



Research Newsletter

Minnesota Department of Transportation
 Research Services Section
 (651) 282-2274, research@dot.state.mn.us

Office of Investment
 Management

Jan / Feb 2007

Issue 12

It's a New Year and RSS has a New Look

In an effort to illustrate consistency in our products, all reports and informational materials produced through RSS will have a similar background design:

Recently produced items that are available are:

- Informational sheets detailing the RSS research and implementation programs, funding sources, SP&R program, contact information, etc.
- Business cards
- Updated RSS brochures
- Trinkets

Look for other **recently** created RSS items with our new appearance:

- RSS display booth
- RSS Power Point presentation background
- Banners
- Report Covers



RSS background design

Watch for new items that are being produced. Each of these items will have a similar background pattern, but will be a different color based on the research or implementation category. For instance, a green background indicates an Environmental project, orange indicates a Construction project, etc.

- Technical Summaries that summarize research projects and implementation projects
- Trading Cards

Watch for a redesigned RSS web site for improved customer service that will be available in the near future.

Please contact Ann McLellan at ann.mclellan@dot.state.mn.us or Sandy McCully at sandy.mccully@dot.state.mn.us for these items.

Calendar of Events

FEBRUARY

15	11th Annual Minnesota Pavement Conference, St. Paul Contact Shirley Mueffelman, (612) 624-4754, conferences2@cce.umn.edu
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MARCH

15-16	Concrete Paving Association of MN Annual Conference, St. Cloud www.concreteisbetter.com
28-29	MN Environmental Conference, Holiday Inn East, St. Paul Contact Robin Valento, (651) 366-3601

APRIL

10-11	Spring Maintenance Training Expo, St. Cloud Contact Shirley Mueffelman, (612) 624-4754, conferences2@cce.umn.edu
22-25	2007 APWA North American Snow Conference, St Paul Contact Brenda Shaver, (816) 595-5240, bshaver@apwa.net
22-26	NACE—National Association of County Engineers, Milwaukee, WI, www.countyengineers.org

Steel Bridge Girder Research Projects

In keeping with the Minnesota Department of Transportation's Strategic Directions to safe guard what exists and make the transportation network operate better, Mn/DOT has been conducting studies concerning assessment of distortional fatigue in bridges. Since 1998, Mn/DOT has sponsored research at the University of Minnesota to develop tools for rapid assessment of distortional stress in steel girder bridges.

Multi-girder steel bridges are found as part of the transportation infrastructure of countries throughout the world. These bridges are typically constructed with a steel reinforced concrete deck rigidly attached to the top flange of steel girders.



7th street bridge

The deck and the transverse steel members distribute loads laterally between bridge girders. The weld connecting transverse stiffeners to the girder web are commonly terminated several inches away from the girder flanges to avoid overlapping with the web-to-flange connection weld, leaving a short, unstiffened portion of the girder web—the web gap. The large flexibility of the web gap region relative to the other components forces it to accommodate the majority of the distortion.

Although many studies have been previously conducted to investigate the fatigue behavior and repair performance of the details subjected to out-of-plane distortion, there had been little research expended towards a comprehensive understanding of bridge characteristics responsible for this phenomenon and a simple method to predict the amount of web gap stress.

Now there are four research projects that have been completed on this subject. Please view the projects at this [LINK](#).

Please contact Paochen Mma at paochen.mma@dot.state.mn.us or (651) 747-2204 for questions about these projects.

*RC
Corner*



Erik Wolhowe

Erik Wolhowe is the Research Coordinator for the Office of Bridges.

In preparation for this position, Erik held several positions in the Bridge Office and served on several Technical Advisory Panels. He is currently the Structural Standards and Research Engineer and is responsible for maintaining all bridge standard plans and details as well as coordinating Mn/DOT's structural research efforts. The Bridge Office has an active research program that includes projects with various universities such as the University of Minnesota, University of Wisconsin-Madison and Iowa State. They are also working on regional projects through the pooled fund and national projects through the NCHRP process.

Mr. Wolhowe completed his Bachelor of Science degree in Civil Engineering from Montana State University. He worked several years as a design engineer for the Minnesota Department of Natural Resources before joining Mn/DOT in 1989.

Erik can be reached at erik.wolhowe@dot.state.mn.us or (651) 747-2147.

Recently Completed Bridge Research Projects

Over the past few months there have been five completed bridge research projects that have resulted in published reports. A brief description of the project, a link to the report and a contact person for each project may be viewed at this [LINK](#).

Please contact Sandy McCully at (651) 282-2272 or sandy.mccully@dot.state.mn.us for report questions.



Precast section used in Pourtre Dalle System

Active Bridge Research Projects



Steel bridge inventory

Currently, there are six active bridge research projects that are being performed through Mn/DOT's Research Program. A description of the project, contact information and the project expiration date may be viewed at this [LINK](#).

Please contact Cory Johnson at (651) 205-4698 or cory.johnson@dot.state.mn.us with questions about the research program.

RSS New Telephone Numbers as of March 12, 2007

The Office of Investment Management will be migrating to a new phone system, Voice over Internet Protocol (VoIP), the week of March 12, 2007.

All of Mn/DOT will soon use the new computer network based phone system that will save significant amounts of money in the future. And, when the phone system is complete, Mn/DOT will fall in line with several other state agencies moving to VoIP.

"It will save money," said Bob Bennett, project technical architect, Office of Information Technology. "A regular desk phone now costs us about \$27 a month just to sit on the desk. The VoIP phones will cost about \$11 a month to operate."

Baldwin, Jerry	366-3733	McLellan, Ann	366-3769
Byerly, Jim	366-3739	Moe, Clark	366-3772
Christen, Linda	366-3743	Nerem, Olive	366-3774
Cruz, Nelson	366-3744	Raval, Lina	366-3742
Gonzalez, Pam	366-3749	Rindels, Dr. Alan	366-3779
Hogan, Barb	366-3755	Roath, Catherine	366-3780
Johnson, Cory	366-3757	Sherkow, Shirlee	366-3783
Kahle, Susan	366-3759	Sinclair, Debbie	366-3746
Klessig, James	366-3760	Tang, Qin	366-3784
Lodahl, Sue	366-3765	Warzala, Dan	366-3786
Lowe, Kay	366-3766	Wiese, Carole	366-3788
McCully, Sandy	366-3768		

Bob Jacobson

The following is a list of research reports that Bob Jacobson was involved in through Mn/DOT's Research Service Section. He has co-authored, was the Technical Liaison for the project or was on the Technical Advisory Panel. Because of his passion for the environment and dedication to research, Minnesota residents have and will benefit immensely.

1994-11 - Screening and Selection of Salt Tolerance in Native Warm Season Grasses (TL)

1994-30 - Culture and Re-introduction of Vesicular Arbuscular Mycorrhizae in a Prairie Restoration (Co-authored & TL)

1996-16 - Re-Introduction of Soil Mycorrhizae into Roadside Prairie Planting (TL)

1998-15 - Roadside Prairie and Wetland Restoration: Mycorrhizal / Plant Factors (TL)

1998-16 - Salt Tolerance in Short Stature Grasses (TL)

1999-16 - Effects of Seeding Date on Establishment of Prairie Grasses in Minnesota (TL)

1999-38 - Establishment of Native Sedge Vegetation in Created Wetlands (TL)

2000-15 - Efficacy of Erosion Control Blankets and Soil Stabilizers (TAP)

2000-30 - Mycorrhizal/Plant Factors Involved in Roadside Reclamation (TAP)

2003-05 - Characteristics of Erosion Control Measures and Their Impact on Erosion (TAP)

2003-20 - The Effects of Fire Versus Mowing on Prairie Plant Communities (TL)

2004-21 - Laboratory Measurements of Stormwater Quality Improvement in Detention Ponds (TL)

2004-32 - Inoculated Legumes and Revegetation/Roadside Plantings (TL)

2004-36 - Best Management Practices for the Invasive *Phalaris arundinacea* L. (Reed canary grass) in Wetland Restorations (TL)

2005-46 - Assessment of AFLP-based Genetic Variation in Three Native Plant Species Across the State of Minnesota (TL)



Bob Jacobson

IN REMEMBRANCE

Robert 'Bob' Jacobson

19 Years of Dedicated Service

From the smallest research project

To the largest implementation plan

You were always there to see it through

With Dedication and Pride!

Thank you for all your hard work on Research and Implementation Projects

You will be greatly missed.

Before his untimely passing, Bob was assigned as TL for 6 active research projects which are yet to become reports, as well as a TAP member on the research project, "The Utility of Wildlife Crossings in MN".

Personnel Changes in Research Services Section

A Fond Farewell!



Kevin Muellerleile

Kevin Muellerleile joined Research Services Section as a rotating Graduate Engineer for his second rotation on September 6, 2006. His first rotation was in the Metro District Water Resources Unit where he was a student worker under the supervision of Cory Johnson.

Kevin recently received his Bachelor of Science degree in Civil Engineering from the University of Minnesota and is in the Graduate Engineer Rotation Program at Mn/DOT.

Kevin worked on a variety of projects including the creation of the State Planning & Research tracking database, marketing database and problem statement/proposal submittal form and database. He was also instrumental in creating the research program network diagram and assisting with the coordination and organization of the Request For Proposal process for programs associated with Mn/DOT research.

He left RSS on February 6, 2007 to spend his next 4-month rotation with the State Aid Bridge Office, followed by six months in the Office of Construction. Kevin has been a valuable asset to RSS and we thank him for his hard work.

Kevin can be reached at (651) 747- 2154 or kevin.muellerleile@dot.state.mn.us.

Welcome to RSS!



Debbie Sinclair

Debbie Sinclair will be joining RSS on February 21st as an Accounting Officer Principal. Her main focus will be on financial activities associated with the federally funded State Planning and Research program.

Debbie comes to us from the Financial Operations Area where she has been an Accounting Officer Senior since June 2005 working with federally funded State Aid projects and reconciling federal funds for pooled fund projects. Previously, Debbie worked for the Department of Public Safety for 17 years, most recently in Fiscal and Administrative Services as the accounting officer for the Office of Justice Programs. Prior to that, she was in Driver and Vehicle Services as the supervisor of the Motor Vehicle counter.

Debbie is originally from Osseo, Wisconsin and lived in Milwaukee for five years. The company she was working for at the time transferred her to Jackson, Mississippi in June of 1983 and then to Minnesota six months later. Debbie stated, "You have to love a company that sends you to Mississippi in June and Minnesota in December."

Debbie can be reached at (651) 296-3609. After March 12th, her new telephone number will be (651) 366-3746. Debbie's email address is: debbie.sinclair@dot.state.mn.us.