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St. Paul District

Crosscurrents

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• Revolutionize Effectiveness: Satisfy the Customer

St. Paul Flood Control Project achieves Award of Excellence; Channel Maintenance Management Plan earns Honor Award

by Peter Verstegen
Public Affairs specialist

The St. Paul Flood Control Project and the Channel Maintenance Management Plan have won top awards in the Civil Works category in the Chief of Engineers Design and Environmental Awards Program.

The worldwide competition was held March 3-4 in Washington, D.C. The program is a biennial engineering competition sponsored by the U.S. Army Corps of Engineers in Washington, D.C.

The judges considered 90 projects from throughout the Corps. Two categories of competition, Civil Works and Military Programs, were judged independently by an interdisciplinary panel of six design professionals each.

The competition presents three types of award: Award of Excellence, Honor and Merit awards. The St. Paul project



Photo by Carl Gray

The above photo shows the final appearance of the concrete promenade and floodwall for the St. Paul project. The surface texture of the wall is designed after the historic limestone facing that appears on many St. Paul landmarks. The concrete walkway is imprinted with a brick pattern and stained red. It is made of reinforced concrete to establish an impervious flood barrier.

earned the Award of Excellence in the Civil Works, the highest award a project can earn in the its category. The channel plan achieved an Honor Award in Civil

Works. (See "Channel Maintenance Management Plan receives Honor Award in Civil Works," page 3).

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• Invest in People

Be sure to drive, ride correctly in vehicles equipped with air bags

by Dennis Dalman

Staff writer

© Echo Press, Alexandria, Minn.

Friday, 2/27/98

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When air bags go off with the force of a bomb, motorists can be severely injured if they're driving or riding in the wrong positions.

That message came through loud and clear during a seminar Monday at the Alexandria Fire Department. The seminar for rescue workers concentrated on ways to safely extricate victims from vehicles with air bags.

Some of the information, however, should be known by every motorist and passenger.

For instance, those who drive air-bag-equipped cars should always drive with their hands at the 4 o'clock and 8 o'clock positions on the steering wheel. If their hands are anywhere else on the wheel, a deployed air bag can slam the driver's hands and arms elsewhere in the vehicle, causing injuries to other passengers for forcing limbs against parts of the car with such force that serious, if not fatal, injuries could result.

A passenger in the right front seat should never lie back and snooze or relax with feet on the dashboard. A deployed air bag would force the legs out through the windshield, causing almost certain loss of limbs beneath the knees.

Those vital tips were provided by Mitch Becker, technical trainer for the ABRA (Auto Body Refinishers of America) out of Minneapolis.

To show the stunning force of air bags, Becker and his assistant set off two of them simultaneously in the garage of the fire station. After the countdown, an ear-shattering boom shook the garage and a shock-wave of air struck the startled observers.

An air bag deploys in a mere three-thousandths of a second and is sent into the vehicle at a speed of upwards of 200 miles per hour.

Several dozen rescue personnel from Douglas and surrounding counties attended the two seminars (day and evening sessions) Monday in Alexandria.

The event was sponsored by the Douglas County

• Invest in People

Civil Servants of the Year named

Marilyn Kruchten, Bill Spychalla and Steve Tapp are the 1998 Civil Servants of the Year in the St. Paul District. They are three among nearly 100 award recipients who will be recognized at an awards luncheon Friday, May 1, at the Radisson South Hotel in Bloomington.

The group represents outstanding federal employees in the Minneapolis-St. Paul area.

Kruchten is a writer-editor in Management and Evaluation Branch. Tapp is the channel maintenance coordinator in the Waterways Section in Fountain City, Wis. Spychalla works as a project manager in Programs and Project Management Division.

The selection is made annually by the Civil Servant of the Year Selection Committee.

Editor's note: Individual profiles of the award recipients are scheduled for the May issue of Crosscurrents.

Sheriff's Department and the Alexandria Fire Department.

Other safety tips for the general public from the seminar:

For the driver's side...

Always wear your safety belt snug across your hips and shoulder strap across your chest away from your neck.

Sit back as far as comfortable, at least 12 inches away from the steering wheel. With tilt steering, aim the wheel at your chest area. Extension pedals are available for shorter people.

Be sure to hold the wheel at the 8 o'clock and 4 o'clock positions. If the wheel feels totally alien, it is acceptable to use the 9 o'clock and 3 o'clock positions.

For the passenger's side...

Always wear your seat belt properly with the seat as far back as possible and avoid leaning on the dashboard.

Never lean back with your feet up on the dash board.

Never use a rear-facing child seat in front. Children under 12 should always ride in the back, with their seat belts on, of course.

Never brace yourself on the dash or raise your hands in the event of a collision. And never store or mount anything on the dash board.

• Revolutionize Effectiveness: Satisfy the Customer; Build the Team

Channel Maintenance Management Plan receives Honor Award in Civil Works

by Peter Verstegen
Public Affairs specialist

The district's Channel Maintenance Management Plan (CMMP) received one of five Honor Awards in the Chief of Engineers Design and Environmental Awards competition March 3-4 in Washington, D.C. Honor Awards are given to projects which demonstrate excellence in multiple design disciplines.

The plan provides long-term, comprehensive guidelines for channel and harbor maintenance activities on the northern 284 miles of the Upper Mississippi River and selected tributaries.

Tributaries in the plan are the lower stems of the Minnesota, the St. Croix and Black rivers. The plan identifies designated dredged material placement sites, describes a strategy for placement site planning, discusses alternative channel maintenance techniques, and documents policies and procedures.

The CMMP protects the Upper Mississippi River's unique environment in partnership with other stakeholders. The high degree of coordination and cooperation with other river resources agencies was key to the plan's success. The plan covers a geographic area that includes Minnesota, Wisconsin and Iowa. Eighty-four percent of the 305,000-acre project area contains



St. Paul District file photo

The hydrographic survey Launch 16 uses sonar to map the bottom of the river channel. The data from the sonar readings, combined with coordinates from a global positioning system, is fed to an on-board computer. This information is plotted on maps of the river and then evaluated to determine whether dredging is needed.

aquatic or wetland habitat.

Maintenance of the nine-foot channel requires annual dredging. Channel control structures, such as wing dams, closing dams, and shoreline protection concentrate water flows to maintain adequate channel depth. The CMMP establishes the framework to plan, to coordinate, and to execute maintenance of a safe, reliable navigation channel while minimizing or avoiding adverse environmental, recreational, and cultural impacts.

The plan emphasizes five areas:

- Reliable navigation channel;

- Cost-effective solutions;
- Environmental stewardship;
- Strong agency partnerships;
- Protect river values.

A major objective of the program is the beneficial use of sandy dredged material. Nearly 80 percent is used beneficially. A long-range goal is 100 percent.

Beneficial uses include landfill for parks, environmental enhancement projects, roads, residential areas, airports, dikes and levees, retail and commercial developments, recreational beaches, ice control on roads, and aggregate for concrete and asphalt.

St. Paul, cont. from page 1

One Award of Excellence may be given for a Military Programs project and one for a Civil Works project. This award can only be given by unanimous decision of the jury, which may decide that no project in the category will receive the award.

The Corps' Civil Works program includes activities in flood control, navigation, recreation, infrastructure and environmental stewardship.

The St. Paul Flood Control Project, located in downtown St. Paul on the banks of the Mississippi River, serves many purposes — recreation, flood control and environmental stewardship, among them.

A partnership between the City

of St. Paul and the district contributed to the project's success. Engineers, managers, architects and landscape architects from the city and the district collaborated on many of the decisions, features and functions of the project.

The floodwalls and levees provide increased protection from flooding while architectural detailing and pathways incorporated into the project provide an aesthetic and recreational asset for the riverfront. The project's aesthetic features complement other ongoing city riverfront projects, such as the new Wabasha Bridge and improvements to Harriet Island Regional Park.

The project protects 450 acres

in the heart of the city from flooding by the Mississippi River. The project builds upon — called adaptive reuse — a 1960s-vintage flood control project. The completed project increases the level of flood protection to the "500-year" level. A 500-year level means that in any given year there is a one-in-500 chance that the river will rise to that level.

Counting the St. Paul project, the St. Paul District is the only district in the Corps to have achieved the Award of Excellence an unprecedented four times.

The district's flood control project in Rochester, Minn., achieved the award in 1996. Other district projects receiving the award include the Weaver Bottoms Habitat Restoration Project on the Mississippi River in 1986 and the rehabilitation of Lock and Dam No. 1 in Minneapolis in 1983.

The Minnesota Society of Professional Engineers and the Minnesota Federation of Engineering Societies also honored the St. Paul Project by naming it one of the "Seven Wonders of Engineering" in Minnesota. The award ceremony was Feb. 20 during the 34th annual National Engineers Week.



St. Paul District file photo

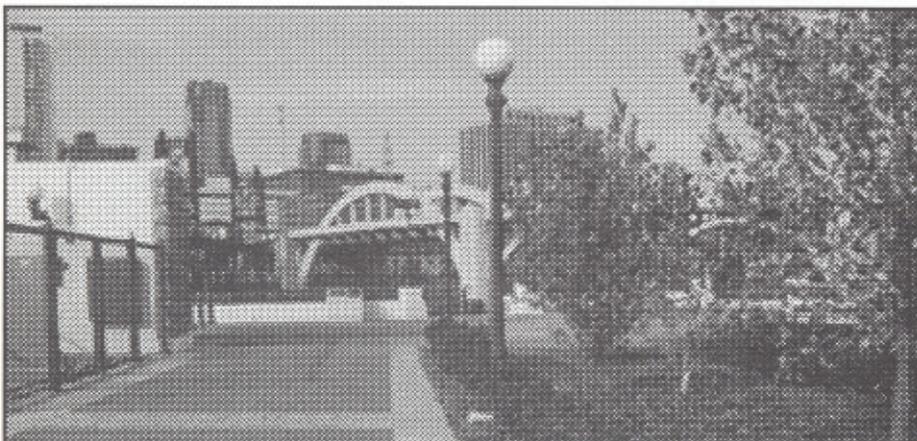


Photo by Russell Snyder

The pre-project photo (above left) shows the 1960s-vintage floodwall and drainage pumping station. The view in the photo at left shows the pedestrian promenade, ornamental lighting, landscaping and remodeled pumping station after the project was completed.

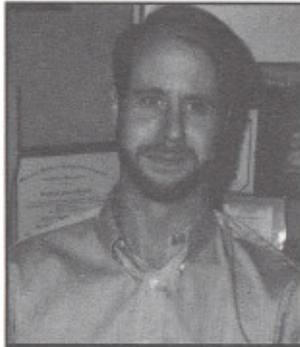
• Invest in People: Reshape Culture
Femrite honored with Tudor medal

Article and photo by Jessica L. Shallow
 student in Public Affairs

Rick Femrite, Engineering and Planning Division, has been awarded the Ralph A. Tudor medal by the Society of American Military Engineers (SAME).

This national award is offered annually to an individual who has shown outstanding contributions to engineering, design, construction, research, development or planning.

"I'm honored. When I first started working for the Corps and became a member of SAME, I never



Femrite

really thought I'd receive an award like this. It's nice to be recognized," said Femrite. The Minneapolis-St. Paul Post of the Society of American Military Engineers (SAME) also selected Femrite as the Young Engineer of the Year. Femrite is a civil engineer in Cost Engineering and Specifications Section and is registered as a professional engineer in Minnesota.

The qualifications for this award are: to be 36 years or younger, be nominated by his or her respective society, have a four-year technical degree and be outstanding in one or more of areas such as engineering, civic activities, education, patents, or papers. The Tudor medal, established in memory of Ralph A. Tudor, was first awarded in 1966.

Femrite has been working for the Corps for 12 years. He started as a student employee in the Regulatory Branch while attending the University of Minnesota, where he received his B.S. in Civil Engineering in 1986. He moved to General Engineering from 1989-1997.

His current work requires him to write specifications and to complete cost estimates. Femrite has also been involved heavily in the St. Paul Flood Control Project, which has recently received the Chief of Engineer's Award of Excellence.

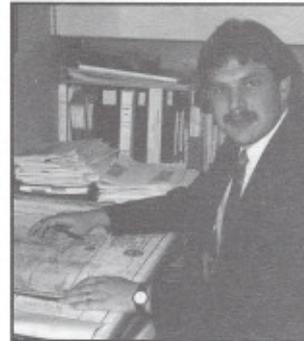
He has received numerous awards for his efforts in flood fights on the Mississippi River, the Red River of

Femrite, cont. on page 6

• Invest in People: Reshape Culture
Geotech Society honors Johnson

Article and photo by Jessica L. Shallow
 student in Public Affairs

"I was honored to be selected by the Minnesota Geotechnical Society (MGS) as their candidate for the Minnesota Young Engineer of the Year Award," said Brian K. Johnson, civil engineer in the Design Branch.



Johnson

Johnson was presented with a plaque for his selection as MGS's Young Engineer of the Year for 1998. Upon receiving this recognition, he represented MGS as their candidate for the Minnesota Young Engineer of the Year at the Minnesota Society of Professional Engineers' and Minnesota Federation of Engineering Societies' 34th Annual National Engineers Week awards and recognition banquet at the Radisson Hotel Metrodome on February 20, 1998.

Johnson received his MGS award for his outstanding achievement in the engineering profession.

His work in the Geotechnical and Geology Section involves the installation and use of geotechnical instruments and field computers to automate measuring the levels of ground water wells within the district. Automated sites include Eau Galle Dam, Orwell Dam, Homme Dam, Lake Darling Dam and Lower St. Anthony's Falls Lock and Dam. This summer equipment for remote sensing will be installed at Baldhill Dam.

"The benefit of automating the ground water wells is that we can obtain readings automatically and at any time from remote locations. We monitor it after business hours and on weekends and we can put the instruments in places that make manual readings impossible," said Johnson.

Johnson has spent more than 11 years working with the U.S. Army Corps of Engineers, ten with the St. Paul District and more than one year with North Pacific Division Materials Laboratory in Portland, Ore.

Johnson, cont. on page 6

Bits and Pieces

'Pre-eminent geotechnical engineer' stops by

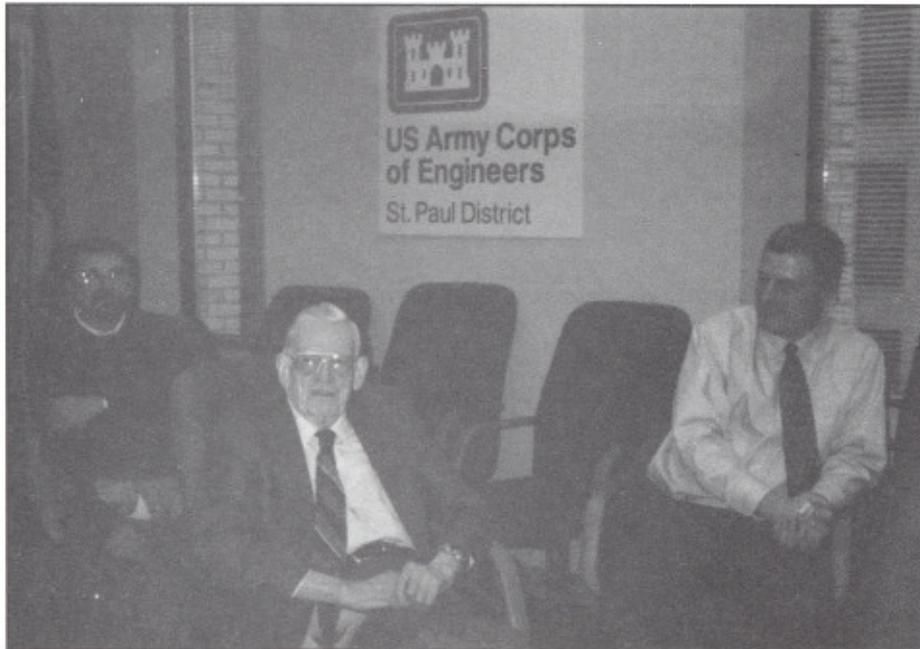


Photo by Jessica Shallow

"He's the pre-eminent Geotechnical Engineer in the world," said Dave Rydeen (right), chief of the Geotechnical and Geology Section. Rydeen was talking about Dr. Ralph Peck (center), who visited the Twin Cities on February 19 and 20 for the 46th Annual Geotechnical Engineering Conference. He was the keynote speaker of the conference. Peck also visited the district office to hear presentations by geotechnical engineers and to discuss the Geotechnical and Geology Section's design philosophies on several projects. Rydeen was on the conference planning committee. At left is Paul Madison, Engineering and Planning Division.

Awards Picnic set

The St. Paul District summer awards picnic is set for June 19 at Eau Galle Lake project in Spring Valley, Wis. Denise Blackwell-Kraft and Ben Wopat, both in Construction-Operations Division, are co-chairpersons of the event.

Daughters to Work Day on April 23

April 23 is national "Take Our Daughters to Work Day." In 1996, the Department of Army recognized this national event and encouraged participation by all Army activities in local "Take Our Daughters and Sons to Work Day" programs. This year, employees who wish to participate should ask for supervisor approval.

The St. Paul District's EEO Office is considering a similar program for later this summer.

Femrite, cont. from page 5

the North, and other locales. He has also received the Commander's Award for Distinguished Civilian Service for accomplishments during advance measures and flood emergency efforts.

He plans to accept the Tudor medal at the SAME national conference this May in New York City.

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Johnson graduated with a B.S. in civil engineering from the University of North Dakota in Grand Forks in 1985. He has also received his J.D. from William Mitchell College of Law in St. Paul in 1995.



US Army Corps of Engineers
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