The most unique and most regional architectural elements in Minnesota are the bridge connections between buildings, the skyways. Their development was a direct response to the climate. The skyways in Saint Paul and Minneapolis work very well. They have fostered the growth of second level cities which, particularly in the winter months, put their street level parents to shame. These skyways are unique to this region and they work very well. Now that the sun is coming out more regularly, however, and that the winds are softer and less rough, we all go out on the street again. We go to rediscover the city at street level. The streets are wider than the skyways, they hold a great many more people and they make it a lot easier to just stand around and talk. And then quite often there are - on a public or private plaza-concerts. style shows, a speech, even a demonstration. And there are also bicycles and some street vendors and even some beggars. The heavy coats and facemasks and mittens are stored away, there is more freedom of movement for the body-now more exposed, more graceful than in the cold winter months. There is more freedom, and we are all celebrating the new season, Spring. Spring leading into Summer.

Construction has also picked up. The lovely elegant cranes sweep through the sky and swing their cargoes up and down and sideways. And the trucks loaded with bricks or steel or precast concrete jam up the freeways. They have to get there too. The stark and geometric steel frameworks sparkle-too beautiful to last-and then almost overnight the brickfacing is completed. Before long the other walls will be completed and then the work inside will have to be finished. That will take longer, will not be as dramatic-but just as important . . . And very soon now that building, the school, the office building, the laboratory, will be inhabited by students and teachers, businessmen, professionals and researchers. These buildings become places for people to do their work in, to spend their lives in, to be productive

and creative within. The buildings are just shells in a just sometimes not so just setting. And the building takes its place among all the other buildings around and it becomes a further element in the visual concert of our environment.

To make that building work and the occupants in it productive is expensive. We still have a great deal of air pollution and the Pollution Control Agency is doing its best and doing more everyday. We are wasteful of our natural resources, but we are more careful. We waste energy, but we try to conserve energy. We use car pools, we insulate, we lower thermostats We are materialistic but we buy a great many books, hard cover and soft cover. But we are still impatient . . . as well we might be. Nevertheless, a renewed vigor, the vigor of spring, has imbued our lives. The cities are rebuilding, new buildings are growing from their foundations, older buildings are being refurbished and given new lives, gardens and lawns are being planted and cared for. And for the first time in some time our national leader is more thoughtful, more sensitive to the realities of the world and, thankfully, a little less concerned with opinion polls. It is now a time of celebration, of growth, of development.

To place a brick upon a brick to make a wall is not a feat. It is a symbol. A strong and powerful symbol. Even more than that: it is reality. It is man building the real world. And in Minnesota, in the spring, the real world looks promising and joyful.

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POINT OF WIEW

Why Don't People Ask Why?!

From the Executive Director Minnesota Society American Institute of Architects We often ask who... We often ask how much it is going to cost... or how it will be done..., but too often we never ask why. We just do or don't do it and later... often too late... people ask why.

- Why is there no longer a gracious, historic, stunning Metropolitan Building but an empty parking lot (Yes, it will finally be built upon)?
- Why is there block after block of neighborhood land in Northeast Minneapolis and near downtown Saint Paul, originally cleared for highway construction and not now needed as the site of highways?
 - Why do we encourage citizens to rehabilitate their homes and shortly after they have expended thousands of dollars on improvements, tax them substantially?
 - Why do we utilize only a fraction of the technology and a miniscule amount of the self-discipline available to skillfully attack the energy conservation problem?

There are many other why's that each of us have and each of us ask daily. Yet too often they are asked after the fact.

Hopefully, if enough people repeatedly ask why, public attitudes and public policy is changed and we develop sensitivities. Enough people in Minnesota have asked why and as a result we have developed some of the most progressive environmental policies in the United States. Yet these environmental policies largely relate to preserving the natural environment.

Soon we will look skyward and begin to ask why more often, and develop sensitivities and better public policy as it relates to the built environment.

John Rauma, a noted Minnesota architect, stated, "Architecture is a metaphor of its epoch." Yes, architecture does reflect society's current values and priorities. Unfortunately all our built environment, a great deal of which is designed by architects, ends up being called or serving as architecture.

Perhaps it's a propos then to ask ourselves a few why's about our built environment and the structures that are being built. Why should they be built in that way? Why are buildings not being built that should be?

Why is the Hubert H. Humphrey School of Public Affairs building's architect being selected by a haphazard process?

The structure, as now conceived, calls for a building whose facade, would you believe, is shaped in the form of three H's. Most disturbing is the matter in which the initial architect selection was made. The fund raising committee, composed of many people from the East Coast, needed some sketches to assist it in fund raising. They utilized a young Minnesota professional whose sketches they were not totally in concurrence with. They then entered in a relationship with a New York City firm. Sketches were prepared and the architectural firm sent out a news release to many national magazines showing a rendering announcing they would be the architect. It would be sad indeed if Minnesota's foremost advocate of the democratic process were honored by a building whose architect was selected through a process that was conducted in such a shabby way. This is truly a building which is deserving of a national competition or at least selection of an architect through the Minnesota Designer's Selection Board. It has become a national model for a fair and impartial selection of professional consultants.

Yes, if Hubert only knew, he would turn over in his grave. The happy warrior, one of Minnesota's foremost leaders, deserves more. So does the public and the institution, The University of Minnesota. The facility will long be a part of their program and the financial commitment of this state.

Why (when speaking of national competitions) does the Minnesota legislature not realize that it not only badly needs space for legislative hearing rooms, conference rooms, and a Historical Society Museum space; but that it has already spent several hundred thousand dollars for what should be an excellent solution? Because a small group of people raised their voices at a time that was politically sensitive, the Capitol Annex, the underground building in front of the State Capitol, may not be built. Already since the time that initial vote was taken construction costs have gone up 19 per cent and they are presently rising at the rate of 1.5 per cent per month. It would be unfortunate if the Minnesota Legislature in the next session does not take initiative and have the vision to construct this badly needed facility.

And furthermore, why does a state agency such as the highway department (in the Department of Transportation) not have some design standards when it comes to the aesthetic

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Contact Don Boehmer, Jr., Roger Barlau or Rod Davies and learn about some recent installations that prove we do right by wood. hodge-podge of barriers being erected along the metropolitan area's highways? It has become a monument to the concept that if federal funds are available, spend them. yes, it will do something to curb the noise impact of highways on neighborhoods. But does it have to look like a disconnected series of experiments for constructing dam or bridge encasements? Yes, it is a dam funny looking wall.

Why doesn't the Metropolitan Council in concert with the Metropolitan Transit Agency and other policy makers being to face the need for a carefully conceived policy for metropolitan mass transit? Several years after the great transit debate the metropolitan area still lacks a coherent transit policy. It would be unfortunate, when faced with the serious energy crisis of the 1980's, for some action not to be taken soon.

And lastly, why didn't the state of Minnesota undertake a more coherent planning study to develop rational alternatives for a policy for the Boundary Waters Canoe Area National Park? Instead we have Congressmen parading across the television tube, citizens parading down Main St., and rumors parading themselves in the newspaper with no rational resolution in this issue. We should learn from this issue

The point is that we do need to ask why more often. We need to ask why we are doing things, and carefully consider the consequences first. — Daniel J. Sheridan

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2Cook, the kitchen appliance shop for serious cooks operated by Kathleen Scott and Anne Zelle sparkles in the renovated Saint Anthony Main in Minneapolis. This shop and the newly opened Anthony's Wharf, the seafood restaurant, were designed by Team 70 Architects of Minneapolis.

The planned community of **Jonathan**, located southwest of the Twin Cities, will soon boast its first restaurant thanks to the efforts of **Roberts Architects, Chaska**. Named Chaucers by the Lake, the facility will be situated in the Jonathan Village Shopping Mall and will feature terrace dining and a menu with a British accent. The restaurant will have a 1,200 square foot outdoor dining terrace overlooking Lake Grace in addition to a 1,600 square foot indoor restaurant.

Thirteen Minnesota architectural firms and engineering firms have been awarded contracts to participate in a national, multi-million dollar research project to develop energy performance standards for the design of new buildings. The contracts were awarded by the AIA Research Corporation for a project sponsored by the U.S. Department of Housing and Urban Development and the Department of Energy. The Minnesota firms were among 168 chosen from a field of over 600 applicants and their architectural tasks include the challenge of redesigning a number of existing structures to learn how much less energy the buildings could be designed to use. The firms and projects that have been selected for energy redesign contracts are: Adkins Association, Saint Paul/Gladstone Park Medical Building, West Saint

Anthony's Wharf Restaurant, 2Cook at Saint Anthony Main, Minneapolis, Team 70 Architects, Minneapolis



Bob Katchmark at remodeled Le Carrousel Restaurant, Radisson St. Paul. Designer: Herman Crawford, Contract Services Associates. Wallcovering: "Executive Wo

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Paul; Centrum Architects, Minneapolis/Phalen Park Dental Clinic, Saint Paul; Dickey/Kodet Architects, Edina/Embers Restaurant, Madison, WI; Dykins Associates, Bloomington/Security State Bank, Lindstrom; Hammel Green and Abrahamson, Saint Paul/elementary school, suburban Twin Cities; Horty, Elving and Associates, Minneapolis/Presbyterian Homes, Arden Hills; Hustad-Pontinen Architects, Edina/Buhler Miag Building, Plymouth; Miller, Dunwiddie Architects, Minneapolis/Fuller Park Neighborhood Center, Minneapolis; Leonard Parker Associates, Minneapolis/University of Minnesota Law School, Minneapolis; Paul Pink and Associates, Minneapolis/Apple Valley Shopping Center, Apple Valley; Reese/Rova Associates, Minneapolis/40-unit high rise apartment, Minneapolis; Smith Architects, Minneapolis/Twin Cities office building; and The Wold Association, Saint Paul/Richfield Towers. Richfield.

Construction is underway on a new residence hall on the Saint Paul campus of the College of Saint Thomas. Formerly an all-male institution, the arrival of female students this fall has created an urgent need for appropriate housing. Designed by McGuire, Courteau, Lucke Architects, Inc., Saint Paul, the new residence hall will house 140 students in apartmentstyle rooms. While the college has not officially designated the five-story structure as the "women's dorm," the first occupants are slated to be the arriving female students.

The Minneapolis architectural and planning firm of Patch Erickson Madson, Inc., are the designers behind a \$900,000 rehabilitation project for Harrison School and the \$385,000 Webber Neighborhood Park and Recreation Center, both in north Minneapolis. The school rehabilitation will include reroofing, new ventilation and the construction of a new boiler room and receiving area addition. The recreation center project includes landscaping, walkways and "tot lots," a wading pool filtration system and the construction of a recreation center building which will be attached to the existing Webber Park structure. Landscape architects for the project are Wehrman-Chapman Associates, Inc.

Final design plans for new interpretive center at the **Deep-Portage Conservation Preserve, Cass County,** have been completed by the Minneapolis firm of **Horty, Elving and** Associates, Inc. The post and beam structure will be approximately 70 feet long by 48 feet wide including a deck on the north side. Both exterior and interior walls will be covered with rough native pine paneling and both levels of the structure will contain meeting and observation areas along with classroom facilities. As a planned environmental education center, the facility will hopefully become self supporting within a few years through income generated from classes and other meetings.

The Saint Paul firms of Toltz, King, Duvall, Anderson and Associates, Inc., Architects, Engineers and Planners and Clarence R. Simonowicz and Associates, Development Planning and Management Consultants, have prepared a Downtown Development Concept for the City of Hutchinson,



Minnesota. The concept will serve as the general framework for the redevelopment of the central business district. A prime developer has been selected by the City and over \$10,000 of new construction, including commercial, residential and public development is anticipated over the next five years.

One of the largest building projects in several years in the west-central Minnesota community of Willmar, is the construction of a \$3.5 million, 120-bed skilled nursing and care center for Bethesda Homes, Inc., a non-profit organization currently operating a four-level home nearby. Designed by Robert Hanson, Minneapolis, in association with Genesis Architecture, Willmar, the new facility will contain 80 private rooms and 20 double rooms, all air-conditioned with individual thermostats and humidity controls. The nursing stations are designed in such a way as to provide maximum resident care and it is anticipated that the structure will meet Minnesota State Department of Health codes for many years to come.

The Northfield firm of Sovik Mathre Sathrum Quanbeck Architects and Planners are currently developing a



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comprehensive development plan for the community of Cokato. When completed, the plan is intended to help city government better plan for the future development of the community through the definition of trends in population, economy, employment, housing, residential development and undeveloped land. Preliminary data from the study indicates that about 20 percent of the town's residents are over 65 and that the city seems to have a sound economic base determined by the varying types of industry and business currently operating in the area.

Setter, Leach and Lindstrom, Minneapolis, are the architects for a \$1.8 million, 45,000 square foot addition to the Federated Insurance Companies office complex in Owatonna. The addition will contain expanded data processing, training facilities and general office areas. Additionally, the new structure will be energy efficient thanks to a design feature calling for heat produced by the computerized air conditioning unit to be recovered and used to heat the building.

Ground has been broken on Jordan Tower II, a \$2.8 million senior citizens housing project for the southern Minnesota community of Red Wing designed by Trossen/Wright & Associates Architects, Saint Paul. The eight-story twin to the existing Jordan Tower, the new structure will offer 102 rent-subsidized apartments for the elderly and will be connected to the original building by a covered walkway.

Construction is underway on the upgrading of the fire alarm system and means of egress for University of Minnesota Hospitals, Minneapolis. The \$2.8 million project, one of the largest of its kind in the country, stemmed from a six month study by the joint venture of Centrum Architects Inc., and Bass Associates Inc., which produced a set of alternative solutions utilizing a systems approach. The upgrading will bring University Hospitals into conformance with the latest Life Safety Standards of the Joint Commission on Hospital Accreditation and the Minnesota State Fire Marshall's office.

Projects in Brief . . .

The Saint Paul firm of Hammel Green and Abrahamson, Inc. are the architects for a major addition to the west wing offices of General Mills, Inc., Minneapolis . . . White Bear Lake

architect Eldon D. Morrison is the designer for a \$240,000 gymna sium and multi-purpose to the King of inas Church in Roseville . . . Plans are underway by the Wilder Foundatic on to build a 16-story, 248-unit condominium tower along with 52 townhouse units on the site of a former nursery in Saint Paul. Architects for the \$13.2 million pre piect which will be financed through a ond issue sponsored by the Saint Paul Housing and Redevelopment Aut nority, are the Winsor/Faricy Architec ts, -Saint Paul . . . Cottle-Herman Architects, Inc., Minneapolis, are the designers of a classroom and o Ffice addition at Bethel College, A -den Hills . . . Bergstedt, Wahlberg, B ergquist and Rohkohl, Inc., Saint F aul. have been retained by the commu nity of Inver Grove Heights to desig n a new city hall to be built at one of two possible sites . . . Inter Design, I nc., Minneapolis, are the architects for r an estimated \$1.3 million commu nity center for South Saint Paul . . . A major addition and remodeling for S aint Paul's Como Park Senior High Sc loor has been designed by The Lunds ren Associates, Inc., Saint Paul . . . S aint Paul's Wold Association are the architects for a new headquarters for Washington County Human Serv ces to be built in Woodbury . . . The N /linneapolis firm of Johnson, Sheldo n & Sorenson, Architects, Inc., are the designers of a 16-unit rental hou sina project for the community of Amboy . . . Kielhack 8 Hans on, Crookston, are the architects for the proposed Lake of the Woods Cou ntv Museum to be located in farav vay Baudette . . . A new church build ing for Holy Trinity Lutheran Church, has been designed by the Rochester f irm of the Architectural Design Gro UD. Inc. . . . Madsen Associates, Ba ttle Lake are the architects for a 16-L Init senior citizens apartment build ing located in the community of New Y ork Mills ... Ellerbe Associates, In C., Bloomington, have designed a park ing ramp for Methodist Hospit al, Rochester . . . Plans for a rehabil tation of the Duluth YMCA are on the boards of Architects IV, Duluth ... The Larsen Associat es, Minnetonka, are the architects for an administrative office facility to be located at Camp Ripley near Lit tle Falls . . . just to name a few

For further information contact the Minnesota Society AIA (67 2) 874-8771,

The Minnesota Zoological Garden

Mike Wilkinson

"There is little doubt that when the zoo opens to the public in May, it will provide the very finest in zoo facilities."



Minnesota Zoological Garden symbol and trademark for use on all MZG identifications.

For the architects at InterDesign, Inc., the opening of the Minnesota Zoological Garden in May will culminate seven years of work on the project, quite obviously an abnormally long period of time to spend on any effort. But the MZG is a unique project, one which placed special demands on the architects both in terms of design and client needs.

InterDesign of Minneapolis has practically been in the MZG's hip pocket from the very moment the idea of a new zoo was formulated nine years ago. It was then that the State Legislature authorized the creation of the Minnesota Zoologial Board, a collection of citizens from throughout the state. They were empowered to come up with a site location, an architect and a staff to put together what was hoped would eventually become one of the world's finest zoos.

In 1973, InterDesign combined with Peterson, Clark, Inc. and Robert Lambert, Inc., both of Minneapolis, to form Zoo Team, the official design group authorized to create the new zoo facility. This followed three years of hard work and uncertainty by InterDesign alone. They had been asked in 1970 to do a comprehensive study on a site location and a preliminary master plan. In 1971, they came back with a proposal calling for the location to be in Apple Valley and requested a construction budget of \$32 million. Pressure by outstate House legislators who questioned the budget and to some extent the location, killed the idea during the last five minutes of the 1971 session.

But in 1973, the legislature was favorably responsive to a new proposal which trimmed the budget by cutting out plans for a state-funded extensive monorail transport system as well as some of the proposed exhibits. Reduced to \$23.5million and with approval for an additional \$2.3 million bonding program, the final goahead was given. Zoo Team was told to proceed with final plans.

"Our guidelines were rather direct," says Dewey Thorbeck, head of Zoo Team and president of InterDesign. "The facility had to be an all-weather facility, it was to be a northern hemisphere zoo and was to contain natural habitats for the animals who basically were to roam free while the people were basically caged in. In other words, the people move through the animals being caged in human environments."

Other guidelines included making the entire facility an educational center with a state-wide outreach and appeal to all ages and groups. This means there will be a children's zoo located in the large interpretive center and exhibits which lend themselves to educational programs on biology currently being taught in Minnesota schools.

One of the most critical aspects to zoo operations is that they are important centers for animal research and are helping in breeding programs, especially for endangered species.

From an architectural standpoint, Zoo Team set out from the very beginning to design structures which were unobtrusive to the natural surroundings of the 460 acre site. The MZG is located amongst rolling hills, woods and waterways east of Interstate 35 and south of the Minnesota River.

Study models were made of all phases of the project to guarantee compatibility of animal spaces with people spaces and the attendant support services. Many form and space models were studied before developing the concepts that met the needs of animal, visitor and maintenance factors plus the aesthetic considerations required.

"A major portion of the architectural design involved the integration of the buildings into the site (a large portion of the main building is underground or covered with earth) and the design of the mechanical and support systems for animal exhibit areas," reports Thorbeck. "These included holding tanks for whales and dolphins and specially designed heating, ventilating and controlled temperature plumbing systems.

"Extensive graphic and signage studies were made to check readability, simplicity of design and communication of a maximum of information in a minimum of space and time. This involved color coding of major zoogeographic areas, directional signage for pedestrian and vehicular traffic, international symbol usage for foreign visitors and building and facility identification. Special graphic displays interpret each major exhibition or facility with text, images and TV and AV presentations."

The zoo can be categorically divided into a number of physical parts. These are:

Main Building Complex: the main building complex, which houses the administration offices, restaurants, gift shops, rental lockers, first aid center, restrooms and educational wing and research center, a largegroup auditorium and classrooms. An interior pedestrian concourse connects all of the major zoo features.

Tropical Exhibit: the tropical exhibit is a sky-lighted, climate-controlled conservatory housing 80 or so tropical species viewed in treetops, nocturnally, underwater and in a variety of natural settings. It is, in effect, a huge greenhouse with up to two acres of

























exhibits and animal holding facilities.

Aquarium: the aquatic exhibit includes a 560,000 gallon tank for Beluga whales (the world's largest saltwater aquarium) and nine other aquaria representing about 40 species of marine life from the temperate, tropical and polar oceans.

Macaque Exhibit: the macaque exhibit is a separate outdoor facility displaying the Japanese Macaque monkey.

Minnesota Exhibit: the Minnesota exhibit includes a nocturnal exhibit and habitats of lake and stream to forest regions within Minnesota. It will display up to 100 species of native wildlife.

Children's Zoo: a children's zoo features domestic animals, demonstration areas, a special exhibits building and a pony cart track.

Northern Trek: the largest exhibit, the northern trek is a simulated trek across the northern hemisphere and features large, open outdoor exhibition areas and will initially include Siberian Tigers, Asiatic Wild Horses, Bactrian Camels, Moose and Musk-Ox.

The entire MZG project was fasttracked in 28 major construction packages comprising 46 different contracts. Project Manager Art Young and Construction Manager Walt Tuttle as well as Thorbeck and Lambert, met every two weeks regularly with the Zoo Board to review progress to date and to submit schematic and design development drawings for approval.

"This is a very large complex using public monies. It was a very close relationship and free of political influence," Thorbeck adds.

The site was selected not only with an eye to land availability and its convenience to the Twin Cities, but also because the topography lent itself to easy construction of outdoor exhibits and because of the high amount of open and vegetated areas. There is also, Thorbeck adds, a nice slope to the land for water runoff.

The Northern Trek is only about one-third done and will not be completed for another four years. The southern portion will be open to the public come May. The first stages will house the tigers, musk ox, wild horses, camels and moose. Later, it will contain wolves, reindeer, polar bears, seals, snow leopards, mountain goats and grizzly bears.

"One of the things we attempted to design into the system was a situation in which the animals are in as much of a natural setting as possible so that their conduct is the same as it would be in the wild," says Thorbeck. "The beavers, for instance, will build dams and houses that can be viewed from above the surface of the water and







Como Park Zoo

While attention for the next several months will undoubtedly be focused on the new Minnesota Zoological Garden, efforts will be underway to renovate and expand another well-known zoo in the Twin Cities, Como Park Zoo in Saint Paul.

Como lies in the heart of Saint Paul, part of the Como Park System which includs a conservatory, athletic fields, golf and water sports facilities. For many years, it has housed numerous species of wildlife f around the world ranging from African and South American cats to monkeys, gorillas and wolves.

The facilities, however, have always been somewhat lacking and it was decided a few years ago by the City of Saint Paul and the State of Minnesota that Como deserved a better fate than to die off when the MZG came in. So, it was agreed upon the the Como Park Zoo should undergo a face-lift. The Saint Paul architectural firm of Rafferty, Rafferty and Mikutowski and Sint Louis-based Peckam, Guiton and Associates were asked to prepare a master plan for the renovation. Peckam and Guiton have done the work on the Busch Gardens throughout the country for the Anheuser-Busch Company of Saint Louis.

"We firmly believe that both the

new MZG and Como can survive quite comfortably in the Twin Cities," says Duane Stolpe, architect and project coordinator for the City of Saint Paul. "Como is an inner-city zoo that meets the needs of a great many people. We believe once the facilities are improved, modernized and expanded, its popularity will grow even more."

Stolpe says two zoos have made it in other cities like Chicago with its Lincoln Park Zoo in the inner city and Brookfield Zoo in the suburbs. Como also has a fine breeding program (the first zoo to successfully breed Siberian Tigers in captivity) and has always drawn well.

In May, the architectural team will present a master plan and a preliminary cost breakdown. Presently, the project is operating with an initial budget of \$3.7 million and will undoubtedly request additional funding in the next legislative session. In the months ahead, a hard look at Como will be taken to determine how it will fit into the entire park complex as well as how it can best meet the needs of the city.

Once those things are determined, construction should start by late in the year. Hopefully, Como will become a nice part to a very successful two-part zoo system in the Twin Cities. M.W.

below through special observation windows. There will also be close circuit televisions inside their houses so people can see them at work. The dams will be periodically torn down so they are stimulated to rebuild them."

Several of the exhibits presented unique problems for the architects. Originally, a greenhouse system was planned for the Tropical Exhibit which houses hundreds of plans and trees, but it was determined that the heat inside would be too great for both people and the animals. Instead, a series of adjustable skylights to refract sunlight was built in, thus allowing for indirect—but necessary—light, yet reducing or increasing heat as needed.

Another interesting project involving the design team was the work done on the artificial terrain for the Tropical Exhibit, particularly the rock work. Working with geologists from the University of Minnesota, the architects identified the kinds of rock outcroppings indigenous to Southeast Asia where most of the MZG tropical exhibits are from. A Minnesota firm and a California firm were contacted to develop rubber molds from which the outcroppings could be made. Using rubber and colored concrete, they were able to reproduce the original rocks withwhat Thorbeck calls ''an amazing authenticity.''

The indoor facilities incorporate both exhibits and departure points for the rest of the zoo. At the main building complex, the upper level contains the orientation facility describing the entire zoo, displays, a concourse level for travel (both by foot and on the eventual monorail) for the Northern Trek, exhibits, education programs and major public facilities and the lower service levels and restaurant. The whale, Minnesota and Oriental exhiits are interconnected and immediately adjacent to each other. The animal housing and veterinary



Apparel for Guides and Keepers MZG Pictographs and Directional Arrows Zoo Ride Station Special Exhibits Building



facilities are located to the north, away from the main complex.

The Zoo Team used as few building materials as possible and, as previously pointed out, were subtle in their approach in order to reduce the impact on the natural surroundings. Poured and block concrete were used on all buildings. The structural system is concrete with steel truss and glass roofs in the Tropical Exhibit. The central heating plant provides high temperature hot water (convertible to coal) and a solar energy exhibit is tied into the zoo ride. It will be used to demonstrate the effective use of sun power by heating the transit station and the domestic water needs of the main building. It is funded by a grant from the U.S. Department of Energy.

The lead designers have been Thorbeck, Roger Martin, landscape architect; Peter Seitz, graphics and exhibit design; Bob Lambert, programming and exhibit design; Art Young, project manager; and Walt Tuttle, construction manager.

Structural Engineers were Bakke, Kopp, Ballou & McFarlin; mechanical and electrical were Jacus Associates; civil engineers were Clark Engineering; and cost analysts were Hodges, Jage of Minnesota. The major contractors were Bor-Son Construction, Knutson Construction, Shaw-Lindquist and M.A.Mortenson Construction.

There is little doubt that when the zoo opens to the public in May, it will provide the very finest in zoo facilities to its anticipated hundreds of thousands of annual visitors. It could well become as one zoo official predicted, "the finest zoo in the world."

Mike Wilkinson is a free lance writer and regional correspondent for Building Design and Construction.

Innovations in Correctional Facilities

Bruce McManus

"The idea that a prison building could have qualities of a work of art is a somewhat arresting paradox."

Albert Ten Eyck Gardner, Metropolitan Museum of Art, New York America, in the last two decades has experienced upheavals in its social institutions which some political scientists refer to as a revolution. By whatever name, many of the institutions of society have been dramatically altered in recent years. The fields of detention and corrections have been greatly affected by these events.

In an earlier era, behavioral scientists and correctional administrators viewed offenders in the context of what has been termed "the medical model." It was assumed that these individuals were socially ill and that proper dispositions involved diagnosing their ills and treating them in such a manner that they could be released as "cured," In order to achieve this, behavioral science, medicine, and education focussed their resources upon a sometimes willing but often recalcitrant client. In the 1970's, in Minnesota and in a growing number of other states, the offender has come to be looked upon as a citizen who, for a variety of reasons, has violated the law and is subject to social sanction. Throughout the duration of the imposed sanction, help should be made available to the individual who seeks it but not forced upon him. Emphasized increasingly is the need to deal with the individual in a fair, consistent, just and humane manner.

This process has been hastened by the courts which largely ignored the correctional process in the first 190 years of this country's history but have now taken an extensive interest. As a result, the constitution of the United States has been drastically reinterpreted to afford offenders the full protection of the law as it relates to freedom of speech, freedom of association, the right to due process, and many other rights and protections which were heretofore not afforded.

Minnesota for years has been among the leading states in the use of community based programs for dealing with its offenders. In earlier days. this was characterized by probation, parole, and work release. Newer innovations such as restitution programs wherein offenders are required to work in the community to pay back their victims are being employed increasingly. Community corrections centers providing alternatives to incarceration for offenders who need support and structure in their lives are currently abundant, especially in the Twin Cities Metropolitan area.

The Minnesota Community Corrections Act is cited nationwide as an ex-



RAMSEY COUNTY



Ramsey County Juvenile Service Center, Saint Paul, Minnesota, The Leonard Parker Associates—formerly Parker Klein Associates—Architects, 430 Oak Grove, Minneapolis, Minnesota; Walker McGough Foltz Lyerla, North 120 Wall Street, Spokane, Washington

Ramsey County is in the process of upgrading its Juvenile Justice System. County authorities recognize that the handling of juvenile offenders is crucial if they are to be deterred from a life of crime and progression into the adult institutional system. The County charge to the architects was to develop a downtown Juvenile Service Center to provide more expeditious and comprehensive services to the juvenile in trouble, by combining the following in close proximity: (a) Juvenile Court including the Juvenile Division Court Unit (probation officers); (b) Resource representation from community service agencies; (c) Detention housing for youngsters who must wait more than 24 hours for a hearing or for release to their parents.

Hennepin County Adult Detention Center, Minneapolis, Minnesota, Ellerbe Architects/Engineers/Planners, Bloomington, Minnesota

Completion date: May 1978; Bed capacity: 292. Since it literally replaced the old jail, the new facility was designed for construction in two phases to permit continuous occupancy during construction. The Adult Detention Center is located in the upper two levels of the City Hall and Courthouse Building with an intake center for holding, booking and screening at street level. Food preparation and laundry facilities make the center somewhat self-contained. A secure tunnel and elevator system permits prisoner access to courtrooms in the adjacent Government Center. Construction cost was \$6.7 million.

High Security Facility, State of Minnesota, Oak Park Heights, Minnesota, Winsor-Faricy Architects, Inc., Saint Paul, architects; Gruzen and Partners, New York, consulting architects; Kirkham Michael and Associates, Minneapolis, consulting engineers; Charles Wood, Minneapolis, landscape architect; McGough Construction Co., Saint Paul, construction management for State of Minnesota

Ramsey County Adult Detention Center, Saint Paul, Minnesota

The Wold Association, Saint Paul, Minnesota, architects; Gruzen and Partners, New York, New York, associate architects; Kirkham-Michael Associates, Minneapolis, Minnesota, consulting engineers; R. Richard Gauger, project representative for the facility.

The design concept for the new Detention Center began with the development of a highly flexible building design for the pre-trial holding of detainees. The design allows for a wide range of housing types of minimum, medium and maximum security categories. The traditional symbols of incarceration, i.e., cage-like cells and barred windows, have been eliminated. The architecture symbolizes the positive effects of adequate space, light and air by providing individual inmate rooms thereby reducing the environmental stresses of crowded confinement.

A public plaza at Kellogg Blvd. presents a dramatic view of the Mississippi River. The plaza also acts as an extension of the Kellogg Mall. The building facade utilizes an angular form which maximizes the amount of perimeter area achievable on the limited site and permits natural light in all living units. The resulting essentially one-sided building conserves energy and maintains security control. The exterior of this maximum security building will be of masonry construction and high security alarm glass.







ample of a constructive approach to correctional change. Under this act, Minnesota counties are rewarded financially for developing correctional programs in the community at the grassroots level where it is felt that the offender can best be helped and controlled. Such financial incentives have caused a dramatic reduction in the number of juveniles in state institutions and have resulted in innovative new programs at the local level. Adult programs are similarly encouraged and the act is one reason cited for the fact that state institutions for adults in Minnesota are not crowded while those in many other states are overflowing at this time.

It is in the context of these developments that Minnesota is encountering a boom in the construction of new and the remodeling of older correctional facilities. This has been undertaken to create facilities in which inmates may be safely, humanely, and justly housed during their period of incarceration or while awaiting trial.

Correctional administrators are beginning to recognize what architects have known for many years, that the environment created by a structure has a great deal of impact upon the emotions and behavior of those who live within. It is hoped that positive environments may replace those which have gone before. It is also increasingly recognized that facilities need not be ugly, monstrous places which contaminate the communities in which they are placed. Rather, it is possible to make facilities 'good neighbors.'' Some facilities which have been built in the United States and in the rest of the world in the past five years can be called beautiful in their own way. A prime example of this in the midwest is the Metropolitan Corrections Center of the Federal Bureau of Prisons in Chicago and the new Ramsey County jail in Saint Paul.

Bruce W. McManus is Project Director, High Security Facility Project, Minnesota Department of Corrections, Saint Paul, Minnesota. He is responsible for programming, planning and phase-in of the new 400 resident facility and also for the programming, planning and renovation of the existing Minnesota State Prison.

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Noguchi's Imaginary Landscapes Walker Art Center Minneapolis 23 April–18 June

Thomas Hodne Jr.



Martha Graham's Cave of the Heart by Noguchi, 1946



The current Noguchi exhibition at the Walker Art Center reacquainted me with Noguchi's work which I admired as an architectural student over 20 years ago. The show expertly displays an amazing array of visionary diversity, from sculptural objects to urban environment. I believe a parallel exists between Noguchi, the sculptor/mini-environmentalist, and today's architect/urban designer. The urban designer approaches design problems from the "outside in," and the traditional architect from the "inside out." Similarly, Noguchi seems to approach his environments from an urban designer's perspective. He creates land forms (dating back to the 1930's) that become background buildings while his sculptural and functional forms (e.q. play apparatus) are his focal buildings. Even his stage setting designs become the "building settings" for the "people actors" to experience by seeing, feeling and surrounding.

If one "squints" at his work as a whole, one can perceive of his sculptural/environmental approach as the major missing ingredient in our urban design process. I believe we need a "bold and noble" urban design effort for our cities to provide a design framework for the object buildings. I





believe the functional and economic aspects of cities and buildings can operate within a visionary form concept. I vote to commission Noguchi's sculptural/environmental concept approach as an additive to the current Minneapolis **METRO 90 Planning Process**.

On the overall impact of the exhibition, I was very intrigued and actually amazed at the depth of his work. One respected person remarked to me, "Noguchi has magic in his work."

Of greatest interest were the land sculpture/non-built work and his excellent environmental built projects: the Chase Manhattan Bank and Yale Library viewing courts and Piedmont Park and Plaza in Atlanta, featuring natural ground with the right sparkle of color. These are simple and elegant with just the proper balance of manmade "stuff." Noguchi knows when to stop a work. So many of us tend to "over object" our environments.

Another exuberant yet subtle work is his 'interior garden'' for the Japanese Flower Arranging School: a mountain of stone indoors with rich wood forms giving warm contrast. This is a superb example of his sympathetic traditional, yet contemporary design symbolism.

Other functional objects in his comprehensive repertoire are his classic glass coffee table and paper lamps. Technology at its best is expressed in the inner workings of the complex mechanical systems in his fountains.

Noguchi convinced me that he is equally talented as an architect by his Martha Graham Theater design done in 1976. An amazing "whole person" designer of extraordinary talents. I am invigorated! I believe the over 50 age group still has a lot of time as Noguchi was 54 years old before realizing his first built exterior environmental project in collaboration with Skidmore, Owings & Merrill.

Thank you Walker and thank you Isamu Noguchi.

Tom Hodne Jr., Architect/Urban Designer, is a principal in The Hodne/Stageberg Partners, Inc. of Minneapolis, and a Professor of Architecture at the University of Minnesota School of Landscape Architecture and Architecture.

Beineke Library, Yale University, New Haven, Conn.

Chase Manhattan Bank Plaza, New York City

Dayton's Home Center and the Life of the Mind

By Rosamond Tryon

Visitors to the opulent new Daytons' Home Center in Edina are likely to encounter more than elegant room settings, expensive objets d'art, harried salespeople and other acquisitive humans like themselves. Allusively alive in the sprawling eclecticism of these precincts are the disembodied ghosts of the beautiful people for whom they were intended. Born in the wishful minds of decorators and manufacturers and nurtured by the myths and expectations we all derive from magazines and television versions of the good life, these faceless ectoplasmic WASPS inhabit carefully ordered, meticulously dusted salons, dine off fine porcelain in exquisite dining rooms. Their children-serious boys of unquestionably masculine, rich brown tastes who are headed for prep school or Yale-lovely little girls in frilled pinafores with never a curl out of place-inhabit sumptuously furnished bedrooms. The individuality of these spirits is felt only in the subtle differences of their life styles-some are serious and sober and read or discuss politics in period settings, some are smartly contemporary, sipping cocktails in contemporary understated elegance. Sybarites and swingers (all in the best of taste) sink into immense overstuffed couches in rooms lit with a sensuous glow, surrounded with "interesting" bric-a-brac, trendy candles. Many of them, we see, have interests-a fascination with Egyptian antiquities, "modern art," "fun" lamps.

For the casual ordinary human visitor these encounters have the thrill of archeology. Once the presence of the ghosts is known, they are met everywhere-standing posed by Queen Anne desks in chiffon morning gowns, speaking to each other sotto voce in conversation pits, admiring themselves in ornamental mirrors. We see well what they have in common. All of them know how to please themselves, they value comfort, good taste and order above all else. All are young, slender, serene and rich. Even the more adventurous of them are moderately conservative. We know they are educated, perfectly dressed, well mannered, never gauche. They have never had a moment of anger, awkwardness or embarrassment. Perhaps they are, or are meant to be, ourselves as we would like to be-wealthy, leisured, guiltless and eternally self-possessed. In this fourth dimension children never cry, toes are never stubbed, the bill collector never comes. No one is old, or ugly, or sick. Their children are never messy. No one is ever anxious. All of them have independent incomes.

The first false note is struck, however, when the amateur archaeologist turns for further enlightenment to their favorite reading matter. All the appropriate rooms are furnished with books, arranged in bookcases, on night tables—flung down in the middle of a chapter on a coffee table, propped up for serious reading on an elegant book stand. Can these ethereal beings, our richer, better



The exterior statue is a stainless steel structure, about 8' tall by 6' and is a fountain: The work was designed by Jack Becker, and has been adapted in a logo for the store's advertising. The new Dayton's Southdale Home Store is a three level, 83,000 sq. ft. home furnishings store, designed by Bentz/Thompson and Associates, Inc., Minneapolis.



selves, nourish their intellectual life by and large on Readers Digest Condensed Books from the 1950s?Are their clever children provided only with old volumes of outdated encyclopedias and pre-World War I society romances? Why are they all so addicted to hopelessly outdated law books and accounting texts? Can that sophisticated lady in the softly lighted boudoir really have been reading Three Gringos in Central America? Is the smart young couple in mirrored surroundings really proud of the 1928 Handbook of Diseases of the Rectum? Are young trendsetters taking 1891 Chautauqua courses and reading Little Visits with Great Americans? Even rich illiterates can buy beautifully bound books by the yard to furnish their studies.

Would they be satisfied with dogeared old tax guides, 1950's high school biology texts and remaindered fiction from the turn of the century? Wouldn't that couple so entranced with Egypt that they wish a full-blown replica of a mummy case in their living room have at least one of the recent beautifully illustrated books on Egyptian Art on their coffee table? One is forced to conclude that Daytons does not think so. Gabberts may perh aps be excused since they don't sell books, but Daytons could dig up a few appropriate volumes without going outside the store.

Sadly, the beautiful people fade away, stunted in mind and imagination by the parsimony of their creators. Faceless, emotionless and now mindless, they recede into the corporate mist and we are left once more with the Sunday afternoon shoppers, imperfection personified, yearning for this and that, quieting squalling children, figuring bank balances — but, on the other hand, perhaps willing once in a while to read a good book, love someone or have a good cry.

Rosamond Tryon is a librarian with close architectural interests, who believes, with Mies van der Rohe, that 'God is in the details.''

This dining area in Dayton's new Southdale Home Store is a "cave room," complete with decorative turtle and snail, and live greenery and fountain.

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Natural Solar Architecture: a passive primer by David Wright, Van Hostrand Rinehold, 7.95 paperback

"Natural Solar Architecture is literally chock full of tips and guidelines, and solar home en-

These and many other books are available from the Architectural Center, 402 N.W. Skyway, Saint Paul 55101. Telephone (612) 227-0761. thusiasts will enjoy perusing the five, 'visionary, maybe illusionary, probably realistic' schemes for solar energized homes.'' Appendix includes metric conversion tables, a list of reference materials, and a reading matrix.



Great Moments in Architecture by David Macaulay, Houghton-Mifflin, 5.95

"David Macaulay, whose phenomenally successful books Cathedral, City, Pyramid, Underground and Castle have won him international acclaim, here demonstrates a fresh and beguiling side to his talents. Great Moments in Architecture is a wondrous portfolio that has to be seen to be fully savored—or even believed for that matter. Here are the plans for . . . the disastrous meeting of the greater and lesser walls of China, the tower of Pisa on a skewed drafting table. A selection of the drawings in this book created a sensation when they were exhibited in 1977 at New York's Spaced Gallery.



Kicked a Building Lately? by Ada Louise Huxtable, Quadrangle, 5.95 paper

"... Among the most perceptive, readable and fascinating commentaries that have been written about the state of architecture in America." – Journal of Aesthetics and Art Criticism. Her comments are all arrows of the chase, released when the aim seemed good, and with some fine hits. – The Hudson Review.



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METRIERG

Editor:

For the past year I have been reviewing your publication, Architecture Minnesota, second hand. I have always received it with interest and with anticipation of reading about outstate projects, but so little has been said about projects, other than Twin Cities originals that I think either the name of the publication should be changed to Architecture Twin Cities or consider giving more out-state projects consideration and keep the name meaningful.

Like all controlled publications, the positive is always displayed and never the negative which leaves one to believe that architecture is a profession without failures. You would do yur fellow architects a service to speak about the mistakes made and help resolve problems to provide owners and operators of the buildings which dominate your publication. Better buildings with costs of operation and maintenance are key factors of design as well as leaking roofs and product failures.

When you speak about renovation/restoration projects in your publication, I think you should look around the state for some better examples of restoration than you have spoken of to date. A good example is the major restoration/renovation of Central High School, Duluth, Minnesota. It is, I know, a long way from Minneapolis, but I believe it should be recognized for its rebirth as an efficient school district administration building with a renewed life expectancy in excess of seventy years when totally completed.

As an active School Board Member and the Director of Plant Services for a local Duluth Hospital, I have seen the state of the art of architecture stumble many times as it trips over the fundamentals of good design while looking to the heavens for inspiration and to its peers for awards. **Robert A. Bodin Director of Plant Service Miller-Dwan Hospital and Medical Contor**

Hospital and Medical Center Duluth

Editor:

Your January-February issue was superb!

Specifically, the article on Minnesota's quality of architecture and the challenge you presented in that article to Minnesotans regarding construction of the mall building in front of the capitol in Saint Paul brought a lot of light to the subject that generated mostly heat in the 1977 session

The pictures of the capitol building

itself demonstrated so graphically how much life and vitality there is in the color and design of this building. Even though I consider myself to be something of a student of this remarkable building, your pictures brought out nuances that I had never noticed before.

Finally, your article on overlapping responsibility explicit in the state's various building codes was very helpful...

John Clawson State Representative District 19A

Editor:

Very quietly but also very methodically I have been doing some research unto myself in trying to outline the characteristics, the origins and the possible future development or evolution of what I can best describe as a very elliptical and for myself even insidious style of design. I have been thinking also that I might, if I could get someone's endorsement, apply for a fellowship from the Minnesota State Arts Council to document and publish my conclusions.

Perhaps I can interest you, although the design style I define has not been so easy to document in architectural works. It will no doubt, however, influence perhaps even very soon the art of architecture. The style is best represented by plastic objects, it is best represented by the color beige (for myself any pale plastic color will do) and by the ever so soft and sensuous corners. Best examples are certain plastic covered metronomes, immense unfolding hair dryers for ladies, some plastic cups and even chairs. . . . They represent what I have named the Suppository School of Design.

The design is innocuous for obvious reasons, for truly the objects appear to have been prepared for horses, giraffes, whales, dinosaurs . . . etc. I must really stop now, but I can see that I am giving away my classification system. If you should yourself care, I could forward you privately an outline of my research and conclusions. In the meantime you should know that I have officially registered the name. **Elbert L. Restad Worthington**

Architecture Minnesota identified this style some years ago. Although we perhaps did not name it so aptly, we warned of its dangers and its potentials. We have since commissioned a thorough investigation of this phenomenon, both on a regional as well as national basis, and expect to report to our readers in early 1979. Ed

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Wunder-Klein-Donohue Co5

aking Thought with Prestressed Concrete



le Prestressed Concrete, Inc. Wall panel. Has low "U" Value of han .065! Panel is 8 foot wide with 3 inch concrete "sandwich" chside of 2 inch thick polyure than e insulation. Features exposed gate finish between floor and ceiling lines. When hoisted by from truck to foundation, panel is rotated to vertical position.



Prestressed beams 20" x 32" x 30' span are shown being erected on precast columns 20" x 20" x 21' high. The structure's simplicity and repetition of structural components are economical relative to other forms of construction. Yet, both interior and exterior esthetics exhibit a pleasant originality.



a Electric Association new headquarters reflect a pride in energy conservation and building functionalism. Originality of design proves the unlimited flexibility of Prestressed Concrete, Inc. many standard building components and techniques "without reinventing the ". Many design features previously thought possible using traditional, costly construction methods, were incorporated. Note multiional walls, roof extending over walkways and recessed windows and doors.

ure encloses three functions. Office, warehouse and garage totals 85,725 square feet. Incorporates 361 wall panels 8" x 96" × 16 * to 28' and 83,000 square feet of Dy-Core Prestressed roof slabs 12" x 48" x 30'.

ECT: Dakota Electric Association, Farmington, Minn. HTECT: Ekberg Associates, Inc., MpIs., Minn. CTURAL ENGINEER: Frank Horner Company, St. Paul, Minn. SULTING ENGINEER PRECASTER: L. W. Darg Engineering, MpIs., Minn. ERAL CONTRACTOR: Witcher Construction Co., MpIs., Minn.





Look for Ceramic Tile under Water

Fountains or foyers...lobbies or lavatories, walls or walkways, ceramic tile won't absorb moisture, won't warp or buckle. Available in a broad spectrum of truefor-life colors, ceramic tile needs no sealants or waxes, comes clean with soap and water. And, when properly specified and installed, ceramic tile outlasts the structures it serves.

So, "look for ceramic tile under WATER," or just about anyplace else where beauty, minimum maintenance and permanence are desired.

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