

**North Dakota Department of Transportation**  
**2003-2005**  
**BIENNIAL REPORT**

**Submitted:**

**December 1, 2005**

**David A. Sprynczynatyk, P.E.**  
**Director**



# North Dakota Department of Transportation

David A. Sprynczynatyk, P.E.  
*Director*

John Hoeven  
*Governor*

December 1, 2005

The Honorable John Hoeven  
Governor of North Dakota  
600 East Boulevard Avenue  
Bismarck, ND 58505-0001

Dear Governor Hoeven:

In compliance with Sections 24-02-01 and 54-06-04 of the North Dakota Century Code, I present to you the Biennial Report of the North Dakota Department of Transportation for fiscal years 2003 to 2005.

This biennium has brought the department many challenges, which our hard-working, dedicated employees have turned into accomplishments. The department is a leader in state government in providing e-commerce customer services. Intelligent Transportation System initiatives have helped to make our state highway system even safer by providing motorists with up-to-date information on weather and road conditions. Our employees have kept the roadways clear in the worst of weather, completed countless maintenance projects each year, and they have successfully completed a number of large construction projects. I am very proud of the department, and especially its employees and all that they accomplish.

Sincerely,

A handwritten signature in black ink, reading "David A. Sprynczynatyk".

David A. Sprynczynatyk, P.E.  
Director

01/amt  
Enclosure

# North Dakota Department of Transportation

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# I. NDDOT at a Glance

**VISION:** *Safe Ways, Great Ways, Promoting Economic Growth*

**MISSION:** *Providing a transportation system that safely moves people and goods.*

## I.A. Statutory and Constitutional Responsibilities

**Creation.** The first North Dakota State Highway Commission was created in 1913. The North Dakota Department of Transportation was created by 1989 North Dakota Session Laws Ch. 22, codified as North Dakota Century Code, Title 24.

**Function.** North Dakota Century Code § 24-01-01 and 24-03-02 make NDDOT responsible for the construction, maintenance, protection, and control of the highways comprising the state highway system. NDCC § 39-01-01.1 describes the general responsibilities of the Drivers License and Traffic Safety Division and the Motor Vehicle Division. When authorized under NDCC § 24-04-01, the Department of Transportation director may enter into contracts and do all things necessary to cooperate with the federal government in the construction of roads under the provisions of a congressional act.

**Funding.** The state highway fund must be spent in the following order of priority:

- 1) maintenance of the state highway system, and
- 2) the cost of construction and reconstruction in an amount necessary to ensure federal aid available to the state.

Monies not spent under (1) or (2) may be spent on state highways for construction, improvement or maintenance (NDCC § 24-02-37).

**National Highway Safety Act of 1966.** Under NDCC § 54-07-05, the Governor has the responsibility of dealing with the federal government with respect to the state's participation in the National Highway Safety Act of 1966. The Governor has designated the director of the Department of Transportation to act on his behalf in administering the act.

**Rail Service Assistance.** The department, with the approval of the Public Service Commission, has the authority to qualify the state for rail service assistance under the Railroad Revitalization and Regulatory Reform Act of 1977 (NDCC § 49-17.1-02).

**State Aeronautics Board.** The NDDOT director serves as a liaison to the State Aeronautics Board, helping the board plan and coordinate airport and ground transportation.

## I.B. Key 2005 Legislation

**HB 1044**—Allows the NDDOT to use an electronic lien notification system, instead of the current paper-based system. Participation by a lender would be voluntary.

**HB 1095**—Provides for the establishment of differing speed limits in highway construction zones for different times of the day, and also specifies that the maximum speed limit reduction between any two signs in a construction zone may not exceed 30 mph, rather than the 20 mph in normal situations.

**HB 1096**—Forbids interference with traffic signals without lawful authority. Introduced and passed in response to devices being sold that can change traffic signals.

**HB 1098**—Allows NDDOT to automatically send a driver involved in a crash a copy of the accident report, rather than only responding to a request.

**HB 1218**—Provides an expedited procedure for contracting with prequalified consultants based on differing amounts of estimated consultant costs.

**HB 1229**—Provides for mobility-impaired parking permits for care providers and other entities that regularly transport mobility-impaired individuals. Previously, under state law, only individuals were entitled to these parking permits.

**HB 1342**—This bill was developed by the North Dakota Parks and Recreation Department and creates a new category of “off-highway vehicle” to encompass all-terrain vehicles, dirt bikes, etc. It also allows for an individual to operate a registered off-highway vehicle on a gravel, dirt, or loose surface roadway, and for operation on a paved county or township road when towing an implement of husbandry (not exceeding 25 mph), or where the posted speed limit does not exceed 45 mph.

**HB 1357**—Sets a fee of \$100 per month for a longer combination vehicle permit when the fees are paid on a monthly basis.

**HB 1412**—Allows for carrying a passenger on an all-terrain vehicle if that vehicle is equipped and recommended by the manufacturer to carry a passenger.

**HB 1478**—Provides for a special fuel tax exemption for E85 fuel and provides for the Department of Commerce to make up the loss to the highway tax distribution fund from the agricultural products utilization fund. There is a limit of 1,200,000 gallons of fuel on which the tax exemption is available.

**SB 2012**—This was the department’s appropriation bill which provides funding of \$954,122,043 to operate the department during the 2005-2007 biennium. It also provides authorization for the department to hire additional full-time equivalent positions for highway construction and maintenance when it is cost-effective to hire additional positions in lieu of entering into contracts. There is a statement of legislative intent that, to the extent possible, the department implement the highway performance classification plan. The department is prohibited from divesting the state from responsibility for maintaining the structural integrity of any bridge over a navigable waterway which is currently maintained by the state, unless an agreement is reached with the municipality. A significant provision provides the authority for the department to bond for completion of US Highway 2 and the new Liberty Memorial Bridge. Much of the discussion in SB 2012 concerned state matching funds for additional federal funds. To raise additional funds, motor vehicle registration fees were raised by \$10, all of which went to the State Highway Fund, along with the previous \$3 that had been specified in the previous legislative session. Motor vehicle fuel tax was also increased by two cents per gallon.

**HB 2102**—Brings North Dakota into compliance with the federal “repeat offender” mandates. This bill provides for confiscation of license plates for a second DUI. There is a possible hardship provision. Funds that had been diverted to safety and hazard mitigation now are retained for highway construction purposes.

**HB 2112**—Allows organ donor designation on a nondriver photo ID. Before passage of this bill, designation was allowed only on driver’s licenses.

**HB 2200**—Regulates recording devices (“black boxes”) on a motor vehicle. It provides for disclosure to the owner and requires owner consent to disclosure of information in many cases. This bill gathered national attention.

**SB 2208**—Creates a definition for child restraint systems, adds a \$25 fee for a violation (previously no fee), and increases the restraint age from four years of age to seven years of age.

**SB 2209**—Incorporates NDDOT into the “one call” system for buried utilities. Previously, the department was not part of this system.

**SB 2274**—Dealt with truck weight and size limitations on state highways and required retractable axle controls to be outside of the cab.

**SB 2339**—Increased the motorcycle safety education fee, collected at the time of motorcycle registration, from \$5 to \$10.

**SB 2348**—Increased the additional fee collected along with the motor vehicle registration fee for the public transportation fund from \$2 to \$3.

**SB 2368**—Requires issuing of special motor vehicle license plates for nonprofit organizations, if they meet certain criteria. There is an added annual fee of \$25, \$15 of which goes to the organization to support its programs.

## **I.C. Major Accomplishments**

**Four Bears Bridge Completed.** Construction of the Four Bears Bridge, which crosses over Lake Sakakawea in the northwest corner of the Fort Berthold Reservation near New Town, North Dakota, was completed in the summer of 2005. The project was sponsored by NDDOT and Mandan, Hidatsa, and Arikara Nation, both to replace the narrow and functionally obsolete structure and improve access to the area. The bridge was designed in cooperation with the Three Affiliated Tribes and is a unique structure bearing aesthetic features representing the Mandan, Hidatsa, and Arikara tribes.



Construction activities on the Four Bears Bridge.

The 4,500 foot long structure cost \$67 million to complete, and was the single largest contract ever let by the NDDOT. The bridge opened to traffic in early September; the official dedication and commissioning took place on October 3, 2005. The old structure is scheduled to be removed in the fall of 2005.

**Four-Laning US 2 from Minot to Williston.** During the past biennium almost \$25 million worth of contracts were let to construct approximately 45 miles of roadway as part of the four-laning project of US 2 between Minot and Williston. Four of the ten projects were let to contract. The project was originally scheduled to be completed in 2012. However, NDDOT accelerated the program to complete construction of the four-laning project in 2008. The 2005 Legislature granted NDDOT the authority to utilize bonding to help finance and accelerate the project completion. This is the first time NDDOT will utilize the bonding concept. The process for establishing the bonding program was put in place this past summer.

**Relocation of US 281.** US 281 in the Devils Lake Basin has been threatened with inundation from rising water. Therefore, in 2005 the department moved the location of US 281 approximately three miles to west and extended ND 19 to tie into US 281. This project included extensive environmental, design, and right-of-way work. NDDOT received Federal Emergency Relief funding to undertake these projects. Construction of approximately 23 miles of roadway was necessary to relocate US 281 and extend ND 19 to tie into US 281 at a cost of \$26.7 million. The grading of US 281 has been nearly completed and surfacing will take place in 2006.

**Major Construction Projects in 2004 and 2005.** The department's commitment to providing a transportation system to safely move people and goods continued to progress this past biennium. In 2004 and 2005, more than \$467 million worth of projects were undertaken. In 2005, the department had about 240 projects, which was a record number. Some of the major projects include: Completion of the Four Bears Bridge, which was the largest project ever undertaken by the NDDOT; completing construction of 45 miles of the four-laning of US 2 from

Minot to Williston; \$50 million worth of projects to reconstruct the roadway and replace structures on I-94 through Fargo and west of Fargo; \$36 million for the reconstruction of Main Avenue in Fargo from 45th street to 25th street including the I-29 interchange structure; and \$26.7 million to construct 23 miles to relocate US 281 and extend ND 19 to tie into US 281.



Earth work on the US 2 four-laning project near Stanley.

extensive questionnaire was sent to members of the advisory committee as part of the involvement process. New features of the revised map include: the map is 60 percent larger (it measures 24" by 36"); the city insets are larger, allowing more local information to be provided; the overall format and color scheme was changed; and a higher quality of paper was used. In addition, the map is now digitized, which will make updating it easier and more efficient. Approximately 1.2 million maps were produced; they became available for distribution on January 1, 2005.

**Strategic Plan Updated.** In 2005, NDDOT updated its strategic business plan to provide department employees a road map for the future. The strategic plan reinforces the department's vision and mission statements, and addresses each of the department's core functions: planning and project development, operations, government services, licensing, safety, and organizational health. The purpose of the plan is to concentrate our efforts on carrying out the department's mission of providing a transportation system that safely moves people and goods. The plan includes five goals.

- Enhance customer service.
- Increase safety on North Dakota's transportation system and within the Department of Transportation.
- Improve the quality and efficiency of North Dakota's transportation system and services.
- Enhance employee effectiveness and well-being.
- Strengthen stakeholder relationships.

The plan also includes 29 objectives and the department's vision, mission, and values. The updated plan was released in October 2005 with an expanded emphasis on customer service and freight movements. The progress made through strategic planning demonstrates the importance of the plan as a living document, that will be updated on a periodic basis.

**New Coach Lines Recruited for Intercity Bus Service.** In the summer of 2004, Greyhound Bus Lines announced that it was discontinuing intercity bus service in North Dakota. Intercity bus service is an important part of the transportation network within our state.

NDDOT led a cooperative effort amongst North Dakota citizens, state and local officials, and the North Dakota congressional delegation to recruit Jefferson Lines and Rimrock Trailways to take over routes abandoned by Greyhound in order to continue uninterrupted intercity bus service.

Rimrock Trailways now operates the route between Billings, Montana, and Fargo, North Dakota; Jefferson Lines provides a connector route with Rimrock in Fargo. The new routes began on August 18, 2004, the same day Greyhound ended service. The cooperative effort to maintain uninterrupted service was extremely important to residents who rely on bus service to stay linked with their families and communities.

**Highway Performance Classification System Finalized.** NDDOT finalized the development of the HPCS for the state highway network in 2004. The HPCS identifies desired levels of service on a five-tier network of state roadways. The system was developed with a high level of input from department employees and the general public. The purpose of the HPCS is to prioritize the various roadways and the expenditure of revenue to maintain and improve the roadways carrying the most traffic and bulk of the state's commodities. The 2005 Legislature endorsed the HPCS concept. The NDDOT is in the process of implementing the levels of service and standards outlined in the HPCS and tying the preventive maintenance program and investment strategy to the system. The NDDOT will continue working to improve the ride quality and load carrying capacity on the system.

**US 85 and US 83 Designated as High Priority Corridors.**

The recently passed Federal Highway Reauthorization Bill, referred to as SAFETEA-LU, identifies the Theodore Roosevelt Expressway from Rapid City, South Dakota, north on US 85 to Williston, North Dakota, west on US 2 to Culbertson, Montana, and north on Montana Highway 16 to the international border with Canada at the Port of



Asphalt paving work in the badlands near the US 85 corridor.

Raymond, Montana as a federal high-priority corridor. Also identified was the Central North American Trade Corridor from the border between North Dakota and South Dakota, north on US 83 through Bismarck and Minot to the international border with Canada. The "high priority" designation allows the corridor coalitions to access federal funds to conduct a feasibility study and look at options for corridor improvements, and eventually to apply for special funding for corridor enhancements.

**Regional Freight Trucking Conference.** Truck transportation plays a vital role in our nation's economy, and is often the first and last mode used for moving commodities, raw materials, and finished products. However, the lack of uniformity of trucking regulations in the regions has a negative impact on the competitiveness of the trucking industry.

To address the issue of and need for truck uniformity, NDDOT and the Upper Great Plains Transportation Institute co-sponsored a Cross Border Regional Truck Transportation Conference June 15-16, 2005, in Fargo, North Dakota. Approximately 70 people representing six states and two Canadian provinces attended the conference.

Conference participants represented the private sector trucking industry, law enforcement agencies, state legislators, trucking associations, state DOTs, economic development agencies, and universities. Some of the conference findings include:

- Need to work on changing the perception that large trucks are not safe.
- Establish a common set of engineering standards for developing an interregional truck freight transportation system.
- Develop a common definition of divisible loads.
- Work towards a common set of truck size and weight configurations based on the proper axle spacing and configurations.
- Explore opportunities for improving truck safety data.



NDDOT plans to follow up with a similar conference that looks at trucking issues related to size and weight uniformity that can improve our regions economic competitiveness.

**Intermodal Facility.** Initiative 7 in North Dakota's Statewide Strategic Transportation Plan (TransAction) states that North Dakota will determine the feasibility of, and identify the conditions necessary for, developing an intermodal freight facility or facilities. To help carry out this initiative, NDDOT has been working with the cities of Bismarck, Minot, and Fargo to look at the feasibility and options of developing an intermodal facility within North Dakota.

The city of Bismarck is in the process of building a facility called the Northern Plains Commerce Centre. Minot and Fargo are continuing to look at the feasibility of various options for developing a viable intermodal or subsidiary facility.

**Bonding.** The 2005 Legislature provided NDDOT the authority to use bonding to help finance the four-laning of US 2 from Minot to Williston and to replace the Memorial Bridge between Bismarck and Mandan. NDDOT issued GARVEE bonds to provide funds necessary to accelerate the construction of these projects. The bonds were issued in anticipation of funds being made available by the Federal Highway Administration to reimburse NDDOT for debt service and costs incurred for issuing the bonds. This is the first time that NDDOT has issued bonds to finance a transportation project. Most of the tools have been put in place and negotiations were completed during the summer of 2005 for issuing the bonds. Funding through the bonding process in the amount of \$53 million was received in August of 2005 to help finance these projects.

**Creation of Community Based Transportation Grant Programs.** Initiative 11 of North Dakota's Statewide Strategic Transportation Plan (TransAction) states that North Dakota will create a special transportation program (infrastructure funding and technical assistance) to facilitate economic competitiveness.

In response to this initiative, NDDOT established two programs to provide assistance in upgrading infrastructure to new businesses. The ND STREET program was established to provide assistance in upgrading state highways through cities with a population under 5,000 and enhance the appearance of streets and sidewalks. Starting in 2008, there will be \$3 million available annually for this program.

The Small Rural Economic Development Program was established to provide assistance for upgrading infrastructure to new businesses in small rural areas. Starting in 2008, the annual statewide allocation for this program will be \$640,000.



Local representatives celebrate SAFETEA-LU funding.

## I.D. Major Challenges

**Liberty Memorial Bridge.** The Liberty Memorial Bridge is over 80 years old and has developed extensive deterioration and damage from weathering, ice control chemicals, and collisions. The NDDOT went through an extensive public input process to get environmental approval and recommend design options for the bridge. It will be a challenge to construct the bridge while maintaining traffic serving businesses in the area.

A major challenge will be keeping the cost of the structure within budget with continuous increases in the cost of steel and concrete. The latest federal highway bill (SAFETEA-LU) earmarked \$40 million for the construction of the bridge. A special provision was also included in the bill reducing the local match requirement from twenty to ten percent. The bid letting for the bridge will take place in November 2005. Construction will begin in the spring of 2006 and is expected to be completed in the fall of 2007.

**Drayton Bridge.** The Drayton Bridge, located in the northeastern part of the state, provides a crossing over the Red River on State Highway 66. The existing bridge is not usable during flooding as the approach roads are under water. The project will replace the existing narrow bridge and low embankment and raise the approach roads. It is estimated that the current recommended alternative for replacing the bridge will cost \$22.4 million. The costs will be split equally between North Dakota and Minnesota. During the past year the environmental document was completed. The challenge will be to coordinate efforts with the Minnesota DOT and keep the cost of the bridge within the estimate. Another challenge is dealing with the unstable soils in the Red River Valley.

**Roads Functioning as Dams in the Devils Lake Basin.** In 2005, the water level in Devils Lake reached a record elevation of 1449.2 feet. As the water has continued to rise, several local roads and state highways in the Devils Lake Basin have been functioning as dams. These roads were not constructed to function as dams, and the threat of inundation or failure could result in extensive flooding. In the past, the Federal Highway Administration did not allow the usage of federal emergency relief funding to raise the grades on roads functioning as dams. However, the new highway bill (SAFETEA-LU) provided \$10 million to raise these roadways in the Devils Lake Basin. The FHWA is conducting an in-depth analysis as to the total amount of funding available for this use per year. The challenge will be to stay ahead of the rising water and to coordinate the grade raise projects with multiple jurisdictions.

**Increased Costs of Fuel and Construction Material.** Fluctuating motor fuel costs and the volatility of the cost of oil-based products and steel, along with limited availability of concrete supplies, will pose major challenges for the department. In the past, we have based our engineering estimates on historical prices. This may need to be adjusted in the future. Also, the uncertainty of the cost of fuel and construction materials makes it extremely difficult for contractors to competitively bid projects.

It is estimated that the NDDOT will be short about \$4 million this biennium in the allowance for fuel costs. The rack price of gasoline and diesel fuel has fluctuated more than \$1.25 per gallon the past couple of months. This makes it extremely difficult to budget and plan ahead. In addition, when fuel costs increase dramatically, it can reduce consumption which negatively impacts revenue available for road construction at the state and federal level.

**Complying with Planning Requirements in SAFETEA-LU.** The passage of SAFETEA-LU resulted in many additional rules and regulations that will have to be interpreted and implemented. As a result, the NDDOT will have to either update or develop the following plans:

- North Dakota's Statewide Strategic Transportation Plan (TransAction)
- Statewide Freight Plan
- Strategic Highway Safety Plan
- State Rail Plan

The challenge will be to develop and/or update these plans in a timely manner in compliance with federal rules and regulations. The plans will be used to assist in project selection and are required to continue accessing some categories of federal funding.

**Access Control.** Increased development along major corridors near urban areas has resulted in the need to balance the protection of the corridor for moving people and freight against the value the corridor has for promoting economic development. Effective access management plans can reduce crashes, improve roadway traffic capacity, reduce travel delays, and improve property values. The challenge will be to develop access management plans and policies that coincide with local jurisdiction development plans and maintain the integrity of the corridor.

**Uniformity of Truck Size and Weight Regulations.** The federal government, states, provinces, and local jurisdictions all have roles in regulating truck size and weights, resulting in inconsistencies that impact the efficiencies and competitiveness of moving freight. The loss of rail service in some areas, increasing fuel prices, the demand for just-in-time deliveries, changes in agricultural production, and the fact that we are competing in a global economy have resulted in the need for more uniformity in truck size and weight regulations. The challenge will be to get the various entities to work together to get more uniformity in regulations, engineering standards, and truck configurations to improve the economic competitiveness of the trucking industry. In addition, we are faced with the challenge of changing the public's perception that large trucks are unsafe.

## **I.E. Major Goals**

**Enhance customer satisfaction.** NDDOT strives to constantly improve the products and services we provide to our customers. The department has completed a benchmarking customer satisfaction survey and is using that information to adjust departmental systems and processes to continually meet and exceed customer expectations. A follow-up survey will be conducted in the first quarter of 2006 to measure the impact of our improvement effort to date. Our customer satisfaction goal centers on consistent high-quality products and services.

**Increase safety on North Dakota's transportation system and within the Department of Transportation.** Safety is paramount to the NDDOT. The department's mission is *providing a transportation system that safely moves people and goods*. Our Strategic Highway Safety Plan coordinates education, engineering, enforcement, and emergency medical services efforts toward increasing safety on our state highway system, by decreasing the number of crashes, injuries, and fatalities. The Toward Zero Deaths initiative will also help us to accomplish our mission.

Safety program emphasis is essential with regard to our employees as well. In the area of worker safety, NDDOT endeavors to improve by eliminating or decreasing the number of back injuries, work zone injuries, and fleet vehicle backing accidents.

**Improve the quality and efficiency of North Dakota's transportation system and services.** The NDDOT has implemented a Highway Performance Classification System which expands the role of traffic counts in applying resources and construction and maintenance efforts on our highway system. HPCS aims to increase ride quality, improve load-carrying capacity, and improve pavement condition and life, while decreasing the number of deficient bridges on the state highway system. The department strives to achieve the highest levels of transportation system quality and efficiency possible within the confines of the resources available to the department. Performance measure indicators are available to managers on the department's Intranet to allow them to monitor status and identify program trends.

**Enhance employee effectiveness and well-being.** Our employees are the reason for our success. Based upon the results of the second organizational climate survey, NDDOT will continue to enhance its efforts in the areas of succession planning, mentorship, and career-pathing, as well as leader and individual training and development. Several human resource program adjustments have been implemented, and a follow-on organizational climate survey will document the impact of those efforts. A wellness program is in place to help improve employee health and reduce the overall cost of employee health benefits.

**Strengthen stakeholder relationships.** First-rate relationships and open communication with department stakeholders is very important to NDDOT. Stakeholders have a vested interest in the department. They have the ability to influence what the department does and can affect department credibility. NDDOT's goal is to consistently promote and strengthen those relationships.

## **I.F. Financial Data**

Audited financial information for the Department of Transportation is available from the North Dakota Office of Management and Budget. This information can also be found online at [www.nd.gov/fiscal/](http://www.nd.gov/fiscal/).

## II. Offices, Divisions & Districts

The NDDOT organization is comprised of five offices that include 16 divisions, and eight districts. The five offices are Business Support Services, Driver and Vehicle Services, Project Development, Operations, and Transportation Programs. The eight districts serve geographical areas of the state; district offices are located in Bismarck, Devils Lake, Dickinson, Fargo, Grand Forks, Minot, Valley City, and Williston.

### II.A. Office of Business Support Services

#### II.A.1. Communication

**Responsibilities and activities.** The communication office is responsible for disseminating information to NDDOT stakeholders: primarily to the general public; to local governments, civic groups, and other legislative bodies; and to its employees.

NDDOT communicates with the public through public meetings and public hearings; letters to the editor and newspaper columns; appearances on local TV and radio talk shows; media interviews; ads and notices in newspapers; presentations to various civic and local government groups; news releases on key issues and events of public interest; articles and topic papers; speeches; and videos. Working with department divisions and districts, the communication office plays a large part in all these activities.

The office creates and maintains relationships with media across the state. With this type of relationship, the department is better able to communicate both ongoing and time-sensitive messages to the public through the media.

The communication staff facilitates multidirectional communication between employees, managers, and executives through a number of channels, including a weekly online employee newsletter, “The Grapevine.” The office also assists executives to create messages to employees about critical issues for dissemination by other means, such as memos or letters or presentations at staff meetings.

#### II.A.2. Financial Management

**Responsibilities and activities.** The Financial Management division is responsible for the department’s accounting and reporting functions, budgeting, payroll, procurements, audits, revenue forecasting, central supply, cash management, and the disposal of highway equipment and materials.

**Key accomplishments.** During the past biennium, the Financial Management division met the required number of International Fuel Tax Agreement/International Registration Plan audits. At the same time, the division was heavily involved in the implementation of the Connect ND project, which replaced the department’s prior accounting system. The division remains fully committed to the Connect ND project. This has resulted in a major commitment of staff and resources. The department expects to realize considerable benefits from the successful implementation of Connect ND as it will enable the Financial Management division to discontinue the use of several major financial systems and become solely integrated with statewide systems.

#### II.A.3 Human Resources

The Human Resources Division is responsible for a broad spectrum of activities and programs that pertain to employees—from recruitment to retirement, employees are our business. Activities include staffing and salary plans, payroll, position classifications and essential functions, personnel policies, training and much more.

**Training.** The HRD training staff handles a growing number of NDDOT-sponsored and outside training, meeting, and conference sessions. There were 1,042 sessions coordinated and processed this biennium. In addition, a new employee training record system and process, Administer Training Module, was established.

**Payroll.** Our payroll staff processed 131 new regular employees and 385 temporary employees during this past biennium. Recruitment bonuses were awarded to 54 employees hired into “hard to fill” categories, and 105 performance bonuses were awarded to employees nominated by their peers and approved by management for service provided beyond assigned duties.

**TRAC Program.** TRAC is a hands-on math and science curriculum designed around transportation focused projects that is intended to introduce and interest students in civil engineering and transportation professions. There were five schools involved this biennium. A highlight was the advancement of the Rugby High School team to the National MagLev Challenge.

**Mentoring Program.** Mentor/mentee pairs commit to year-long relationships that has proved rewarding to both parties. Mentors nurture, guide, and open doors for their mentees. Both receive the perspective of looking at issues through a different pair of eyes. Nineteen mentoring pairs are currently participating in the program; twelve pairs participated last year.

**Wellness Program.** This program is intended to bring fresh ideas and motivation for employee wellness into the workplace. Several health and wellness fairs were held for employees throughout the state, giving participants insight into their wellness rating.

A Health Screening conducted by the Burleigh/Morton Chapter of the American Red Cross drew participation from 611 employees in categories that included: personal health risk assessment surveys; cholesterol, blood glucose, and blood pressure screening; vaccinations; strength/grip testing; and body mass index.

**Grants & Internship Programs.** The internship program provides hands-on experience in NDDOT divisions and districts for college students. NDDOT had 90 interns participate this biennium in this win-win program. Grants were awarded to 20 college students majoring in engineering-related fields; NDDOT offered employment to these students upon graduation.

**Succession Plan.** All employees were invited to participate in the NDDOT Succession Plan through presentations at District Safety or Central Office meetings. The program started by targeting positions at the district engineer, division director, and executive manager levels. A committee is reviewing the 30 draft development plans that were submitted, and will provide recommendations on areas where these employees can strengthen to prepare for the positions to which they aspire. This program will be continued in the next biennium.

**Career Pathing.** Career Pathing can be defined as providing career opportunities within an organization that meet organizational needs and provide promotion and professional growth opportunities for employees. The purpose of a Career Pathing system is to meet NDDOT’s current and future occupational needs as well as those of individual employees while also contributing to employee retention. Career Pathing was a major undertaking this past biennium, and we are currently transitioning between the planning and implementation stages.

## II.A.4. Information Technology

### Responsibilities

The Information Technology Division is responsible for all technology-related activities including information systems, network and PC support, telecommunications, electronic equipment, information processing, multi-media, traditional media, technology training, desktop publishing, web development, and e-business. ITD is also responsible for records management, photography, printing, mailing, and building maintenance and security.

In addition, staff is involved with various committees including: Continuum of Government, Highway Engineer Exchange Program, strategic business plans, Enterprise Architecture, United State Postal Service Postal Customer Council, Research Advisory Committee, and the Committee on Research and Engineering.

During the past biennium, the IT division made great strides in increasing staff efficiency to maintain architecture review board and associated domain teams, the electronic document management system, and computer aided drafting and design, in addition an the ever-increasing workload that has included updating equipment, installing new or revised software applications, providing technical training, and increased development and maintenance of web sites.

### Major activities

**Geographical Information System.** GIS integration into everyday workflow continues from ArcIMS applications that spatially show traffic counts to field data collection using Geographic Positioning Systems. Several major projects were completed. Right-of-Way plats were scanned, indexed, and spatially joined so all NDDOT personnel can access right-of-way plats from their desktop.

The "One Call" spatial layer was completed. This layer enables contractors to contact NDDOT when there is a need to dig near our utilities. Public information maps on our web site were upgraded so that users can dynamically pan or zoom to any portion of the state. New tools were added to the ArcGIS desktop application to improve user productivity. GIS infrastructure was upgraded to version 9x.

NDDOT is also an active member of the state GIS Technical Committee and Data Oversight Committee.

**Videoconference System.** NDDOT implemented a statewide videoconference system that includes nine locations—the central office in Bismarck and each of the eight district offices—allowing for meetings between offices without travel. The Transportation Learning Network video conferencing system was updated within the NDDOT and at universities and state transportation agencies in seven states, including at North Dakota State University and the University of North Dakota.

**E-Bidding.** This newly-developed system is a fully functional two-way electronic bidding process, which allows contractors to submit their bids electronically over the internet. The applications were developed by the NDDOT IT Division, and the services provided by Info Tech (Bid-X). Contractors see the value of using this feature, and they are taking advantage of it with over 90 percent of bids now coming in electronically. NDDOT also realized a time and cost savings throughout the process.

**Automated Vehicle Location/Global Positioning System.** IT worked with Dickinson District to run a 2004-2005 winter pilot project in which six snow plows were equipped with AVL/GPS equipment. The pilot was designed to test the reliability of data transmission over radio, to assist with safety and emergency response and to obtain real-time tracking of vehicles.

**Computer-Based Training.** Maintenance & Engineering Services Division started a pilot project to have a company create computer modules on Anti-icing. The modules were created on CD and have been distributed out to the test district and section. Results of this pilot project have been positive and it is expected that it will be rolled out state-wide in the 2005-2006 winter season.

**Maintenance Decision Support System.** Maintenance Engineering Services and a five-state pooled-study group have been creating a module with the University of North Dakota and Meridian (Grand Forks) to implement a web-based system. This system will assist districts and State DOTs to make appropriate maintenance decisions regarding ice and snow accumulations and compactions on the roadways in the state. The decisions made will affect the

traveling public. This system is still being created and will tie in to the AVL/GPS pilot project that is in test mode in the Dickinson District.

**Materials Feasibility Study.** NDDOT conducted a study to determine if an application should be created similar to the Construction Automated Records System to be designed for use for the Materials and Research Division, District Labs, and field labs of the DOT. After the study was conducted it was found to be feasible; the analysis phase of the project is scheduled for 2005-2006.

**Construction Automated Records System Handheld.** IT developed handheld applications that interface with CARS to maintain the Project Diary and Inspector's Reports in electronic format. The goal is to reduce paper as well as make more information available to individuals working on construction projects. This pilot project was disbursed to selected districts throughout the state to run through the 2005 construction season.

**Web Team.** A Web Team was created within NDDOT to evaluate the internal Intranet and the external web site, and to design new sites that better serve the needs of both the sites' target audiences and the NDDOT. The Intranet is being re-designed to improve communication within the agency, and the Internet is being re-designed to better address the needs of the public.

**Commercial Vehicle Information System & Networks.** The International Fuel Tax Agreement portion of the Motor Carrier Systems rewrite was deployed to production in June 2005. The International Registration Plan is scheduled for completion in January 2006. The web-based application allows carriers to file for credentials on-line.

**Social Security On-line Verification.** This system was implemented in 2004. Prior to license or permit issuance, the social security number is verified with the Social Security Administration.

**Criminal Justice Information System.** IT assisted in the development of access to the system which includes on-line retrieval of any driver image on the DDLS server. The application displays the date of the photo and the associated demographic information.

**Electronic Crash Reporting System.** In cooperation with an outside contractor, IT successfully implemented the Iowa TRaCS application which provides law enforcement with the capability to file crash reports electronically and eliminates the need for double entry from DOT staff. Currently, 19 agencies are participating.

**US Patriot Act.** Incorporated the hazardous material security check requirements called for by the act. All drivers who hold hazardous material endorsements must go through a security and fingerprint check in order to maintain the endorsement.

**Commercial DUI Suspensions.** At the request of the hearing officers, IT created dual suspensions for commercial drivers since there are two separate suspension times.

**Registration Card Printer Replacement.** IT implemented a new card format and installed printers that eliminated the need for maintaining a decal inventory.

**Digital Driver License System.** IT issued a request for proposal for a replacement system to be implemented by June 2006.

**Computer Aided Drafting and Design.** During the 2003-2005 biennium IT has improved our 2D and 3D abilities.

- 2D—In order to have capability to design highway projects using orthophotography through the Softcopy Imageviewer process, this software provides highway designers the means to view orthophotos in two dimensions. It also provides software tools to integrate raster and vector data, for the purpose of designing highways. The software also manages how the raster data appears on the screen. This will provide the image backdrop to plan and profile sheet layouts.
- 3D—In order to have capability to view and work with orthophotography using 3-D through the Softcopy SSK process, this kit allows designers the means to convert a PC workstation into a digital stereoplottter. It also provides high-quality stereo display and feature collection capability, as well as interactive digital terrain modeling collection and editing.

**DOT Support Center at NDSU (DOTSC).** IT worked with NDSU computer students to develop and/or convert the following applications: WIM (Weigh-in-Motion), Ref95 re-write, spread sheet conversions from Q-basic to Excel, and the DOT Online Employee Survey.

**Electronic Document Management System.** The FileNet Document Management system was implemented throughout the department. The infrastructure is in place and over 200 processes have been reviewed and recommendations made. Workflow is being utilized in the department to increase efficiencies. The remainder of the processes will be reviewed in the 2005-2007 biennium.

**Computer Network Services.** During the past biennium, IT maintained a greater than 99% availability of computer network services, and provided support to all NDDOT employees in central office, all district offices, sections, and remote locations.

The CNS complied with legislative mandate for consolidation of IT server infrastructure. CNS migrated 40 servers to the Information Technology Department for hardware responsibility. Approximately 340 desktop computer workstations were upgraded with new hardware on planned replacement cycle, and NDDOT migrated to a new email and calendaring system. IT maintained and supported NDDOT customers on 900 workstations and other peripherals and devices including printers, plotters, scanners, PDA's, cell phones, security devices, and communications, which were distributed throughout the state; maintained and installed required software updates; and maintained hardware and software maintenance service agreements.

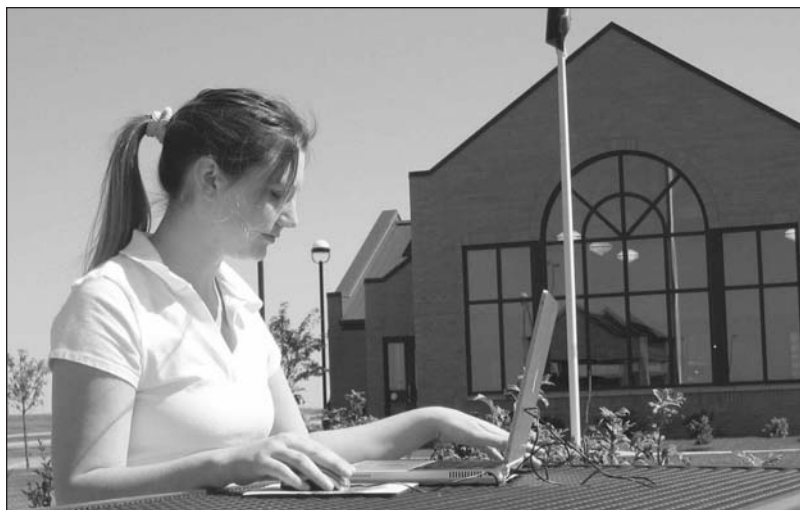
**Mail Center.** An alternative package delivery service to UPS was identified, providing rates that are approximately 23% less than previously paid. To reduce shipping costs, the address data base for contractors has been updated.

**Records Management.** Disposed of 10,750 plus linear inches of records, while maintaining 24,600 linear inches of records in both paper and microfilm.

**Telecommunications/Radio.** IT designed and installed a wireless hotspot system at nine visitor centers along I-94 and I-29. In addition, the department assisted in the preparation of a request for proposal for the new Public Safety Radio Communications System to replace the current system which is 30 years old. This RFP also included \$900,000 for upgrades/updates to the tower site infrastructure statewide as part of the overall project, and was not part of the NDDOT budget. The contract was awarded to Motorola in December 2004.

The Telecom/Radio section continues to provide maintenance, engineering and support for over 900 DOT mobile and handheld radios, 40 repeaters and radio tower sites and associated infrastructure, 19 RWIS sites, 12 WIM sites, 48 ADR sites, 19 Dynamic Message Boards, one bridge deck sprayer w/camera and PC and printer support in the districts.

The Telecom section also provides support for 108 State Radio base station/repeaters, 15 Mobile Data stations and all of the Highway Patrol mobile, handheld radio and device maintenance. The central radio shop in Bismarck also provides support for state radio office's Motorola Dispatch Console, Central Electronics Bank, Mobile Data Radio Network controller and Wireless Network Gateway.



Free WiFi internet access is available at nine visitors centers.

**Video Programs.** The multimedia section developed videos for five public hearings, five other major video programs from script to distribution, including two videos for the NDDOT to use at public meetings, orientations and other presentations. IT also developed a video on seat belt use for the NDDOT, as well as videos for Job Service North Dakota, and the ND Health Department. IT also developed seven testing videos for the Materials and Research Lab from script to distribution. The division produced radio and/or TV spots for four snow plow safety ads



511 ads, and spots for the First Lady, the Governor's office, and the ND Health Department.

**Web.** Forms, GIS data, manuals, concept reports, the Grapevine, and other information are available online to assist and inform NDDOT employees. The division built and maintains over 4,500 pages on the Web, including the TransAction manual; executive office biographies pages; strategic business plan; Statewide Transportation Improvement Program; Cultural Resources web pages; 511 travel information web pages; Adopt-A-Highway; Keep North Dakota Clean posters; RV dump sites; Materials and Research pages; Crash Facts; Traffic Trends; Meth Products; equipment information; and pages on recreational and historical signing, Scenic Byways, the Memorial Bridge, and the AASHTO conference in North Dakota. IT also made the NDDOT Web site ADA compliant and helped outside contractors for nine sites funded by the NDDOT to make sure that their sites meet all ADA compliant issues.

**Web access for Law Enforcement.** Law enforcement can now access a listing by county of any driver who is currently under suspension, cancellation, or revocation. The list is updated on a daily basis at 6:30 a.m. to insure that timely information is available.

## **II.A.5. Legal Division**

### **Responsibilities and activities**

The Legal Division provides legal services and advice to NDDOT in all areas, with emphasis on: pre-litigation issues; driver's license administrative matters; contract development, negotiation, drafting, and administration assistance; review of nonconstruction and construction-related contract documents; risk management; legislation; and administrative rulemaking.

During the 2003-2005 biennium, the Legal Division held 3,092 driver's license hearings, an increase of 21 percent over the previous biennium. Seventy-nine percent, or 2,454, of the hearings were alcohol-related. Also during the 2003-2005 biennium, the division reviewed and assisted with the administration of approximately 2,835 contracts/documents, a 64 percent increase over the previous biennium.

The Legal Division is expected to meet additional challenges during the 2005-2007 biennium in the areas of right-of-way acquisition, contracts, and risk management, due to the overall increase in NDDOT projects and responsibilities

## **II.A.6. State Fleet Services**

### **Responsibilities and activities**

The function of State Fleet Services is to manage, operate, maintain, purchase and dispose of the state's 2,850 licensed motor vehicles. In addition, State Fleet Services manages all insurance programs, and alcohol and controlled substance testing for all state agency and university system CDL drivers.

### **Key accomplishments**

The continued rapid rise in fuel costs and motor vehicle repairs and labor is a major budget concern, but through monitoring expenditures, the division expects to stay within appropriations.

During the 2003-2005 biennium, State Fleet Services initiated a new trend in fleet vehicle replacement to acquire smaller vehicles as a means to reduce acquisition and operational cost, while continuing to maintain or increase the vehicle's value at disposal.

State Fleet Services created, disseminated, and implemented a policy and training program for large passenger vans. This is an ongoing program, with oversight responsibility resting with State Fleet Services. Approximately 1,195 people were trained during the biennium. No serious accidents have occurred since the inception of this program.

State Fleet also conducted defensive driving course training for approximately 3,000 drivers of State Fleet vehicles during the biennium.

## II.B. Office of Driver and Vehicle Services

### II.B.1. Drivers License and Traffic Safety Division

#### Responsibilities and activities

The Drivers License and Traffic Safety Division offices are visited by more than a quarter of the state's population each year. The division represents one-half of NDDOT's front-counter services, where a driver's permit, license, renewal, or identification card can be obtained; driving records or crash reports may be purchased; or applicable fees for suspension-related driving behavior may be paid. Twenty-eight of the 44 sites are fully automated for customer convenience.

Law enforcement, the court system, and insurance companies rely on the quality and accessibility of conviction and crash report data gathered and maintained by the division. While a portion of the division's responsibility is regulatory, promoting safety on our state's highways is paramount. The division applies for, receives, and administers all National Highway Traffic Safety Administration federal grant dollars. Based on problem identification data, an annual highway safety plan is developed, and approximately \$4.4 million is spent each year by local entities and state agencies in promoting traffic safety efforts. During the past biennium, the main focus was centered on child passenger safety awareness, seat belt use, motorcycle safety education, and alcohol awareness activities (especially among our state's youth).

#### Key accomplishments

Through effective state and local efforts, a statewide seat belt use survey showed an 8.9% increase in seat belt use, from 67.4% in 2004 to 76.3% in 2005.

In 2004, North Dakota's alcohol-related fatalities dropped from 50% in 2003 to an all-time low of 38% in 2004.

The transmission of electronic crash reports was deployed in 2004 and continued into 2005. It is expected that 70% of all crash reports will be electronically submitted by 2006.

Through the diligence of the licensing employees, North Dakota successfully implemented the federal hazardous materials requirements of the USA PATRIOT Act and the school bus requirements of the Motor Carrier Safety Improvement Act. Both of these federal requirements had a significant impact on the licensing of commercial drivers, requiring employees to learn new procedures quickly in order to provide prompt and accurate information to the general public, and to successfully perform the licensing and testing procedures to ensure that North Dakota would remain in compliance for commercial driver licensing.

### II.B.2. Motor Vehicle Division

#### Responsibilities and activities

The Motor Vehicle Division administers all programs relating to the titling and registration of vehicles. The division regulates motor vehicle dealers, interstate motor carriers, mobility-impaired parking privileges, and



intrastate household goods carriers, and is responsible for maintaining and making available records created by its various activities.

The division serves the public at a central office in Bismarck, 12 privatized branch offices located throughout the state, four county treasurer offices, in person, by mail, by fax, by e-mail, and through the internet. Five of the branch offices also provide partial registration services to interstate motor carriers, who no longer need to conduct their transactions in Bismarck. Branch offices located within the same building as the department's driver's

Division personnel registered 1,656,981 vehicles in the past biennium.

license testing sites are in Dickinson, Minot, Grafton and Jamestown. The privatized operations result in decreased operational cost for the division.

### **Key accomplishments**

During the 2003-2005 biennium, the division processed more than 2.8 million customer transactions, collected and distributed more than \$345 million for various state government agencies, and responded to approximately 250,000 customer inquiries via telephone calls, e-mail, letters and fax. The division registered 820,054 vehicles in 2003 and 836,927 vehicles in 2004. The division used approximately two percent of its total collections to cover operational expenses.

Use of the on-line vehicle registration renewal system continues to increase. During the biennium, 113,447 vehicles were renewed on-line with \$6,955,718 collected, for an average of approximately 8% of all renewals processed.

In November 2003, the division increased dealer enforcement with the addition of four temporary dealer inspectors. These inspectors met with approximately 115 new motor vehicle dealers and 475 used motor vehicle dealers each year. This effort, plus increased enforcement efforts from the division staff, has had a positive effect on ensuring dealer compliance and dealer relations.

In 2004, the division contracted with Intellectual Technology, Inc. of Vista, California, to implement an on-demand decal printing system. This was done to reduce costs relating to postage and inventory. At the same time, the division leased the required Datamax registration card printers from ITI, which were set up at all Motor Vehicle locations. Once the system was in place, the division was able to begin using the new card stock in October 2004. The decal now identifies the month and year of expiration and the license plate number for which the registration card and decal have been assigned.

In May 2005, the Motor Vehicle division implemented a web-based application for North Dakota motor carriers. This application gives these carriers the option to file quarterly fuel reports, purchase additional fuel decals and renew their interstate fuel license on-line. Comments have been positive and division expects usage to increase as carriers become aware of the application's potential.

### **Future challenges**

An identified future challenge for the division is the potential loss of institutional knowledge through retirement of long-term employees. The division has several long-term employees, including several senior managers, who are at or near retirement.

## II.C. Office of Operations

### II.C.1. Civil Rights

NDDOT is committed to eliminating unlawful discrimination in its state, federal, and federally assisted programs on the basis of race, color, national origin, religion, sex, age, physical or mental handicap or disability, political opinion or affiliation, status with regard to marriage or public assistance, or participation in lawful activity off the employer's premises during non-working hours which is not in direct conflict with the essential business-related interests of the employer. In addition, NDDOT ensures that all beneficiaries and potential beneficiaries of these programs are offered an equal participation opportunity. NDDOT also protects the civil rights of its employees and applicants for employment. The Civil Rights Office has the responsibility for developing, implementing, and monitoring the following seven programs:

**Disadvantaged Business Enterprise program.** This program is responsible for certification of minority, female, and other socially and economically disadvantaged owned businesses under the rules and regulations of the federal DBE guidelines. The DBE program encourages the development and use of companies owned and controlled by minorities, women, and socially and economically disadvantaged individuals on federally-aided highway construction projects. The companies can be contractors, suppliers, or manufacturers with capabilities in the transportation industry. At the end of FY 2004, NDDOT certified 8 new businesses, for a total of 85 DBEs. At the end of FY 2005, 6 companies were certified in the DBE program, bringing the total to 83.

To participate in the program, the companies must be annually certified by the NDDOT. Under the DBE Program, select contracts are assigned percentage goals, based on the potential for DBE participation, type of work, location, and total dollar amount of the contract. The prime contractor must meet the assigned DBE goal or prove sufficient good faith efforts were made to meet the goal. NDDOT awarded \$13.1 million to DBE contractors in FY 2004 and \$14.1 million in FY 2005.

**DBE/OJT supportive services.** NDDOT receives federal funding to provide technical assistance and support to companies owned and controlled by minorities, women, and socially and economically disadvantaged individuals with capabilities in the transportation industry. This technical assistance is in the area of DBE certification, bidding, bonding, bookkeeping, loans, contract procurement, etc. This allows DBE firms to enhance their capabilities, to make them competitive in the project bid process, and to increase their overall effectiveness. In addition, state funds are used to provide counseling services to target group on-the-job trainees and to monitor their progress under the program. NDDOT contracts with a consultant to provide this assistance and these services. Currently, the supportive services consultant is Laducer & Associates, Inc.

**EEO Contract Compliance Review program.** This program ensures that federal-aid highway construction projects valued at more than \$10,000 include minority and female employees on construction crews. Contractors report their achievements annually. For 2004, there were a total of 2,600 employees working in highway construction. Of these employees, there were 307 minority males, representing 13.3% of the total work force, and 304 females, representing 13.2%. For 2005, a total of 2,418 employees worked in highway construction. Of these employees, there were 307 minority males, representing 12.6% of the total work force, and 220 females, representing 9.0%.

Contractors with federally-funded highway construction contracts must also comply with the requirements of the Civil Rights Act of 1964, as amended, and the related contract special provisions regarding equal employment opportunity, disadvantaged business enterprise utilization, and on-the-job training. Formal compliance reviews document contractor efforts. If any deficiencies are found during the audit, the Civil Rights Office makes recommendations for corrective action. Under this program, the Civil Rights Office conducts in-depth audits on 10-12 contractors each year. The office conducted 9 in-depth audits in 2004 and 12 in 2005.

**EEO On-the-Job Training program.** This program provides training for minority, female, and economically disadvantaged individuals in the skilled craft classifications used by contractors on highway construction projects. Contractors are assigned trainees based on the total amount of federal-aid work they receive each season. The contractors may choose to train equipment operators, truck drivers, concrete finishers, structural carpenters, or other skilled craft workers. Training programs run from 350 hours to 500 hours. Annually, highway construction contractors must provide on-the-job training to anywhere from 25 to 40 qualified individuals. For 2004 there was a goal of 30 trainees; 27 were assigned and 21 graduated from the program. For 2005 there is a goal of 30 trainees; 33 have been assigned and, with the program not completed, 11 have graduated.

**Labor Compliance program.** This program ensures that Davis-Bacon wage rates and fringe benefits are paid to highway construction workers on federal-aid contracts valued at more than \$2,000 and subsequent subcontracts. Certified payroll monitoring and a formal complaint process document contractor compliance. All federally funded highway construction contracts are subject to the federal Davis-Bacon and related Acts. The U. S. Department of Labor has empowered the NDDOT to enforce all pertinent labor laws pertaining to Davis-Bacon wage rates, overtime, fringe benefits, payrolls, etc. Any contractor employee who feels he or she has not been properly paid may file a wage rate complaint with the NDDOT. The Civil Rights Office investigates the complaint and recovers any back wages found due.

**Title VI and Nondiscrimination program.** This program ensures that all programs, activities, and services offered to the general public by the NDDOT are free from discrimination. Under Title VI of the Civil Rights Act of 1964 and its related statutes and regulations, no person or groups may, on the grounds of race, color, sex, age, national origin, and handicap or disability, be excluded from participation in, be denied the benefits of, or be otherwise subjected to discrimination under any program or activity receiving federal financial assistance. Within NDDOT, for example, Title VI might affect the site selection for a federal-aid highway construction project or the allotment of money for a subsidized busing facility for people with disabilities.

**Title VII (Internal EEO) program.** This program ensures that the recruitment and selection of regular and temporary employees for the NDDOT is done in a discrimination-free manner and that the work environment is free of discrimination. It also includes procedures for investigating discrimination complaints. EEO training of all NDDOT employees is part of Title VII of the Civil Rights Act of 1964. Title VII, and its related statutes and regulations, protects employees from discrimination and harassment based on race, color, religion, sex, age, national origin, and handicap or disability in all phases of employment. Title VII applies to employees and relates only to employment issues.

## **II.C.2. Construction Services Division**

### **Responsibilities and activities**

The Construction Services division is responsible for all highway construction bid opening activities for NDDOT construction projects including pre-qualification of contractors bidding on projects. The division reviews the constructability of project plans, establishes contract completion dates and performs field reviews of federal aid projects. Construction Services reviews and approves contractor payments, provides technical support for the Construction Automated Records System (CARS), and assists the district offices with the resolution of contract disputes and arbitrations. The division also assists the district offices in monitoring the Disadvantaged Business Enterprise (DBE) program. Construction Services is also responsible for management and supervision of the engineering pool, and coordinates statewide construction staffing. During the construction season, the division reports road construction conditions that affect the traveling public, and maintains a road construction map on the NDDOT web site.

### **Key accomplishments**

**Contractor payments.** The Construction Automated Records System (CARS) application was successfully rewritten in 2002-2003. This system, which provides an automated system to pay contractors on NDDOT

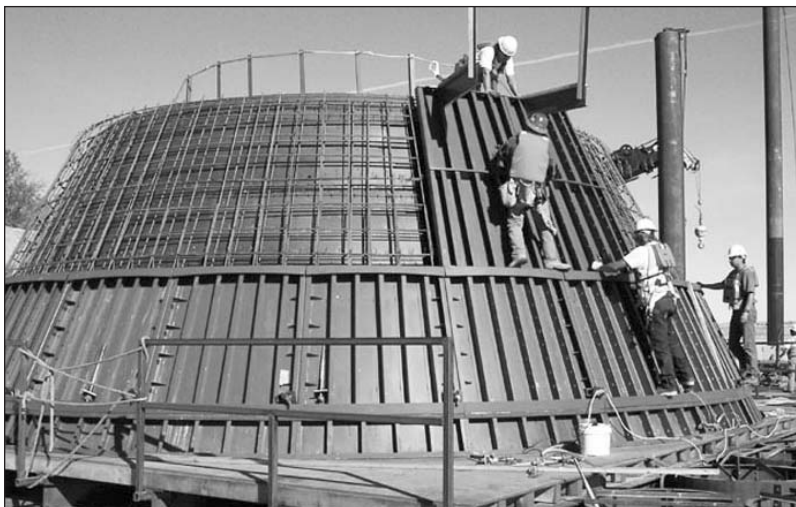
projects, was enhanced in the 2003-2005 biennium.

The CARS application is a Web based system, with users being able to access records from any location with Internet service. Most reports are stored on-line, reducing the need for paper copies and mailings. Few problems have been encountered and users are very pleased with the new CARS application.

**Internet Bidding.** In 2003, legislation was passed allowing the Department to develop rules and procedures for Internet bidding. In 2004, NDDOT implemented Internet bidding for NDDOT construction projects. Highway construction contractors can now download bidder information and submit their bids to NDDOT via the Internet. This service has been very well received by the construction industry.

**Live Bid Openings on the Internet.** The NDDOT bid openings can be viewed live, or from any location with Internet access. The Internet broadcast is accessed by clicking on the link found on the NDDOT webpage. This live web cast provides real time bid information.

**Four Bears Bridge.** Construction Services was involved in the bidding and contract administration for the new Four Bears Bridge, crossing Lake Sakakawea on the Fort Berthold Reservation near New Town. The project was bid in February 2003 and opened to traffic in September 2005. The project is the largest construction project in NDDOT history and improves access through the New Town area replacing the narrow, functionally obsolete present structure.



Lost coffer dams were built to create footings to support the piers.

## **II.C.3. Maintenance and Engineering Services**

### **Responsibilities and activities**

The Maintenance and Engineering Services division is responsible for NDDOT property and facilities; safety, health and emergency responses; budgeting for maintenance operations, capital improvements, equipment, pavement marking program, construction and maintenance specifications; construction contract special provisions and supplemental specifications for construction projects; the pavement preservation program; roadway weather information system; Tribal Employment Rights Office issues; Intelligent Transportation Systems; and load restriction and road condition reports.

### **Administrative functions**

The Maintenance and Engineering Services Division is responsible for a broad variety of administrative functions, including load restrictions, the 511 traveler information system, the living snow fence program, trucking issues, the aircraft pool, equipment operator testing, and emergency response/incident management. The division coordinates posting of spring-time load restrictions with the eight district offices and provides load restriction notification to the media and to truckers, and posts the load restrictions on the NDDOT web site.

### **Maintenance operations**

Maintenance operations are a core function of the division. MESD administers the budget for the purchase of major equipment, pavement marking contracts and district maintenance operations. The division also administers the pre-approval process to evaluate new equipment, and develops specifications for the use of new maintenance materials and practices.

MESD develops the equipment specifications for all non-fleet equipment, oversees equipment procurement, and provides technical assistance to the districts in effective repair techniques and preventive maintenance strategies. The division is also implementing a pavement preservation system, and provides general support services for all maintenance activities.



Approximately 45 new snow plow trucks were built this biennium.

### **Accomplishments**

During the 2003-2005 biennium, the department continued exploring the use of different liquid deicers. Salt brine continues to be the most widely used liquid deicer. Blending of different liquid deicers with salt brine improved the melting temperature and helped reduce the application costs when compared to using the other chemical deicers alone.

The department purchased and built approximately 45 new snow plow trucks this past biennium using a turn-key process. All equipment to make the truck complete is installed on the truck chassis prior to the truck leaving the installer's shop. New front snow

plows are purchased for each unit and are mated to the trucks at the district. The department procured two used generators from the Water Commission and will be installing them in the Williston and Valley City district offices. The Devils Lake and Dickinson districts will be the only district offices that do not have permanent mounted generators. The generators will provide for emergency power for the department to carry out operations during power outages.

**Safety.** Safety is paramount to NDDOT, and MESD is responsible for a variety of safety-related topics, including a review of employee accidents, an employee safety program and health services, workers compensation claims, and the safety manual. In addition, the division also maintains the North Dakota Department of Transportation safety manual.

**Intelligent Transportation System (ITS) operations.** ITS technologies assist MESD in providing better information to the traveling public. The division's ITS activities include coordinating the development and deployment of roadway/weather information. This includes managing federal ITS grants and projects, providing technical assistance to the districts, and developing ITS equipment specifications. MESD is also responsible for collecting and disseminating roadway and weather information. This information is provided to the general public via public service announcements, call-in phone service, the Internet, and the North Dakota 511 Travel Information Service.



ND 511 Travel Information Service is one part of ITS operations.

MESD also oversees a pilot project using automatic vehicle location and data collection equipment. The project is intended to improve the efficiencies and safety of the traveling public during snow and ice control operations.

**Facilities management.** MESD is responsible for facilities management activities that include capital improvements of department property, coordination of construction administration, budget, and visitor center/rest area operations. MESD provides assistance to the districts in the maintenance, repair, and capital improvements of NDDOT property and facilities, and is responsible for developing the specifications and request for proposals, as well as for procuring contractors and providing construction administration for the construction of section buildings.

MESD is responsible for developing and managing the budget for all major capital improvements and coordinates the replacement program for visitor centers and rest areas. This includes selection of the consultants and contract administration for the construction of each new facility.

In the past biennium, six section buildings were replaced or expanded to make room for larger snow trucks. Twenty-six office additions were also constructed in various sections across the state to provide office space for the employees. Security equipment was also installed in several rest areas and district offices.



Six section buildings were replaced or expanded this past biennium.

### **Engineering services**

MESD develops the department's Standard Specifications for Road and Bridge Construction. The division is also responsible for the development of contract provisions and special provisions required for all construction projects. The division plays the role of liaison with the Associated General Contractors, soliciting input for construction specifications and addressing construction-related concerns.

MESD is also the department's liaison with tribal governments on Tribal Employment Rights Ordinance issues. The division develops and negotiates agreements with TERO offices for all department projects on reservations.

MESD conducts technical studies and provides technical assistance to all department divisions and districts. The division is also responsible for maintaining the department's Flagging Handbook and manual on Traffic Control Requirements for NDDOT Operations on Highways and Streets.

**Maintenance Decision Support System and Automatic Vehicle Location System.** The department is active in implementing a maintenance decision support system. Several states joined together to form a pooled-fund study to jump-start this project, which will continue into future bienniums. The study is being coordinated with the automatic vehicle location and data collection project, which is intended to provide maintenance operators with up-to-date weather information, equipment coordination during adverse weather, and best maintenance strategies to combat poor road conditions caused by the weather.

**Living Snow Fence Program.** NDDOT continued the Living Snow Fence program in this biennium. The department has partnered with the North Dakota Forest Service and Division of Emergency Management to protect the state highway system by planting living snow fences.

**Emergency response.** The department continued to provide fire control support to other agencies. The department has committed the use of its equipment fleet and personnel to assist in responding to emergencies. MESD coordinates the response effort with Disaster Emergency Services.



## Challenges

The department is continuing to move into new areas, with advanced technology being applied to many aspects of transportation. Additional portable dynamic message signs were purchased to communicate with the traveling public to provide a safer traveling environment.

The department is continuing to implement a pilot project which involves equipping a group of snow plow trucks with automated vehicle location using global positioning system. This provides the ability to locate trucks at any given time, and to provide additional information to the operators to respond to adverse conditions.

The technology will also be used to coordinate a rapid response effort to emergency situations. MDSS is tied-in to this system and provides equipment operators with the information they need to better conduct snow and ice removal activities.

NDDOT will continue to deploy intelligent transportation systems. Various technologies are continuing to be deployed, including installation of road weather information system sites, automated bridge anti-icing systems, statewide Dynamic Message Sign implementation, video detection for signal activation, WiFi systems at rest areas, DMS and fiber optic communications links, video surveillance for security purposes, incident management, integrated road reporting and fiber optic communications.



Dynamic message signs are one example of ITS technology.

## II.D. Office of Project Development

### II.D.1. Bridge Division

#### Responsibilities and activities

The Bridge Division's primary responsibilities include designing and preparing plans for construction and rehabilitation of state highway bridges, inspecting bridges on state and county roads, and rating bridges for load-carrying capacity. In addition, the division manages the inventory of state and county bridges and structures. Based on need, the division is continuously planning and scheduling the rehabilitation and the replacement of the state's existing bridges. The division is also responsible for hiring consultants to perform preconstruction and construction engineering.

#### Administrative Functions

During the 2003-2005 biennium, the division continued to contribute to the construction of the new Four Bears Bridge and began involvement in co-administering the contract for the Memorial Bridge Replacement Project.

**Design and Plan Preparation.** The design section of the Bridge Division designed and prepared the plans for 10 new bridges, 14 new box culverts and 24 box culvert extensions, and for 132 sites of miscellaneous work (rail retrofits, approach slabs, deck overlays, bridge painting, and general maintenance). The division is also designing and preparing the plans for the steel alternate for the Memorial Bridge Project.

New bridges include:

- One bridge at Carrington, over the mainline railroad.
- Two interchange bridges on I-29 at Herrick and Main Avenue in Fargo.
- One bridge at Flaxton, over the mainline railroad.
- Three interchange bridges on I-94 at Wheatland, Peak and Oriska.
- One bridge at White Earth Valley on Highway 2.

**Preliminary Engineering and Structural Management.** The preliminary engineering and structural management section of the division manages 4,482 state, county, and city bridges. In addition, 5,330 bridge inspection reports were processed through cooperation with bridge inspectors from NDDOT districts.

This section also rated bridges for load-carrying capacity and issued 2,644 overload permits in cooperation with ND Highway Patrol; prepared or reviewed 16 hydraulic reports for projects including Highway 2 from 13 miles north of Williston to 30 miles east, and Highway 67 at Scranton; wrote 11 project concept reports for projects including Highway 13 at Wahpeton and I-94 through Mandan; provided preliminary engineering concepts and cost estimates for a new bridge at Drayton; and reviewed and approved 88 shop-drawing submittals.

**Consultant Administration.** The Consultant Administration Section (CAS) performs solicitations for consulting engineers to perform preconstruction and construction engineering for NDDOT. In addition to the solicitations, CAS interviews and negotiates with the consultants on the scope of work and contract fee.

The section's accomplishments include soliciting and processing approximately 85 contracts and supplements; managing nearly 84 projects through environmental documentation, design, and submittal of final plans; and managing approximately 84 district design projects.

In addition, the section reviews consultant invoices for preliminary engineering, processes them for payment, and maintains spreadsheets showing the current status of all preconstruction engineering contracts, and maintains a spreadsheet which provides date of current consultant expenditure, and compares these costs with the department's budget allocation for consultant services.

## II.D.2. Design Division

### Responsibilities and activities

The Design Division's primary responsibilities are to develop concept reports, plans, and specifications for construction projects on the state and federal highway system; perform all aspects of right-of-way related work; manage billboard laws; obtain federal approval of environmental documents; ensure compliance with cultural resource impact issues; provide contract administration for design, archaeological, surveying, and right of way consultants; and coordinate and conduct all aerial photographs and surveys for NDDOT.

### Key accomplishments

**US 2 from US 85 to 6 miles E. of Berthold.** Four of the nine US 2 four-laning projects have been completed



About 3.5 million cubic yards of earth were moved on US 2.

or are under contract. In 2004, the grading and aggregate base work was completed from Ray to Tioga. In 2005, the section from Ray to Tioga was paved and opened to traffic. The grading and aggregate base work for the next 30 miles was also completed in 2005. Along with grading and surfacing, these projects included constructing left and right turn lanes and new drainage facilities including box culverts and a bridge over the White Earth River. Approximately 3.5 million cubic yards of earth has been moved and 1.4 million tons of aggregate base has been used on these four projects. The design of the next projects from US 85 to Ray is nearing completion.

**ND 1804, W. of S. 12th Street to Bismarck Expressway.** A 39-year-old original pavement section was structurally weak and had well-exceeded its expected usable life. The project, greatly influenced by the needs of a highly urbanized area, was reconstructed as a 4-lane undivided urban curb and gutter section with a continuous left turn lane. The reconstruction addressed numerous features such as roadway geometrics, pavement structure, traffic operations (traffic signals were installed at Denver and Wachter avenues), lighting, safety features, storm drain installation, utility relocation, pedestrian and bicycle facilities, and landscaping.

**I-94, Valley City (Eastbound).** This concrete pavement repair job begins east of Valley City and ends west of the Hill interchange. It consisted of surfacing and safety improvements in a 14-mile section. In addition, there were five overhead structures with clearance problems that required lowering the grade, and one structure that required replacement. This eastbound lane was originally constructed in 1961.

**US 12 from Bowman to a half-mile West of Scranton.** This project began at the east end of Bowman and ended a half-mile west of Scranton, a length of 11.7 miles. The existing roadway was originally constructed in the 1940s and had deteriorated significantly. The project consisted of one mile of roadway regrading/reconstruction to improve sight distance and 11 miles of shoulder widening, slope flattening, ditch grading, recycled base, and asphalt surfacing that improved the ride and load carrying capacity of US 12. With six cultural resource sites along this project, the work was carefully coordinated to avoid impact to these sites. Earthwork was a major part of this project with approximately 392,000 CY of earth being moved.

**I-29/Main Ave. Interchange (Structures, Roadways, and Ramps), Fargo.** This project provided for the reconstruction of the Main Avenue Interchange including both the northbound and southbound I-29 roadways within the limits of the interchange. The new interchange provides additional lanes on Main Avenue to improve traffic capacity. The I-29 roadways consist of six lane sections with auxiliary lanes for the ramp connections.

This projects will extend the six lane section of the I-29 corridor to the north through the Main Avenue Interchange. The major improvements include structure replacement, the addition of the southeast loop ramp, ramp widening and realignments, service road realignments, signals, lighting, and a sidewalk.

**South of Herrick to North of Bowsmont (Northbound and Southbound), Grand Forks.** This is the first segment of asphalt surfacing and grade lowering at interchanges along the I-29 corridor from south of Herrick to the Canadian line. This project included grade lowering and Herrick structure replacement at the Herrick interchange (northbound and southbound), grade lowering at the Burlington Northern Santa Fe Railroad crossing (northbound and southbound), the Drayton interchange (northbound and southbound), grade lowering at the Pittsburg, Lincoln, and Bowsmont interchanges (northbound). Also included was a structural overlay on the I-29 mainline (northbound and southbound), ramp overlays, and safety work at the ramps. The grade lowering and asphalt overlay were needed to provide the needed 16' of roadway clearance and give this portion of the I-29 corridor new life.

**US 281 Corridor, S. of Minnewauken to US 2.** This project involves the relocation US 281 near Minnewauken to a new location with a higher elevation. The existing US 281 corridor by Minnewauken is subject to damage by the high water level at Devils Lake. Water levels have risen more than 25 feet since 1992 and potentially could overtop existing US 281. The new corridor includes 24 miles of grading. Major quantities include 1.3 million cubic yards of excavation, 1.7 million cubic yards of borrow, 1.0 million tons of aggregate base, 2 bridges, 7 box culverts, and 2.7 miles of culverts. The new corridor is planned to be surfaced in 2006.

**Wetland Information.** Design Division is in the process of developing numerous wetland banks as part of our mitigation program. The Hillesland bank is the latest constructed wetland mitigation bank and Vollrath wetland mitigation bank is scheduled to be constructed either this year or next. There are five possible future mitigation banks currently in the review process: Hillesland section 19 addition, Johnson, Zajak, Wakefield, and Connor.

**Cultural Resources.** The Four Bears Bridge project allowed the Design Division to work closely with project engineers to facilitate National Historical Preservation Association compliance and to address National Environmental Protection Association cultural resource issues. Cultural resource issues were coordinated with Kadmas Lee & Jackson, Lichtenstein, the Federal Highway Administration, State Historical Preservation Organization, and the Mandan, Hidatsa and Arikara Nation. We conducted cultural resource surveys, completed Historic American Engineering Records photographic documentation, and negotiated with the Antelope Society on relocation of the Little Shell Celebration grounds.



Visitors view the Scattered Village displays at the Mandan Library.

The Scattered Village project was a Native American earth lodge village discovered during the reconstruction of First Street in Mandan. Work included 10 museum quality displays detailing the archaeological find, excavation, analysis, and what we learned about Scattered Village. The exhibits have been installed as permanent fixtures in the Mandan Public Library. A curriculum was developed for fourth and eighth grade students in North Dakota. This was a highly successful collaboration among the city of Mandan, NDDOT, the State Historical Society of North Dakota, the Three Affiliated Tribes, and the Mandan Public Schools.

## II.D.3. Materials and Research Division

### Responsibilities and activities

The Research Division is responsible for the department's research program, which focuses on contributing to the goals and objectives of the NDDOT Strategic Business Plan. Research projects fall into one of three categories: Federal Highway Administration-sponsored Pooled Fund Studies, in-house NDDOT research projects, and university research projects. Examples of current projects include:

#### **Pooled Fund Studies**

- Animal – Vehicle Crash Mitigation Using Advanced Technologies
- Maintenance Decision Support System (MDSS) for Snow and Ice Control
- Implementation of Low-Cost Safety Improvements
- Materials and Construction Optimization for Prevention of Premature Distress in Portland Cement Concrete Pavements

#### **In-House Research Projects**

- Evaluation of Ground Penetrating Radar for Determining Flexible Pavement Thickness and Concrete Bridge Deck Condition
- Evaluation of the Light Weight Inertial Profiler for Measurement of Pavement Smoothness
- Laboratory and Field Evaluation of Blended Base Materials to Optimize the Percentage of Recycled Asphaltic Material Used in Mine and Blend Projects

#### **University Projects**

- Evaluation of High Performance Concrete Bridge Decks
- Evaluation of the Performance of Hot Bituminous Pavement Binders Used on NDDOT Flexible Pavement Projects
- Evaluation of Portland Cement Concrete Surface Sealants

Recommendations for new research projects are provided by NDDOT executive management, division and district personnel, and university researchers. Evaluation and project selection is conducted by the NDDOT Research Advisory Committee and executive management, with review and approval by the FHWA.

Research reports on completed and in-progress projects are available on the NDDOT website at [www.nd.gov/dot/materials/Researchlist.html](http://www.nd.gov/dot/materials/Researchlist.html).



This series of photos shows an animal-vehicle crash mitigation system that is the subject of current pooled-fund study.

## II.E. Office of Transportation Programs

### II.E.1. Local Government Division

#### Responsibilities and activities

The Local Government division administers, coordinates, and allocates funds for all county, urban, Transportation Enhancement, and transit federal aid programs and projects. Local Government also provides a liaison between the Federal Highway Administration, county and city officials, and NDDOT divisions and districts during project development; assists local entities in getting their projects ready for the bid openings; and coordinates the Emergency Relief program on a statewide basis on behalf of the NDDOT.

#### Key accomplishments

Local Government provides a one-stop service to city and county governments and to transit projects for all their transportation related projects.

North Dakota counties received:

- \$23.4 million for road projects,
- \$ 8.9 million to repair or replace 25 bridges,
- \$ 0.7 million for TE projects (multi-use paths, etc.).

North Dakota's 13 largest cities received:

- \$83.0 million for street projects,
- \$ 2.5 million for TE projects (multi-use paths, etc.).



An example of Legacy Trails funding in action at Indian Hills.

**Transit Section.** Transit programs are vital to the state of North Dakota. The state's population continues to decline in rural areas, yet aging and special-needs residents depend more on transit services. Transit programs are also vital in the state's larger cities, as their population continues to increase. During the 2003-2005 biennium, the Local Government Transit Section distributed:

- \$15.7 million in federal funds for buses, vans, buildings, and operating expenses to local transit authorities,
- \$ 3.2 million in state funds for operating expenses.

Without these funds, many transit programs would have to be reduced or cut.

**Legacy Trails.** A Congressional earmark provided \$1.4 million for the Legacy Trails program. This program funds trails and multi-use paths along the Missouri River.

**Recreational Trails.** Our partnership with North Dakota Parks and Recreation continues with NDDOT providing \$1.3 million in Recreational Trail funds to North Dakota Park and Recreation to administer. These funds are used for motorized and non-motorized trails around the state.

**Transportation Enhancement.** Transportation Enhancement funds for NDDOT projects and for Tourism projects were also administered through Local Government.

- \$2.1 million for TE projects along rural state highways, for visitor centers, and for landscaping,
- \$0.9 million for tourism TE projects.

## Future programs

Three new programs were started this biennial, with the first projects being constructed in 2007 or 2008.

**ND STREET.** North Dakota Small Town Revitalization Endeavor for Enhancing Transportation provides \$3.0 million per year, starting in 2008, for cities less than 5,000 in population to upgrade existing pavement infrastructure and enhance the appearance of sidewalks on the state highway through town.

**The Small Rural Economic Development Program.** This new program provides \$640,000 per year, starting in 2008 for cities less than 5,000 in population and counties to upgrade existing infrastructure to new businesses.

**The Safe Routes to Schools Program.** This program provides \$1.0 million per year to improve safety for kids walking to school.

## **II.E.2. Planning and Programming Division**

### Responsibilities and activities

The Planning and Programming division is responsible for a wide variety of activities, including cartography, planning, highway-rail grade crossings, rail freight assistance programs, roadway data, traffic operations, pavement management, and programming.

### **Planning Section**

**Mapping/Cartography.** For more than 70 years, NDDOT has produced county general highway maps. In that time, map production has evolved from a pen and ink process drafted on linen to a digital process. With a desire to supply timely map information to highway planners and design personnel, NDDOT began the process of converting to electronic versions that duplicated the same look and feel as existing hand-produced maps.

During the 2003-2005 biennium, we have completed one full series of county general maps, which are updated on a six-year cycle. Along with the county maps, we also created electronic versions City Traffic Volume, City Major Urban, City Major Functional Class, and State Traffic Flow maps. The greatest feat during the last two years was the rebuilding of the State Tourist Map from pen and ink into digital form. A two-year supply was printed on time in December 2004 for a January 1, 2005, issue.

**Implementation of TransAction, the Statewide Strategic Transportation Plan.** TransAction was completed in December 2002. Since that time, the planning staff has focused its efforts on implementing strategies designed to achieve the plan's 16 initiatives. Most of these implementation efforts include working with the Upper Great Plains Transportation Institute to develop a statewide personal mobility study that identifies trends, gaps and recommendations, and a continuation of the biennial freight study series analyzing truck size and regulations and permitting in a multi-state/provincial area.



Photogrammetry turns 2D images into 3D for design and mapping.

### **Highway Performance Classification System.**

The Planning Section prepared the third edition of the Highway Performance Classification System annual report. The report's format has been expanded to include additional data and trending analyses. Expanding the report to provide more information and analyze additional variables has allowed for the development of performance measure comparisons between vehicle miles traveled on HPCS segments meeting or exceeding HPCS guidelines.

**Highway-Rail Grade Crossings.** NDDOT obligated \$2,962,873 of federal funds for 26 railroad signal projects for fiscal years 2004-2005. Twelve of these projects included new installation of active warning, flashing light signals with short arm gates, 12-inch LED lights and constant warning time train prediction. Existing active warning signals were upgraded at fourteen locations. The signal upgrades include flashing light signals to gates, 12-inch LED lights and present day electronics and train prediction circuitry. The active warning device was relocated at one location. The 26 projects were on US and state highways, county major collectors, county off-system and city roadways. NDDOT endeavored to reasonably distribute signal projects among the five railroads operating in the state and cover a wide geographical area.



Five railroads cover a wide geographic area of North Dakota.

**Rail Freight Assistance Plans.** NDDOT administers two rail freight assistance programs: one state funded (Freight Rail Improvement Program), and one federally funded (Local Rail Freight Assistance). Both programs provide loan funds for eligible projects. In fiscal year 2005, NDDOT obligated \$3,723,391 of federal funds for two LRFA projects. Both are rail rehabilitation projects, replacing light jointed rail with heavier welded rail and replacing/renewing ties, ballast and hardware. A total of approximately 24 miles of track were rehabilitated by the two projects.

**Rail Plan Update.** In fiscal year 2005, NDDOT obligated \$50,000 of federal funds to contract with Upper Great Plains Transportation Institute to update the state rail plan in 2005 and 2006. An advisory committee was formed and has met three times. The updated plan is scheduled for release in draft form in early 2006, and, after public and stakeholder input, final adoption later in the year.

## Roadway Data Section

**Highway information and statistics.** The roadway data section responded to various requests for information pertaining to functional classification systems, mileage change orders and mile point locations for construction projects and various bridges on the state highway and county system. All road system changes from the Local Government Division were updated in the Highway Performance Monitoring System database.

Service roads in the 13 major cities were also added as collector routes, which was a major task. These service roads work in conjunction with the major route they parallel. Rather than merely providing access to business on the service road, they also collect traffic from the vicinity and distribute it to the crossroad intersections with the major routes.

Employees in the roadway data section processed the high-accident location information for the traffic operations section. They also completed surveys and questionnaires from other states and national organizations regarding the department's roadway data files.

**Roadway Information Management System.** The highway components database is maintained and updated with construction plans from each bid opening. This assures timely and accurate data for its users. The section provides system support for RIMS, and generated numerous reports containing RIMS data for all eight districts. Several ArcView GIS maps were produced for analysis and also to reflect the data on the state highway system. The Devils Lake Basin elevation data base was updated during this time frame.



**Highway Performance Monitoring System.** The HPMS data submittal was completed before the annual June 15th deadline. The analysis by the Federal Highway Administration did not find any substantial errors in our data or in NDDOT data collection procedures. Section employees (with a FHWA representative) conducted a traffic review of selected sections from the HPMS database.

**Traffic Data Collection and Processing.** The section completed all traffic counts according to the traffic counting schedule. These included 48-hour volume counts between break points on state highway system and on all functionally classified streets within corporate limits. Additionally, 48-volume counts and classification counts were completed on all state routes, HPMS samples, and selected major collector routes. The section employees also completed special count requests and assisted counties and cities with equipment and guidance. Section employees also completed special studies, such as turning movements at intersections and speed surveys. We currently have 48 Automatic Traffic Recording stations permanently installed in our rural and urban highways throughout the state. Presently, we have 35 class stations and 13 volume stations. Our goal is to collect class data for all 48 locations.

**Traffic Data Analysis.** The section has increased the automation of the traffic data processing. All traffic data collections stations are now permanently recorded in the traffic database. Volume and classification locations each have a unique number that can be recalled and display traffic history. Volume counts have the daily, monthly, and axle factors applied automatically.

The section also provided timely traffic data for the updating of the department's data files. Traffic forecasts were made for many urban, county, and state highways. The Automatic Traffic Recording data reports were produced and distributed monthly and an annual report was produced and submitted to Federal Highway Administration. Daily truck vehicle miles traveled (VMT) and linear growth rates were calculated for the state highway system. Additionally, the annual traffic report was enhanced to include more truck data and new geographic information systems (GIS) maps.

Analyzed traffic data is now available for all DOT employees. TIM (Transportation Information Map), as a part of our GIS Intranet page, gives the current traffic data information to our users. It is ready to move on Internet, if needed. This map is updated every 24 hours, and it displays current traffic data together with historical information.

**State Traffic Volume Map and Strip Maps: Improved GIS Projects.** We have high quality maps with dynamic connection between old and new data. After analysis is over, old data is automatically replaced with new data.

The section was tasked to complete various construction projects dealing with Trip Generation, Users Cost Estimates, and Traffic Demand Forecasting.



**Weigh In Motion.** In 2003 the NDDOT completed the phase I Weigh In Motion project which installed four permanent WIM sites in various locations. In 2004 the DOT completed phase II of the WIM project, which installed eight additional permanent WIM sites in various locations. All 12 sites are on line and data is being collected on a continuous basis. The North Dakota Highway Patrol (NDHP) is using these sites for the screening of legal truck weights via a wireless connection between the WIM roadside electronics and the NDHP in-car laptop computer.

This WIM site is located along I-94 near the Painted Canyon.

## Traffic Operations Section

The traffic operations section responded to approximately 300 various requests. The section also completed traffic operations studies for all major reconstruction projects, provided requested crash information, and reviewed and commented on design plans, project concept reports, and consultant traffic operations studies.

The section also reviewed numerous studies and roadway design plans for proposed large retail developments throughout the state, and assumed responsibility for developing traffic projections for all urban intersections.

In addition, safety improvements were implemented through the Title II Highway Safety Improvement Program; field work included traffic signal inspections of new installations and annual maintenance of the 33 state-maintained signals; legislation was passed to allow for variable speed limits in work zones; and signing accomplishments included 70 work orders, 16 speed orders and 12 Tourist Signing Advisory Committee (TSAC) signs.

## Programming Section

The programming section's major responsibilities are project authorization and development. This includes preparing the State Transportation Improvement Program document, monitoring project development, preparing and assembling contract proposals and documents for all bid openings, and programming and monitoring federal aid for all state and local projects.

We now have expanded reporting capabilities from our federal project authorization system, Federal Management Information System. NDDOT is offering bonds to fund additional highway road construction projects. This is one of the newer innovative financing techniques being used by NDDOT.

District scoping reports accompany all highway priority projects from the district, which assists in estimating the future costs of projects. This past biennium, the section has improved the STIP format by making it more user-friendly, posting it on the web site, and providing the ability to comment online. In addition, the public input process has been expanded to include meetings with the tribal communities, cities, and counties. We now meet individually with each tribal entity to discuss any issues they may have with the department and upcoming STIP issues, followed by two additional joint meetings with tribal entities, in addition to the their annual Tribal Transportation Planning meeting. NDDOT is currently working with the tribes to combine and streamline both processes. We present the development process as well as inform them of the upcoming projects in their jurisdictions.

## Pavement Management Section

The Pavement Management Section has continued to monitor the condition of the NDDOT highway system and provide data to the department and the NDSU Research Centers. The continued compilation of data has an ever-increasing role in determining pavement performance and resulting future budget needs.

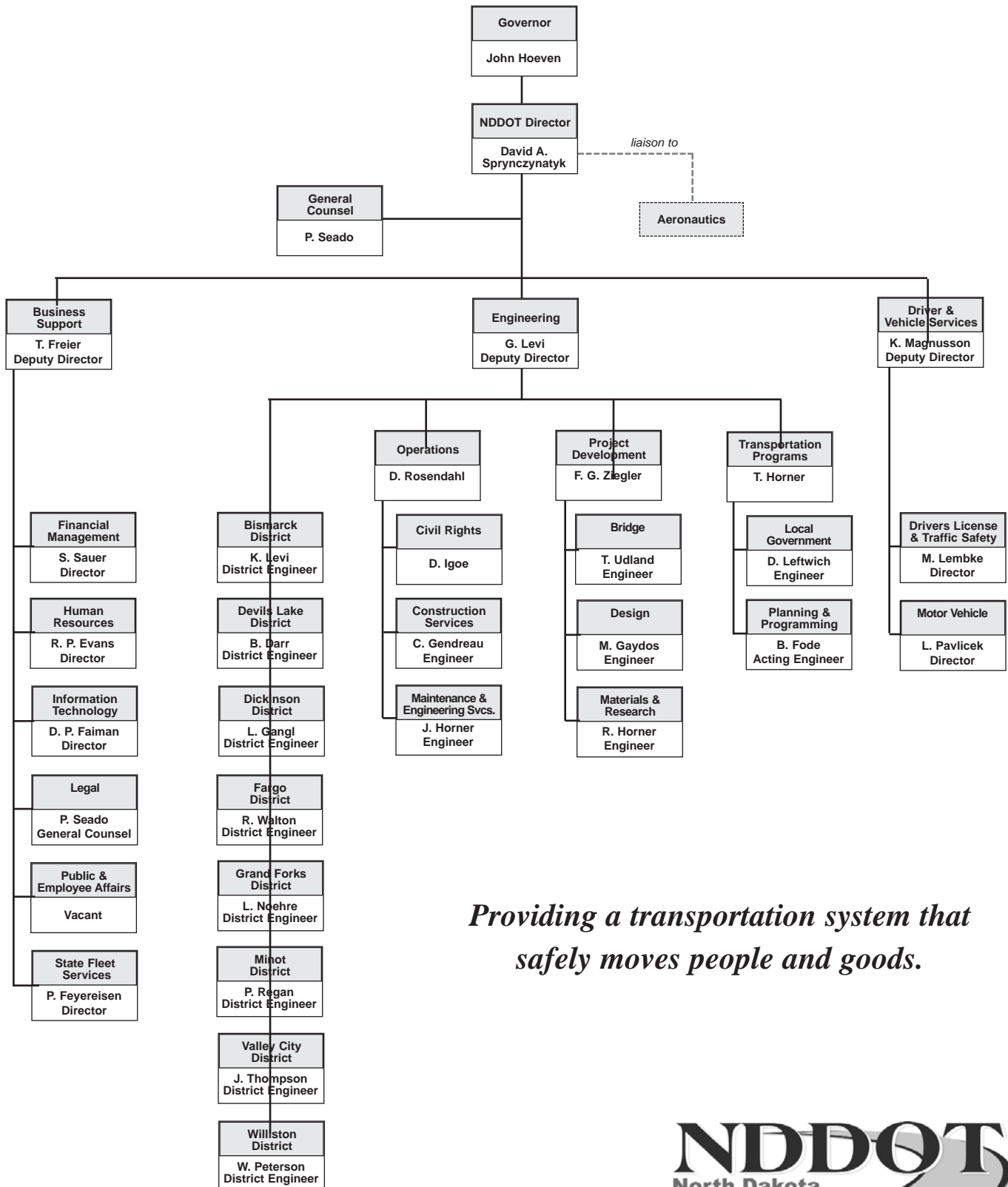
With 13 years of data available to analyze, the Pavement Management Section has acquired a state-of-the-art computer optimization software program that will aid management in project selection and determine future conditions of the highway system.

The Pavement Management Section has continued to look to the future by updating its data collection, analysis, and information distribution methods, which has resulted in a more user-friendly data retrieval and distribution process.



This falling weight deflectometer is used to test pavement condition.

# North Dakota Department of Transportation Organization Chart *as of November 15, 2005*



*Providing a transportation system that  
safely moves people and goods.*



## II.F. Districts

### II.F.1. Bismarck District

#### Responsibilities and Activities

The Bismarck district is located in the south central part of the state, and lies in nearly even halves on either side of the Missouri River. Of the 2,800 lane miles, 445 are on the Interstate system and 2,355 are on the state highway system. The district staff consists of 99 full-time employees, which is supplemented with approximately 25 to 30 temporary employees for summertime construction and maintenance activities.

#### Key Accomplishments

During this past biennium the district has had a very active construction and maintenance program which included the following activities.

With the department's emphasis on providing a good ride on all roadways, the interstate from New Salem to Mandan has been reconstructed. This segment of I-94 had the highest maintenance costs of all interstate segments in the district. The new roadways should provide the traveling public with a good ride and a very low maintenance roadway for the next 30-plus years.

Major asphalt overlay projects in the 2003-2005 biennium included ND 3 from Steele north to the ND 200, US 83 from Hazelton to I-94, and ND 200A from Washburn to Stanton. These projects, along with other overlays, accounted for approximately 210 miles of roadway in the district being overlaid.

Two urban projects in the City of Bismarck were completed: the Bismarck Expressway from Rosser Avenue north to I-94, and Airport Road from 48th Avenue to the Bismarck Expressway. These projects greatly improved the traffic flow along these corridors. The costs of these projects totaled approximately \$15.2 million.

Regular preventive maintenance on all roadways is an ongoing activity for the district. These activities consist of attempting to seal coat the district roads on a seven-year cycle and to contract patching the segments of roadway that show distress from the traffic. The contract patching program consisted of projects on several different roadways totaling approximately \$2 million.



Traffic flow was greatly improved on Airport Road.

#### Future challenges

The district will continually be challenged to provide the public with a snow and ice control program that meets their demands. As more people commute to their jobs, the Department is expected to provide extended service with its present staff. New technology and equipment are being used to make snow and ice control activities more efficient. Computers are being installed in maintenance sections to provide site-specific forecasts. With this information, maintenance crews can react in a timely manner to weather conditions and plan the proper snow and ice control strategies in advance. Also, anti-icing and pre-wetting equipment are being used to better control the amount and the time that chemicals are being used during a storm condition. This helps provide safer roadways and saves the department money on the amount of chemical used.

The Memorial Bridge reconstruction project, and the reconstruction of portions of the Bismarck Expressway, will provide interesting challenges for the next biennium.

## **II.F.2. Devils Lake District**

### **Responsibilities and Activities**

The Devils Lake district is located in the north central part of the state, is responsible for 1,136 miles of roadway, and is staffed by 75 full-time employees. A total of \$40,601,178 was invested in construction projects in the district during this past biennium. Of this, \$3,051,070 was used for emergency relief projects around Devils Lake, made necessary due to rising lake levels. For the most part, work consisted of raising grades and then paving them. The remainder was used on various traditional construction projects including grading, hot bituminous paving, and seal coats projects throughout the district.

In 2005, \$54,438,968 was let for construction in the Devils Lake District, \$39,182,207 of which was for emergency relief projects.

### **Key Accomplishments**

The Devils Lake District erected a new section building at Carrington in 2005. This facility provides enough space to accommodate a six-person crew. In 2004, district maintenance personnel built office additions to section shops located in Cando, Maddock, Pekin and Rugby. The Cando shop had a mud-sand-oil separator and floor drain installed during renovation and replacement of new concrete floor with off-peak electric floor heating. This project has substantially reduced the heating costs for this facility.

The district has established 10 remote sites throughout the district for storing de-icing chemicals and loaders to enhance snow and ice removal operations. The last couple of years the district has arranged fall meetings with adjoining district sections to develop good communications with neighboring districts in an effort to enhance the snow and ice operations for the traveling public.

The SPPC spill plan for the district was completed in 2004, which placed dikes and security fencing around all heated oil storage tanks.

Maintenance crews have sawed/sealed transverse cracks with polymers on 80 miles of new asphalt structural overlays. Approximately 33 % of roadways were crack poured, approximately 260 miles of roadways chip sealed, and approximately 85 miles of roadways had contract patching, thin-lift overlay/structural overlay.

### **Future challenges**

Emergency grade raises have resulted in miles of district highways exposed to the lake. Maintaining these roadways will be a challenge.

The Devils Lake District office facility severely lacks adequate size to accommodate a larger meeting room and needed filing space. Consideration should be given to building a new facility or an addition that would provide enough space to include Driver's License and Highway Patrol offices. The current shortage of space in the district office severely limits the district's ability to conduct conference meetings, safety and staff meetings, and meetings with contractors.

An additional area of need is replacement of the steel siding on the cold storage building at the Industrial Park in Devils Lake. This building was moved to its current location in 1991 and placed on a concrete foundation and floor. The structural steel in this facility is in good condition and definitely justifies replacement of its rusting steel siding.

Salt storage buildings need to be constructed at Maddock and Pekin sections in the near future, and some consideration must be given to replacement of existing old buildings in other sections.

Roadway conditions in the district are in generally good condition. However, there are sections that have various degrees of rutting and depressed cracks. There are also roadways that are in need of structural overlay to increase the load carrying capacity. These are needed mainly to connect to grain terminals.

Devils Lake continues to experience the loss of rail branch lines throughout the district, which is compounding our concerns with the need to maintain adequate surface strength on highways that facilitate trucking of grain products to four large unit-car elevators in our district. These types of facilities have been built at Leeds, Devils Lake, Milton and Bisbee. In most cases, the highways serving these elevators were not designed to handle the truck volumes, which are creating Spring load restriction problems on weak highway segments in these areas.

## **II.F.4. Dickinson District**

### **Responsibilities and Activities**

The Dickinson District is responsible for maintenance on 1,978 lane miles of roadway on the Interstate and state highway systems. The district has 65 full-time employees.

### **Key accomplishments**

The Dickinson District had several key accomplishments over the past biennium. The district resurfaced and reconstructed 375 miles of district roadways at a cost of \$30 million. Some of these projects included resurfacing and safety improvements on both the eastbound and westbound lanes of I-94 from Belfield to South Heart; reconstruction through the City of Killdeer and on US 12 from Bowman to Scranton; realignment of the intersection of ND 8 and ND 200 east of Halliday; and 180 miles of seal coats and 175 miles of thin lift overlays.

District construction crews administered construction contracts on several large construction projects. The design of all seal coats and thin lift overlays were completed by district construction staff. Many preliminary surveys were also completed.

District maintenance crews completed 60 miles of seal coats, and repaired depressed transverse cracks on 300 lane miles of roadways. Automatic vehicle location systems were added to trucks in two district sections to improve snow and ice control efforts.

A new 70'x100' section building was added at Mott. The new building was needed because the existing building was too small for current equipment storage. A 50'x60' addition was completed on the Killdeer section building and construction started on a new 70'x120' section building at Belfield.



Maintenance workers place a sealcoat on a roadway.

### **Future Challenges**

The Dickinson district is facing similar challenges in the next biennium to those that other districts and organizations are experiencing. There is a need to recruit new employees to fill current positions. Funding is also a challenge, whether it's money needed to repair or reconstruct district roadways, or to replace deficient or obsolete equipment.



New buildings were completed in the Devils Lake District (see left).

## II.F.5. Fargo District

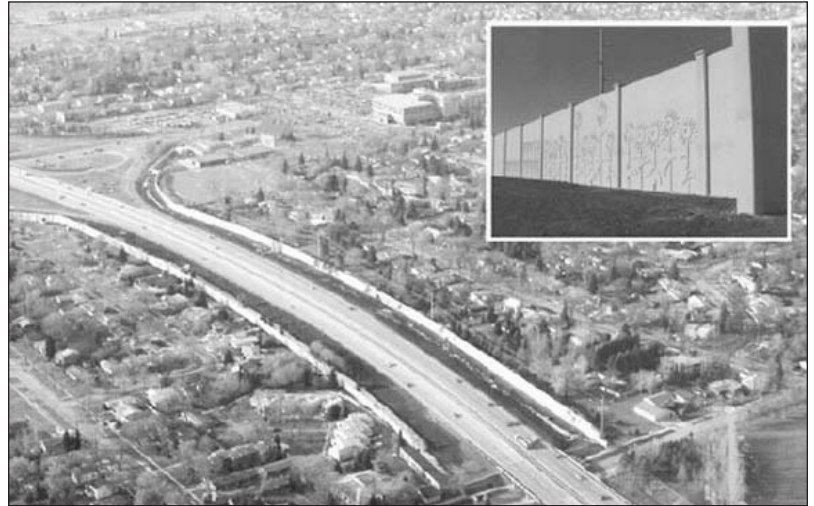
### Responsibilities and Activities

The Fargo district is located in the southeastern part of the state, and is responsible for 1,811 miles of roadway. The district has 88 full-time employees assigned in four sections: highway engineering, roadway maintenance, vehicle maintenance, and administration.

### Key accomplishments

The 2004 reconstruction of Main Avenue in Fargo from 25th Street to 45th Street was completed during the 2003-2005 biennium. Along with the reconstruction of Main Avenue, I-29 was reconstructed and widened to six lanes from just south of Main Avenue to 7th Avenue North. The reconstruction of Main Avenue from I-29 to 45th Street was completed more than one month early. The rest of the project was completed on-time, which was a big success given the limited time construction was allowed to impact traffic in an important Fargo business area.

In 2003, the first sound walls in the state were constructed along I-94 in Fargo from University Drive to the 5th Street underpass. The sound walls varied from 20 to 24 feet high. Evaluation of the walls' effectiveness has shown that they are functioning as intended with the adjacent properties receiving at least a five decibel noise reduction. Additionally, the I-94 pavement from the Red River bridge to I-29 was ground longitudinally to reduce the tire to pavement noise.



New sound walls have resulted in a five decibel noise reduction.

This past biennium saw both eastbound and westbound I-94 bridges over I-29 reconstructed. Reconstruction of these bridges had to be expedited due to the bridges being damaged by a

high load in 2002. The bridge reconstruction included adding a third through lane in each direction to allow for anticipated interstate widening west of I-29, and improving the vertical clearance over I-29. The added bridge width will eliminate the requirement for additional bridge work and reduce traffic disruption on not only I-94, but on I-29 below the bridges when six lanes are needed on I-94 west of I-29.

North Dakota Highway 32 from Gwinner to Lisbon was rehabilitated in 2004. The highway's condition required spring load restrictions due to the deteriorated pavement and a weak road base. After rehabilitation of this important state highway corridor, spring load restrictions were no longer needed. Also, much needed left-turn lanes were added to the south side of Lisbon, which has seen major business development in the last six years.

Key accomplishments in roadway maintenance included the crack sealing of 328 miles and chip sealing of 97 miles of asphalt highways. Forty-four miles of concrete interstate highway and ramps were crack sealed as well. Several maintenance section facilities were improved to increase highway maintenance equipment storage space and make equipment maintenance easier. Six maintenance sections added office additions. Moving the section offices out of the shops increased shop space for vehicles and equipment. Two sections had additions added in order to house all the assigned snowplows in heated areas, and three badly deteriorated section shop floors were replaced.

New methods of anti-icing highways and bridges were evaluated. The use of sugar beet by-products combined with a salt brine mixture on known highway frost areas was evaluated. Placing the mixture on the pavement the evening prior to projected frost conditions proved beneficial for reducing the number of morning run-off the road crashes and guardrail damage. The cost of the chemical mixture, combined with the limited time of its effectiveness due to traffic wearing the chemical off the pavement, impact the wide-spread use of the material. The district continues to test and evaluate cost-effective materials and methods to improve winter-time highway travel.

Intelligent Transportation Systems continued to be developed. Traffic signal video detection cameras were installed at the Fargo-Main Avenue and I-29 ramp intersections, and a pan-tilt-zoom camera was placed on a Main Avenue interchange hi-mast light with the capability to monitor traffic flow and roadway conditions in a one-mile radius of the Main Avenue and I-29 interchange.

The district Traffic Operations Center continued to grow and develop. In the 2003-2005 biennium, video detection cameras at the Fargo 13th Avenue South and Main Avenue/I-29 interchanges, and on the I-94/I-29 tri-level bridge were used to provide traffic counts. Video detection technology is superior to the standard rubber tube counting, especially for highways and streets with high traffic volumes with two or more lanes in each direction. Interchange ramp video detection has proved to be much more efficient to reduce traveler delay at traffic signals than the in-pavement wire loop system for high traffic volume intersections.

The anti-icing bridge deck spray system at the I-29 Buxton railroad bridges, which was installed in winter of 2002-2003, continued to benefit public safety. During the winter of 2004-2005, no reportable crashes were documented. Prior to the spray system installation, this location had a long history of winter-time crashes.



Anti-icing system at work on the Buxton Bridge deck.

### **Future challenges**

The largest challenge facing the Fargo district is keeping up with the continued population and business growth in the southeast part of the state. With this growth, the district continues to see an increase in car and truck traffic and heavy loads. Interchanges along I-94 are also starting to see longer lines of vehicles stacking on the ramps as housing and business growth continues in the Fargo-West Fargo metropolitan area, especially to the south and west.

Reconstruction and rehabilitation of the area highways have not kept up with this rapid growth, so the maintenance staff is faced with more highway repair activities than in the past. The public is also requiring continuous and better snow and ice control on highways. Our ability to maintain multilane roads when a lane is closed for maintenance work creates traffic safety challenges we have not had before due of the high volume of traffic. Current staffing does not allow for 24-hour maintenance of state highways. This is a challenge the district is attempting to mitigate with improved snowplows, anti-icing chemical applications, technology, and scheduling staggered work shifts.

The Fargo district has also seen the development of several large rail unit train-car agricultural elevators and fertilizer plants. Several existing agricultural elevators also added significant product capacity. These facilities continue to generate large truck volumes for transporting grain to the facilities. In most cases, the highways serving these elevators were not designed to handle the truck volumes. Construction improvements on ND Highway 32 from Lisbon to Gwinner, and on ND Highway 18 in the Hatton area, allowed for improved spring load carrying capacity. However, some district highways still require load restrictions. Spring load restrictions on the district's highways continue to impact the efficient movement of agricultural products. The result of load restrictions often means businesses and farmers must make more truck trips to move their product.



## II.F.5. Grand Forks District

### Responsibilities and Activities

The Grand Forks district is responsible for the construction and maintenance of approximately 940 miles of highways in the northeast corner of North Dakota. The district consists of 70 full-time employees. The district has four sections: highway engineering, roadway maintenance, vehicle maintenance, and administration.

### Accomplishments

During the 2003-2005 biennium, Grand Forks District maintenance forces performed routine crack repairs, crack pouring, patching, sealing, mowing, and winter maintenance to the district's 940 miles of highways. Additionally, district maintenance forces are performing extra mowing and drainage work in select areas to enhance the highway appearance. Continued wetter-than-normal conditions this biennium required continued extra attention to drainage and water issues.

A new equipment building large enough to house equipment previously stored outside was completed at Grand Forks. In addition, all office additions to section buildings were completed, and new equipment was received to aid in our maintenance efforts.

The Grand Forks District is the host for a Minimac micro-surfacing machine, which is used to fill depressed transverse cracks. This program is meeting with good success. We received a Durapatcher brand pothole patcher which has enhanced our small repairs. Another addition is a Cat 320 excavator that just went online. It stood ready during our latest emergency, then went to work cleaning ditches and resetting culverts in the district.

The Grand Forks District experienced its share of emergency work during the past biennium. In March 2004, we had flooding or water over the roadway at about 12 sites. Three of the sites required extensive repairs involving our equipment and personnel, plus contractors. Several emergency sites came up in May 2005, including a very serious concern at a slough area of ND 1. Muskrats and high water created need for additional riprap and surface patching of the entire area. Large culverts in a field drive on US 81 also washed out and required emergency work. Flooding to areas adjacent to ND 18 near Cavalier required prompt attention. Flooding in the Drayton area caused emergency ditching at two locations. June 2005 included heavy rains and roadway flooding to a portion of ND 32 near Finley. Maintenance crews assisted counties affected in our district due to the heavy rains in May and June by supplying pumps and staging them.

During the 2003 construction season, the Grand Forks District started a one-mile reconstruction of 32nd Ave. and Columbia Road in Grand Forks. During this year new storm drainage was installed. Other work being performed this year included the final lift of pavement laid on 11 miles of ND 200 from Finley east; 18 miles of hot bituminous pavement on ND 18 north of US 2; and 17 miles of seal coats completed in the district.

In 2004, the reconstruction of 32nd Avenue and Columbia Road was completed. The work that year involved new curb and gutter, concrete paving, storm sewer, lighting and incidental items. During that same year, U.S. 81 was widened from Grafton to ND 66, including widening the roadway, reshaping the ditches and installing new culverts.

Work on I-29 included 14 miles of hot bituminous pavement, grading and structure work completed from south of Drayton to the Canadian line. In addition, the district completed 27 miles of thin lift overlays, 17 miles of seal coats, 11 miles of contract patching, and 5 miles of concrete pavement repair.



Reconstruction was completed on 32nd Avenue & Columbia Road.

## II.F.6. Minot District

### Responsibilities and Activities

The Minot district is located in the northwestern part of the state and is responsible for the maintenance and construction of over 1,200 miles of highways. The district has 70 full-time employees. Construction and maintenance activities for the highways in the Minot district are planned, designed, and scheduled by the district, and are performed out of the district office and eight outlying sections. Winter snow and ice control is provided for the public seven days a week. Additional support services are provided to the cities, counties, utilities, US Air Force and public from the district, which range from everyday activities to emergency responses.

### Key accomplishments

Grading was completed on the final of four regrading segments of the US 52 corridor from Kenmare to US 2 (Brooks Junction). The 12.7 mile Carpio to Brooks Junction regrading segment was completed at a cost of \$7.6 million. Asphalt paving was completed on the Kenmare to Baden Overhead segment at a cost of \$1.9 million. US 52 is part of a major commercial trucking corridor beginning at the US-Canadian border and extending to Charleston, South Carolina.

A landscaping project that includes granite signs as well as plantings at the five major entrances of US highways into Minot was bid in 2005 at a cost of \$650,000. This project is underway and is scheduled to be completed in 2006.

Eighty-five miles of highway received a thin lift overlay extending the life of the roadways an estimated five to seven years. The total cost of the thin lift overlays was \$5.1 million, or approximately \$60,000 per mile. A structural overlay was completed on an eight-mile segment of ND 3 south of Harvey at a cost of \$1 million.

The Minot district administered contracts for regrading of 61 township and county road miles. The funding for these roadways comes through the Federal Highway Administration and Department of Defense.

Several safety improvement projects were completed including guardrail retrofits on several structures and installation of turn lanes at a rural Minot elementary school.

A dowel bar retrofit project was completed on Business US 52 in Minot. This project will extend the life of the concrete pavement and greatly improved the ride of the segment.

Median crossovers were constructed on US 83 south of Minot in preparation for the reconstruction of the southbound lanes in 2007 and 2008.

Microsurfacing to repair a rutted and poor-riding 18-mile segment of US 52 was completed at a cost of \$800,000.

In addition, the Minot District completed construction of office additions for all outlying sections, remodeling of its district headquarters offices and engineering offices, and staff restructuring.



Concrete placement for a structure on the US 52 project.

## II.F.7. Valley City District

### Responsibilities and Activities

The Valley City district is responsible for the construction and maintenance of approximately 1,079 miles of highways in the south central area of North Dakota. The district consists of 74 full-time employees. The district has four sections: highway engineering, roadway maintenance, vehicle maintenance, and administration.

### Key accomplishments

A number of improvements were done on roadways in the Valley City District during the 2003-2005 biennium.

**US-52/281.** In 2004 the Jamestown US-52/281 truck bypass was completed, to connect US-52/281 to I-94. This is one component of the many improvements to the U.S. 51/U.S. 281 corridor in the Valley City District. The purpose of this project is to take trucks that would normally travel through Jamestown on U.S. 52/281 and divert them around the city. Work on the US-281 corridor includes the reconstruction of 16 miles of this corridor between Jamestown and ND-46. This roadway was widened, turn lanes added near Jamestown and the surface reconstructed.

**I-94.** Two concrete pavement repair and dowel bar retrofit projects were completed on I-94, involving the eastbound and westbound roadways from the Eckelson interchange, Exit 275, to west of Valley City. This work consisted of repairing broken concrete, bridge maintenance, installing dowel bars, and grinding the pavement to provide a smooth ride. A fifteen mile segment of eastbound I-94 was resurfaced from east of Valley City to east of Tower City.

These interstate projects improved the ride to a good or better quality on 41 miles of the interstate mileage in the Valley City.

**ND 13.** North Dakota 13 is an important corridor to the communities of LaMoure, Edgeley, Kulm, Lehr, and Wishek in the Valley City District. This roadway was reconstructed through LaMoure, and resurfaced between LaMoure and Edgeley. The district also resurfaced between Lehr and Wishek, and completed a minor “sliver” widening project along with resurfacing west of Wishek. In all, 39 miles of this corridor received a new surface this biennium.

Other bituminous overlay projects included:

ND-3 South and West of Ashley	15.2 miles
ND-1 South Dakota Border to Oakes	15.0 miles
ND-1 North of Oakes to Verona*	14.8 miles
ND-200 Cooperstown to Jct. ND-32*	12.6 miles
<b>TOTAL</b>	<b>47.6 miles</b>

\* Scheduled for completion during the 2005 construction season.

**Urban projects.** The district’s major urban project included the construction of a new Marsh Rainbow Arch bridge over the Sheyenne River in Valley City. The existing structure was replaced with a bridge of the same engineering design, only wider, higher, and longer. The existing bridge was 75 years old and had a very unique design (*see photo on following page*). The project served to carry history forward in time. Other urban projects include construction of 5th Ave NE in Valley City, 3rd street in Jamestown, and the 1st Street bridge, over the James River in Jamestown.

**Maintenance.** Maintenance crews were busy with seal coats, crack sealing, and bituminous patching done by district maintenance forces. This work was done to preserve the pavement or to react to defects in the pavement. With the use of improved equipment and new deicers, we have decreased the response time for snow and ice on the roadways.

## **II.F.8. Williston District**

### **Responsibilities and Activities**

The Williston District is responsible for over 900 miles of paved highways in the northwest corner of North Dakota. Fifty-three full-time employees are responsible for routine maintenance activities, designing and administering construction programs, and repairing equipment and administering the state fleet program.

### **Key Accomplishments**

In 2003, a contract for \$55 million was let for the replacement of the Four Bears Bridge near New Town. NDDOT partnered with Kadrmas, Lee & Jackson to design and construct the new bridge. Fru-Con Construction Corporation was selected to build the precast segmental bridge. The bridge opened for traffic on September 2, 2005, with a grand opening scheduled for October 3, 2005. The Three Affiliated Tribes coordinated the blessing and dedication of the new structure. The old structure is scheduled to be removed before the end of 2005.



Precast concrete sections were placed to form the bridge deck.

The US 2 four-lane between Minot and Williston became a reality to those that have

worked so hard and waited so long. The first 10-mile segment of the four-lane construction of US 2 (Ray to Tioga) was graded in 2004, paved in 2005, and opened to traffic in September 2005. An additional 34 miles was graded in 2005, and is scheduled to be paved and opened for traffic in 2006. The entire four-lane corridor from Minot to Williston is scheduled to be completed and open to traffic by fall 2008.

The district continues to repair and update buildings and grounds, including the replacement of a maintenance section building in Crosby. Offices were added to two existing section buildings to provide employees with a place to complete training, do paperwork, and plan daily activities.

The District remains committed to the Be Smart program. This program is centered on teaching younger students about department and district activities, and giving safety instructions through the use of a coloring workbook. We go into schools and make presentations to students, as well as display our snow plow trucks and explain how they work. The students are allowed to sit in the trucks for a real hands-on experience.



Concrete placement on the uniquely-designed Rainbow Arch Bridge in Valley City (see district report on left-hand page).

### III. NDDOT History — A Timeline Overview

- 1913** First State Highway Commission formed with three members. Gov. L.B. Hanna chairman. No extra compensation.
- 1917** To get newly available federal funds, North Dakota abolished the old commission and created a new five-member body: governor as chairman, commissioners of agriculture and labor, and two members appointed by governor.
- 1920s** By mid-1922, construction had been completed on more than 1,000 miles of state highway: 20 were graveled; the rest were only earth-graded.
- 1925** Legislature created the state highway fund to partially match federal aid.
- 1930s** During the Depression, the department employed thousands with federal relief funds. In six years in the 1930s, under six governors, seven men served as highway commissioner.  
**1935:** First drivers' licenses issued.
- 1940s** World War II saw a shortage of highway materials; many highway engineers and other employees left to serve in the armed services. Soldiers returning from Germany cited Autobahn, with its high speeds and controlled access, as a model for highway design. This led to Interstate program.
- 1950s** Federal Aid Highway Act of 1956 created.  
**1956:** First Interstate contracts let in North Dakota for a section of the former US 10 between Valley City and Jamestown.
- 1960s** Interstate work continued.  
**1968** The Transportation Building on the State Capitol grounds was completed.
- 1970s** North Dakota was the first state in union to let contract for a final stretch of Interstate, on I-29 between Drayton and Pembina.
- 1980s** With completion of Interstate, the department's needs changed from construction to maintenance. This philosophy continues to the present day. Walter R. Hjelle retires after a total of 25 years as Highway Department director (1961-1983 and 1986-1988), the longest tenure in department history.
- 1990s** January 1990: ND Highway Department became Department of Transportation, and the Motor Vehicle Department was merged into NDDOT as Motor Vehicle division. For the first time, there is more state funding available than just enough to match federal funds in order to preserve system built over 75 years. The system is deteriorating faster than the state can maintain it. February 1997: After months of working with a consultant, the department issues its first strategic business plan. January 1993-February 2000 Director Marshall W. Moore's tenure is the second-longest in NDDOT history.
- 2001** Newly elected Governor John Hoeven names new DOT Director David Sprynczynatyk to lead the effort to create a Statewide Strategic Transportation Plan involving all government jurisdictions, all modes of transportation, and the public.
- 2002** North Dakota's first Statewide Strategic Transportation Plan, TransAction, is completed, and introduced by Governor John Hoeven and NDDOT Director David Sprynczynatyk.
- 2004** Finalized the Highway Performance Classification System, which was endorsed by the North Dakota Legislature during the 2005 session.

## IV. Available Resources

To request a copy of any of the documents listed below, contact the NDDOT communication office at [atait@state.nd.us](mailto:atait@state.nd.us), (701) 328-2671 or (701) 328-4444.

### Bridge Division

Structure description and inspection reports for all structures on state and county systems  
Copies of bridge plans  
Hydraulic studies  
Specific project file information

### Civil Rights

Davis-Bacon Wage and Payroll Requirements Handbook  
DBE Goal Setting Methodology  
DBE Program Administration Manual  
Disadvantaged Business Enterprise (DBE) Directory  
Disadvantaged Business Enterprise (DBE) Rosters  
EEO Affirmative Action Plan Update  
External Civil Rights Manual  
On-the-Job Training Program  
Supportive Services Newsletter  
Title VI and Nondiscrimination Program Plan

### Construction Services Division

Pre-qualified contractor list  
Average annual bid prices  
Construction and road condition report  
Construction manual  
Construction Records Manual  
Approved Subcontractor List  
Bidding Requirements and Conditions

### Design Division

Roadside Management and Wetlands Development Along ND Highways  
Procedures for Public and Other Agency Involvement for Highway Improvements  
Right of Way Acquisition Procedures for County/Federal–Aid Projects  
The NDDOT Relocation Assistance Program  
Highway System and Your Land  
Rights of Land Owners Under ND Eminent Domain Law  
Project concept reports  
Environmental impact statements  
Environmental assessments  
Archaeological reports  
Implementation process for the Title II Highway Safety Improvement Program  
3R standards for 2-lane rural roadways  
90-1 procedures manual  
I-4R design policy for Interstate  
Right of way plats  
Roadside advertising in ND  
Mailbox safety brochure and video  
Copies of plans  
Design guides  
Hydraulic studies  
Specific project file information

### Drivers License & Traffic Safety Division

Annual ND Highway Safety Plan  
ND Vehicular Crash Facts  
Traffic Trends  
Life Source Donor Brochure  
Hazardous materials pamphlet  
Statistics on test results, licenses, permits, identification cards  
Driver guides for cars, motorcycles, trucks, and buses  
Drivers License site locations  
Evaluations of the safety plans  
Posters, pamphlets, and audiovisual materials on traffic safety  
Traffic Safety Executive Summary

## **IV. Available Resources—continued**

### **Human Resources Division**

Employment brochures

### **Information Technology Division**

Special maps for sale to public

Aerial photographs for other agencies and departments

### **Maintenance & Engineering Services Division**

Interactive Reports to the Public

511 and Traveler Information

Spring load restriction postings

### **Materials & Research Division**

Field Sampling and Testing Manual

Soil survey reports

Aggregate pit information

Bridge foundation reports

Pavement deflection test reports

Pavement thickness design

Hot bituminous pavement recommendations

Materials testing

Research program

Transportation Technician Qualification program

### **Planning & Programming Division**

ND Highway Statistics

ND Traffic Report

ND State Rail Plan

ND State Tourist Map

Statewide Transportation Improvement

Program (STIP)

ND state, county, and city traffic flow maps

Roadway mileage

Current and forecasted traffic

Pavement condition data

Highway Performance Classification System

annual report

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