

Nebraska ♦ Department ♦ of ♦ Roads

Continuing the Story

1997 - 2006



A Supplement to "A Story of Highway Development in Nebraska-Revised 1997"

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Background

In December of 1986, the department published "***A Story of Highway Development in Nebraska***" with an updated and expanded version published in 1997. Both documents written by the late George E. Koster provided readers with exceptional history, education and information concerning the development of highways in Nebraska.

Since 1997, advancements in technology, organizational revisions, funding and highway safety concerns, along with many other highway-related activities, have had an impact on the highway development process. For that reason, this document has been written to continue the story of progress, including features which have enhanced the area of operation within the department, along with accounts of special activities affecting department employees during the past decade.

Department Organization Update

"We provide and maintain, in cooperation with public and private organizations, a safe, reliable, affordable, environmentally compatible and coordinated statewide transportation system for the movement of people and goods."

The above statement addresses today's mission of the Department of Roads. Since the establishment of the department (originally named the State Board of Irrigation) 111 years ago, many significant changes have occurred. To begin with, we can look at the change in the number of permanent employees that has taken place. Starting with six employees in the State Board of Irrigation in 1895, the number of employees grew to 1,813 in 1950 and today numbers approximately 2,133.



John L. Craig

Robert B. Howell, the first State Engineer, served from 1895 until 1896. Twenty-five persons have since held the position, changed to Director-State Engineer in 1969. The current department Director, John Craig, coming from the U.S. Corps of Engineers, was appointed to his position by Governor Mike Johanns in 1999.

In addition to the Central Headquarters operation, the department has eight field districts which are responsible for all construction and maintenance of that portion of almost 500 miles of Interstate, approximately 600 miles of Expressway and nearly 9,000 miles of other roadways within their respective areas. District office headquarters are located in Lincoln, Omaha (transferred from Lincoln in 1968), Norfolk, Grand Island, Bridgeport, North Platte, McCook and Ainsworth.

In part, today's highway development process consists of: (1) design of roadways, bridges and right-of-way; (2) maintenance; (3) operations; (4) construction; (5) development, testing and research of highway materials; (6) early planning, including environmental studies; (7) development, implementation, and administration of procedures, standards and practices pertaining to information systems services technology; (8) financial planning, programming and management analysis; and (9) design of signs, signals, pavement markings and other traffic control devices. Fourteen divisions and a Project Scheduling & Program Management Section located in the Lincoln headquarters carry out the work load necessary to design and maintain Nebraska's State highway system. The department is also responsible for the issuance of motor carrier permits and the administration of the federally-funded Rail Planning Program and the Nebraska Grade Crossing Protection Program.

Continuing changes in technology and safety have opened the doors to more opportunities for the department. This, along with improvements to Nebraska's highway system, have required the department to address many areas over the past ten years. Let's take a look at some of the changes and other activities involving employees that have evolved since 1997.

1997

It's a true statement when we say that technological advancements have significantly impacted the lives of every American. From computers to cell phones to high definition televisions, almost every household has felt the effect of the high tech world. The Roads Department has been deeply involved in the advancement of technology, both programs and equipment, which continues to aid in the highway safety, maintenance, development and design processes.



Travelers along I-80 began to see a new feature in the rest areas as data transmission network monitors were installed providing “real time” information that scrolls across the screen at 10- to 15-second intervals. The television-like screens give information featuring current temperatures, forecast maps, radar summaries and satellite information for the United States. Additionally, travelers can view data on regional winds, sky conditions and temperatures for the central region of the country.

In January, the Department observed the retirement of Warren “Duke” Lichty, Chief Counsel and Assistant Attorney in charge of the Department of Roads Section of the Nebraska Attorney General’s Office, after 35 years of service. Mr Lichty served as Chief Counsel for 28 years and was succeeded by Gary Welch, who served the Department as Chief Counsel until his death in December of 1999.

Changeable message signs (CMS) also began to appear along Interstate 80 from Kimball to Lincoln to alert the traveling public to up-to-date roadway information of immediate and/or upcoming closures. Local Roads personnel are able to access the signs using personal computers and modems to either initiate or change messages.



A new division was created and named the Intermodal Transportation Division (renamed Rail & Public Transportation Division in November 2001). The division has two sections: Program and Rail/Transit. The division is responsible for:

- Coordination and oversight of the Transportation Enhancement Program and Intelligent Transportation System plans, and coordination of the Scenic Byways Program.
- Motor carrier permits, and rules and regulations for controlling overweight and overdimensional permits.
- Administering the federally funded Rail Planning Program and preparing the State Rail Plan.
- Submitting a biennial report to the governor on transit activities.
- Administering the Nebraska Grade Crossing Protection Program.

Selected to head the new division was Ellis Tompkins who moved to the position from the Project Development Division, where he had served as Agreements Engineer since 1992. Tompkins began working for the Department in 1970 after graduating from Iowa State University. He started his career working in District 1 before moving to the Project Development Division where he worked for nine years in the Corridor Studies Section. In 1980, he became the Railroad Liaison Engineer in the Information Services Division and worked in that position until becoming the Agreements Engineer.



Ellis Tompkins

In the fall, Nebraska laid claim to the first bridge in the United States constructed using a new grade of high-performance structural steel in the Snyder South Bridge in Snyder. The new steel was used in the fabrication of plate girders and has two main characteristics that are superior to conventional steel – weldability and toughness.

The department's Right-of-Way Division developed the preliminary analysis for the Automated Right-of-Way Management System (ARMS). The system was in response to the need to manage information and create a paperless office. To accomplish this, the system will automate the creation of documents, provide for sharing of information and retention of records required to complete activities of the Right-of-Way Division. The system will assist the division in managing work functions and provide management timely and accurate status reports on right-of-way acquisitions, resulting in better decisions in assigning project letting dates. The system will ultimately save time, and therefore money, by eliminating duplicated and/or unnecessary tasks and by centralizing and sharing information. Continued development of the system will be required before final implementation.

Federal funding was available to states for the purchase of new "Superpave" equipment and to build roads to the new "Superpave" specifications. The "Superpave" program, developed and tested in the late 80's, consisted of new ways to test asphalt cement used on highways and to check the asphaltic concrete's properties during design and field testing. The department's first two "Superpave" projects, In Tecumseh and Louisville to Springfield, were let in 1997, with the design used identified as SP-97.

With the retirement of Ken Gottula, Randy Peters was promoted to the position of Traffic Engineer. Peters began his career at the department in 1977 as a photolog driver in the Transportation Planning Division. Working in that position led him to pursue an engineering degree with graduation from the University of Nebraska-Lincoln in 1987. That same year he moved to the Roadway Design Division where he worked in several positions, with the last being assistant design engineer since 1992.



Randy Peters

1998

Seven projects were designed utilizing “Superpave” asphalt concrete. Highway contractors were gearing up with all the necessary “Superpave” equipment. While equipment costs were significant to both the department and the contractors, an increase in the future performance of asphaltic concrete was anticipated.

Kris Winter, currently of Ainsworth, was named the new District 8 Engineer and the first female district engineer at NDOR. She succeeds John Klatt who retired after 46 years of service. Since August of 1997, Winter served as District 8 construction engineer in Ainsworth. She holds bachelor’s degrees in two fields, civil engineering and mathematics.



Kristine Winter

Department of Roads employees and programs earned high ratings by the public in five key areas as a part of the department’s quality initiative program. The department was one of 10 organizations participating in the University of Nebraska Annual Social Indicators Survey (NASIS) which concluded in early February.

The survey showed a high degree of satisfaction on five attributes:

- 76% of Nebraskans were satisfied with the condition of the state highway system.
- 85% were satisfied with snow and ice removal.
- 83% had a positive impression of NDOR workers.
- 92% of Nebraskans who interacted with an NDOR worker felt they were treated courteously.
- 84% indicated that NDOR is doing a good job of building and maintaining the state highway system.

The survey also asked questions dealing with NDOR funding. Responses indicated that Nebraskans had some misconceptions about how NDOR is funded. Less than one-half of the respondents knew that the fuel tax is NDOR’s major source of funding. On the issue of current fuel tax rates,

70 percent of the respondents didn't know the state tax, and 80% didn't know the federal tax. In one other area, over 9-out-of-10 respondents somewhat agreed or strongly agreed that NDOR should use tax dollars for highway improvements and maintenance.

Steady progress had been made on the expressway system in Nebraska. As of the first of the year, some 220 miles of expressway were open to traffic with some 78 miles anticipated for completion by the Fall of 1999. Some 600 miles of major high-volume, multi-lane divided highway, with limited access, composes the expressway system.

In September, NDOR staff attended the Midwest Equipment Innovations '98 show. It is a multi-state maintenance equipment show where states display their best innovations to improve operations. The show was the first of its kind in this area, and featured innovations from Missouri, Iowa, Kansas and Nebraska transportation departments. More than 700 employees attended from all four state agencies, Federal Highway Administration (FHWA), and county and city workers.

Altogether there were 60 innovations displayed. All four states brought their newest dump trucks to compare with those of other states. All of the innovations either saved time, money and resources, and/or promoted safety. NDOR had 14 innovations. Two items which generated the most interest were the Distance Measuring Instrument, which quickly and accurately calculates site restrictions for no-passing zones on highways, and the Pavement Tape Dispenser. The dispenser quickly and efficiently places pavement markings during patching or armor-coating operations.

Emergency medical training enabled Roads employee Bill Allen to assist an injured Iowa National Guard pilot who had ejected from his plane in the Ainsworth area. Allen, a senior highway maintenance worker, and local ranch-hand Randy Hart were first on the scene to aid Lt. Col. Dave Lundquist. Using his emergency medical training, Allen worked with Hart carefully to assure the pilot's neck, spine and broken leg were immobilized. When an ambulance arrived, Allen wrapped a cervical collar around the pilot's neck and supervised other workers strapping Lundquist to a backboard. Allen rode to the Brown County Hospital in the ambulance watching over his patient.

Commenting on the incident, Iowa National Guard Col. Dennis Swanstrom stated, "By cutting him (Lundquist) out of the dragging parachute, and stabilizing his neck and broken limbs, Bill and Randy saved Dave from potentially more serious injury." In recognition of his assistance, Allen received the Nebraska Department of Roads' Employee Public Assistance Award.

NDOR was left with egg on its snowplow after 26,000 eggs spilled from a truck onto Highway 92 near Garrison in early November. Several racks of eggs from a nearby farm were broken on the highway as the back door of the egg truck had not been secured. NDOR employee Roger Kloke, who drove the snowplow to clean the mess said, "This is the first for me. I've never scraped eggs off a highway before." Just another example of the various tasks encountered by the department's road crews.

1999

The department's website, <http://www.dor.state.ne.us>, became functional with modifications and additions of new information to the site planned as an ongoing process.

As an alternative solution to traffic congestion problems, the weigh-in-motion (WIM) or PrePass system became a reality in Nebraska. This system allows trucks to be checked for compliance with state-required credentials and bypass the weigh station. As a driver approaches the PrePass equipped weigh station, the high speed WIM weighs the truck at highway speed and a transponder inside the truck's cab identifies the vehicle to the facility's computer as a PrePass member. Assuming the vehicle is within state-required weight limits and its credentials are current, the vehicle is then allowed to bypass the weigh station at highway speed. First installed at the North Platte eastbound weigh station on I-80 in the summer, services are also in operation on I-80 at the Waverly and Nebraska City weigh stations.



Work was underway, and training started in July, for employees to use the new computer-based payroll detail system (PDS). The reporting system provides for on-line entry of leave slips, time sheets, cost-accounting information, and provides more accurate and timely reporting of work time and how the payroll costs of the department are distributed. The system eliminated the need to have employees record their time on paper and someone else to enter the information on-line. The system also permits instant access to the historical timecards and leave slips.


On May 16, 1969, 69 people attended the charter banquet for Roadtoasters #1761. Toastmasters International had granted a club charter to NDOR employees and 40 became charter members. On July 9, 11 of those present at the charter banquet returned to NDOR to help celebrate the 30-year charter anniversary. Six charter members had retired and five were still working at NDOR.

Thirty-six "Superpave" asphalt concrete projects were let. By the end of the year, the department decided that certification of the contractors test technicians was necessary. A consultant was hired for technician training, mix design and certification. The consultant also trained department staff in the new methods of testing and ways to help control mixes during production.

The largest transport of a single object in Nebraska history took place on August 16th with the roll out of the 309-foot, three-story high Great Platte River Road Archway Monument across I-80 near Kearney. The \$60 million arch honors Nebraska's role in American migration from pioneer days to the present. Former Governor Frank Morrison was a major force behind the creation of the arch. Opening day for the arch was scheduled for Spring of 2000.



On August 25th, numerous dignitaries were present to commemorate the hard work and dedication upon the completion of ten years of reconstruction of the I-80 system through Omaha. Construction of the \$325 million project started in 1989. The end result was 19.2 miles of rebuilt Interstate and Expressway. In addition, 70 bridges were widened, lengthened, replaced or added. Thirteen bridges were used in place or redecked. The Omaha World Herald in its August 25th edition said, "The motoring public can be a hard critic of the people who build and care for the roads and highways. People sometimes fail to consider that the delays and detours of the past 10 years were part of the price that had to be paid for enhanced convenience and safety. The price has now been paid. The wait has been worth it. To all who had a hand in the 10-year project, take a bow and enjoy the applause."

The year also saw the establishment of the Nebraska Scenic Byways Program in Nebraska. Under the program, Nebraska was able to designate up to 10 highway routes within the state as official Nebraska Scenic Byways. While scenic attributes are definitely a consideration, byways play an important part from many other standpoints, including historical, recreational and archaeological. The first byway to be designated was the Western Trails Scenic and Historic Byway along U.S. Highway 26 and Nebraska Highway 92 from Ogallala to the Wyoming Border. Byway route signs with a special print logo were in place and identified on state road maps.



Roadway Confluence, located at the Sidney westbound I-80 rest area and one of eight sculptures comprising Nebraska's 500-mile sculpture garden, underwent restoration. The sculpture garden was dedicated on July 4, 1976, to celebrate the nation's bicentennial and contribute to Nebraska's cultural heritage.

From the outset, the 35-foot-tall sculpture of shiny aluminum with a unique design of two upright towers was challenged by harsh Nebraska winds. This led to instability of the structure, creating a safety hazard for its visitors. Rehabilitation work involved drilling holes and cutting out access plates so structural reinforcement, which included large diameter rebar and prestressed cables securing the uprights into the base, could be added. Special welding work was required which provided structural support allowing the sculpture to be filled with concrete. Completed in October, Roadway Confluence was ready to be enjoyed by new generations of travelers through Nebraska.



Long-time NDOR employee and historian George "Dutch" Koster died on August 29th following a lengthy illness. Dutch started working at NDOR in 1954 and worked intermittently while going to school until September 1958. In 1971, Dutch was hired as a Highway Liaison Officer. He served as Secretary to the State Highway Commission from 1972-75. In 1975, he became a Highway Administrative Analyst and served in that capacity in several divisions at NDOR. At the time of his death, he was working in the Project Development Division.

Over the years Dutch wrote and published a variety of documents about the history of NDOR including, "A Story of Highway Development in Nebraska (1986)" and a revised edition of that document in 1997. Dutch's father worked for the Department of Roads for almost 40 years and Dutch carried on a proud tradition with his employment with the Department of Roads.

The total number of traffic fatalities was 295, down from the 1998 figure of 315.

2000

In January, Nebraska Attorney General Don Stenberg appointed Jeffery Schroeder as the new Chief Counsel of the Department of Roads Section of the Nebraska Attorney General's Office. Schroeder replaced the late Gary Welch and had served as Assistant Attorney General assigned to the department for the past 13 years prior to accepting the position as Chief Counsel. He began his career at the Roads Department after graduating from the University of Nebraska, College of Law. At this time, the Roads Section also included attorneys Robert Avey, John Brown, William Orester, Kenneth Payne, and Matthew Gaffey; support staff Twila Avey, JoAnn Kroll, Susan Givens, Shannon Prall, and Linday White; and law clerk Dana Lindauer.



Jeffery Schroeder

In early 2000, Mostafa "Moe" Jamshidi was selected to be the new Materials & Tests (later to be renamed Materials & Research) Division Engineer, replacing Eldon "Vern" Orth who retired. Jamshidi had been the Bridge Division's assistant engineer for the past eight years. He started with the Department as a student intern during his last year of college at the University of Nebraska at Omaha, working as a surveyor in District 2. He was promoted to project manager at District 3 in 1984, and transferred to central headquarters in Lincoln in 1986, working as a designer in the Bridge Division before becoming the assistant engineer.



Moe Jamshidi

NDOR implemented the GEOPAK Civil Engineering Suite as its standard highway design and engineering software, bringing divisions and districts together for the first time using one common software package. The new system was selected following intensive benchmark comparisons with other civil engineering software, including InRoads from Intergraph and CaiCE. GEOPAK replaces IGrds, a software design package that had been used since 1987.

According to Bill Wehling, Roadway Design Computer Applications Engineer, "We were very impressed with GEOPAK's general applicability to the way we work. Cross-section plotting matched to a tee what we do in-house."

Other strengths included flexibility and customizability. The ability to coordinate projects using GEOPAK's Project Manager was also considered a "big plus" by NDOR. Three hundred licenses for use at the central headquarters and the eight district offices were in place with plans to expand that number to 400. Many consultants are interested in GEOPAK, but it is not currently required that they use it. A decision will be made at a later date.

An effective safety strategy that motorists saw along some Nebraska highways was the installation of rumble strips on roadway shoulders. The strips, which are raised or grooved patterns in the pavement, create an audible rumbling sound and a vibration in the steering wheel when a vehicle drives over them. The sound and vibration can wake a sleeping driver and give the person time to regain control of the vehicle. The National Highway Traffic Safety Administration estimated that rumble strips could cut the rate of run-off road crashes in half. The first installation of rumble strips began on Interstate 80 from Brady to Lincoln.



Eight more byway routes were now a part of the Nebraska Byways Program bringing the total to nine. To give full recognition to the historical, recreational and archaeological standpoints of the program, the word “scenic” was removed from the program name. According to Jim Pearson, the department’s Byways Coordinator, “The byways give travelers alternative ways to see Nebraska without taking the Interstate. They can choose from a north, south panhandle or Sandhills route with a lot of history and recreation opportunities.” The nine byways, listed below, provide a positive travel experience for visitors and tourists, which in turn, will benefit both the individual communities and the State by lengthening visitors’ stays and increasing expenditures of those touring Nebraska.

- Heritage Highway (*U.S. 136 from river at Brownville to intersection of U.S. 34/6 north of Edison*).
- Lewis & Clark Byway (*U.S. 75 from just north of I-680 to South Sioux City*).
- Outlaw Trail (*N-12 from Valentine to South Sioux City*).
- Bridges to Buttes Byway (*U.S. 20 from Wyoming border to Valentine*).
- 385-Gold Rush Byway (*U.S. 385 Colorado border to South Dakota border*).
- Sandhills Journey (*N-2 from Alliance to Grand Island*).
- Platte River Trail (*U.S. 30 from west edge of Lincoln County to east edge of Dawson County*).
- Loup Rivers Scenic Byway (*N-11/91 from Dunning to Wood River*).
- Western Trails Scenic & Historic Byway (*N-92/U.S. 26 Ogallala to Wyoming border*).

The department’s Transportation Enhancement Program continued to provide funding to local, state and regional governmental entities to construct and restore minor transportation infrastructure that is not eligible to be funded through other programs. Funds are used to beautify highways, build bicycle and pedestrian trails, rehabilitate bridges and improve the overall environment of the state. Funding announced this year totaled \$3,571,743 for 17 community projects across the state. Recipients of funding include the communities of Hooper, Wahoo, Omaha, Elkhorn, North Platte, Brownville, Scottsbluff, Beatrice and Nebraska City.



The final leg of the four-lane expressway between Lincoln and Nebraska City was completed. It was the culmination of work on the Nebraska Highway 2 corridor that took 17 years and included 17 separate projects at a total cost of \$95,000,000 plus. The entire improvement involved 50 miles of highway. The Highway 2 Expressway corridor was a top priority of NDOR. The work and support of many helped to bring this highway improvement to Nebraska and its motoring public.

Two new state-of-the-art weigh stations commenced operation on I-80 in October. NDOR and the Nebraska State Patrol, along with motor carrier industry partners, dedicated the new stations that will improve safety and increase productivity. The new stations are located near the Cass County line (just east of Waverly) and replace the antiquated Greenwood weigh stations. Construction began in the fall of 1999 and concluded in October. The new stations were equipped with two state-of-the-art technologies. The high-speed weigh-in-motion technology weighs trucks at highway speed. The scales are installed in the right lanes of the Interstate. Officers



communicate with drivers via electronic signs. Signs and signal lights will direct trucks to either enter or bypass the station. The second technology is electronic screening. It allows trucks to be checked for compliance with state-required credentials. Trucks participating in the screening program are equipped with a transponder inside the truck's cab that identifies the member is in good standing and meets weight requirements, the driver could be signaled via the transponder to bypass the weigh station.

More than 1,000 people attended the Midwest Equipment Innovations show in St. Joseph, Missouri. The show featured inventions created by employees that improve efficiency, cost/effectiveness and/or field operations safety. Thirty-eight innovations were displayed, including seven from NDOR.

2001

The February bid letting by NDOR saw the implementation of the first mandatory electronic bid letting for about 42 contractors who submitted some 105 bids. Previously, the department had been allowing voluntary electronic bids whereby 60-65% of the bids received had been electronic. While this process is in place, the bidding process is not completely electronic as the contractor must contact the Contracts Office to obtain a bid proposal and bid bond form. The contractor then prepares a bid using the electronic bidding software and returns the bid proposal, a diskette (containing the bid) and a completed bid bond form to the Contracts Office prior to bid letting. Advantages to electronic bidding include: a bid that is complete and readable; microfilm time is reduced; and data entry has been eliminated with only a few exceptions. It also helps the contractor by providing checks and balances in preparing the bid. Positive comments about the new service were received by a number of contractors.

Early in the year, Steve Maraman was promoted to the position of Finance Administrator as the head of the Controller Division, replacing Jack Pittman who moved into a Deputy-Director's position in the department. Maraman, a graduate of Western Kentucky University, started his career at the department in 1969 and has held several positions in the Controller Division, including Budget Analyst, and Senior Budget Analyst. His latest position, since 1972, was that of the Budget and Finance Manager.



Steve Maraman

One of the important safety measures for highway drivers is the installation of safety guardrail. In 2001, a new type of guardrail designed and built in Nebraska was installed for the first time on a highway in the United States. The "thrie-beam" bullnose guardrail was installed on a segment of Nebraska Highway 64. "Bullnose" refers to the shape of the guardrail between parallel bridges or around piers in the medians of the interstate, expressway and divided streets.

The "thrie-beam" bullnose guardrail differs in several ways from the "w-beam" bullnose guardrail, which has been used in Nebraska for many years. The "thrie-beam" guardrail is wider and stronger which helps capture and stop, or redirect errant vehicles before they contact the hazard (pier or slope). There are slots in the rail, which allows the rail to bend at shorter increments to prevent rail buckling and tearing. Cables are placed behind the first rail, which assist in capturing and stopping the vehicle. A double block-out (two wood blocks), is placed behind the rail to keep the vehicle from coming into contact with the post itself, which prevents further damage. While the "w-beam" guardrail has proven reliable, the "thrie-beam" guardrail ensures even greater safety. The "w-beam" guardrail will be replaced by the new design as projects upgrade the highway.



Transition of the department's website continued to be accomplished, with the site's entry page offering the ability to view a full range of transportation related links for general public use. Features found on the website include separate internet pages for each highway district, county maps and expanded regional radar/weather links.



In October, Nebraska became the first state in the nation to utilize the 511 statewide for traveler information system since the Federal Communication Commission designated 511 for that purpose. Travelers in Nebraska are able to access the Advanced Traveler Weather Information System (ATWIS) by dialing 511 from any cellular or land line telephone. Anyone outside of Nebraska can dial an 800 number which will connect directly to the 511 system. In addition, 511 information is available via the Internet through the Nebraska Department of Roads, the Nebraska State Patrol web sites or through 511 nebraska.org.

The 511 system replaced the weather and road condition report service previously offered by the State Patrol via a toll-free 800 number. By using the Patrol's 800 number, callers will be connected to the 511 system, which is available 24-hours-a-day, seven days a week, 52 weeks a year. The system offers localized reports on weather and road conditions along with accident information. There is no charge to callers for using the 511 system. At the time the 511 system became operational, Roads Director John Craig called the new system an important advancement, stating, "We at the Department of Roads are pleased to be on the cutting edge of information technology. We know the citizens of Nebraska will be well served by this year 'round traveler information system. 511 will be a valuable service and a key safety resource."



Remembering employees who lost their lives while working for the Nebraska Department of Roads was officially accomplished in special memorial ceremonies held in each of the eight highway districts. Department of Roads staff and representatives along with relatives of some of the 55 employees who, since 1943, lost their lives while performing their duties were in attendance. Plaques, imprinted with Nebraska landmarks, symbols and the message, "In memory of Nebraska Department of Roads employees who lost their lives while serving the citizens of Nebraska," were attached to hand-selected boulders and prepared for placement in each of the districts.



Railroads operating in the state, included two Class I Railroads—Union Pacific Railroad and the Burlington Northern Santa Fe Railway. There were four Regional Railroads—the Nebraska, Kansas, Colorado Railnet; the Dakota, Minnesota and Eastern Railroad; the Nebraska Northeastern Railroad; and the Nebkota Railway. The Brandon Corporation; the Omaha, Lincoln & Beatrice; and the Sidney & Lowe Railroad were classified as switching or terminal railroads. The Union



Pacific Railroad and the Burlington Northern Santa Fe Railway were the major rail companies. Freight volumes exceeded 400 million gross tons annually on large segments of the lines in Nebraska and Iowa.

Smaller railroads, referred to as shortlines, played a vital role in the economy and transportation system, and provided a valuable service to local shippers in the state. The Nebraska Railway Council was administering the Light-Density Rail Line Assistance Act. The act provided funding for rehabilitation and improvement projects for shortline railroads. Projects were under review by the Council that provided funding for rehabilitation of trackage for two of the shortline railroads.

Passenger rail service through Nebraska was provided by Amtrak—the nationwide passenger rail service. Station stops included Omaha, Lincoln, Hastings, Holdrege, and McCook. Ridership during fiscal year 2000 was 39,566, according to Amtrak's Office of Government Affairs.

Nebraska's public transportation program maintained an important role in the state, particularly in the rural area. There were 60 rural general public transportation systems receiving state and federal funds to subsidize operations. In addition to the rural systems, there were six intercity bus systems providing transportation from rural areas to more populated areas of the state, which also received federal and state funding. There were also six urban bus operations located in South Sioux City, Lincoln, Omaha, Papillion, Bellevue and Ralston.

The department was also administering a federal capital funding program to assist private nonprofit organizations to purchase vehicles and equipment for the transportation of elderly and disabled persons. Numbers for 2000 indicated that there were 6,494,244 public transportation passenger boardings from rural bus, urban bus, and intercity bus programs.

In a first of a kind situation, a new turtle crossing on U.S. Highway 83 was developed to help steer the threatened Blanding's turtles clear of danger. To avoid harming wildlife by widening the highway across the Valentine National Wildlife Refuge, NDOR roads crews erected a 3-foot high chain-link fence to prevent the turtles from crossing the highway and becoming road kill. The fence is being used to herd turtles under the road through culverts. Officials will evaluate the effectiveness of the crossings to see if they keep the turtles from getting on the road and killed, and to see if fences will direct turtles into culverts.



In an effort to pursue new partnerships with the public and private side of the transportation industry, the Nebraska Transportation Research Council (NTRC) was formed. The council will bring together people from various areas of the transportation industry, public and private, and use their pool of knowledge and experience to prioritize statewide research ideas.

Research projects received during the year by NDOR's Research Section were submitted to NTRC for brainstorming, refining and prioritizing. Projects were categorized into four groups:

- Materials, Pavements and Maintenance
- Roadway, Hydraulics and Environmental
- Traffic, Safety, Planning, Transit and Intelligent Transportation Systems (ITS)
- Structure and Geotechnical

The highly prioritized projects were developed into proposals and submitted to NDOR's Research Advisory Committee for their review and approval for funding.



2002

The year saw the appearance of new overhead dynamic message signs (DMS) in District 2. These message signs were installed at nine different locations on the Interstate system in the metro Omaha area. The signs will advise motorists of major accidents, road advisories during construction, rush hour traffic jams, and information concerning road conditions during inclement weather.

Centerline rumble strips were introduced with the installation of strips on two segments of Nebraska's highways. The 16-inch-wide rumble strips were placed across the centerline of 16 miles of U.S. 34 between Seward and Lincoln, and on 11 miles of US-77/N-92 between Wahoo and Yutan. As a pilot project, the process will be evaluated for several years before further implementation. The evaluation will include accident reduction, public acceptance, maintenance requirements and choice of appropriate locations.

After serving as Acting Human Resources Administrator since 2001, Sue Larson was permanently selected to the position. Sue began her career in state government in 1978 in State Personnel within the Department of Administrative Services. In 1999, she moved to the Department of Roads to the position of a Human Resources Manager, serving in that capacity until her selection as the Acting Human Resources Administrator.



Sue Larson

NDOR announced that a total of \$5,035,404 had been awarded to 20 community projects across the state through the Transportation Enhancement Program. Half million dollar trail projects in Hastings, Wayne and Norfolk were part of the projects to be funded.

The year saw Nebraska Highway 2 from Nebraska City to Lincoln named in recognition of the extraordinary legacy of Jerome and Betty Warner. Senator Jerome Warner served 35 years in the State Legislature. His contributions were many, but for those involved in the transportation industry, he was remembered most for his legacy of highway legislation. In 1969, Warner introduced 16 bills on highway legislation that, among other things, established a road classification system and a weighted formula for distributing state dollars to cities and counties. In 1980, the Warners led efforts to stabilize highway funding through a state statute setting a variable rate that sets a variable fuel tax generating the revenues to meet the appropriation as set forth by the Legislature and as approved by the Governor.

Betty Warner wrote the actual legislation for the roads study and made significant contributions to other legislation. Jerome and Betty Warner worked as a team and their service and legacy has benefited and will continue to benefit Nebraskans for many years to come.



Highway employees working on the highway right-of-way began wearing new safety vests that meet national requirements for high-visibility safety. The new vests are constructed using a solid material, compared to the thin mesh fabric on the old vests. Tests show that the new material is more visible than that used on the old vests. Velcro straps on the sides of the old vests have been replaced by high visibility material on the new vests, making it easier for the motorist to see people working along the right-of-way. Orange vests were still required when working on the railroad right-of-way.

Nebraska was the first state in the nation to install a conductive concrete anti-icing system. Construction of the continuous concrete slab bridge at the Roca Spur, located off of U.S. 77 south of Lincoln was installed about 50 to 60 feet before a railroad crossing, where rapid deceleration is required. Based on research by the University of Nebraska, the system is designed to warm the pavement in advance of expected icy weather conditions, in much the same way as an electric blanket.

A weather-monitoring system tracks humidity and temperature of the air. When weather conditions are right, the system can be programmed to start the warming process and maintain an effective anti-icing system for the required length of time. Fully automated, the system can be activated in advance of expected weather changes. If needed, the system can also be manually operated.

Fifty-year employee Merritt “Andy” Andreasen, a department Highway Mechanic District Supervisor, reflected on changes that had taken place since beginning work for the department in 1951. Included in his comments were:

- Many of the highways in the Omaha area were gravel.
- Shops and crew areas were heated with wood stoves.
- Elkhorn was the only yard providing indoor plumbing.
- Asphalt overlay was done with a motor grader with the material being a cold mix made in a windrow. It was loaded onto the trucks with shovels.
- Cinders were used instead of gravel for ice control.
- Often, in the winter, truck radiators and engine blocks were drained at night. In the morning water was heated on the stove, which made trucks easier to start.

As a volunteer with the Red Cross, Jim Wilkinson, an engineer in the department’s Planning and Project Development Division, spent two weeks at Ground Zero, the site of the September 11, 2001 disaster at the World Trade Center in New York City. Wilkinson worked as a caseworker, interviewing people affected by the 9-11 disaster to determine how the Red Cross could help them. Around 140 clients per day were processed with the service center open seven days per week with volunteers working 10-13 hours per day. While calling it intense and emotional, yet rewarding, Wilkinson said volunteering at Ground Zero was a great way to get directly involved and to help victims of the disaster.

2003

John “Jake” Jacobsen was named the new Deputy Director at NDOR succeeding Jack Pittman who retired. Graduating from UNL in 1971, Jacobsen began his career at NDOR the next day as an engineer in the Material & Tests Division. In 1976, Jacobsen was named Maintenance Bridge Engineer in the Maintenance Division. From 1979 until 1986, he served as District Construction Engineer in District 6 at North Platte. In 1986, Jacobsen was promoted to District Engineer for District 7 in McCook. Jacobsen transferred to District 2 in Omaha in 1992, serving as District Engineer until his appointment as Deputy Director. Jacobsen and his wife Diane have two children, Jim and Jackie. “Jake” is an avid hunter, fisherman and golfer.



John Jacobsen



A new web-based Geographic Information Systems (GIS) tool developed by the department to provide employees with a user-friendly access to current transportation-related information became available. The Nebraska Enterprise Centerline Transportation Attribute Resource (NECTAR) provides access to data pertaining to roads, bridges, railroads, average daily traffic (ADT) locations, and a variety of other transportation categories, which previously were not easily accessible. NECTAR is a decision-support tool, which allows the user to query multiple databases and map the results. Reports may also be generated using the data.

The first step in plans for implementation of a Road Store Front (RSF) system took place when the department’s Contracts Section completed their first electronic credit card transaction with a sale of a map to the Ash Grove Cement Company. A similar type of system in place allows for NDOR automated truck permits to be issued, but this new system is being tailored for a variety of purchases by suppliers, vendors and other NDOR customers. A study is also underway as to the possibility of implementing a statewide storefront system.

On May 23rd, during Memorial Day weekend, disaster struck Interstate 80 in western Nebraska for the second time within a year. A westbound semi-trailer truck, loaded with food cargo, slammed into the center support of a country road overpass head-on about three miles west of Big Springs, killing the driver and causing the bridge to collapse onto one of the nation’s busiest highways. The other incident occurred on July 6, 2002, when a flash flood caused the closure of a seven-mile stretch of I-80 between the Ogallala and



Brule Interchanges, while bridge approaches that washed out in the weekend flood were repaired.

Within 48 hours of the May 23rd crash, all four lanes of I-80 were reopened in record time, surpassing most estimates and easing concerns about problems with Memorial Day traffic. Nebraska Governor, Mike Johanns called the non-stop cleanup, involving Nebraska Department of Roads employees, contractors, subcontractors, law enforcement officials, emergency responders and many other transportation partners, an “incredible accomplishment.” He added, “There was a major amount of destruction that occurred out there. To think that that much debris was cleaned up and removed in that short of a time period is nothing short of miraculous.”



The new Nebraska Information System (NIS) began coming on-line with the new Payroll Detail System. Ultimately, the web-based system will provide personnel records, employee benefits and payroll processing. New employees are able to enroll in health and other employee benefits on-line. Annual open enrollment for employee benefits is accomplished on-line with each employee using the Employee Self-Service feature of NIS. Employees can view and/or print their paystubs on-line. While it will take some time to reach its full potential, NIS has reduced the amount of print required for payroll processing and benefits enrollment, literally by tons of paper.

A concern to prevent semi-trailer trucks from illegally parking on ramp shoulders and causing safety problems at four Interstate 80 rest areas led to the installation of vertical panel barriers on the ramp shoulders at the Goehner westbound, Blue River eastbound, and York east and westbound rest areas. As a pilot project, the barrier installation was initiated after “no parking” signs placed along the rest area shoulders and asking for voluntary compliance was not effective. When citations issued were excessively high and the illegal parking continued, department officials decided to use the barriers.



The year saw three district engineer appointments announced as Tim Weander, Craig Lind and Mark Kovar moved into new positions in District 2 at Omaha, District 5 in Bridgeport and District 8 in Ainsworth respectively.



Timothy W. Weander



Craig R. Lind



Mark Kovar

Tim Weander replaced John Jacobsen who was promoted to Deputy Director. Weander had been with the department for 19 years and worked in a variety of positions. He came to District 2 from the district engineer position in District 5 at Bridgeport.

Craig Lind, a 32-year department employee, had been serving as the District 5 Construction Engineer for the past 20 years. He replaced Tim Weander who moved to Omaha to take the District 2 District Engineer position.

As an 11-year department employee, Mark Kovar moved to the district engineer position replacing Kris Winter who moved to the district engineer position for District 3 in Norfolk. Kovar had been the acting District 8 District Engineer and, prior to that position, served as the district's Construction Engineer.

The year also saw the development by District Engineers and the NDOR administration of a two-year program designed to expose engineers to the major activities associated with highway construction, including preliminary surveying, construction surveying, and construction inspection. After completing the two-year program, participants may select a division or district they choose to relocate to and every effort will be made to meet their request.

2004

The year found a new Roadway Design Engineer to replace Eldon Poppe who retired. Jim Knott, a 24-year department employee moved to the position from McCook where he had served as the District 7 Engineer for nine years. A 1980 graduate of the University of Nebraska-Lincoln, Knott worked in the Traffic Engineering Division while attending the University. From 1981 to 1986, he worked in District 1 serving as an Engineer I, II and III. In 1986, he was selected as the District Construction Engineer in North Platte where he worked until his promotion to the District 7 Engineer position in 1995.



Jim Knott

NDOR's website continued to grow in usage, as well as in the amount and variety of information available. Website accessibility has been enhanced by adding a Text Transcoder which allows people with visual impairments to translate the department's web information instantly into pure text. Information in a table is translated into a logical text format. Other website enhancements included full activation of the Automated Truck Permit System, where drivers of overweight/overwidth vehicles can obtain their permits online.

The wetlands education program also was introduced by the department. NDOR Biologists Steve Duecker and Carol Wienhold conducted field trips with area school students to nearby NDOR wetland mitigation banks. "I thought it was important to introduce them to plant life in a different environment, and I challenged them to think about what it's like to live in an aquatic environment," Wienhold said. NDOR officials are hopeful that the educational program can expand to other parts of the state close to other NDOR wetland bank sites.



This was a landmark year for construction bidding for the department. On November 4th, 19 contractors were able to submit bids via the Internet, thus eliminating the necessity of submitting paper bids, bid bond forms and a computer diskette on letting day. Previously, contractors were only able to submit paper bids, and this is still possible as a change in State Statute would need to be made to allow only Internet bids. Specific software is needed for both types of bidding and is downloaded from the department's website at no cost. Contractors are responsible for paying a subscription fee to a Internet bidding service.

Two formats are available for submitting bid bonds with the first being a project-specific paper bid bond. The second is an annual bid bond which covers all projects for a 12-month period ending July 1 of each calendar year. The annual bid bond offers contractors the advantage of only having to submit one bid bond for all their projects. Internet bidding appears to be a popular choice with its ease of the system, the saving of time and money, and eliminating the need to go to Lincoln and working late hours the night before the bid letting.



In a measure to provide more information to motorists, Amber Alerts, information concerning child abduction, were a new addition to Nebraska's 511 System. The alert message is made available to 511 callers within minutes of their being recorded.

Motorists in the Blair area began driving in a circle as the first modern roundabout built on a major highway in Nebraska was opened connecting U.S. Highway 30 and Nebraska Highway 133. Roundabouts are circular intersections, which are gaining popularity as cheaper and safer alternatives to signalized intersections. In addition to being a bonus to increased safety and decreased delays, the roundabouts present an aesthetic



feature. They are visually attractive and communities usually have had a positive response once they get used to them. The Blair roundabout is designed to handle large vehicles with a 22-foot driving surface and a 16-foot truck apron. Many oversized loads have gone through the roundabout without any problems.

As a result of monitoring the illegal parking on ramp shoulders of several rest areas, a decision was made by NDOR to install a refined truck parking barrier system at all Interstate 80 rest area ramp shoulders with the exception of the Lincoln Solar westbound and Platte River eastbound rest areas. Vertical panels placed at earlier mentioned rest areas were replaced with three-button reflectors to address problems with the bigger signs catching the wind and coming unattached from the posts, as well as excessive nighttime reflective glare. The reflectors are placed at 50-foot intervals and installed in the center of the asphalt shoulders. According to Randy Peters, the department's Traffic Engineer, safety continues to be the driving force behind the issue. "These barriers are only part of the safety equation. The Department of Roads is continuing to work with the private truck stops and the trucking industry to ensure that the growing demand for safe resting places is met," said Peters.

Significant changes in issuing of overweight and overdimensional motor carrier permits from the department were set in place. Customers are able to go online to get a permit 24 hours a day and can receive it within a few minutes. With the new system, simple permits can be approved automatically without a clerk examining it, allowing clerks to work with the more difficult permits. Customers enjoy the ability to store information about their vehicles in the system. When it's time to get a permit, they pull up saved information and make the proper selection that automatically fills in the required spots on the permit application. Customers also appreciate the convenience of using their credit cards to pay for permits. Another aspect that has been very successful is the bridge analysis. This is required for all overweight loads. Once the customer enters the required information about their load, selects a route and presses "analyze," every bridge on the route is analyzed within seconds, compared to half-a-day required prior to the new system. Based on NDOR's success with the permit system, other states have considered adopting similar systems that are fully automated, allowing customers to do everything themselves.

2005

Over 1,096,000 web visits to the department's website were recorded. Visitors to the website wanting information about specific highway projects still in the planning stage, are helped by the additions to the Highway Projects area of the web. Also added to the web was a link where users can access regularly updated camera views of highways across the state. Additional cameras were planned to be linked in 2006.

Three long-time NDOR engineers took over the reins as District Engineers. Kurt Vosburg was appointed the new District 7 Engineer, moving from his previous position as District 7 Construction Engineer. He replaced Jim Knott, who moved to the state headquarters in Lincoln to become



Wesley Wahlgren



Gary Thayer



Kurt Vosburg

the Roadway Design Engineer. Wesley Wahlgren was appointed the new District 4 Engineer, moving from his previous position as Assistant Construction Engineer in District 1. Wahlgren replaced Chuck McCann who retired after 35 years of state service. Gary Thayer was appointed the new District 6 Engineer, moving from his previous position as District 6 Construction Engineer. Thayer replaced Les O'Donnell who retired after 44 years of state service.

NDOR's eight engineering districts were developing operations centers to maintain and operate Nebraska's state highway system 365 days per year. Each district operations center (DOC) will become the focal point for operations and control of Intelligent Transportation Systems (ITS) field devices.

Road Weather Information Systems (RWIS) provided localized weather data from 60 weather stations — 23 with cameras — strategically located across Nebraska. RWIS equipment collects data, such as temperature of surface and humidity which is sent to a computer database at NDOR. Personnel then check the data and swiftly respond to incidents. The sites provide continuous updates to Nebraska's 511 travel information system, so motorists are provided road weather information for all state highways. Of particular note is the site at the I-80 bridge near Brady, which collects air and surface temperature, precipitation, dew and freezing points, and wind speed and direction. This information is used to turn on the fixed automated spray system that applies a liquid anti-icing chemical to the bridge deck when conditions are conducive to ice formation.



July 10-13 was an important date for NDOR as the department hosted the annual meeting of the Western Association of State Highway and Transportation Officials (WASHTO) in Omaha. This was the first time the conference was held in Nebraska, the newest of the eighteen WASHTO member states. More than 600 state delegates and industry partners attended.

The conference offered members and their industry partners the opportunity to share transportation updates and observations during technical breakout sessions and tours. Displays and exhibitor presentations were also included in the meeting. Chairs for the event included department employees Jon Ogden, Tom Goodbarn, Claude Oie, Steve Maraman, John "Jake" Jacobsen, M.J. Hall, Moe



Jamshidi, Sue Larson, Jamie Huber, Monty Fredrickson and Jim McGee. Forty-nine non-delegate volunteers also performed needed tasks, including some NDOR retirees.



Tom Sands

Tom Sands, a 28-year NDOR employee, was named the Highway Logistics Division Manager, succeeding Dale Dvorak, who retired. Sands started his career at NDOR working as an Auto Mechanic I. His most recent position was that of Logistics Operations Manager along with assuming the duties of Acting Highway Logistics Division Manager. Soon after being named division manager, the division's name was changed to Operations.

Throughout the year, dedicated department employees continued to be recognized for their years of service. Of special note were 700 hours of service from thirty-nine 10-, 20-, 30- and 40-year employees who celebrated their service dates in April and May.

Giving the highest priority to the safety of NDOR staff and visitors, new security measures went into effect at the Central Headquarters in Lincoln (1400 Highway 2 Materials & Research Building; 1500 Highway 2, Central Building; 1600 Highway 2 Right-of-Way/State Patrol Building) and the 5001 South 14th Street building (on the hill). Measures included requiring all NDOR staff to display their ID badges, while on duty. The badge is meant to help identify employees and visitors and manage access through secured doors at NDOR facilities and possibly other State of Nebraska office buildings.



Khalil Jaber

Khalil Jaber was selected to be the Program Management Engineer taking the place of Roger Winkelhake. Jaber had worked for the department for 14 years in a variety of positions beginning as a Project Manager in District 5 in 1990. He moved to the Roadway Design Division in 1995 where he worked until 2003. From 2003 to 2005, he had served as the Public Transportation Engineer in the Rail & Public Transportation Division.

Sixty-one rural general public transportation systems were in operation as were four intercity bus systems providing transportation from rural areas to more populated areas of the state. Six urban bus operations were continuing service in Papillion, Bellevue, Ralston, South Sioux City, Omaha and Lincoln. A statewide Rural Transit Study was in progress. The study provided information for gauging conditions for rural transit in Nebraska, which will assist NDOR and the rural transit systems in immediate, mid-and long-term management.



Union Pacific Railroad and Burlington Northern Santa Fe continued to be the major rail companies operating in Nebraska. Train counts, on the Union Pacific corridor between Gibbon and North Platte, exceeded 140 per day and was the busiest rail freight corridor in the nation. Counts on BNSF corridor between Alliance and Ravenna exceeded 70 trains per day.

It was noted that some highway/railroad crossings in Nebraska had more train traffic than any crossing in any other state. Nebraska has a total of 6,553 railroad crossings:

- 3,808 public crossings (264 on the state highway system and 3,544 on local roads).
- 2,745 private crossings.

Of the 3,808 public crossings, over 752 were carrying more than 40 trains per day.

Commenting on the department's record-setting \$390 million state highway program for Fiscal Year 2006, Roads Director John Craig told attendees at the Surface Transportation meetings that the department had reached the "high watermark." While acknowledging that the program was the highest in state history, accomplished in part due to additional federal funds, Director Craig also stated, "I'm going to predict for the next two, three, four, five years, and this is what we're going to have to come to grips with here in the next few weeks, next few months, we're to go the other way."

2006

Nebraska's Interstate System of 480 miles continued to carry a high volume of traffic which required ongoing maintenance and rebuilding. With completion of a 10-year reconstruction program of I-80 in Omaha in 1999, Interstate improvements in Omaha continue with the planned improvement of I-80 from the Missouri River Bridge to 24th Street scheduled to begin within the next five years. Looking ahead, studies will be made to determine the need for new interchanges west of Omaha.



Major work was underway to expand I-80 to six lanes between Omaha and Lincoln. Continuation of the expansion to six lanes west of Lincoln remains in the 20-year Interstate program. As a side note, in 2003, the department was recognized by the Federal Highway Administration for its efforts in completing a successful environmental review of a 35-mile stretch of the Interstate 80 corridor from the Platte River to just west of Lincoln. The review came about after several important steps were taken that helped prevent delays on the six-lane expansion of the roadway, while ensuring environmental protections.



June 29, 2006 marked the 50th anniversary of the "Dwight David Eisenhower System of Interstate and Defense Highways." Today, the national Interstate system consists of approximately 47,000 miles of roadway. While Interstate highways comprise less than 1 percent of all roadway lane miles in the country, they carry over 24 percent of all vehicle traffic, including 41 percent of total truck miles traveled. There are approximately 15,000 interchanges and over 55,000 bridges on the Interstate system. Nebraska became the first state to complete its portion of I-80 in 1974 at a cost of \$435 million, or an average of \$950,000 per mile.



In observance of the 50th anniversary celebration, a national convoy of semitrailer trucks traveled from San Francisco to Washington D.C. retracing the first cross-country road trip taken in 1919 by Dwight D. Eisenhower when he was a young soldier. The convoy traveled the Interstate 80 corridor,

stopping in cities along the way to make speeches and raise public awareness about the Interstate system. The Nebraska Department of Roads hosted the convoy on June 21st at the eastbound weigh station on I-80 in North Platte. Celebration activities included a grilled picnic lunch. Local transportation officials joined in the celebration and provided remarks.



During their stop in Omaha on June 22nd, ceremonies were held at the Werner Trucking Museum at Interstate 80 and Highway 50. A continental breakfast for the convoy guests and VIP's was served. Speakers included Governor Dave Heineman, Omaha Mayor Mike Fahey and AASHTO Executive Director John Horsley. A granite monument noting the 50th anniversary of the interstate was presented to Nebraska by AAA. The monument was placed in the I-80 "Melia Hill" rest area, west of Omaha.

Historical tidbits about Nebraska's I-80

- The first segment of I-80 construction in Nebraska began in 1957 south of Gretna.
- Nebraska was the first state to complete its portion of I-80 nationwide with dedication ceremonies held on October 19, 1974.
- Total length of I-80 in Nebraska is 455.27 miles.
- There are 80 interchanges and 442 bridges along, on or over I-80 in Nebraska.
- There are 25 rest areas spaced approximately 35-50 miles apart on I-80 in Nebraska.
- As completed, I-80 stretches from New Jersey to San Francisco—over 2,900 miles of safe, uninterrupted roadway.

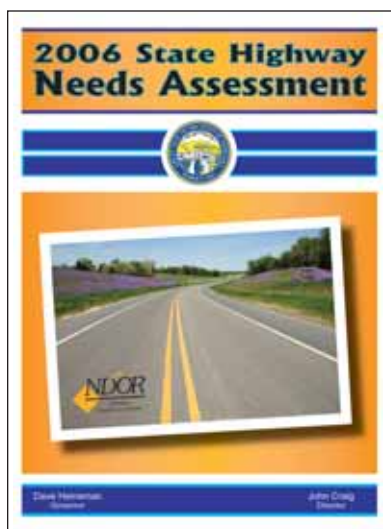


After two years of construction, the elevated West Dodge Expressway in Omaha, running from just west of Interstate 680 to 124th Street, opened more than a year ahead of schedule. The \$100 million project was among the biggest road projects in Omaha's history, and was the biggest of about a dozen state projects carried out over the past 15 years aimed at improving West Dodge and U.S. 275 between Omaha and Fremont. The expressway bridges carry three lanes of traffic in both directions, with local traffic using the existing at-grade West Dodge Road. The original deadline for completing both the westbound and eastbound bridges was August 2007.



Special features of the expressway bridges include three and one-half foot barriers on each side as a safety feature. The barriers are 13 inches taller than the older ones still in use on some Interstate bridges in Nebraska, and are tall enough to keep vehicles from flipping over the bridge. A second safety feature involves the barriers' shape, like a bumper, with the middle section protruding out. That design creates a rail along the side of the barrier. The bumpers help absorb the impact and serve as a catch for a vehicle in a crash.

Roads Director John Craig noted that the project has been genuinely successful because of partnerships and teamwork. Director Craig commended the staff from HDR, Inc., the project's designer, and Hawkins Construction Company employees who have worked to build the elevated expressway regardless of weather conditions.



In compiling the needs of the State Highway System, the following categories are considered: (1) Interstate, (2) Expressways, (3) Rural Geometrics, (4) Resurfacing, (5) Urban, (6) Missouri River Projects, (7) Railroad Crossings, and (8) Miscellaneous.

The department's "2006 State Highway System Needs Assessment" report identified highway needs at \$9.2 billion. When projected out over the next 20 years with an inflation factor of 3% per year, the needs will cost an estimated \$12.4 billion. Considering conservative increases in State and Federal revenue, total funds available will be approximately \$6.7 billion. As can be seen, needs could not be achieved as the revenues necessary would fall short by \$5.7 billion. With resurfacing projects, those needs accrue each year over the next 20 years, including a backlog of miles which have reached or passed the optimum time for resurfacing.

As the accruing 20-year needs are addressed, traffic patterns and philosophies change, and costs continue to increase. Since 1994, the rural heavy commercial annual vehicle miles traveled on the rural highway system had increased by 33% to an estimated 1,738,000,000 vehicle miles. This type of an increase has twofold effect on Nebraska's highway needs. It accelerates the wear on existing pavements and may necessitate a functional upgrading of existing facilities.

Since the expressway system in Nebraska was identified in 1969, steady progress had been made with approximately 70 percent of the 600 miles of expressway completed or in the department's 2006 construction program. Funding continued to be the controlling factor for completion of the expressway system. While the design for many miles of the expressway had been completed, the letting of contracts for the construction of the remaining miles extended into the 2011 and beyond period.

While the department remains committed to the completion of the state's expressway system, it is realized the demands placed on the highway system will change. This led to adopting a long-range planning philosophy to help identify potential expressways that extend beyond the original expressway system. Viable candidates will be considered but will not compete with the original expressway system for funding. Once considered and identified as a potential expressway, candidates will be placed in the planned expressway category and will have the appropriate studies completed and accepted by the department. The "2006 State Highway Needs Assessment" listed the following as current planned expressways: (1) Norfolk to South Sioux City, (2) Scottsbluff north to the Black Hills in South Dakota, (3) Nebraska City to Auburn, and (4) Colorado border north to Kimball.



Among other technology items to come on the scene, the 21st century saw the emergence of the digital camera. NDOR began utilizing a roadway camera as an aid in keeping motorists informed as to the latest traffic and road conditions. Cameras have been, or will be, installed over the next year on Interstate 80 and other locations throughout the state. The total number of highway cameras installed across the state is anticipated to exceed 200 within the next ten years. Deployed cameras will be connected to the Internet and updated about every 20 minutes. Images from the cameras installed in the Lincoln and Omaha areas will update more frequently. The primary purpose of the highway cameras is to monitor traffic for level of service and verify an incident or travel condition which allows for the deployment of appropriate resources to the right location in a timely manner. The camera technology will also be used by the department's districts to upgrade many of the Road Weather Information System (RWIS) sites in place throughout the state. There are a number of RWIS tower sites, some without cameras, which collect a variety of information that is relayed through long distance telephone calls from district locations to the RWIS sites.

Gasoline prices fluctuated and for a good share of the year rose to some of the highest prices as motorists were paying well over \$3.00 per gallon across the nation. Nebraska drivers began to see a price decline in the fall of the year and it was hoped that lower prices would continue.

Environmental accomplishments and commitments were given the spotlight with a special issue of the department's "Roadrunner" magazine which was dedicated to NDOR's environmental stewardship. In the issue, Roads Director John Craig wrote, "Many good things have been accomplished environmentally throughout the years, but we must meet the growing expectations ahead ... we must build on the accomplishments of the past and meet the challenges of the future to provide Nebraska and the nation a safe, reliable and environmentally compatible transportation system for the movement of people and goods."

Specific environmental areas noted in the "Roadrunner" included the development and maintenance of wetland mitigation bank sites in Nebraska; efforts in establishing and maintaining an inventory of historic bridges; plans for the development of a new state landscape plan that will create a safe, sustainable and more environmentally friendly roadway corridor, and several examples of environmental stewardship in action, including protective fencing for threatened or endangered species.

In late July, NDOR was asked to assist local, county, state and federal agencies in containing complex fires in and around Chadron and Harrison. Over 90 people from Highway Districts 5, 7 and 8 responded, contributing 5,000 man-hours and 50 pieces of equipment to cut approximately 1,000 miles of fire lines and haul over 500,000 gallons of water. NDOR employees also set up message boards, flagged traffic and closed roads. While over 27,954 acres in Dawes County and over 40,000 acres in Sioux County were destroyed, the combined efforts of these hard-working, dedicated Roads employees helped to contain the fires and prevent further loss of property.



Work was underway to establish the Nebraska Safe Routes to School Program, a federal program signed into law in 2005. The overall purpose of the program, which will dedicate \$612 million from 2005-2009, is as follows:

- To enable and encourage children, including those with disabilities, to walk and bicycle to school.
- To make bicycling and walking to school a safer and more appealing transportation alternative, thereby encouraging a healthy and active lifestyle from an early age.

- To facilitate the planning, development, and implementation of projects and activities that will improve safety and reduce traffic, fuel consumption and air pollution in the vicinity of schools.

Eligible infrastructure projects include the planning, design, and construction of infrastructure-related projects that will substantially improve the ability of students to walk and bicycle to school. Eligible noninfrastructure projects are activities that encourage walking and bicycling to school, such as public awareness campaigns, student sessions on bicycle and pedestrian safety, and traffic education and enforcement within the vicinity of schools. Selection of projects is to be made by the Select Committee, a state-wide committee of volunteers with expertise in the funding categories.

The Nebraska Department of Roads acquired the services of a consultant to serve as the Program Consultant to advise communities on select committee policies and eligibility requirements. When a project is funded, the Program Consultant will assist applicants in administering projects and monitoring project development for compliance with state and federal requirements. A call for project applications was to occur in the fall of 2006 with projects selected for funding possibly in early 2007.

With a new name, the Business Technology Support Division, formerly known as Information Systems, had a new division manager as Bill Wehling was named to the position. As a 19-year NDOR employee, Wehling worked in a variety of capacities, all within the Roadway Design Division in Lincoln. For the past 14 years, Wehling served as Computer Applications Engineer.



Bill Wehling

In the last 10 years, the shift in emphasis has changed the focus of work for the department's Human Resources Division, formerly known as the Personnel Division. Functions within the division moved to support of the divisions and districts, both management and employees.

Over the past several years, the recruitment process for NDOR has been restructured and more strategically developed. Facing challenges such as an aging workforce, cultural and diversity issues, and a new generation who has different goals and expectations has led to actively recruiting rather than just advertising. Advancements in technology have made it possible to utilize educational institutions, professional organizations and businesses with their own websites. The Student Opportunity Program is an example of one of the department's best recruitment tools. College students can normally work anywhere in the state on a construction project earning a very decent salary during their summer break. Other college opportunities include internships, co-ops and work studies. College students are able to apply what they learn in the classroom to actual work, i.e. engineering tasks, etc.

The Surface Transportation Program Book for Fiscal Years 2006-2011 and Beyond identified 129 new projects totaling \$361.9 million, plus 37 projects totaling \$8.1 million for Preventive Maintenance in the FY-2006 State Highway System Program.

Approximately 50% of the department's Automated Right-of-Way Management System (ARMS) was in place. The system, created in 1997, will enhance right-of-way activities through the automated processing of right-of-way design, appraisal, negotiations and relocation information. Long-term goals anticipated are: (1) Automation of payments, (2) Developing an excess land inventory, (3) Integrating access control and signs system into the ARMS system, and (4) Translating data from outside vendors (consultants) into the system.

The department's eight districts continued to provide important maintenance and construction operations throughout the entire state. Their importance is reflected by responsibilities that include:

- Administer and manage activities, operations, and programs assigned to each district.
- Act as representative of the Director for their areas.
- In conjunction with the other districts and divisions, provide leadership to the agency and the Nebraska transportation system.
- Update state senators and highway commissioners on highway issues.
- Coordinate maintenance and construction activities with cities and counties within the district.
- Provide construction supervision and system maintenance for all state highways in the district.



District operations realized much improvement to their operations as a result of new technology advancements mentioned previously, along with other operational changes over the past decade. Two districts are representative of the operation improvements accomplished. District 3, with headquarters in Norfolk, reported its preventive maintenance program had improved to the point of extending the life of pavements for both construction and maintenance programs. A large improvement in the quality of the vehicle fleet allowed maintenance to be much more efficient in delivering and keeping roads in top condition. Hot-mix work by maintenance forces using a laydown machine was a big leap forward in the ability to react to deteriorating pavement problems. Expansion of maintenance contracting for routine functions, such as mowing and striping, freed employees from these responsibilities to work in other areas.

District 6, headquartered in North Platte, reported that their emergency operations center resources were in one location, allowing for greater improvement in the response time. The addition of portable traffic signals, automatic vehicle locators in two test vehicles, two satellite phones, and mainline and ramp closure gates added to more efficient operations. Capital facility improvements in North Platte, Mullen, Ogallala, Lexington, Big Springs, Stapleton and Gothenburg provided up-to-date facilities for the district. Creation of Quality Improvement Teams in such areas as vendor payments and fleet preventative maintenance allowed district employees to provide helpful insight into various operational areas.

Technology ... technology ... technology. Without question, the improvement and acquisition of business support systems and equipment made it possible for significant changes to occur over the last decade within the department's Communication Division. Being responsible for the dissemination of information and providing quality records management and printing services require having the best equipment possible. A big step in service improvement took place when color printing capability with better picture resolution came on the scene. Scanning speed increased with re-scanning no longer required with the use of CD's, which along with DVD's can be copied. With the use of electronic files, off-set printing for department information is no longer required.

New photographic equipment, specifically digital, eliminated contact prints with digital images now placed on CD's. A high-tech processor provides better quality air photos. Networking capabilities with Roadway Design allows for plans to be sent electronically to a computer for holding and later released to low bid contractors electronically.

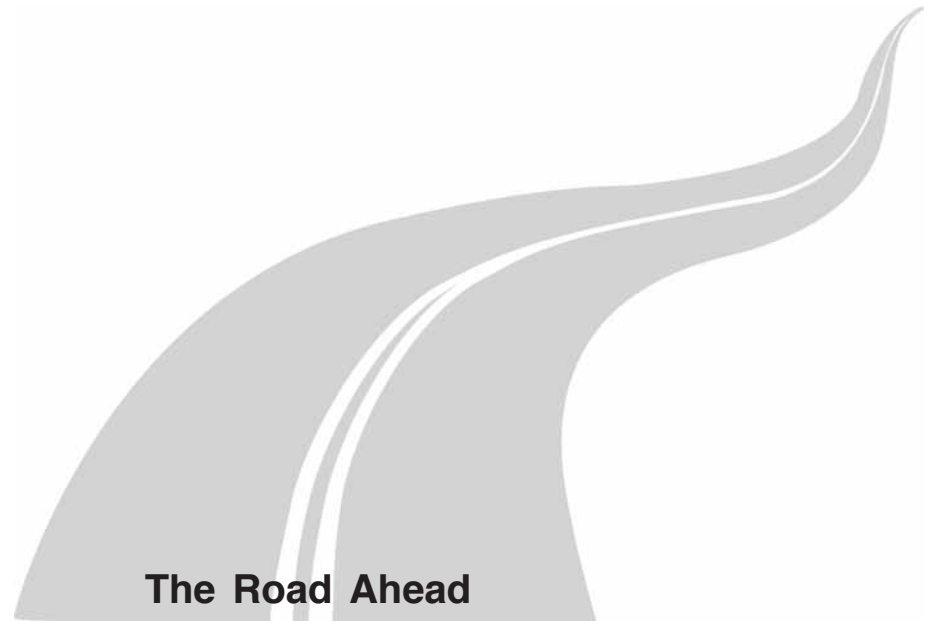
Scanning capabilities improved in the Records Management Center. Material is scanned to an image and then entered into Archive Writer equipment. CD's have taken the place of microfilming equipment.

A large amount of department information was provided to the public through the department's web page. With various computer programs now available, the Information Processing Center now has the ability to serve their customers more efficiently and expeditiously. Scanning and placement of documents on CD's eliminated paper copies. Creation and standardizing of department forms with calculations and other fields was occurring, and official news releases were sent electronically, eliminating the sending of hard copies through the mail.

While the Fiscal Year 2006 state highway program was the highest in the state's history, the Fiscal Year 2007 program reflected that the department was at a "crossroad" as to road funding, with a decline of \$40 million from the previous year due to a reduction in state and federal revenues. Inflation had a significant impact on the highway program. Roads Director John Craig, speaking before Surface Transportation Meeting audiences, reported, "Typically we've inflated our program about 3 percent historically, and that's worked pretty well for us. This year we inflated our program 13.1 percent, more than four times what we historically have." Petroleum, steel and concrete costs were some of the primary items reflecting price increases. Director Craig was not optimistic in his prediction of future reduction of programs stating, "... we don't see any end to it, smaller programs and fewer projects. That's the outlook for 2007." However, Director Craig continued to remind everyone the future is what we make it and "we will make 2007 another great year."

The department continued to use the original "Superpave" asphalt concrete designs with the roadways, for the most part, dependable and holding up quite well. The department continued to welcome new changes and ideas, knowing that as tire pressures and truck weights increase, more changes will be made and even better roadways will be needed.

Continuing to provide dividends to the state since its creation in 2001, approximately \$6,987,505 had been funded for research ideas by the Nebraska Transportation Research Council (NTRC).



The Road Ahead

As yet another chapter of history has unfolded, the challenges and expectations of the future continue to lie ahead. The past 111 years have seen tremendous changes and accomplishments to Nebraska's highways. From the early days when Nebraska had only three major highways — the Meridian, the Lincoln and the Omaha-Lincoln-Denver — to today's modern Interstate and Expressway highways, progress has provided Nebraska with a safe and efficient road system. Certainly, technology advances have and will continue to play a significant part in the future.

Nebraska's highway programs can be accomplished if both state and federal funding remains stable during future fiscal years. The level of federal funding ultimately received will be the primary determinate to the financial success of future highway programs.

The dedication of department workers to do their jobs well continues to be a contributing factor in the day-to-day agency operation. Positive results in accomplishing the tasks with a reduced work force have been realized. The 20, 30, 40 and even 50 years of service by many employees continues to exemplify the willingness by staff to provide numerous services to the traveling public.

Motorists will continue to use the nation's highways, and states will be challenged to meet the needs to provide a safe, well maintained and smartly preserved highway system with the available funds. Nebraska will continue their leadership role in these public service endeavors.



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