

# The Center Line

North Dakota Local Technical Assistance Program • North Dakota State University • A Service for Local Transportation Agencies

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## LTAP FEATURED AT OPEN HOUSE

by Tom Jirik

ND LTAP was featured during an open house at its new offices in Bismarck, June 18.

The event drew about 60 people from the Bismarck and Fargo area including the director of the NDDOT, Francis Ziegler. The open-house was hosted by the Upper Great Plains Transportation Institute (UGPTI), the NDSU program that took over management of the ND LTAP center in January.

“The open house was intended to showcase the UGPTI and its programs to the Bismarck-Mandan community,” notes Gary Berreth, director of the ND LTAP. “The opening of the Bismarck office in January and the relocation of the ND LTAP program here marks a significant commitment by the UGPTI to enhance ties with the NDDOT

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L. to R. Marcia Lembke, Dave Levi, Mark Berg, Ayman Smadi, Gene Griffin, Jon Mielke



F/Ziegler, Ron.Hartl, Al Rogneby, Prakash.Mathew



Vern Monger, Russ McDaniel, Kurt Johnson

and other state programs and to continue to expand training and outreach activities to agencies, organizations and communities across the state.”

The program is also supported by NDSU administration as evidenced by attendance at the open house. The event was attended by four vice presidents from NDSU – Vice President for Agriculture and University Extension D. C. Coston, Vice President for Business and Finance John Adams, Vice President for Student Affairs Prakash Mathew, and Vice President for University Relations Keith Bjerke.

## NEW ADVISORY BOARD MEMBERS

### Mark Berg

Mark is the traffic engineer for the city of Bismarck. He has served in this position for the last seven years.



Mark received his construction management degree from North Dakota State University in 1982 and is a registered professional engineer (RPE). Mark spent his prior career in the Department of Transportation working in construction, design and planning divisions. He spent several years in the traffic engineering unit of the DOT prior to joining the city

As city traffic engineer, Mark is involved in all phases of the transportation facilities of the city, construction, maintenance, planning, and considerable involvement with the public.

Mark, his wife Sunny and their son live at rural Bismarck. Mark is an avid fisherman and hunter, which involves his spare time.

### Mike Grafsgaard

Mike is the city engineer for Devils Lake, a position he has held for the past six years.



Mike is a native of Devils Lake. He received his BS and ME degrees in Civil Engineering from the University of North Dakota in 1997. Prior to his current employment he was with the Ramsey County Rural Utilities and the North Dakota State Water Commission. He is a member of the ND Army National Guard and has served for the past 18 years

Mike and his wife, Lisa, have two children. He is involved in family activities with the children, enjoying hunting and fishing.

### Barry Schuchard

Barry is a partner in the engineering firm of Kadrmas, Lee and Jackson (KLJ). He has been with this firm since 1983, and works out of the offices in Valley City. Barry is a native of Bismarck. He received his civil engineering degree from North Dakota State University in 1983 and is a registered professional engineer (RPE).



Barry, his wife, Sue, and four children reside in Valley City. Barry is involved in family outdoor activities and is also a collector of classic cars of the 60's and 70's. NDSU Bison athletic events are also high on his priority list, especially football. GO BISON

### Ronald Wagner

Ron has been with the Mclean County Road Department for the past 35 years and has been Superintendent of Highways for the last 25 years.



Ron is a native of the Washburn area and received his education in the Washburn school system. Ron has been very active in the road transportation associations and is a member of the National Association of County Engineers (NACE) and the North Dakota Association of County Engineers (NDACE). He served on the executive committee for a number of years with one term as president.

Ron and his wife, Marella, live in rural Washburn, on the farm in where he grew up. They have two boys. For leisure, Ron is involved in snowmobiling, fishing, riding horses and an avid baseball fan.

Ron has been involved in the LTAP program throughout the years, supporting the training efforts with he and his staff attending our workshops.

### Ken Yantes

Ken Yantes is the Executive Secretary/Director of Government Relations for the Township Officers Association, a position he was appointed to in 2006. This is the first and only full time position of the Township Officers Association.



Ken has been involved in township government for the past 40 years. He was a farmer and lived in rural areas his entire life. In addition to being a township officer he has served in various positions in the Township Officers Association, including four years as president. During the legislative sessions Ken can be found at the state capital involved in lobbying for the interests of the townships. As executive secretary he is also a director, representing NDTOA, on the National Town and Township Board of Directors, a group representing local governments.

Ken shares a great concern for the future of our local transportation needs and as such has a great interest in our LTAP programs, providing technical assistance to the townships.

Ken and his wife Darleen reside at Brocket, where he also has the NDTOA office.

# STARK COUNTY'S NEW SHOP

by Vernon Monger

The Stark county road department moved into its new shop in January. The facility was built at a new location, on the west end of Dickinson. The facility has four major bays in addition to the welding and wash area bays. Also, there are two offices, conference (break) room and parts room. The building has 17,300 (100 x 173) square feet, comparing to the old one of 5000 square feet. The cost of the facility, including paved yard and fenced area, was about two million dollars. Funding for this was provided through oil royalty revenues.

Heating and cooling is provided through a geothermal process. Fifty-two wells were drilled at a depth of approximately 205 feet. The two offices for the road superintendent and foreman as well as the break room are air conditioned through geothermal process. The shop area has in-floor heating, with approximately 3 1/2 miles of tubing in the floor. The welding area with a ventilation system is 50' by 25' and has a two ton overhead crane. The wash bay is 25' by 100'. All areas of the building are handicapped accessible with two rest rooms provided.

Al Heiser, Road Supervisor, says this is a wonderful place to be working at. It is much more efficient in that all seasonal equipment such as snow plowing equipment can be stored inside. Also the repair areas are more accessible to bring in heavy equipment for instance, the welding bay can now hold a semi-trailer. From this location, easy access is provided to all areas outside the city of Dickinson.



Al says the county commissioners are very satisfied in the way everything worked out. Also, the employees are very content to be working out of the new facility. They feel they have gained ownership of their work areas.

Al has made the facility available to LTAP for workshops. We held our annual asphalt maintenance workshop in the facility in April. Stark county is very supportive of the LTAP program and Al indicated it is available for other workshops as fits our needs.



## LOW COST TREATMENTS FOR HORIZONTAL CURVE SAFETY

FHWA has published a report on Low Cost Treatments for Horizontal Curve Safety. The abstract from the report states: Nearly 25 percent of fatal crashes occur at or near a horizontal curve. Hence, addressing the safety problem at horizontal curves is one of the 22 emphasis areas of the Strategic Highway Safety Plan prepared by AASHTO. Also, crashes at horizontal curves are a big component of the road departure crash problem, which is one of FHWA's three focus areas. This publication was prepared to provide practical information on low-cost treatments that can be applied at horizontal curves to address identified or potential safety problems. The publication concisely describes the treatment; shows examples; suggests when the treatment might be applicable; provides design features; and where available, provides information on the potential safety effectiveness and costs. The treatments include:

- Basic traffic signs and markings found in the MUTCD
- Enhanced traffic control devices
- Additional traffic control devices not found in the MUTCD
- Rumble strips
- Minor roadway improvements
- Innovative and experimental treatments

The publication concludes with a description of maintenance activities that should be conducted to keep the treatments effective.

Following is the website link to the report.

[http://safety.fhwa.dot.gov/roadway\\_dept/pubs/sa07002/index.htm](http://safety.fhwa.dot.gov/roadway_dept/pubs/sa07002/index.htm)

## SMOOTHER, LONGER-LASTING PAVEMENTS: A WIN-WIN FOR THE MOTORING PUBLIC AND CONTRACTORS

Research has shown that pavements that are built smooth, stay smooth longer. Smooth pavements can reduce maintenance costs and extend pavement service life.

The North Dakota Department of Transportation (NDDOT), in an effort to improve customer satisfaction with the ride quality of roads on the state and national highway system, is working with the asphalt and concrete paving industry to develop new pavement smoothness specifications for new and rehabilitation paving projects. Starting in 2005, the NDDOT implemented a pavement smoothness specification that was used on four asphalt pavement projects, with the pavement profile data being collected by the NDDOT.

that because of uncertain construction schedules, the van may be at work collecting “network” data in other areas of the state when it was needed to test a newly completed paving project.

To respond to this challenge, the NDDOT Materials & Research Division initiated an experimental project to determine the equipment and personnel resources required, if the ride specification was to be implemented on all paving projects statewide. The Lightweight Inertial Profiler, was acquired and, as part of the experiment, profile data and operational information was collected throughout the 2005 construction season.

Like the Pathways van, the “Lightweight” uses lasers and computer technology to measure the profile of the pavement and calculate pavement smoothness.

With the projects of 2005 completed, the NDDOT, working in conjunction with the asphalt paving industry, improved the ride specification for use on eight asphalt paving projects in 2006.



NDDOT Pathways High Speed Inertial Profiler

The NDDOT's Planning & Programming Division had already been conducting statewide pavement management surveys for many years using sophisticated equipment like the NDDOT's High Speed Inertial Profiler, the Pathway.

The van was used to collect profile data on the 2005 paving projects. However, the Pathways van is most efficiently used when it is collecting “network-wide” data. It became apparent,



NDDOT Lightweight Inertial Profiler

(Cont. on page 5)

Twelve asphalt paving projects will be covered by the specification during the 2007 construction season. The Pathways van and "Lightweight" devices continue to provide profile measurement on these projects.

Concrete pavements have been covered by a smoothness specification for many years. The pavement profile was measured using a California-style profilograph.

Advancements in laser technology and computer software now make it possible to use the Lightweight Inertial Profiler on both asphalt and concrete pavements. Because of its *light weight*, it is capable of testing new concrete much sooner than heavier profiling devices. Plans are being made to implement ride specifications, (similar to those on asphalt), for new concrete paving projects.

One of the main features of the pavement smoothness specification is the incentive it provides contractors to use their expertise to construct smoother pavements. The specification



**California Style Profilograph**

establishes thresholds of "roughness" that provide bonus payments for smoother pavements.

Occasionally, even the best paving operations may experience problems that leave a bump, dip, or other rough area. The Lightweight Inertial Profiler locates those areas. The contractor is required to make corrections to meet the required smoothness tolerance, usually by grinding the surface.

The NDDOT believes that the results of these changes have been promising. The

motoring public gets smoother, longer lasting-roads and the contractors are rewarded for their efforts to achieve a superior product. This creates a win-win situation for the motoring public and contractors.

So the next time you see this equipment at work, you will know that the NDDOT is working to ensure your travels are on smooth, long-lasting pavements.

## OPEN HOUSE PHOTOS



## COMING EVENTS

### ND LTAP Events

#### Annual Local Roads Conference

Oct.16-18 Rapid City SD

#### Bridge Maintenance

Nov. 6 - Oakes

Nov. 7 - Devils Lake

#### Winter Road Maintenance

Tentative - Fall

#### Asphalt Conference

March 25-26 - Bismarck

#### TLN Sessions:

#### Concrete Finishing Issues & Surface Failures

Nov.15

#### White Topping Pavements

Dec.6

#### Unbonded Overlays

Dec.20

<http://www.translearning.org>

## OTHER EVENTS

#### NDACo Annual Conference

Oct.7-10, Bismarck

<http://ndaco.org>

#### RTSSC - Vision Safe Drive Conference

Nov. 29-30 - Bismarck

[http://www.ugpti.org/rtssc/  
conference/visionsafedrive2007](http://www.ugpti.org/rtssc/conference/visionsafedrive2007)

### Looking for your ideas and news articles

Contact Dave Levi at  
(701) 328-9857 or  
[dave.levi@ndsu.edu](mailto:dave.levi@ndsu.edu)  
to share your ideas and  
articles for the upcoming  
editions of The Center Line.

## NATIONAL ROADWAY SAFETY AWARDS

The Florida Department of Transportation provided the winning entry in the 2005 National Roadway Safety Awards program. The program is jointly sponsored by the Federal Highway Administration and the Roadway Safety Foundation. The entries were rated on their innovation, effectiveness, and efficient use of resources. The Florida DOT entry was found to be an outstanding highway safety improvement.

The Florida DOT is promoting the widespread usage of Intersection Enforcement Lights at signalized intersections to facilitate the enforcement of red light running (RLR) violations. The lights, also known as “white lights,” are electronically attached to the red light and are visible to a law enforcement officer stationed downstream of a traffic signal. White lights are illuminated when the signal turns red, enabling a single officer, who must have a view of the stop bar and a red light indicator, to apprehend drivers who run a red signal. Without the white lights, two officers would be required for a RLR operation — one upstream to observe the infraction and one downstream of an intersection to write the citation. This enforcement light technology must get acceptance from the local traffic court judiciary prior to installation to assure that the citations written will be accepted in court proceedings.



In 2003, there were approximately 111 traffic fatalities and 1,703 serious injuries due to RLR in Florida. This program’s effectiveness is clear: as an example, the initial installation at the Intersection of SR 60 and US 19 in Clearwater in 2001 resulted in a 50% decrease in RLR violations and an 11% decrease in crashes over a 3-month evaluation period, with 519 citations issued.

Improving intersection safety continues as one of the key areas in the state’s 2003 Strategic Highway Safety Plan, with a critical initiative to install white lights at a minimum of 60 signalized intersections per year for the five-year duration of the plan. To date, white lights have been installed at over 400 high RLR intersections throughout the state, already exceeding the five-year target, with many more to be installed as the initiative gains support.



### CONTACT

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## “YOU SHOW US HOW” CONTEST

by Vernon Monger

### To All North Dakota Counties

The North Dakota Local Technical Assistance Program (LTAP) encourages you to enter the “You Show Us How” contest for the Annual Local Roads Conference at Rapid City, S.D. in October. It is a profitable way to share your innovative ideas with others that may benefit from your concept. This is also a good way for you, your crews, and your department to get some well earned recognition for your efforts. It’s a real morale booster for everyone.

To be considered you must have entries submitted to our office no later than August 15. One entry will be submitted from North Dakota for the Local Roads Conference. We will be glad to help you put your entry together for this contest. Contact information:

Vern Monger 701-328-9858 or

Denise Brown at 1-800-726-4143  
or 701-328-9855.



## LEO MILLER – STARK COUNTY RETIREE

By Vernon Monger

After 46 years of working for the Stark County road department at its Richardton shop, Leo Miller retired in March as the road foreman for the Richardton section. Leo grew up on a farm in the Richardton area and began work as an equipment operator in 1961.

I asked Leo what changes have taken place over the last 40 years. He states everything changes: equipment; road materials and procedures for building roads; public attitudes on needs; and funding availability.

When Leo began work the county crews did the road building, using the old mucker (do-mor) to elevate the material from the ditches into the road bed, working within limited right of way. Whatever material was adjacent to the roadbed, including topsoil, went into the roadway, with very limited compaction. Gravel material was pit run, which didn't provide good compaction for the road surface. The road department still has earthmoving equipment and uses it for small jobs such as grade raises. Other road building is let to contract. Over the years many of the obsolete bridges were replaced with culverts by the county road crew.

Stark County has good equipment and Leo states that it wasn't always that way. Years ago the equipment was kept running until it was completely worn out. The commissioners have been excellent about providing good equipment for the road department. The operators are pleased with the equipment, and are pleased with the county shops in which they work.

The Richardton section of the county maintains more than 300 miles of gravel surfacing and 20 miles of paved roadway. Leo states the public is much more demanding now than it was 40 years ago. At that time, because of funding restrictions, roads were bladed in the spring, a windrow of gravel material left on the shoulder, and in the fall it was bladed back. Today, crushed aggregate is used, which provides a much better surface, and the roadways are bladed several times during the season. Years ago, the winter season had more snow and there were weeks when the roads were blocked because there was not adequate equipment to maintain them. The farmers accepted this and were aware, living out in the country, that this type of service would be provided. Today, with many rural residents being employed in town, it is necessary to get the roads open as soon as possible.

I asked Leo about our LTAP training program. He has supported the training workshops with his operators as well as himself. He feels it is a worthwhile program and beneficial to all the equipment operators.

Leo and his wife, Colleen, raised two children and have four grandchildren. Colleen will retire in the near future and they will continue to reside in Richardton. As we were drinking coffee in the local cafe, I asked Leo what he would be doing after retiring. He stated probably drinking coffee at the next table with the other retirees each morning and discussing the world problems. Also there would be some traveling to do. We wish you the best in your retirement, Leo.





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