THE MINNESOTA HISTORY
Interpreter
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INSIDE

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Granlund Sculpture Installed at Cook County Historical Society

In its first showing in front of the Johnson Heritage Post Art Gallery in 1994, Paul Granlund's sculpture "The Swimmers" made a deep impression on gallery director Suellen Kruse and former board member Marion Quick. They set out to acquire it and have it mounted permanently in that same location, which is across from the harbor in downtown Grand Marais.

Granlund was very pleased with the idea. He and his wife, Edna, agreed to sell it to the Johnson Heritage Post at a 20 percent discount of the retail price of $30,000. In a letter to Ms. Kruse, he recalled seeing the sculpture in front of the building, and said that "we noted how right its scale was to the site and the building and that it seemed ideally positioned for access and viewing. The family and water theme worked together to evoke a sense of buoyancy and play. There was a shared opinion that the sculpture seemed to belong. I will be extremely proud to be so represented in the community."

Photo courtesy of Cook County Historical Society

"The Swimmers," by Paul Granlund, is shown here in its place in front of the Johnson Heritage Post Art Gallery in Grand Marais.

The management committee of the Post, which is a facility of the Cook County Historical Society, set out to raise the needed $24,000. By May 1997, after more than $12,000 had been raised, the sculpture was installed. At a fund-raising dinner in September, the sculptor gave demonstrations of how he works and invited the audience of more than 80 persons to participate.

As this issue of the *Interpreter* goes to press, nearly $16,000 has been raised. The full amount is due in May 1998. As a fund raising incentive, the name of any donor who contributes $500 or more will be inscribed on a plaque to be placed at the base of the sculpture.

For further information, call the Johnson Heritage Post Art Gallery, Cook County Historical Society, (218) 387-2314.

A message from Minnesota Historical Society Director Nina Archabal

On September 29th I received the National Humanities Medal from President Clinton at the White House. This was an unforgettable experience for me personally and an honor for everyone associated with state and local history in Minnesota. I feel tremendous pride in our accomplishments together.

All across the state there are fine historical organizations that nurture our Minnesota heritage. These organizations and the people associated with them exemplify Minnesota's long-standing commitment to history that extends from state government to individuals. The honor belongs to all who give their time and money to preserve the Minnesota story. The honor given with the 1997 National Humanities Medal is truly yours.

Nina Archabal

Return of the Quilting Bee
by Marsha Knittig

Grab your needles! This is your chance to do some hand quilting—in the new "Q is for Quilts" exhibit at the Minnesota History Center!

Recruiting fliers went out to quilting groups and quilting shops from International Falls to Luverne, and have been working wonders. Minnesota quilters have responded to the call—and have called back to schedule their day at the History Center. Now that the new "Q is for Quilts" exhibit is open, quilters will be coming from all over Minnesota to demonstrate the art of hand quilting.

On the first and third Saturdays of each month, six to eight quilters will be in the program area next to the exhibit to recreate an old fashioned quilting bee. Visitors will experience the time-honored tradition of women gathering—not only to sew, but to talk and laugh, as quilters around a frame are inclined to do. Those who want to try their hand at quilting will find lots of willing teachers.

Above: The "Minnesota Lily" quilt, which will be the first quilt to be completed by the quilters.

Below: Beverly Keltgen, Atwater (left), and Kathie Illig, Delano, are shown tacking the edge of the "Minnesota Lily" quilt

The teachers will include eight experienced quilters and members of the Minnesota Quilters, who started out as a working advisory group to the program. Their names are familiar to quilters in Minnesota: Karen Benson, Jean Humenansky, Mary Lou Murray, Debra Newman, Judy Purman, Jeannette Root, Judy Sears and Dorothy Stish. They will serve as hostesses, two at a time, to the visiting quilting groups.

To the delight of project planners, more than half of the available quilting days had been scheduled by Oct. 1. Planning meetings have been enlivened by the names of scheduled groups, which include: The Muslin Maidens from Dawson, the Prairie Piecemakers from New Ulm, The Quilters Along the Yellowstone Trail from communities along Highway 212, the Loon Crafters Quilt Guild from Outing, Hearts and Pieces from Eden Prairie, and the Rosemore Family Quilters from Floodwood.

The Quilters Along the Yellowstone Trail (QYT) were the first to gather around the frame and put needle to fabric on Saturday and Sunday of the exhibit's opening weekend. The members of QYT volunteered in June to piece and appliqué the top of this first quilt and prepare it for quilting. Its red, white and green "Minnesota Lily" quilt design is by Johanna Wilson of Plum Creek Patchwork in Walnut Grove, and the materials were donated by the Country Peddler Quilt Shop in St. Paul. A second quilt—a gift for a prominent Swedish American to be announced later—is tentatively scheduled to replace the first one in early April.

Quilting will take place from 10 a.m. to 3 p.m. on the first and third Saturdays of each month. At the end of each quilting day, the quilt will be raised to the gallery ceiling with pulleys and lines; this is the way quilts were stored in pioneer days. When the quilt has been finished, it will hang in one of the community rooms in the History Center.

This has been a shared project with the quilters of Minnesota. Every element—from the materials and labor for the quilt top, to the quilt frame—has been donated by members of the quilting community. The Great Saturday Quilting Bee is scheduled to last for one year: to the end of September, 1998. The exhibit itself will last several years longer. "Q is for Quilts" is a collaboration between the Minnesota Historical Society, the Minnesota Quilters and the Minnesota Quilt Project.

For a listing of available quilting dates, a list of "Frequently Asked Questions," or for further information, please call Marsha Knittig, MHS Program Developer, (612) 296-1193, or Jackie Maas, MHS Volunteer Coordinator, (612) 296-2155.

Marsha Knittig, MHS Program Developer, has been with the Society since 1995.

TECH TALK
This issue: Building Materials • Part I

MINNESOTA HISTORICAL SOCIETY

Masonry
by Charles W. Nelson

This is the first of two Tech Talk articles concerning building materials by Minnesota Historical Society Historical Architect Charles Nelson. This article can be considered a "primer." In the January, 1988 *Interpreter,* Nelson will discuss problems of maintaining and treating building materials.

"Masonry" is defined in the *Dictionary of Architecture and Construction* by Cyril M. Harris (1975) as "the art of shaping, arranging, and uniting stone, brick, building blocks, and other materials to form walls and other parts of a building." Virtually all buildings incorporate some type of masonry construction, whether it be a stone or concrete foundation, brick veneer walls, or terra cotta ornamentation. Preservation of these buildings requires a basic understanding of masonry types and their characteristics, technology and construction methodology, and proper maintenance and conservation treatments.

Let us begin with a brief overview of masonry types and technology found in the construction of Minnesota buildings.

Stone

The earliest material to be used is stone. It is obtained in two ways: from natural outcroppings or scattered deposits, and by the process of quarrying. Many early buildings were constructed of stone readily available near the building site. Along river valleys, limestone was prevalent, both in the gray Platteville and yellow Mankato/Kasota varieties. The stone was removed in natural layers, or strata, by the simple technology of picks and crowbars.

Early stonemasons were familiar with the properties of limestone and other sedimentary stone, and exercised care to "lay up," or set, the stone in accordance with its "bedding plane," i.e., its natural geological layering. If the bedding plane ran horizontally in the deposit, the stone was laid so that this bedding plane was also horizontal in the construction of the building wall. (When sedimentary stone is not laid up in accordance with its bedding plane, i.e., when the bedding plane runs horizontally but the stone is laid vertically, problems will arise. This improper practice has been used by contractors when the original thickness of stone is not readily available and they are required

State Historic Preservation Office, MHS; photograph by Charles Nelson

Two limestone gate posts in St. Paul, built around 1885.

Editor's note: TECH TALK is a bimonthly column for offering technical assistance on management, preservation, and conservation matters that affect historical societies and museums of all sizes and interests.

Charles Nelson is Historical Architect in the Historic Preservation, Field Services and Grants department of the Minnesota Historical Society. Known around the state as Charlie, he has been with the Society since 1971, and has worked on numerous preservation projects and given many workshops and talks throughout Minnesota and the upper Midwest.

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to lay up the stone as a "veneer," or facing. When the stone is not in its bedding plane, it is at its weakest, will absorb moisture between strata, and will "spall"—fracture and lose its surface—as a result of thermal stress and weathering.)

Early stonemasons also were aware that certain stone types had more "weatherability"—able to withstand the effects of weather better than others—and they utilized each type in accordance with its properties. For example, Platteville limestone is prone to fracture along strata and so is more vulnerable to effects of weathering when used in above-grade, or above-ground, construction. Kasota stone is more dense and has a higher resistance to weathering.

State Historic Preservation Office, MHS; photograph by Charles Nelson

These men are using hammers and picks to break off slabs of limestone from a riverbank outcropping.

Another readily obtainable type of stone is fieldstone, found in many areas of the state affected by glaciers. In laying up fieldstone, adherence to bedding plane is far less critical. Stones may be laid up in their natural form, or broken and "squared," or shaped, for proper fit with other stones in the wall. After milled lumber became available, fieldstone was used primarily in foundations, fireplaces and chimneys. There was a revival of fieldstone construction during the 1920s and '30s, however, when it was recognized as a distinctive characteristic of the Rustic Style.

Quarrying, the industrial process of extracting stone from the earth, requires substantial effort and technology. In this process, stone is drilled, blasted, fractured or cut from the quarry face, and then shaped and finished for use in construction. Four examples of significant quarries that have contributed immensely to building construction in Minnesota are located at Kasota, Sandstone, Cold Spring/Rockville and Jasper.

Brick

Brick is the second of the early masonry types to be found in Minnesota. Unlike the extraction of stone, brick-making requires a technological process to reach its final form. The primary ingredient in brick is clay, which is most often found in deposits in lowlands or river valley. Clay is soft, and may be supplemented with a binder; early brick often had straw as a binder. The clay is packed into molds and set aside to dry and stiffen; in this form, the brick is called "green." After an appropriate time period, the green bricks are removed from the molds and stacked in a kiln to be fired.

The intensity of heat and duration of firing determines the strength and durability of the brick. The process is similar to baking bread; a brick has a protective outer layer, or crust, with a softer

State Historic Preservation Office, MHS; photograph by Charles Nelson

This wall of the J. Engesser House in St. Peter, built in 1888, is a good illustration of the kind of variety in design of which brick is capable.

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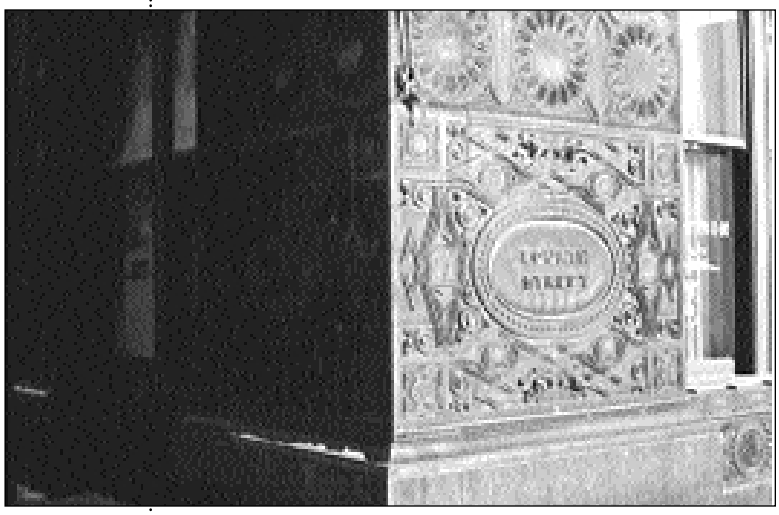
interior. It is important to remember that when the exterior crust is damaged or removed, the brick rapidly deteriorates. This is sufficient reason not to sandblast; sandblasting removes the crust and reduces the life expectancy of the brick. The colors found in bricks are the result of minerals in the clay deposits. When fired, the minerals go through a transformation to produce reds, yellows, and even purples.

Bricks are produced for a variety of applications in the building trade. "Soft-fired," or "common," brick makes up the cores of walls and exposed secondary facades. "Hard-fired," or "faced," brick is used on principal facades and surfaces where a crisp, durable image is desired. Yet another type of brick, often called "sewer brick," is used for paving or subterranean culverts. Brick may also be finished with a glazed surface to provide a sanitary, impervious surface for use in areas of food production such as meat-processing plants and creameries.

A masonry type closely related to brick is *terra cotta.* Its principal ingredient is also clay. The primary difference between brick and *terra cotta* is that *terra cotta* is not a load-bearing structural material. It is used primarily for facing, or veneer. It is often ornamental, having been made in molds and then fired in the same fashion as ceramics. *Terra cotta* also shrinks during the process of firing; the shrinkage must be compensated by enlargement of the original mold, allowing for the final proportions. *Terra cotta* is often glazed and pigmented. Like brick, if the glazing or outer skin is removed or damaged, the material will rapidly deteriorate. Architects and builders made extensive use of *terra cotta* in their designs for Commercial and Prairie School style buildings, which were popular during the first decades of this century.

The photograph below is a detail of the terra cotta *cornerstone at the southwest corner of the Grain Exchange Building in Minneapolis, which was built in 1902. The inscription says, "Fourth Street."*



State Historic Preservation Office, MHS; photograph by Charles Nelson

Concrete

Concrete would be considered modern on the masonry timeline. (Concrete is cement plus an aggregate; cement is the bonding agent that hardens and bond the aggregate.) Cement and concrete date back to Roman times. It became a state-of-the-art, popular, building material early in the 20th century.

It had been used in the Civil War era as "grout" or "gravel wall" construction. In this form, a slurry of cement, lime and gravel was poured into slip forms that could be moved as the wall rose in height. For some reason, probably the ready availability of brick and wood, this concept was soon abandoned. This method was later used for poured concrete foundations at the turn of the century. With the addition of iron reinforcing bars, such construction became quite strong and durable. By the 1920s, reinforced concrete construction was common, and was used extensively in buildings and structures such as bridges and grain elevators.

This is an example of a poured concrete foundation, in a church built around 1910.

State Historic Preservation Office, MHS, photograph by Charles Nelson

Concrete also was produced in modular form as blocks of various sizes and textural finishes. Blocks were poured in forms, and after a short curing period were ready for use in construction. When they first appeared on the broad market, concrete blocks were considered "technologically fashionable" and were left exposed. Patterns made possible by molds allowed

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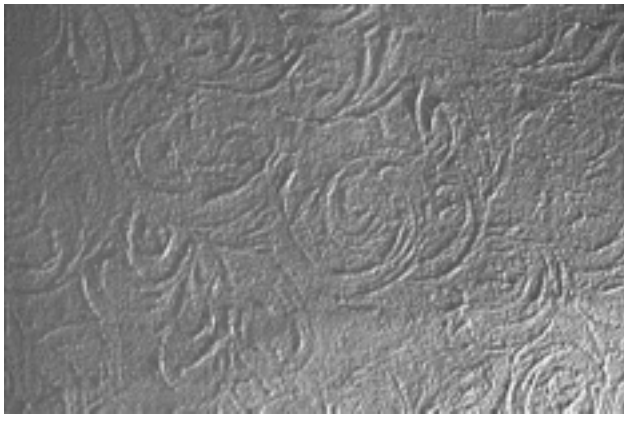
some blocks to resemble hewn stone while others presented a vivid array of color from a variety of aggregates. However, exposed concrete block soon fell from fashion and became the infrastructure of the walls, hidden beneath veneers and the "cladding," i.e., the metal, wood siding or stucco. "Rusticated," or "rock-faced," block has experienced a revival within the last decade for use in historically sensitive new construction.

Clay tile

Hollow clay tile became a popular material for light-weight construction of walls and vaulted ceilings during the late 19th century. It is, for the most part, not a load-bearing material and is utilized in panel construction, to fill space between structural members such as posts and beams in a skeletal frame system. Some examples of exposed tile exist that date from the 1920s and '30s, but these are usually utilitarian structures such as garages or well-houses.

To provide protection from the elements and to give the wall a finish, plain concrete block and hollow tile was given a coating of "stucco." Essentially a mortar slurry, stucco was applied like a durable plaster. It could be textured and pigmented and used as infill within the mock half-timber panels of a Tudor Revival cottage. It could convey the image of a southwestern adobe, it was essential to the Prairie School, and it was later used to conceal underlying deterioration and structural deficiencies.



State Historic Preservation Office, MHS; photograph by Charles Nelson

Stucco may be textured into a variety of decorative patterns.

Mortar

This discussion of masonry types would not be complete without a brief mention of mortar. The earliest mixture actually to be considered mortar was simply lime and sand, mixed with water to form a thick putty. Lime was obtained from burning limestone in kilns, then allowing the quicklime that resulted to slake by adding water to form a putty, then letting the putty cure for a specific period of time. The mixture formed a soft mortar that bonded with the masonry units in the wall, holding it in place while permitting it to expand and contract with changes in temperature and settlement. Being soft, however, this mortar was greatly susceptible to weathering and erosion. The solution to the problem was provided by adding a small portion of Portland cement to the mix.

However, the more durable the mortar became, the more rigid it became. The result was an undue stress on the masonry units, retarding their natural movement and causing them to fracture and spall within the confinement of the unresponsive mortar. Concurrently with the growing use of Portland-type mortars, masonry types with similar characteristics were developed to avoid this situation. Therefore, when repointing (replacing mortar) on an old building, one must become familiar with the properties of both the masonry type and the mortar, and take appropriate measures to assure compatibility.

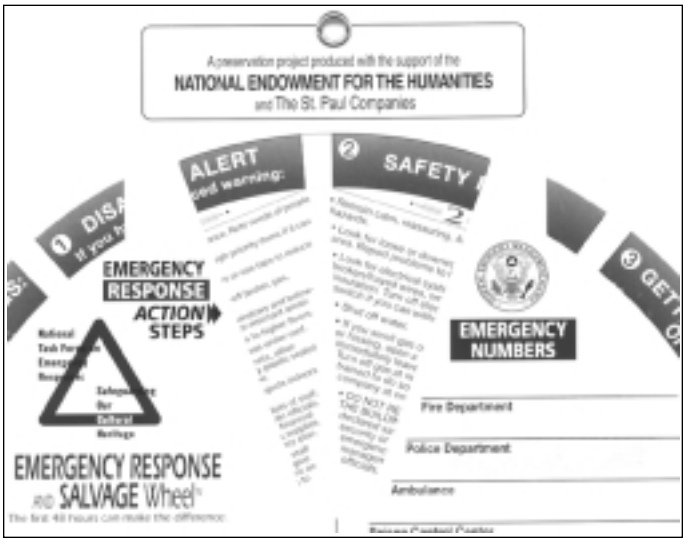
NOTE: In the Tech Talk section of the January 1998 *Interpreter,* Nelson will tackle the challenges of maintenance and treatment of masonry.

Brief Glossary of Masonry Terms

Bedding plane	natural geological layering
Lay up	to place, or set
Spall	fracture, losing its surface
Squaring	shaping broken fieldstone to fit desired space
Veneer	facing
Weatherability	capacity of material to withstand the effects of weather

Damage to Collections: Advice in New Fingertip Aid

This extraordinary slide-wheel, 9-3/4" in diameter, gives cultural organizations quick access to essential information about protecting and salvaging collections during the first 48 hours of an emergency.



This photograph shows the top part of the "Salvage Wheel." By grasping the handle at the top, you can rotate the window to read the "Emergency Salvage Steps" under each heading.

The device is called the "Emergency Response and Salvage Wheel™." On one side, the topics are listed in sequence, from "Disaster alert" to "Historic buildings—general tips." The information below each heading can be viewed through the sliding window. On the other side, information about specific topics, such as "ceramics/stone/metal" and "photographs" is presented in the same way.

The information on the wheel was developed and reviewed by preservation and conservation professionals, and endorsed by the Federal Emergency Management Agency (FEMA), and seven other federal agencies and national organizations. The wheel was produced by a partnership of FEMA, the National Endowment for the Humanities (NEH), The Getty Conservation Institute (GCI) and the National Institute for the Conservation of Cultural Property (NIC). Funding was provided by NEH, the St. Paul Companies and an anonymous foundation. The wheel was prepared for NIC by the Environmental Hazards Management Institute, Durham, N.H., from its Environmental Action Wheel™.

Some 45,000 libraries, museums, archives, and historical organizations and sites are to receive the wheel without charge. After that distribution, the wheel will be sold for $9.95 each, or $5.95 to nonprofit organizations, including postage and handling. If your organization has not received one, place an order by calling toll-free 1-888-979-2233, or write to the National Task Force on Emergency Response, 3299 K Street N.W., Washington, D.C. 20007.

Source: NEH web page: **www.neh.fed.us**

New Law Protects Nonprofit Volunteers

The Volunteer Protection Act of 1997, recently signed into law by President Clinton, affords certain kinds of protection to volunteers in nonprofit (or not-for-profit) organizations. Under this law, volunteers are not liable for committing negligent acts or omissions while acting within the scope of their responsibilities.

This exemption should be qualified, for it does not include acts or omissions caused by "willful or criminal misconduct, gross negligence, reckless misconduct, or a conscious, flagrant indifference to the rights or safety of the individual harmed by the volunteer," nor when harm is caused by a volunteer operating a "motor vehicle, vessel, aircraft, or other vehicle for which the state requires the operator or owner to possess a license or maintain insurance."

The new law is beneficial, but nonetheless, nonprofit organizations should have good "D & O" (Directors and Officers) insurance.

Source: American Society of Association Executives, (202) 626-2723. For further information, contact the American Association of Museums (AAM), Government and Public Affairs department, (202) 289-9125.

Web Site Information

Cokato Museum and Historical Society: **www.cokato.mn.us**
Textile Center of Minnesota: **www.mtn.org/textilecenter/**
Correction: The new Internet address for the American Association for State and Local History is **www.aaslh.org.**

Holiday Programs: A Sampler

Historical organizations in Minnesota produce a staggering number of historical holiday programs. We cannot do justice to their scope and scale in the *Interpreter;* this is a reminder that there is very little time left to produce one. Here are examples of programs in two places. They typify the abundance of program choices that will be available soon.

The Washington County Historical Society has scheduled Victorian Christmas teas for Dec. 6 and 13 at the **Warden's House Museum in Stillwater.** Authentic delicacies from the Victorian era will be served by costumed maids, and the first floor of the museum will be amply decorated in traditional holiday fashion. The cost is $8 per person; reservations are required. Call (612) 439-5956 by Dec. 1 for tickets and further information.

Three programs will be held at the **American Swedish Institute in Minneapolis.**

Holiday tables will be set to represent the table settings in the Scandinavian countries: Denmark, Finland, Norway and Sweden, Nov. 28, 1997–Jan. 11, 1998. A tree will stand at each table, featuring decorations from each country. On the Swedish tree, for instance, candy treats, called *julgranskarameller,* are wrapped with tissue paper frills in bright colored paper. Children scramble for them when the tree is tossed out of the house at the end of the holidays.

The life of St. Lucia, a 4th-century Christian martyr, is at the heart of several Swedish Christmastime traditions. Her life is the focus of "Illumination of a Saint: The Legend of Santa Lucia," an exhibit of photographs and story panels that will be shown at the American Swedish Institute, Nov. 28, 1997–Jan.11, 1998.

Families are invited to extend their holidays at *julglädje,* or "Christmas happiness!", on the afternoons of Friday and Saturday, Dec. 26 and 27. Programs of musical performances and storytelling will be featured, and holiday food will be served.

For further information, contact the American Swedish Institute, 2600 Park Ave., Minneapolis, MN 55407; (612) 871-4907.

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Readers are invited to submit information for publication. To be considered, items must reach the editor by the 25th of the month, two months before publication (example: publication date, October 1; submission deadline, August 25). Send to: **Interpreter** Editor, Minnesota Historical Society, 345 Kellogg Blvd. W., St. Paul, MN 55102-1906. For more information call (612) 296-5434 or (612) 296-8196.

Upon request, this publication can be made available in alternative formats: audiotape, large print or computer disk.

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