COVER PHOTOS

Front
Top left: Long X Bridge on US 85. | Top right: DeMers Avenue in Grand Forks. | Bottom left: Main Avenue in Fargo.
Bottom right: Pedestrian bridge in Dickinson on I-94.

Back
Top left: Motor Vehicle & Driver License booths were installed throughout the state. | Top right: New welcome signs were installed.
Bottom left: NDDOT staff training on drone usage. | Bottom right: Snowplow following an Oshkosh snowblower clearing drifts on I-94.
FROM THE OFFICE
OF THE DIRECTOR

Our mission to safely move people and goods is rooted in everything we do at the North Dakota Department of Transportation (NDDOT) and I’m proud to work with a passionate team of experts who work hard every day to move North Dakota forward.

This was a biennium like we’ve never experienced before and although COVID-19 was challenging, we never closed our doors and we continued to find safe and innovative ways to serve the public. In fact, some of the solutions were so successful we’ve continued to do them even after the pandemic diminished. A couple of success stories from COVID-19:

• The NDDOT implemented an online appointment system for both Driver License and Motor Vehicle Divisions. This new way of doing business has reduced citizen wait times from nearly 30 minutes to about 10 minutes per visit.
• We installed 52 kiosks allowing customers to print motor vehicle tabs, renew or request a replacement license or ID card, schedule a road test, pay a reinstatement fee or change their address without stepping foot in an office. Many of the kiosks are open to the public 24/7 and allowed us to expand services in rural North Dakota.

But it wasn’t just COVID-19. Last biennium, innovation was everywhere. We experienced:

• New developments in our unmanned aircraft systems (UAS). In 2020, we continued our partnership with the United States Department of Transportation on the UAS BEYOND Integration Pilot Program and continue to be on the cutting edge of using UAS for traffic safety, inspecting infrastructure, photo and video observation and responding to emergencies.
• We added our first autonomous impact protection vehicle to our fleet along with the purchase of autonomous vehicle technology that converted a current NDDOT truck into a self-driving vehicle to improve safety in work zones.
• We’ve broadened relationships, engaged critical partners and have collaborated with more state agencies, legislators, communities and other stakeholders than ever before. And we’ll continue to do it because we know that we are serving North Dakota better, together.

The future is bright at the NDDOT and we look forward to continuing our work to advance the state’s transportation system.

Bill Panos, Director
North Dakota Department of Transportation
North Dakota Department of Transportation
July 1, 2019 through June 30, 2021

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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
NDCC § 24-01-01 and NDCC § 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 Driver License, Safety and Motor Vehicle Divisions. 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 that 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).
Major Goals

The NDDOT’s major goals are established through our strategic planning process, which has steadily evolved since its inception in 1997. Through these efforts, the department continues to be recognized as the state’s transportation leader that operates as a progressive and innovative organization that carries out its vision and mission.

Vision

North Dakota’s Transportation Leader Promoting:

**Safe Ways - Superior Service - Economic Growth**

Mission

**Safely move people and goods.**

As the department strives to meet the transportation needs of the energy, agriculture, and manufacturing industries it is faced with increasing challenges. To meet these challenges and advance our mission the NDDOT has incorporated five strategic emphasis focus areas and goals.

Strategic Focus Areas and Goals

**Safety** - Provide a safe and secure transportation system and workplace.

**Innovation** - Promote a culture of innovation to enhance external and internal services, products, and programs.

**Assets** - Preserve and enhance assets managed by NDDOT.

**Mobility** - NDDOT works to improve access to our transportation system through multi-modal solutions to enhance the movement of people and goods, having a positive impact on the quality of life and the economic well-being of North Dakotans.

**Leadership** - We strive to position the NDDOT as a local, state, and nationally trusted leader. We value service, excellence and diversity, instilling a culture of leadership, which expands the problem-solving capacity of our organization.

Values

In practicing the department’s values of **Professionalism, Respect, Integrity, Dedication, and Excellence** we will be successful in being North Dakota’s transportation leader.

Financial Data

Audited financial information for the Department of Transportation is available from the North Dakota Office of Management and Budget (OMB). This information can also be found on the [OMB website](http://www.omb.nd.gov).
Organization Chart
as of June 30, 2021

For the current NDDOT Organization Chart, go to www.dot.nd.gov/divisions/exec/docs/nddot.pdf
Responsibilities and Activities

The Communications Division is responsible for all aspects of communication within the North Dakota Department of Transportation (NDDOT). This includes internal communications with NDDOT employees and external communications with the general public, media, legislators, civic groups and stakeholders. The NDDOT communicates externally through the website, social media, public meetings and hearings, letters to the editor, interviews with local TV and radio stations, news releases, ads and notices, press conferences, and presentations with various civic and local government groups.

The Communications Division is also responsible for facilitating internal communications with our employees and constituents. The primary venue for internal communication is MyDOT, an employee-only intranet.

The Communications Division also serves as a resource to the entire department by providing assistance in areas such as: information campaigns, talking points, speeches, PowerPoint presentations, videos, posters, biennial reports, brochures, handbooks, technical and statistical manuals, study guides, proofreading and graphics. The Communications Division also houses the Multi-Media Section. Multi-Media is responsible for photography, video production, graphic design and web page design. Multi-Media provides many services to NDDOT and other state agencies.

Key Accomplishments

During the 2019-2021 biennium, the Communications Division worked closely with every Division and District throughout the NDDOT on numerous projects and information campaigns. The following accomplishments represent some of the highlights of the biennium.

- Distributed information to the public by sending out approximately 360 news releases in 2019 and approximately 300 news releases in 2020.
- Completed a workzone safety campaign highlighting kids and grandkids of NDDOT workers asking the public to slow down to keep their family members safe.
• Hosted an Electric Vehicle (EV) Tailgate event sponsored by the NDDOT and Capital Electric. Hundreds of car enthusiasts and others were able to see a variety of EVs, scooters and an electric motorcycle. The event was held to raise awareness of the availability, capabilities, and benefits of EV’s since these vehicles are fast becoming the ride of the future.

• Created YouTube videos to inform employees and the general public about various NDDOT programs including construction, safety, REAL ID, and snow and ice control.

• Provided up-to-date information regarding travel alerts, travel advisories, public meetings and events through the use of news releases, the website and social media.

• Worked on several ribbon cutting events for completed construction projects throughout the state.

• Assisted with internal and external communications during the COVID-19 pandemic, including facilitating team member communication and public safety messaging.

Financial Management
Shannon Sauer, Director

Responsibilities and Activities
The Financial Management Division is responsible for the fiscal operations of the agency including accounting and financial reporting, budget preparation and monitoring, some payroll activities, procurement, revenue forecasting, central supply, cash management, FHWA 500-series statistical reporting, rate development, p-card administration, legislative activities, fiscal note development, and disposal of highway equipment and materials.

Key Accomplishments
• Developed training for new employees on how to complete the NDDOT timesheet using the Workforce Time and Labor System.

• Developed a new Construction in Progress report.

• COVID-19 Reporting - Developed project structure to account for COVID-19 expenditures; provided weekly reports to division management; completed quarterly COVID-19 reports to OMB.

• Participated in a review of our activities by the Federal Transit Administration.

• Increased automation of payments via increased usage of purchasing cards and payment uploads; automated claim for payment process for contractor payments; converted numerous internal payable processes to electronic format.

• Prepared and submitted the biennial budget.

• Prepared and submitted the FHWA 500-series transportation revenue/expenditure reports.

• Finished development of an Account Code Inquiry System and developed related training.

• Processed approximately 1,283 requisitions and 1,481 purchase orders in addition to additional procurement activity to support COVID-19 relief efforts; issued 132 bids on the State Procurement website; maintained 160 contracts for commodities, services, and equipment rentals; submitted 35 alternate procurement requests to the State Procurement Office.
Human Resources
Nikki Sackman, Director

Responsibilities and Activities
The Human Resources Division (HRD) is responsible for agency compliance with federal and state employment laws as well as performing and overseeing the following: recruitment, selection, salary administration, position classification, workforce assessment/planning, workforce development and training, leadership development, coordination of payroll processing, personnel policies, employee files, human resource consultation, employee leave program administration, performance management, awards and recognition, wellness program, book club, community engagement events, tuition reimbursement program, internships, educational scholarship and grant programs.

Key Accomplishments
• Enhanced employee engagement efforts, including raising awareness, measuring engagement, providing resources to managers, and providing a safe and supportive work environment for employees. With the COVID-19 pandemic, this included moving new hire orientation to a virtual platform, wellness initiatives, maintaining connections and supporting employees working from home by sharing information and resources, expanding telework policy and procedures, expanding leave options and flexible schedules as part of the Families First Coronavirus Relief Act, and working through the changes and challenges together.
• Participated in over 50 in-person and virtual events including ND State Fair, Career and Technical Education Conference, university and community job fairs, high school career education/events, Governor’s Main Street Summit, career expos, job shadowing, Mandan Touch a Truck event.
• Developed and implemented Future Leaders Day, a curriculum where children and grandchildren of NDDOT employees learned about and experienced various careers in transportation.
• Hired 12 engineering & surveying summer interns for 2020 and added 18 summer interns in engineering, marketing, mechanics, and surveying in 2021.
• Maintained representation on a variety of recruitment and talent advisory boards. (Bismarck State College Career Advisory Board, University of Mary Career Services, Leadership North Dakota, North Dakota State College of Science, North Dakota State University, University of North Dakota, Bismarck-Mandan Young Professionals Network Board, Society for Human Resources Management, State of North Dakota Talent Acquisition, State of North Dakota Engagement Partners, State of North Dakota Joint Economic Committee, State of North Dakota Change Management, State of North Dakota Classification Transformation, and State of North Dakota Internship Development.)
The Quality Assurance and Internal Review (QA&IR) Division of the NDDOT is responsible for performing internal audits of NDDOT district and division activities and conducting cognizant reviews of architectural and engineering consulting firm indirect cost rates. The QA&IR Division is also responsible for motor carrier program audits, including program required audits of International Fuel Tax Agreement (IFTA) and International Registration Program (IRP) registered North Dakota based motor carriers. Auditors focus on ensuring applicable policies and regulations are followed and ensuring proper use of federal and/or state funds.

**Key Accomplishments**

- Completed audits of 38 motor carriers enrolled in the IFTA and audits of 59 motor carriers enrolled in the IRP. The Audit Services Division audits 3% of North Dakota registered motor carriers each year to ensure compliance with record keeping requirements. The IRP allows for record reviews to replace a portion of required audits. During the biennium, an IRP record review program was implemented, and the QA&IR Division completed 29 record reviews which equals 9.6 audits. The IFTA does not currently allow record reviews to replace required audits. The QA&IR Division has submitted a ballot to the IFTA program for consideration in allowing future record reviews to count toward audit requirements. The ballot must receive 75% of all jurisdiction votes to pass, voting will take place in January 2022.

- Implemented a risk-based review program for indirect cost rates proposed by architectural and engineering consulting firms. In addition to the risk-based review program, the QA&IR Division implemented a limited review program for medium risk firms. The QA&IR Division conducts a risk assessment for indirect cost rates submitted by architectural and engineering consulting firms, if the risk is low, the rate is accepted as submitted. If the risk falls into the medium range, a limited review is conducted to ensure they comply with applicable federal regulations. If the risk is determined to be high, a full cognizant review will be conducted. In addition to the implementation of the risk-based review program, the QA&IR Division has also contracted with a CPA firm to complete all limited and cognizant reviews on behalf of the agency. During the biennium the QA&IR Division completed 10
Oversaw the creation of a document to keep on file, describing the expenses as they related to the COVID-19 pandemic.

- Completed two indirect cost rate audits to ensure the rates submitted conform to 2 CRF 200. North Dakota Association of Counties and Metro Council of Government are grant recipients who have chosen to recoup some of their administrative expenses incurred during the facilitation of a grant via an indirect cost rate.

- Cognitive reviews and five limited reviews in-house and accepted five indirect cost rates as submitted. The QA&IR Division has contracted seven cognizant reviews.

- Aided the Local Government Division and the Safety Division with subrecipient monitoring activities required by federal regulations by reviewing 159 financial and/or single audit reports. The QA&IR Division reviews the financial and/or single audit reports of grant recipients to assess the overall risk of the entity receiving federal pass-through funds.

- The QA&IR Division audits transit organizations who receive federal pass-through funding to ensure compliance with applicable federal regulations. In addition to completing audits of two transit organizations, the QA&IR Division continues to provide information related to operational best practices, which if implemented, will ensure future compliance with federal regulations.

- The QA&IR Division assisted in the review of the Motor Vehicle Division’s segregation of duties. All policies and procedures were reviewed to ensure proper controls were in place to mitigate the risk of noncompliance or fraud. In addition, the QA&IR Division worked with a third-party CPA firm to ensure recommended controls were implemented for two of the three phases of the project. The third phase of the implementation review will be completed in the 2023 fiscal year.

- Observed annual inventory counts at two district locations to confirm that financial records and the actual physical count of goods are consistent. In addition, the QA&IR Division contracted with an external CPA firm to conduct a review of all district inventory processes to ensure appropriate policies and procedures. Inventory represents a key asset of the NDDOT, the verification that strong internal controls are in place reduces the risk that inventory fraud and misappropriation may occur. The QA&IR Division is leading multiple working groups to ensure audit recommendations are implemented.

- Completed an electronic signature audit to review the DocuSign process and provide recommendations on best practices. As a result of this audit, the Executive Policy 1-3-1.8 Digital Signature Authentication Requirements was implemented.

- Completed a COVID-19 expense audit to ensure expenses complied with the Federal CARES ACT. Worked with several divisions to ensure supporting documentation was available for all expenses.
Driver License
Brad Schaffer, Director

Responsibilities and Activities
The Driver License Division provides identification validation, licensing, and driver record management services for all North Dakota drivers.

Driver license examiners process each applicant for licensure in the state. Individuals are evaluated for identity, residency, and qualification, to include both knowledge and skill, and issue the pertinent permit, license or non-driver identification card. Examiners conduct vision screenings and review medical and vision information thus determining if any restrictions need to be applied or if any additional medical documentation or testing is required. Thereby ensuring individuals licensed in North Dakota are fully authorized and capable. Driver License responsibilities are regulated by both state and federal laws, regulations, and policies.

Driver license record specialists provide record management services that link a driving record with the court system, to ensure that only convictions for driving errors become part of the record. Responsibilities are interpreting, processing, and inspecting documents from chemical dependency programs or court dispositions, and maintaining the integrity of the driving record for use in administrative hearings, court proceedings, attorneys, employers, law enforcement, insurance companies, professional licensing boards, or other state and federal agencies. Proficiency, communication, and customer service are critical elements that must be adhered to. The division also provides administrative support for all sites, from logistic support to financial management, in order to ensure the statewide Driver License team has all the tools necessary for success.

Key Accomplishments
July 1, 2019, through June 30, 2021
• Processed 442,476 permits, licenses and identification cards.
• Administered 80,874 written tests.
• Conducted 32,564 driving tests.
• Conducted 283,383 vision screenings.
• Averaged 1,000 phone calls per day.
• Answered an average of 250 emails per month.
• Processed 131,077 suspensions, revocations, and cancellations.
• Received 236,084 traffic citations.
• Issued 10,825 Temporary Restricted Licenses.
• Accepted 7,321 implied consent violations.
• Convened 4,703 hearings.
• Processed 6,100 crash reports.
• Created 32,499 abstracts.
• Issued 1,507 clearance letters.
• REAL-ID compliant driver license and identification cards grew to 45%.
• The Driver License Business Process Modeling Project was completed in March 2020. The project studied 124 unique processes through cross functional process maps and generated 560 ideas for future improvement to processes.

Driver License staff conducting a driving test

• Driver License examiners visited four tribal reservations in May and September of 2020 to provide Non-Driver Photo Identification (ID) Cards that can be used for voting purposes.

• Online transactions for driver license renewals and duplicate driver licenses grew by 48%, with 21,231 transactions processed.

• Driver License processed a record number of driver licenses and state ID cards during October 2020. Statewide almost 25,000 customers received a new license or ID card. This was an increase of 4,000 cards printed compared to October 2019.

• A new mobile application was launched in December 2020 called ND Drive. This application enables users to conduct various driver license and motor vehicle transactions on any mobile device or tablet.

• Kiosk services were expanded across the state to include 44 new kiosks. There are now 52 kiosk locations that offer driver license services. For the first time drivers can renew a license, request a replacement license or ID card, schedule a road test, pay a reinstatement fee, change their address, and edit donor registry information through the kiosks.

• During April – June 2020, over 30,000 licenses had to be renewed along with the current monthly volume. Driver License worked extended hours and completed
the backlog by the end of 2020.

- Staff conducted six public speaking events focusing on various Driver License topics, including REAL-ID and driving abstracts.

News conference with TSA for REAL ID

- Melia Shaw was recognized as the 2019 American Association of Motor Vehicle Administrators (AAMVA) Certified Driver Examiner of the Year for the state of North Dakota.
- Eric O’Toole was recognized as the 2020 American Association of Motor Vehicle Administrators (AAMVA) Certified Driver Examiner of the Year for the state of North Dakota.

Motor Vehicle
Jennifer Blumhagen, Director

Responsibilities and Activities

The Motor Vehicle Division is most commonly known for our consumer service team’s work serving the public by providing vehicle title and registration services, parking permits for mobility-impaired customers and license plates for all vehicle types.

The Motor Vehicle Division also serves the interstate motor carrier industry by administering the International Registration Plan (IRP) and the International Fuel Tax Association (IFTA) Plan. Having these programs administered in Motor Vehicle creates a one-stop shop for titling and registering both personal vehicles and those who engage in interstate commerce.

The Motor Vehicle Division has a Dealer Enforcement section whose team members assist our dealership partners to ensure compliance with statutes and regulations. This team also assists customers who have a concern with experiences they have encountered with a dealership.

The division is responsible for maintaining and making available records created by its various activities.

The division serves the public throughout the state through services provided at its central office in Bismarck, four privatized contracted motor vehicle service offices (CMVSO), six chamber of commerce offices and eight county treasurer/city offices. Services are provided in person by appointment, mail, fax, email, self-service kiosk, ND Drive mobile app, and online.

Four of the branch offices also provide limited registration services to interstate motor carriers, who no longer need to conduct their transactions in Bismarck. CMVSOs located within the same building as the department’s driver license testing sites are in Bismarck and Dickinson.

Key Accomplishments

- During the 2019-2021 biennium, the division processed over 2.8 million customer transactions, and responded to approximately 421,782 customer inquiries via telephone.
- The division registered 1,155,231 vehicles in fiscal year (FY) 2020 and 1,183,528 in FY 2021. During the 2019-2021 biennium, 665,851 vehicles were renewed online, for an average of approximately 36% of all renewals processed.
- The division implemented an eLearning solution through Microsoft Teams to provide training to internal staff, contracted motor vehicle service office staff, and our motor vehicle dealer partners.
- An additional 44 kiosk locations were added to the 8 previous, for a total of 52 kiosks around the state of North Dakota. Kiosk usage increased from 7% to over 10%.

Kiosks are located throughout the state

- Three additional branch offices began to issue titles for a total of 11 branch offices that currently issue titles over the counter to our customers.
• The Motor Carrier Section renews approximately 2,041 International Fuel Tax Association (IFTA) accounts and 2,241 International Registration Plan (IRP) accounts each year. The Motor Carrier Section implemented the following enhancements:
  1. Motor Carrier implemented a new plate for IRP vehicles that does not require an annual renewal decal. This is a big win for customers as motor carriers travel across the US and Canada. The new plate coupled with the electronic cab card eliminated a lot of scheduling challenges for our customers as they no longer have to be in North Dakota to get their motor vehicle decal/sticker in the mail.
  2. Motor Carrier went fully online. IFTA has reached 98% participation and IRP has reached 90% participation, drastically reducing data input by employees.
  3. Motor Carrier also went electronic and can issue registration cards to carrier customers via email. Now, customers can get their cab card instantly with no waiting.
• The Dealer Services Section renews and regulates roughly 1,100 dealerships in the state of North Dakota. Highlights for this section include:
  1. Dealer Services implemented online drive out and truck/trailer demo permits. This has received a 100% user rate, not only increasing the security around these credentials, but making them available on-demand 24/7.
  2. Increased dealer outreach and educational opportunities resulted in a 31% decrease in dealer paperwork errors. On average, correcting each error takes approximately 15 minutes. The creative eLearning solution and increased outreach to our dealership partners could have a savings of over 500 labor hours.
• The Consumer Services team has implemented the following enhancements:
  1. Identified opportunities to increase efficiencies and to decrease mailed in paperwork wait times from 8 weeks down to 3 weeks with no overtime or additional staff.
  2. Implemented numerous educational videos to assist the public in accurately filling out title work applications.
  3. Implemented an appointment system to speed up lobby service times.
  4. Entered a contract to streamline the renewal process.

Safety
Karin Mongeon, Director

Responsibilities and Activities
The NDDOT Safety Division is the designated State Highway Safety Office (SHSO). The Safety Division is responsible to coordinate North Dakota’s Vision Zero strategy to reduce motor vehicle crash fatalities and serious injuries to zero. Vision Zero is an interdisciplinary effort between state agencies and public and private sector partners.

• Coordinates ongoing implementation and evaluation of the Strategic Highway Safety Plan (SHSP), North Dakota’s Vision Zero Plan, in cooperation with local, state, federal, tribal and private sector safety stakeholders. The SHSP is a data-driven, multi-year comprehensive plan that establishes statewide goals, objectives, and key emphasis areas and integrates the four Es of highway safety – engineering, education, enforcement and emergency medical services (EMS). The SHSP allows highway safety programs and partners in the state to work together to align goals, leverage resources and collectively address the state’s safety challenges. The SHSP is a federal requirement to access federal grant funds for safety infrastructure improvements through the Highway Safety Improvement Program (HSIP) and behavioral safety programs through the Highway Safety Plan (HSP).

• Applies for and receives annual funding through the National Highway Traffic Safety Administration (NHTSA) to develop and implement the HSP which includes behavioral strategies to address identified traffic safety issues including: lack of seat belt use, drug and alcohol impaired driving, distracted driving, young drivers, speed, lane departure, motorcycle safety, pedestrian and bicycle safety, and other concerns.

• Works with law enforcement statewide to collect and maintain crash data and to analyze the data to identify traffic safety problems in North Dakota to be addressed through the safety planning processes administered by the NDDOT and partners. This includes coordinating with other data sources including driver, vehicle, roadway, injury and court.

The Safety Division also: assures broad stakeholder involvement in the Vision Zero initiative; conducts public information and outreach; coordinates and builds program capacity through partnerships; provides technical assistance and training to partners; plans and conducts traffic safety conferences and
events; assures compliance with state and federal rules and regulations; and many other activities.

**Key Accomplishments**

- Ended 2019 and 2020 with a total of 100 motor vehicle fatalities on North Dakota roads. This is the lowest fatality number in 15 years.

- Continued to convene Vision Zero Priority Emphasis Area (PEA) teams comprised of expert stakeholders to advance the strategies within the Vision Zero Plan. The Occupant Protection PEA was nearly successful with passing a Primary Seat Belt law (PBL) through the 2021 North Dakota legislature. The PBL bill was defeated by only three votes.

- Launched Vision Zero Schools in March 2020. Vision Zero Schools is a peer-to-peer program that gives students the opportunity to be traffic safety advocates.

- Held the 2021 Vision Zero Partner Conference virtually with over 180 partners in attendance. The conference provides best practice information and networking opportunities.

- Won the American Association of Motor Vehicle Administrators (AAMVA) 2020 Public Affairs and Consumer Education Overall Campaign Award (budget under $50k) for an occupant protection campaign focused on rural roads.

- Launched ND Sober Ride in March 2021. ND Sober Ride is a program aimed at reducing the number of impaired drivers on North Dakota roadways through ride-hailing vouchers.

- Completed the annual Crash Summary and data analysis for agency safety plans including the Highway Safety Plan, the Highway Safety Improvement Program, and the Strategic Highway Safety Plan (i.e., the Vision Zero Plan). This includes performance measure development and evaluation.
Office of Project Development

Chad Orn is the director of The Office of Project Development. Chad oversees the Bridge, Design, Environmental & Transportation Services and Materials and Research Divisions. This office is administered by Ron Henke, Deputy Director for Engineering.

Bridge
Jon Ketterling, Engineer

Responsibilities and Activities
Bridge Division is comprised of three sections; Preliminary Engineering and Hydraulics, Design, and Structural Management. Primary responsibilities within each of these sections are as follows:

Preliminary Engineering & Hydraulics Section
- Complete environmental documents for structure rehabilitation and replacements.
- Perform hydraulic analysis for bridges, box culverts, and pipe culverts.
- Perform hydraulic analysis and design for urban storm sewer systems.
- Perform hydrologic and hydraulic analysis for drainage complaints.
- Provide recommendations for complex erosion control measures.
- Issue drainage permits.
- Update and maintain the Design Manual.

Design Section
- Design and prepare plans for rehabilitation and replacement of structures including bridges, box culverts, pipe culverts, sign structures, high mast lighting, street light standards, and traffic signal foundations.
- Review consultant designs and plans.
- Review work drawings.
- Provide technical support to districts, Construction Services, and consultants with construction, contract administration, and claim related issues.
- Update and maintain the Design Manual.

Structure Management Section
- Maintain and update inventory data for approximately 4,950 bridges in North Dakota.
- Manage bridge inspection program for all public bridges in North Dakota.
- Perform routine, fracture critical, special, and emergency inspections for bridges on the state and national highway system.
• Oversee routine, underwater, fracture critical, special, and emergency bridge inspections on the state and local system.
• Load rate bridges on state and local system and issue load restrictions as necessary.
• Process overload permit requests and assist ND Highway Patrol with automated truck routing system.
• Review requests for 129,000 lb load network.
• Utilize the Bridge Management System (BrM) to assist in planning and development of priorities for the rehabilitation and replacement of structures on the state and national highway system.
• Assist in the review and update of the Transportation Asset Management Plan (TAMP).
• Develop, update, and maintain the Bridge Preservation Program.
• Update and maintain the Load Rating, Bridge Inspection, Bridge Management, and Bridge Preservation Manuals.

Key Accomplishments

Preliminary Engineering & Hydraulics Section
• Completed environmental documents for 34 stand-alone structural improvement projects.
• Performed hydraulic analysis and prepared reports for seven new structures. Began utilizing 2D hydraulic modeling in our analyses.
• Designed urban storm drainage systems for six projects.
• Hydrologic and hydraulic analysis and culvert size recommendations were performed for approximately 20 rural highway projects on the state system.
• Drainage investigations relating to approximately 40 drainage complaints or problem locations were completed.
• Reviewed requests, and prepared 10 permits for drainage revisions on highway right of way.
• Completed reviews for all rural and urban roadway and bridge hydrology and hydraulic activities associated with consultant-developed projects on the state highway system.
• Completed and provided technical support to consultants for over 40 grade raise locations throughout the state. Assisted in applying for a Resiliency Grant and in the design of grade raise sites that were included in the grant.

Design Section
• Designed and prepared plans for five new bridges and two deck replacements, eight new box culverts, one box culvert extension, and 115 additional projects consisting of bridge rail-retrofits, approach slabs, deck overlays, bridge painting, and general maintenance.
• Provided consultant oversight and reviewed designs and plans on nine projects.
Structures Management Section

- Worked with District Maintenance to significantly increase the amount of bridge maintenance and preservation work completed to extend the service life of North Dakota’s bridges.

- Worked with the Bridge Inspection Program to provide timely and thorough inspection of more than 4,900 state and local bridges to ensure the safety of the traveling public.

- Provided National Highway Institute (NHI) Safety Inspection of In-Service Bridges for new employees.

- Completed training and licensing for utilizing UAS to enhance bridge inspections.

- Added four dedicated bridge inspectors to improve the sustainability of the state bridge inspection program.

- Implemented a bridge inspection software app to improve efficiency in performing bridge inspections.

- Performed emergency bridge inspections in response to damage or critical findings.

- Provided NHI bridge inspection refresher and snoop truck training for state bridge inspectors.

- Contracted with consultants to complete bridge inspections and load ratings for local system bridges.

- Completed Bridge Inspection and Load Rating Manuals.

- Provided load ratings for new and rehabilitated bridges, as well as bridges with changed conditions and issued load restrictions as necessary.

- Used Non-Destructive Evaluation (NTDE) on a bridge to determine impacts from heavy loads and support international commerce.

- Verified bridge capacity for large overloads. Worked with North Dakota Highway Patrol on the automated routing system.

- Worked with AASHTO, AASHTOWare, BrM and NDIT to update and customize deterioration modeling and decision trees in our bridge management system to improve planning and programming capabilities.

- Participated in a pooled fund study to improve the deterioration modeling of North Dakota’s bridges to support bridge asset management.

- Provided data and assisted with planning structure rehabilitation and replacement of structures for the Statewide Transportation Improvement Plan (STIP).

- Provided current and forecasted structure management program deterioration and condition information for the Transportation Asset Management Plan (TAMP).

- Provided information to consultants, counties, and cities regarding the condition of local bridges to assist in planning and programming structural improvements.

Design
Kirk Hoff, Engineer

Responsibilities and Activities

The Design Division’s primary responsibilities are to develop engineering and environmental documents, plans, and specifications for construction projects on the state and federal highway system; provide CADD support; provide research and innovation; provide project management; perform roadway safety audits; prepare right...
of way plats; coordinate and conduct aerial and ground surveys utilizing GPS, imagery, and LiDAR; provide utility coordination on state highways; maintain design policies and Design Manual; and provide technical support for design consultants.

**Key Accomplishments**

**Grade Raise Projects**

The NDDOT has been consistently challenged in the Prairie Pothole Region of the state by flooding. Design Division delivered three grade raise projects in 2020 and eight in 2021. In addition, there are currently seven projects under development sponsored by a federal grant. There are also three additional locations under development. The grade raises improve the resiliency of North Dakota’s rural transportation infrastructure.

**New Interchange Configuration at Exit 161 on I-94**

There has been much growth in Bismarck which has impacted traffic at the exit 161 interchange on I-94. In fact, traffic south of the interchange has seen more than 20% growth since 2014. Traffic north of the interchange has seen growth of more than 56% since 2014. Projections show continued growth in the future. A study was completed to see what improvements could be made to the interchange to accommodate the growth. Five alternatives were advanced. The selected alternative was a Modified Single-Point Interchange. This will be the first interchange in North Dakota with this configuration. The Modified Single-Point Interchange allows the movement of large volumes of traffic through a limited amount of space. All the traffic converges and is controlled by one set of traffic signals. The project is tentatively planned to start construction in 2024.

The NDDOT’s First Retrofit Roundabout North of Beulah

The design of the NDDOT’s first retrofit roundabout was completed in 2020 and constructed in 2021. The roundabout improves the level of service and decreases the severity of crashes at the intersection. Since there were existing turn lanes at the junction of ND 200 and ND 49, there was a lot of surface area available at the intersection. A decision was made to take advantage of the large surface area and save money by constructing the roundabout on the existing surfacing. This also expedited the construction which minimized the impact to the traveling public. The new roundabout accommodates turning movements for large trucks.

**Plan to Convert all Lights on State System to LED**

A decision was made to replace non-LED luminaires with LED luminaires on the state highway system. LED luminaires require less power than non-LED luminaires thus providing cost savings. The LED luminaires also last longer which provides additional cost savings and reduces exposure to traffic of maintenance crews. There are five projects being planned across the state with the first project planned for 2022 construction.

**LiDAR Sensors**

The NDDOT recently replaced its aerial camera system that collected well over 250,000 images over a span of 14 years. The NDDOT aerial camera system provided services to several state entities including the Department of Emergency Services, State Water Commission, and State Aeronautics Commission. The aerial camera that is housed in the state’s manned aircraft was replaced with a dual platform sensor that can collect both LiDAR data and digital imagery. The dual sensor provides high quality digital imagery, along with millions of LiDAR points,
Environmental & Transportation Services
Mark Gaydos, Engineer

Responsibilities and Activities
The Environmental and Transportation Services (ETS) Division fosters stewardship for the human and natural environments affected by transportation projects. The division furnishes expertise, guidance, education, and review in delivering services necessary to carry out the project development activities within the department. Allied services are coordinated with Design, Bridge and Materials and Research divisions.

ETS is comprised of five functional areas including: Environmental Services, Cultural Resource Services, Right of Way Services, Technical Services, and Consultant Administration Services.

Environmental Services
Provide guidance, procedures, and project documentation to assure proposed projects comply with the National Environmental Policy Act, and other related federal and state laws. They perform wetlands services such as delineations and development and monitoring of mitigation sites and banks. Other responsibilities include studies and coordination with threatened and endangered species, migratory birds, wildlife, biological assessments, noise, stormwater and material clearances. They prepare and obtain necessary project permitting associated with federal and state requirements. Environmental commitments and mitigation are tracked to ensure compliance for impacts related to highway construction projects.

Cultural Resource Services
Provides guidance, procedures, and project documentation to assure proposed projects comply with
the National Historic Preservation Act and other related federal and state laws. Services performed are archaeological services, inventories, mitigation, monitoring of historical sites and monitoring of construction projects to ensure compliance. Other cultural services provided are tribal consultation, agency coordination, and completing the necessary project permitting associated with federal and state requirements.

**Right of Way Services**
The Right of Way section provides services related to the acquisition and management of all real properties necessary for highway purposes including highway right of way, rest and recreation areas, and tracts of land necessary for the restoration, preservation, and enhancement of scenic beauty adjacent to the state highway system.

**Technical Services**
The Technical Services Section develops the department’s Standard Specifications for Road and Bridge Construction, Supplement Specifications, Special Provisions, Value Engineering for construction projects and other associated engineering studies. Technical Services is the department’s liaison with tribal governments on Tribal Employment Rights Ordinance (TERO) issues. The section develops and negotiates agreements with TERO offices for department projects on reservations

**Consultant Administration Services**
The Consultant Administration Services performs solicitations for consultant services, including preliminary engineering, construction engineering and architectural services. The section prepares requests for proposals, conducts interviews and selections, and negotiates contracts and supplemental agreements with the consultants. In addition, the section processes payments for preconstruction engineering, maintains current status of preliminary engineering contracts and maintains consultant expenditures.

**Key Accomplishments**
• Like virtually every working American, the challenges brought on by the COVID-19 instantaneously and dramatically changed the way of negotiating right of way. Electronic documents and signatures replaced relationship building and personal visits faster than a flash of lightening. The team brainstormed best practices, adapted our workflow and communication, and, most impressively, held together as a team to meet the challenges head on. Now, as COVID-19 settles, continual review, innovation, and process improvement are evaluated to provide the best customer experience we can.
• Held multiple in-person and virtual Tribal Consultation Committee meetings. The committee reviews provide tribal input on the types of sites and methods of identification, evaluation, and avoidance needed from the tribal perspective for specific projects and our program as a whole.

• Provided erosion and sediment control training and certification for NDDOT projects that require a National Pollutant Discharge Elimination System Construction General Permit. The certification is required for the project engineer, prime contractor’s erosion control supervisor and any erosion control subcontractor. The Associated General Contractors of ND and NDDOT partnered to certify about 500 people. Recertification is required every four years.
• The Programmatic Categorical Exclusion Agreement between Federal Highway Administration and NDDOT was revised and renewed in 2021. This agreement streamlines federal-aid highway projects by delegating environmental review for a majority of NDDOT projects. This streamline approach to environmental review provides an important instrument to the NDDOT and local governments to deliver highway projects more efficiently and timely. The previous agreement expired in 2021, and in addition to extending the agreement another five years to 2026, the new agreement made changes to remove redundancies, continues
to exempt certain projects from further documenta-
tion or review, as well as provides an opportunity
to certify environmental review on new or unlisted
actions and projects.
• Finalized and let to contract the Koenig Wetland
Mitigation Bank located within the Missouri River
Basin South Regional Service Area (RSA). This
wetland mitigation bank provides the NDDOT with
much needed USACE wetland mitigation credits
for projects located within this RSA.
• Completed and obtained 128 permits needed
to bid highway improvement projects. These
permits are required to meet current state and
federal regulations. This work includes the review,
obtaining the permit, completing any required
mitigation, and complying with any special condi-
tions. The summary of the permits obtained are as
follows: USFWS Special Use Permit - five permits
obtained, USACE Section 404 Permit - 54 permits
obtained, State Floodplain Permit - 67 permits
obtained, State Sovereign Lands Permit - two
permits obtained.
• Technical Services administers the New Product
Evaluation Program for new product submittals
from vendors. A new material, product, or proce-
dure that is not included in the NDDOT Standard
Specifications, Supplemental Specifications, or
Special Provisions will be designated as a new
product. Some new products are brand new and
don’t fall under any specification section, while
others do but don’t meet the requirements. New
products are reviewed by a technical expert and
later by the new product review team to determine
if specifications will need to be created, modified,
or remain unchanged. This last biennium saw the
acceptance of using expanded polypropylene and
high-density polyethylene for manhole adjustment
rings. Manufactured construction trackout pads,
which are placed at stabilized construction access
areas, are being further evaluated on projects via
special provision.
• Moved to an Annual Specification Book begin-
ing 10/1/2020. Performing rolling rewrites of
specifications and working with Design, Materials
and Research, the districts, and industry when
reviewing specific sections. This will assist in the
future goal of an electronic-only publication.
• Developed a warranty-based pavement marking
process and deployed on a test project. A success-
ful pilot will allow industry to innovate and bring
their best products to North Dakota. These mark-
ings are being evaluated over a 5-year period, to
be completed in 2025.
• Developed a new Cold In-Place Recycling speci-
fication. Cold In-Place hasn’t been used in North
Dakota since 2008. With the help of the Materials
and Research Division and with industry input, the
specification was brought up to current industry
practices and testing standards and utilized on
projects in 2021.

Materials & Research
Matt Linneman, Engineer

Responsibilities and Activities
Materials and Research Division assures the quality,
economy, and reliability of highways and structures
through the performance and innovative use of
materials. This is accomplished by:
• Providing materials quality assurance programs
and manuals.
• Testing highway construction materials.
• Training and certifying materials testing personnel.
• Collaborating on the development of highway
improvement projects.
• Providing support for highway construction proj-
ects and maintenance activities.
• Collecting and analyzing highway construction
materials data.
• Conducting, communicating, and implementing
research.

Key Accomplishments
Testing Laboratory
• Maintained accreditation of the departments materials
testing laboratory through the AASHTO Accreditation
Program (AAP). Accreditation ensures the competency
of the laboratory’s ability to test construction material
such as aggregate, cement, concrete, soils, asphalt
mixtures, binders and traffic marking materials.
• Served as a testing resource across the state during
all phases of highway construction. Collaborated
on incorporating National Transportation Product
Evaluation Program test data in the acceptance
procedures for materials.
• Provided inspections of precast concrete plants and
their products such as concrete beams and box
culverts.
Bituminous Materials

- Evaluated and provided expertise on asphalt mix designs during highway project design and construction.
- Provided testing of asphalt binders, emulsions, and cutbacks used in highway construction.
- Deployed and trained district personnel using Asphalt Ignition Oven.
- Maintained Combined States Binder Group (CSBG) membership by refining required inspection procedures and contractor requirements.
- Maintained AASHTO accreditation for bituminous mix and liquid asphalt laboratories. Inspected and evaluated QC/QA labs and procedures for contractors and districts.

Gravel Prospecting

- Located, optioned, and managed gravel material deposits totaling over 8,000,000 tons. This included the drilling, testing, and preparation of pit plats and boring logs to be shown on highway construction projects.
- Studied and confirmed a 12:1 benefit to cost ratio by creating a competitive bid environment for aggregate materials.
- Maintained an aggregate information database for pits used on current projects from across the state and compiled annual usage reports for NDDOT and Tax Department.

Geotechnical

- Instrumental in several landslide projects that were affecting NDDOT infrastructure. One project involved designing the south abutment of the new Long X Bridge to withstand the landslide forces anticipated at that location. The abutment was designed to incorporate seven - 8 ft. diameter reinforced concrete drilled shafts and fifteen - 160 ft. long ground anchors. Another project involved the design of the first cantilevered soldier pile retaining wall. This wall is 15 ft. high and consisted of 21in. diameter drilled shafts with steel H piles as reinforcement and 6 in. thick treated timber serving as lagging.
- Put into use a new CME-55/300 tracked drill rig which will allow access to hard-to-reach areas to conduct soil borings.
Research and Pavement Design

- Issued pavement design recommendations for upcoming roadway projects.
- Supplied statewide falling weight deflectometer data for use in spring load restrictions.
- Provided high-speed profiling data to administer ride quality specifications for highway construction acceptance.
- Conducted a multi-state research peer exchange with South Dakota, Nebraska, and nine additional participating agencies. Initiated four new research projects with the University of North Dakota.
- Championed a department effort for hot mix asphalt advancements to pilot new paving technologies, practices, percent within limit acceptance, and materials.
- Procured and tested new field materials acceptance equipment including a density profiling system, lightweight deflectometer, dynamic cone penetrometer, and EGuage.

_UAS and Beyond_

In 2020, the NDDOT was selected as one of eight participants in the Unmanned Aircraft Systems (UAS) BEYOND Program.

BEYOND is the next phase of the UAS Integration Pilot Program (IPP) which will extend the federal program over the next four years. The pilot program was initially launched in 2017 to shape the future of UAS in America and enable agencies to work on policy to safely advance UAS operations, including beyond visual line of sight (BVLOS), flights over people and night operations.

The NDDOT and Northern Plains UAS Test Site recently announced partnerships with major players in the commercial UAS industry to execute the goals of the BEYOND program.

BEYOND aims to facilitate the successful integration of UAS into the National Airspace System, with a particular focus on operations that are repeatable, scalable, and economically viable. These efforts will be bolstered by Vantis, North Dakota’s UAS Network, which is designed to enable real-world BVLOS flights without extreme barriers to entry.

The NDDOT currently uses drones in a variety of roles to support and maintain the state highway system. Everything from documentation, emergency response, survey and design, to bridge inspections.

We added to our UAS fleet significantly the past biennium and have several Mavic drones placed throughout the state. We have also added a sensor driven Skydio 2 that is being integrated into our structure inspection operations and acquired a PRISM drone equipped with a LiDAR package that will be used for mapping on future projects.

Technical Certification Program

- Provided training and certification for individuals working in highway construction that sample and test aggregate, asphalt mixtures, soils, and concrete, inspect asphalt pavement construction or create asphalt mix designs. Participants included employees from NDDOT, contractors, consultants, cities, and counties. The 2020 season ended mid-schedule due to the pandemic. The 2021 season was shifted to online training and certification. All scheduled classes were completed using Microsoft Teams and shorter morning and afternoon live sessions.
- Over the last two seasons 25 classes were completed. Approximately 670 participated including 300 individuals that attended classes to maintain existing certification. The program has approximately 2,000 individuals currently certified in one or more area.

Soils testing training

Density profiling system
Wayde Swenson is the director of the Office of Operations. Wayde oversees the Civil Rights, Construction Services and Maintenance Divisions. This office is administrated by Ron Henke, Deputy Director for Engineering.

Civil Rights
Ramona Bernard, Director

Responsibilities and Activities
The Civil Rights Division manages eight federally mandated (USDOT) programs:

• Disadvantaged Business Enterprise (DBE)
• On-the-Job Training (OJT)
• Disadvantaged Business Enterprise and On-the-Job Training Supportive Services (DBE/SS and OJT/SS)
• Disadvantaged Business Enterprise Business Development Program (BDP)
• Contractor Compliance Reviews
• Labor Compliance
• Title VI/Nondiscrimination and ADA Program
• Internal EEO/AAR/Title VII

The Civil Rights Division also manages NDDOT Printing and Mail Services.

Key Accomplishments
• Conducted 10 contractor compliance reviews in 2020 and nine contractor compliance reviews in 2021. All contractors were found to be in compliance.

• LCP Tracker continued to be the sole source for inputting all contractor certified payroll records on federally funded highway construction projects in 2020 and 2021. LCP Tracker is proven to reduce project staff and contractor time spent reviewing and submitting certified payroll. More than 401 projects were entered into LCP Tracker valuing $997,881,867.02 and 2,111,719.80 certified employee hours were entered by contractors.

Mowing in the median of a highway

LCP Tracker website
• In response to COVID-19, the Title VI/Nondiscrimination and ADA Program had various documents such as mask protocols, ND Smart Restart Door signs, and screening questions translated into Spanish to help serve the community.

• Title VI/Nondiscrimination and ADA Program, in response to Federal Highway Administration recommendations, changed the way internal program reviews were completed. Instead of programs conducting their own reviews, the Civil Rights Office now conducts these.

• In 2021, the Title VI/Nondiscrimination Program became the liaison between the North Dakota Department of Health New, Foreign Born, Immigrant (NFI) Board and the NDDOT. The purpose is for the NFI Board and NDDOT, to communicate and build a partnership, to address transportation needs and concerns.

• In this biennium, 36 DBEs were certified. Of those firms, 17 were North Dakota based and 19 were from out of state.

• In 2019 and 2020 we exceeded our OJT trainee completion goals of 18 trainees to finish their skilled craft approved programs.

• Began creating a new DBE dashboard that will be available on our website and inform contractors where we stand in our overall DBE participation for the fiscal year.

• Continuing to work on a new Bid Opening Submission System (BOSS) program with North Dakota Information Technology for contractors to electronically submit required DBE special provision documents for NDDOT bid openings.

• Total pieces of mail processed and sent out for the for 2019-2021 biennium was 3,469,751.

2. Bid Openings and Contracts

• Respond to prebid questions and issue addenda

• Administer construction project bid openings.

• Prepare bid reports and perform bid reviews.

• Administer contract award and contract execution process.

3. Construction Contract Administration and Records Management

• Manage the Construction Automated Records System (CARS) program that is utilized to administer construction projects.

• Maintain the Construction Records Manual.

• Oversee and implement eConstruction initiatives.

• Process payments to contractors, consultants, utilities, railroads, etc.

• Process change orders, time extension requests, and equipment rental rates.

• Administer dispute resolutions including contractor claims and demands for arbitration.

• Coordinate post construction reviews.

• Perform project engineering duties during the construction season.

• Check final project records and manage construction record files.

Construction Services
Phil Murdoff, Engineer

Responsibilities and Activities

The Construction Services Division’s responsibilities are consolidated into three primary functional areas, along with key activities.

1. Pre-Bid Services

• Prequalify bidders

• Perform plan reviews

• Establish project completion dates

• Advertise projects

The Construction Automated Records System (CARS) Updates

CARS is the NDDOT’s electronic construction records system. It is a web-based program used by the department and local public agencies to administer highway construction projects. The following upgrades were made to the CARS program during
the biennium.

• Schedule dropbox – This module enables CARS users to upload all schedules, narratives, transmittal letters, & engineer’s acceptance and rejection letters into CARS. It also contains a viewer tab which organizes and displays the results.

• General module enhancements including recalling estimates, finals tracking, adding automatic emailing notifications of reports, security role setups, progress estimate emails, civil rights forms, and testing firm updates.

Processing of Contracts via DocuSign

• Construction Services now processes all NDDOT highway construction contracts and related documents with an electronic signature process utilizing DocuSign. The result is an average of three weeks quicker turnaround compared to the previous paper and ink signature process.

Cognos Construction Dashboards

NDIT and Construction Services have developed dashboards for tracking and reporting current and past years construction projects. There are two dashboards (Executive and District) that show the following information:

• Overview – This shows the status on construction progress.
• Bid Opening Detail – This shows each respective bid opening in greater detail.
• Contract Status – This shows the status of projects (inactive, active or complete).
• Contract Amounts by Owner – This breaks down the overall dollars of contracts by owner.

These dashboards provide real-time data to all internal staff. This has made the process of gathering and reporting the information accurate and efficient.

Contractor Payments on Highway Construction Projects

• Total contract payments processed and approved for highway construction during the 2019-2021 biennium was $831 million.

Maintenance

Brad Darr, Engineer

Responsibilities and Activities

NDDOT property management, facilities, emergency responses; emergency relief for state highways, budgeting for maintenance operations, capital improvements, equipment, pavement marking, maintenance specifications; the pavement preservation program; Road Weather Information Systems (RWIS); static traffic control devices; Intelligent Transportation Systems (ITS); Billboard Program/Junkyard Program, safety and traveler information including load restriction and road condition reports.

Key Accomplishments

• Completed design and bid for the new Edgeley Section Building.
• Construction completed for new District Lab/North Dakota Highway Patrol remodel.
• Construction completed on a new Minot Driver License building.

• Awarded the contract for a new Driver License remodeling project in Fargo.
• Conceptual architect work completed for a combined Materials and Research Building and Grand Forks District Headquarters remodel.
• Continued Implementing 129,000 LB Large Truck Network segments to add to the 129,000 LB Highway Network as warranted.
• Completed ROW transactions sales:
  » One sale of a residential site in Dickinson
  » Two relinquishments to cities for continued public-use purposes (Wyndmere; Valley City)
  » One utility easement for public purpose (Minot)
- Four releases of easement interests (Board of University & Trust Lands; private parties).
- Worked with State Fleet on implementation of an Equipment Capital Asset Management Program upgrade as well as branding of NDDOT equipment.
- Received Autonomous Attenuator Grant. The equipment is installed and being tested.
- Awarded Autonomous mower contract to Grand Farms to study opportunities.
- Planned and executed the urgent hauling of personal protective equipment as a part of the unified command during COVID-19 pandemic.
  1. Worked with the NDDOH, planned the routes and worked with the districts on the staff and equipment necessary to get this accomplished.
- Assisted Planning Division in applying for a Transportation Management Center (TMC) RAISE Grant.
- The Maintenance Division worked with North Dakota Information Technology (NDIT) on upgrading the platform that our Traveler Information Map was built on allowing for additional functionality. Some of these included adding North Dakota Ag Weather Network information, the Upper Great Plains Transportation Institute supplied county information, a find my location feature, and adding reference points.
- Installed blue strobe lights to rear of all snowplow trucks to increase visibility and reduce the risk of rear end collisions.
- Developed a new program of pre-qualifying products and equipment before bidding to be sure NDDOT is purchasing heavy equipment and materials at the best quality and lowest cost.
Local Government
Paul Benning, Engineer

Responsibilities and Activities
The Local Government Division works primarily with Local Public Agencies (LPA’s) such as the 12 largest cities and the 53 counties in the state, other smaller LPA’s, and also Transit Providers, and the three Metropolitan Planning Organizations (MPO’s). Local Government assists and works with these entities in their project development (environmental clearance, plans, bid openings), planning activities, and programming of federal and state funds allocated to them regarding transportation-related activities and providing funds for transit services.

The division also works as a liaison between Federal Highway Administration (FHWA), Federal Transit Administration (FTA), other outside agencies, LPA officials, and NDDOT divisions and districts.

Program areas Local Government Division is responsible for:
- Interstate (urban areas)
- Urban Highways & Roads (Regional System and LPA owned federal aid roads)
- Urban Grant Program (UGP)
- County Roads (LPA owned federal aid routes)
- Bridges (LPA owned ≥20’)
- Administration of LPA Bridge Inspection and Load Rating Contracts
- Historic Bridges
- Federal Lands Access Program (FLAP)
- Safety (LPA owned roadways)
- Transportation Alternatives
- ND Small Town Revitalization Endeavor for Enhancing Transportation (NDSTREET)
- Special Road Fund (SRF)
- Small Rural Economic Development (SRED)
- Emergency Relief (ER) – Statewide on state owned roadways and LPA federal aid routes
- Township Disaster Assistance Program
- NDDOT Tribal Liaison
- MPO Coordination and Planning activities
- LPA Long Range Transportation Planning
- Transit
- Title VI, Sub-recipient monitoring and audits (LPA’s, MPO’s, and Transit Providers)

Key Accomplishments
- A $15 million discretionary grant was received to purchase new buses for rural and small urban transit agencies.
• Awarded $750,000 to townships affected by the floods in 2019 and 2020 under a new program established in the 67th Legislative Assembly.

• Awarded $72.7 million in Federal Emergency Relief funds for the State of North Dakota as part of floods that occurred in 2019 and 2020. This helped repair state and county roadways that were damaged.

• Partnered with LTAP/UGPTI to put on Bridge 201 classes across the state for LPA’s.

• Awarded seven projects under the NDSTREET program to assist smaller communities with upgrading their multi-modal facilities along the state highway.

• The $28 million-dollar Main Avenue reconstruction project in the city of Fargo was administered by the Urban Programs Section. This two-year construction project consisted of replacing 50-60-year-old underground infrastructure and an aging driving surface, while improving the pedestrian experience through this downtown corridor. The project included additional parking; a counterflow lane which offers another north railroad underpass crossing; and a dynamic messaging system to alert drivers of train traffic at the railroad crossing, thereby allowing them to make the decision to use one of three underpasses to avoid delays.

• Awarded seven projects under the Urban Grant Program for multi-modal transportation infrastructure improvements within the core business districts of urban cities.

Planning/Asset Management
Scott Zainhofer, Engineer

Responsibilities and Activities

Division goals are to enhance:

• High-quality and integrated data available to everyone.

• Communications relating to transportation performance to enhance quality of life.

• Transparent decision-making processes that increase effectiveness and add value.

• Insight into state, national, and international trends and future scenarios.

The division is responsible for planning and management programs, including, but not limited to:

1. Statewide transportation planning and special studies, such as:
   a. the long-range strategic transportation plan (Transportation Connection)
   b. developing and leading implementation of the statewide active and public transportation plan (ND Moves) with associated rural bike network classifications
   c. maintaining the Highway Performance Classification System
   d. developing the combined State Freight and Rail Plan, including maintaining the strategic Freight Network classifications and definition

2. Traffic, mapping/GIS, and roadway data collection, analysis, forecasting, and reporting.

3. Agency-wide asset management, including modeling:
   a. the current and predicted condition of the state highway system
   b. highway system funding needs
   c. level of service that can be provided based on
budgetary limitations
d. effects of budgetary tradeoffs among numerous department investment options.

4. Pavement performance evaluation and condition survey.

5. Program-level performance management (i.e. performance measure development, target setting, outcome reporting, etc. for major agency-level program areas).

6. Manage rail programs, such as the rail loan program and rail-highway crossing signals, closures, and surfacing improvements.

7. Policy and legislation evaluation and research.

Key Accomplishments

1. The Roadway Data Section led the multi-agency effort to modernize the State Highway Map to include numerous features showcasing North Dakota’s local communities. New features include QR codes linking to local visitors’ bureau websites and insets showing additional areas of interest.

2. The Traffic Data Section managed 81 automatic traffic recorder (ATR) and 16 weigh-in-motion (WIM) sites, in addition to collecting portable counts for more than two-thirds of the state (roughly 5,600 locations). Using the ATR/WIM network, along with third-party probe data, the team worked with the Upper Great Plains Transportation Institute to provide daily traffic updates to the State Emergency Operations Center, Unified Command for COVID-19 and wildfire responses throughout most of 2020.

3. The Planning/Rail Section led the effort, in cooperation with multiple state agencies and staff throughout NDDOT, to update NDDOT’s long range transportation plan (LRTP). Transportation Connection is the foundation of our family of strategic plans and includes many firsts for NDDOT: 1) First forum where only Spanish was spoken, 2) First plan built almost entirely from virtual public and stakeholder involvement, 3) First plan where over 50% had never participated in an LRTP. Additionally, the outreach effort generated more than 9,000 public views, likes, and comments.

4. The team supported numerous transportation partners in preparing federal grant applications and obtained $45,261,000 in new discretionary grant funding (with an additional $15 million spearheaded by another division, bringing NDDOT’s total to more than $60 million for the biennium). These grant funds will provide preliminary engineering at the intermodal port in Minot, transit support across North Dakota, reduced roadway flood risk near numerous wetlands and ponds in central North Dakota, and improved safety and mobility along US 52 with the addition of passing lanes and improved shoulders. Some of these successful grant applications were made possible, in part, by the authority provided by the legislative body for matching federal transportation grants.

5. Other accomplishments: Obtained federal designation of North Dakota’s first United State Bike Route System route (USBRS 30...
along highway US 12 in southwestern North Dakota), developing the federally required and new Model Inventory of Roadway Elements databases for interchanges and ramps, and segmenting approximately 42% of all statewide roads (regardless of ownership) for the MIRE databases.

**Programming**

Jane Berger, Engineer

**Responsibilities and Activities**

The Programming Division is responsible for coordinating the development of the Statewide Transportation Improvement Program (STIP), managing federal funds, compiling information for bidder’s packages, implementing the department’s project scoping process, managing the Highway Safety Improvement Program (HSIP) and completing traffic operations activities. These responsibilities include a systemwide perspective as well as project level involvement from early project inception through project completion.

**Key Accomplishments**

During the 2019-2021 biennium the Programming Division continued to make progress in areas such as safety, project programming, and process improvements.

**Tribal Safety**

Assisted in a legislative change to allow the department to use federal safety funds more broadly in tribal safety project development. This will improve the department’s ability to assist the tribes with implementation of tribal safety infrastructure projects. Also continued to collaborate with all safety partners to fully program the federal safety funds.

**Project Programming**

Developed a 10-year infrastructure plan of projects to address the need to eliminate roadway load restrictions, eliminate roadway width restrictions, and improve deficient bridges. Continued development of a shelf-ready program of projects to be prepared for funding opportunities.

**Paperless Processes**

To adapt to the many changes over the past two years, we took the opportunity to convert most of our processes to paperless. During this transition we found ways to also streamline those processes and make information more accessible to others.
Responsibilities and Activities

North Dakota’s transportation system is divided among eight regional districts. The district engineer is responsible for all the construction and maintenance activities in their designated region. District construction activities include monitoring the conditions of bridges and roadways to determine which roadways should receive the highest priority for reconstruction based on need and available funding. The district then works with the appropriate divisions in the Central Office to establish short and long-term construction programming of the projects. Planning and design of individual projects is a joint effort with the appropriate divisions within the department. The contract administration of the projects is then handled by the district construction staff.

Maintenance activities consist of roadway and non-roadway maintenance. Included in the roadway activities are crack sealing, blade patching, seal coats and snow and ice control activities. Non-roadway maintenance activities include the issuing of utility permits, drive permits, the Adopt-A-Highway Program, the Interstate Haying Program, the Noxious Weed Program, the Billboard Program, and dealing with all other right of way issues.

The districts also have a partnership with cities and counties to work together on transportation issues. Included in this process is the Bridge Inspection Program in which district personnel inspect the bridges for these entities.
Bismarck District
Larry Gangl, Engineer

Responsibilities and Activities
Oversee the construction and maintenance on 2,600 lane-miles of district roadways. Our mechanic shop administers the state fleet operations in the Bismarck/Man-dan area along with maintaining our fleet of 60 snow plow trucks and numerous tractors, loaders, and various pieces of highway maintenance related equipment.

Key Accomplishments
• Designed and planned for future construction of a new district office facility.

Remote-control vehicle used to inspect pipes and culverts
• Used technology to increase efficiency. For example, using a remote-control vehicle to inspect pipes.
• Completed remodel of our inventory areas and massive improvements in our purchasing processes.
• Successfully completed 61 construction projects totaling over $135 million.

Constructions on 43rd Avenue in Bismarck
• Implemented a preventative maintenance program for all our roadway assets such as culverts, fences, bridges, signs and safety devices.

Devils Lake District
Wyatt Hanson, Engineer

Responsibilities and Activities
The Devils Lake District is located in the north central part of the state and has 2,304 lane-miles on the state highway system. The district has 68 employees who handle duties related to construction, plan development, roadway maintenance, sign maintenance, shop mechanics and welding, monitoring other transportation related programs throughout the district, and administration of the district.

Key Accomplishments

Construction
• Completed a full depth reclamation and widening on westbound US 2 from Mauvais Coulee to Devils Lake, on US 281 through New Rockford to the south junction of ND 15, and on US 281 within the Spirit Lake Nation (SLN).

Construction on US 2
• Improved safety and load carrying capacity on ND 20 north of Devils Lake by implementing a grade raise and widening in areas that were being threatened by water.
• Added shoulders and increased the load carrying capacity on ND 200 from Hurdsfield to the junction of US 52.
• Completed emergency pipe repairs to a cattle pass that washed out ND 200 near Bowdon.
• Completed an inslope repair on eastbound US 2 east of Rugby.
• The biennium totals of Preventive Maintenance Overlay projects and Seal Coats within the district were 46 miles and 255 miles.
Additionally, our construction personnel lent a helping hand to neighboring districts as the need and availability arose.

**Maintenance**

During the 2019-2021 biennium, Devils Lake District maintenance forces performed a wide variety of activities to improve/extend the life of roadways and maintain ride quality, including:

- Enhanced safety by addressing public concerns in a timely manner.
- Bridge maintenance included epoxying of cracks on all decks and working with the bridge inspectors when it comes to maintenance items.
- Mowing was done according to established guidelines. The Section Supervisors reached out to the ones that were haying and made sure they had an opportunity to get the hay.
- Improved the ride on 86 miles of depressed, transverse cracks with the use of the Mini-mac machine.
- Two Dura-patchers were used extensively throughout the district to fix potholes and areas of distressed asphalt.
- Crack sealed district roadways, according to pavement preservation guidelines.
- The use of mastic material has been introduced as a beneficial repair for challenging roadway repairs. The mastic material has been used throughout the district roads.
- Shoulder repairs were done on US 2 eastbound from Leeds to Devils Lake.
- Addressed many drainage issues within the right of ways. Several approach pipes were replaced as well as cleaning out the ends of the centerline pipes.
- Continued maintenance of signs, trucks, equipment, buildings and yards.
- Sign shop has maintained and repaired many of the destination lights.
- Maintained the Crary Rest Area in a way that best represents the 164th Infantry and NDDOT.
- Assured that the roads in the Peace Garden are maintained at a high standard.
- Cross-trained transportation technicians assisted in construction included paving, striping, grading projects and administration of seal coat projects.
- Group of employees removed and replaced the concrete floor in the District Shop. They also updated the heating system, water and air supplies.
- Our administrative staff, along with the shop personnel, managed and maintained the state fleet pool of vehicles located at the district for use by other agencies in the area.

The winters during this biennium presented challenges including blizzards as well as blowing snow events which forced closures in several locations; crews and mechanics put in many long hours dealing with snow and ice issues, forfeiting weekends and holidays with family to keep the highways safe for the state’s residents and visitors.

**Dickinson District**

Rob Rayhorn, Engineer

**Responsibilities and Activities**

The Dickinson District is responsible for 2,005 lane-miles of roadways which includes 400-lane miles of interstate, four roundabouts and approximately 300 bridges and box culverts. The employees in the district handle duties related to roadway construction and maintenance, sign and guardrail maintenance, vehicle and equipment repair and administration.

The construction activities include monitoring the conditions of bridges and roadways and prioritizing projects based on needs and funding. Coordination is done with numerous divisions during project development. The contract administration of the construction projects is handled by the district construction staff. Maintenance activities consist of roadway related maintenance. Examples include crack sealing, pavement patching and sealing, bridge and culvert preventative maintenance and repairs, sign and guardrail
maintenance, and snow and ice control activities. The shop manages repairs for the district trucks and equipment.

The district administration issues permits such as drive or utility permits, manages the following types of programs including; Adopt-a-Highway, interstate hay harvesting, noxious weed, billboards, and deals with all other right of way issues. The district works closely with the city, county and tribal authorities on transportation related issues.

Key Accomplishments

- Built a state-of-the-art brine making facility capable of producing 2,500 gallons of brine per hour for use during snow and ice control.
- Created a nearly one-acre pollinator planting consisting of native grasses and flowers at the Beach Visitor Center.
- Added blue lights to snowplow trucks and snow removal equipment to enhance safety.
- In 2019 completed a 13-mile westbound interstate reconstruction project near Hebron and the full depth reclamation of US 85 north of Amidon.
- In 2020, completed a pedestrian bridge at the west Dickinson I-94 Interchange, a 30-mile widening and paving project on ND 22 from New England south to US 12, and a full depth reclamation project on ND 8 through Halliday to Twin Buttes.

Responsibilities and Activities

The Fargo District is located in southeastern North Dakota. It is responsible for 1,827 lane-miles of roadway. The district had 80 full–time employees assigned in four sections: highway engineering, roadway maintenance, vehicle maintenance, and administration.

Key Accomplishments

- Construction

In 2019, construction staff completed several projects. The completion of West Fargo’s Sheyenne Street Interchange at I-94 culminated the first of a kind design in North Dakota, a modified single-point interchange which cost $19.4 million and was part of a bigger $70 million urban corridor investment. The interchange greatly enhanced the road network’s ability to handle the increasing traffic volumes related to business and residential growth in the southwest segment of the metropolitan area. The city of Fargo also started the downtown Main Avenue reconstruction project. The first year of work included reconstruction of the 5-lane roadway into a 3-lane facility with parking. A multi-lane roundabout was constructed at the intersection of Main Ave. and 2nd Street to...
help smoothly transition from the 5-lane roadway to 3-lanes and improve the safety of the intersection by eliminating left turns. Additionally, all the city utilities and storm sewers were replaced and upgraded from 2nd Street to Broadway. Some of the underground utilities were over 105 years old.

Also in 2019, the district completed 10 miles of northbound I-29 reconstruction from mile 33 to the Christine Interchange. ND Highway 13 had a 25-mile mill and overlay project from Gwinner to Wyndmere, which was the first asphalt placed on the roadway since 1998. This important freight corridor had been maintained with chip seals and one micro-surfacing project for the past 21 years. Late in the 2019 construction season, the riverbanks of the Wild Rice River bridges on I-29 at mile 54 began to slide causing structural integrity concerns. An emergency project was initiated which included landslide detection, instrumentation and median crossovers, so the bridges could be lengthened beyond the slide area the following year.

In the second year of the biennium, construction was impacted by COVID-19 restrictions. The virus had minimal effect on staffing and construction efficiencies, but roadway traffic was significantly reduced, making urban construction with lane reductions and detours much easier to manage.

The 2020 construction season was focused on completing the Fargo Main Avenue project from Broadway to University Drive. This project was a continuation of the previous year’s work changing a 5-lane highway to 3 lanes. It included installation of dynamic message signs to alert traffic to rail traffic, a HAWK pedestrian crossing east of University Drive to enhance pedestrian crossing safety and provided for 2-way traffic under the University Drive railroad bridge at Main Avenue. The district also completed 10 miles of southbound I-29 reconstruction from mile 33 to the Christine Interchange.

Also in 2020, the department began installing high tension median cable guardrail (HTMCG) which is designed to prevent errant vehicles from crossing the median and going head-on into traffic moving in the opposite direction. Ten miles of HTMCG was installed on I-29 in the metropolitan area in the highest traffic areas without existing concrete median barriers.

During the biennium, 124 miles of district highways had chip seals completed. Chip seals are among the most cost-effective methods of extending a pavement’s life.

**Maintenance**

Much of the summer of 2019 was spent on recovery from the snow melt from the snowy April. A lot of drainage problems and separated culverts showed up after the moderate spring flooding. This was followed by a very wet fall and then an October storm that set records for snowfall.

NDDOT’s snow and ice control costs for the winter of 2019-20 were just above the five-year average. The winter included three blizzard closures of I-94 in the Fargo area and four of I-29, all occurring between early October and mid-February. The blizzard of January 17th to 19th was particularly impactful to the eastern half of the state. This blizzard effectively closed most state highways in the southeastern part of the state as the roads quickly became impassible and couldn’t be kept open until the winds subsided.

The summer of 2020 was highlighted by dedicated use of mastic to repair roadway potholes, alligatored pavement, and wide pavement joints too large to be sealed. Mastic asphalt repair proved very beneficial by providing long-lasting repairs. By repairs lasting longer, workers don’t have to work in traffic as often, reducing moving traffic exposure. Fewer repair trips also resulted in less traffic disruption.

The winter of 2020-21 was unseasonably warm after early January. Snow and ice control costs were the lowest they had been in the last six years.

During the biennium, district maintenance personnel completed 1,041 lane-miles of crack sealing, chip sealed 17 miles of 2-lane-highway, and completed 16 miles of shoulder repair. Roadside ditch repair continued to be a time-consuming challenge. Fence repair was also initiated north of Fargo and to the west. Approximately 20 miles of I-29 was re-fenced north of Fargo along with six miles of I-94. Approximately,
1,100 posts were replaced with all new cabling for the 26 miles.

**General**

During the biennium, much of the district headquarters building was remodeled with Fargo Driver License staff moving to a leased facility in the major shopping area of 13th Avenue South in Fargo. The area vacated was expanded and upgraded to ADA standards with all new restroom facilities and ventilation. The building’s heating and cooling system was also worked on, and we now have a more equal temperature distribution throughout the building. The remodeled area now houses the Southeast Region of the Highway Patrol and the district materials testing lab. Additionally, new snowstorm closure gates were installed throughout the district. The new gates have automatic flashing beacons which trigger when the gate is lowered.

**Grand Forks District**

*Ed Pavlish, Engineer*

**Responsibilities and Activities**

The Grand Forks District is in the northeast corner of the state and provides administrative support, construction, operations, maintenance, and fleet support for 1,980 lane-miles of state highways in six counties.

**Key Accomplishments**

**Construction**

- The downtown Demers Avenue reconstruction project in 2019 (finished in 2020) was a $6.9 million dollar reconstruction project. The project focused on new pavement, improved lighting, updated traffic signals, IT systems, new storm sewer installation, and beautification with the addition of “street scape elements” such as decorative sidewalks, decorative planters, trees, benches, and receptacles throughout the downtown area. This project achieved the governor’s vision of “Main-street Initiative,” providing for a vibrant downtown area, attractive to all citizens in Grand Forks and the surrounding area. Centerline concrete replacement (CPR) on northbound I-29. Completed 9.3 miles of centerline replacement of concrete. This work is the longest segment of replacement of this kind in the state. The goal of the project was to repair the deteriorated center line joint and panel corners without doing a full reconstruction project.

- The North 5th Street Project was worked on in the summer of 2020. The US 2 Business Loop Project consisted of a mill and overlay, reconstruction of a 1/2 block area, CPR, grinding, ADA installation, and continued street scape elements. This project connects the north bound leg off Demers Avenue (on 5th Street) and incorporated many of the same features from the Demers Avenue Reconstruction Project in 2019. The city of Grand Fork’s vision is to capture these features and include them in this area of Demers Avenue and North 5th Street is the first in several projects that will be conducted over the next few years.

- 32nd Avenue South (US 81B) Grand Forks - constructed new left turn lanes for safety & capacity and installed new traffic signals at all major intersections along the 32nd Avenue corridor. The placement of the new turn lanes now allows motorists a visual line of site of traffic coming from the opposite direction before proceeding into the intersection. Ultimately, this project will result in a safer route for the traveling public.
Maintenance

• April 2020, the Grand Forks District experienced spring flooding. Maintenance crews were busy on I-29 and ND 54 to keep roadways safe and open to the traveling public. NDDOT maintenance crews set up water-inflated property protectors (WIPP) to protect a portion of I-29 from going under water.

• Summer 2020, Grand Forks and Devils Lake District’s purchased one mastic machine that will be shared between the two districts. This type of repair will allow the districts to create a longer lasting repair to areas that see reoccurring potholes, which will be a benefit to safety and ride quality of the traveling public.

• Each summer, Grand Forks District selects roadways that see the most severe transverse cracking, which create “thumps” for the traveling public. The district has done miles of repairing these transverse cracks with the minimac machine on ND 66, ND 18, ND 5, and Interstate Ramps. The Grand Forks District received various compliments from the traveling public on these types of repairs and have been told “whatever it is that you are using to fix those thumps, keep on doing it!” Our crews take pride on the maintenance and ride quality of their roads, so to get compliments like these from the traveling public is very much appreciated.

• Maintenance crews constructed a new salt brine building at Grand Forks District Headquarters. Salt brine is a solution with an ag-based anti-icing liquid, water, and salt. This brine solution can be used as a pre-treatment, anti-icing tool, as well as a reactive de-icing technique.

Minot District
Korby Seward, Engineer

Responsibilities and Activities

The Minot District is located in the northwestern part of the state and is responsible for the construction and maintenance of over 2,300 lane-miles of highways. The district has 70 full-time employees. Construction and maintenance activities for highways in the Minot District are planned, designed, and scheduled by the district. Minot maintenance is comprised of eight outlying maintenance sections and two sections in Minot. Support services are provided to the cities, counties, utilities, United States Air Force, and public that range from everyday activities to emergency responses. District maintenance staff provides winter escorts to nuclear warhead and missile movements to these sites on state, county and township roads.

Key Accomplishments

Construction Contracts

• Completion of a roadway widening project on ND 37 in 2020 and US 83 in 2021. ND 37 is a 20 mile stretch between Parshall and Raub and included widened shoulders, and new asphalt surfacing. Total cost for the project was $14.9 million. US 83 is a 15.5 mile stretch between the west junction of US 83 and ND 5 and the east junction of US 83 and ND 5 and included widened shoulders, box culvert extensions, milling and new asphalt surfacing. Total cost for the project was $7 million.

• The Minot District assisted the Williston District by providing construction engineering services on a 13-mile concrete overlay on US 2 between Blaisdell and Berthold.

• A structure over the Souris River on US 2 had a bridge deck overlay in 2021 with a cost of about $550,000.

• 106 miles of asphalt overlay totaling $17 million was bid in 2020-2021.

• 141 miles of chip seal and micro surfacing treatments were bid in 2020-2021.

• The Minot District also oversees the Missile Access Road projects for the Minot Air Force Base. During the 2020-2021 Biennium $7.2 million in projects were bid. These projects included aggregate surfacing, inslope repairs, culvert replacement, riprap, concrete blanket placement.

Maintenance

• The district sign shop installed 14 “Continental Divide” signs throughout the district.

Widening shoulders on ND 5
• The sign shop also installed four new “Welcome to North Dakota” signs at each of our border entries as well as 15 new “State Park” signs in the Garrison and Bottineau sections.

• The NDDOT Travel Information Map is kept up to date by maintenance employees using iPads.

• Maintenance employees continue to provide excellent snow and ice control services working long hours, weekends and holidays.

• Along with their normal duties the maintenance sections have worked together on numerous projects outside of their own sections, providing manpower and an extra level of safety. Some of these projects and additional duties included the following:
  » Building of specialized equipment for roadway work. (Example, slide in brine tanks, centerline rumble machine patcher, drainage tools for pipes.)
  » Painting bridge retaining walls.
  » Recycle shoulder program district wide before future paving events.
  » Started a preventative maintenance truck inspection program district-wide.

• Shop installed approximately 100 NDDOT emblems on vehicles, plow trucks, and equipment.

Valley City District
Jay Praska, Engineer

Responsibilities and Activities
The Valley City District is located in the south-central portion of the state. The district is responsible for the construction and maintenance of 1,965 lane-miles of roadway. We have 424 lane-miles on the Interstate system and 1,541 on the state highway system. The district has 70 full time employees in four primary areas: roadway maintenance, roadway construction, vehicle and equipment maintenance, and administration.

Responsibilities include administration of roadway construction contracts, roadway designs, roadway maintenance, maintenance of roadside features, snow and ice control, right of way management, and rest area maintenance. The district is the main contact for questions concerning access points to state highways, utility permits, outdoor advertising, right of way issues, drainage issues, snow and ice control and many other public concerns.

Key Accomplishments
• Completed the I-94 reconstruction project on the eastbound roadway from Eckelson Interchange to Oakes Interchange. This was the districts first interstate reconstruction project in over 16 years.

• Snow and ice control requires a large effort from the district staff to respond to weather conditions
and provide a safe driving condition for the public.

- Completed roadway slide repairs and subgrade repairs on I-94 and I-94 Business Loop through Valley City and the Sheyenne River Valley.
- Completed the upgrade of the sanitary sewer system at the Ellendale Section building. Removed the existing septic tank system and connected to the city’s sanitary sewer system.
- Completed emergency grade raises at four locations throughout the district due to high water overtopping the roadway and completed two permanent grade raises on I-94 due to high water.

**Williston District**

Joel Wilt, Engineer

**Responsibilities and Activities**

The Williston District is responsible for the construction and maintenance of highways in the northwest corner of the state. The district is at the heart of the state’s oil production and has North Dakota’s three largest oil producing counties, McKenzie, Williams, and Mountrail. This makes the district transportation system one of the most impacted in the state. Burke and Divide counties are also part of the Williston District. The region includes the communities of Williston, Watford City, Stanley, New Town, Crosby, Tioga, and Bowbells. The district provides support for over 2,052 lane-miles of roadway. This includes snow and ice control through the winter months to ensure safe travel for the public, and pavement preservation activities throughout the summer months. Maintenance forces also mow and remove debris during the summer months to promote a good image of North Dakota.

**Key Accomplishments**

**Administration**

- Utility Permits processed - 211
- Approach Permits processed - 26
- Temporary Water Permits processed - 94
  (Temp. movement of non-hazardous materials in state R/W)

**Maintenance**

District snow and ice control efforts over the 2019-2020 winters were normal. Our maintenance forces were able to catch up with building repair and road maintenance issues.
• Building a new salt brine manufacturing building.
• Paving the district yard.
• Constructing parking lot and landscape new Driver License building.
• Adding a district equipment building to house snowplows.
• Constructing a new materials laboratory.
• Performed 48,882 feet of centerline rumble strip restoration.

**Construction - $130.1 Million**  
(contracts only)

A short list of key projects are listed below:

- Placement of gravel shoulders on 10 miles of US 52
- Performed 122,115 feet of asphalt seam repair using mastic on ND 8, ND 22, & ND 68
- Placed scotch patches on 59 miles of US 2

**US 85 Long X Bridge near Theodore Roosevelt National Park**

- ND 1804, Intersection with 7th Avenue East in Williston, intersection realignment & reconstruction ($1.3 million)
- US 2, WB lanes from Blaisdell to 4 miles west of Berthold, concrete overlay (12.6 miles, $12.9 million)
- ND 1804, Lund’s Landing to the Epping Road, reconstruction with widening, passing lanes, and asphalt paving (12 miles, $35 million)
- US 85, from Junction US 2 to Junction ND 5, chip seal coat (39.6 miles, $1 million)
- ND 73, from Junction ND 23 East, full depth reclamation with cement stabilization and widening with asphalt paving (5.8 miles, $11.3 million)
- ND 23, Four Bears Bridge, deck overlay ($4.3 million)
- US 85, wildlife structure, repair and modifications ($1.9 million)
NDDOT History

1913
• First State Highway Commission formed with three members. Governor L.B. Hanna chairman. No extra compensation.

1917
• To get newly available federal funds, North Dakota abolished old commission, created new five-member body: governor as chairman, commissioners of agriculture and labor, and two members appointed by governor.

1920s
• By mid-1922, construction completed on more than 1,000 miles of state highway: 20 were graveled; the rest were only earth-graded.

1930s
• 1935: First driver licenses issued.
• The department employed thousands with federal relief funds during the Depression.
• In six years in the 1930s, under six governors, seven men served as highway commissioner.

1940s
• During World War II there was a great shortage of highway materials.
• Many highway engineers and other employees left for armed services.

1950s
• Federal Aid Highway Act of 1956 created.
• 1956: First interstate contracts in North Dakota were bid for a section of US 10 between Valley City and Jamestown.

1960s
• Interstate work continued.
• 1968: Highway Building on State Capitol

1970s
• 1977: North Dakota first state in union to let contract for final stretch of I-29 (between Drayton and Pembina).

1980s
• With the completion of the interstate, department needs changed from construction to maintenance. This philosophy exists 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: North Dakota Highway Department became Department of Transportation (NDDOT). Motor Vehicle Department merged into NDDOT as Motor Vehicle Division.
• For the first time, more state funding than just enough to match federal funds is necessary to preserve system built over 75 years. System deteriorating faster than state can maintain it.
• February 1997: After months of working with consultant, 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 NDDOT 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.

2005
- The new Four Bears Bridge was opened in October, followed by the demolition of the old bridge.

2006
- Francis Ziegler is appointed by Governor John Hoeven as the new NDDOT director.

2007
- TransAction II, the updated statewide strategic transportation plan, was published in the spring of 2007.
- The I-29 reconstruction projects through the Fargo corridor were completed. Starting in 2000, these projects included the reconstruction of six interchanges, seven new loop ramps, 15 new bridges and the expansion of two bridges.

2008
- NDDOT completed the four-laning of US 2 between Williston and Minot with the total of 97 miles of four-lane highway added to the system when the project was finished in October.
- The new Liberty Memorial Bridge in Bismarck-Mandan was completed in November.

2009
- 2009 was one of the largest road construction programs in North Dakota. The NDDOT awarded bids on approximately 292 projects which amounted to $383 million in road improvement projects.
- NDDOT launched the new NDteendrivers.com website aimed at informing teens about safe driving habits.

2010
- The new Drayton-Robbin Bridge crossing the Red River near Drayton was completed.
- NDDOT launched a new law enforcement program across the state called the Regional Driving Under the Influence (DUI) Task Force in an effort to deter drunk driving throughout North Dakota.

2011
- Construction was conducted for the US 85 Super 2 Project, with intermittent passing and turn lanes, between Watford City and Williston.

2012
- Completed temporary bypasses on the northwest side and northeast side of Williston. Also, completed first roundabout project on a state highway on ND 22 near Killdeer.

2013
- Governor Jack Dalrymple appointed Grant Levi as the new NDDOT Director.
- The 2013 construction program is estimated to bid out approximately $878 million in infrastructure projects across the state, making it the largest construction program in state history.
- NDDOT launched a County Safety program to provide additional safety measures on rural roads. The safety program provides funding for implementation of safety measures that may include: enhanced signing for road curves; upgraded signing or pavement markings to improve visibility of intersections; larger regulatory or warning signs, and intersection warning rumble strips.
2014
• NDDOT worked on four-laning US 85 between Watford City and Williston; constructed several truck bypasses and truck reliever routes around the communities of Alexander, Dickinson, New Town, Watford City and Williston. The department also renewed nearly one million vehicle registrations.
• The 2014 customer satisfaction survey results illustrated the top four categories that ranged from 83% to 96% in satisfied or very satisfied were: traveler info, motor vehicle, driver license, and communications.

2015
• The department worked on a large construction program across the state which included building two roundabouts – one east of Watford City on ND 23 and ND 73, and one near Fairview on ND 200 and ND 58.
• The NDDOT issued a new flat license plate, called the Sunrise Plate. The new flat plate replaced the embossed Buffalo Plate and Lewis and Clark Plate.

2016
• Completed large construction projects including the Killdeer Truck Bypass, Carrington Roundabout, Dickinson State Avenue Railroad Bridge and West Fargo Main Avenue projects.

2017
• Governor Doug Burgum appointed Tom Sorel as the new NDDOT Director.

2018
• Other major construction projects completed included work on I-94 in Bismarck, Valley City and Fargo and Burdick Expressway in Minot.
• North Dakota was selected as one of 10 participants in the Unmanned Aircraft Systems (UAS) Integration Pilot Program through the US DOT. Through this three-year program, NDDOT along with partners including North Plains UAS Test Site, will help shape the future and safety of UAS (drones) in America.
• Completed the US 83/Broadway Bridge Replacement Project in Minot. The new bridge is nearly 1,000 feet long and due to newer engineering and design capabilities the bridge has fewer piers than the old bridge built in the 1960’s.
• Federal and state officials from US Customs and Border Protection, US Department of State, US General Services Administration, Federal Highway Administration and the North Dakota Department of Transportation completed border crossing upgrades at the Pembina-Emerson Port of Entry.

2019
• Governor Doug Burgum appointed Bill Panos as the new NDDOT Director in September 2019. Prior to joining NDDOT, Panos served as director for Wyoming’s Department of Transportation.
• Completed the reconstruction of I-94 and Sheyenne Street Interchange, along with the Sheyenne Street corridor from 13th Avenue West to 40th Avenue West.
• Completed the Northwest Truck Reliever Route north of New Town. The project, is the final portion of the truck reliever route around New Town.
• The NDDOT launched a new online bidding opportunity to customers who are interested in purchasing vehicles from the State Fleet Vehicle Auction. The event was also simulcasted online to provide customers the opportunity to place their bid from anywhere using a computer, smartphone or tablet. The onsite auction is held at regular locations in Bismarck and Fargo.
• The NDDOT received a four-year waiver from the Federal Aviation Administration (FAA) to operate Unmanned Aircraft Systems (UAS) over people.

2020
• The NDDOT announced Kidder County Public Schools as the first “Vision Zero School” in North Dakota. Schools who participate in the program
will receive promotional materials featuring student leaders to help promote traffic safety and will be featured on Vision Zero’s website, Facebook, and Twitter.

- NDDOT employees teamed up with the North Dakota Department of Health to deliver personal protective equipment across state as part of the COVID-19 relief effort. These drivers hauled 40% of the personal protective equipment in the state medical cache to 49 hospitals. Some of the equipment included gowns, gloves, and masks.

- Launched an updated online travel information map called ND Roads. This new travel map, which replaced the North Dakota Travel Information Map, features several upgrades and provides a consistent platform across web-based and mobile applications.

- North Dakota is one of four states selected by the National Governors Association for Best Practices to participate in a six-month learning collaborative to address impaired driving. The goal is to strengthen and leverage data strategies to reduce drunk and drugged driving-related injuries and fatalities.

- After a postponement due to COVID-19 restrictions, the State Fleet Auction was held entirely online for the first time. The online format led to increased participation and allowed customers to bid remotely. The auction resulted in selling 75 vehicles which generated more than $1 million.

- Hosted federal, state, and local officials to demonstrate the first autonomous impact protection vehicle at the Grand Farm Test Site near Horace, ND. The autonomous vehicle will improve safety in work zones by removing the driver from the impact protection vehicle during normal operation. Impact protection vehicles are typically human operated and are designed to protect road construction crews from distracted motorists in work zones.

- U.S. Transportation Secretary Elaine L. Chao announced that the NDDOT was selected as one of eight participants in the Unmanned Aircraft Systems (UAS) BEYOND Program.

BEYOND is the next phase of the UAS Integration Pilot Program (IPP) which will extend the federal program four more years.

- North Dakota’s highway system ranks first in the nation in overall performance and cost-effectiveness, according to the Annual Highway Report published by the Reason Foundation.

- Launched new mobile app called ND Drive. This app enables users to conduct various driver license and motor vehicle transactions on any mobile device or tablet.

- The former Long X Bridge was dismantled, and a portion moved to a new location near Linton. This portion of the bridge was adopted and will be reconstructed by a North Dakota rancher. This process will help preserve a piece of history for the state.

- Launched ND Sober Ride – a program aimed at reducing the number of impaired drivers on North Dakota roadways by offering a free or discounted ride through ride-hailing vouchers. These vouchers are available during specific holidays and events where individuals may overindulge.

- Finalized the long-range transportation plan, also known as Transportation Connection. This plan looks out 25 years into the future and helps to identify plausible scenarios for transportation in the state. Transportation Connection reflects a new approach to how NDDOT will plan for and address emerging challenges in maintaining the state’s transportation system.
NDDOT Awards

Awards received in 2019

The North Dakota Department of Transportation was awarded an Engineering Excellence Award during the American Council of Engineering Companies (ACEC) 2019 Award Gala for the Sheyenne Street Corridor Study in the Fargo District.

Wes Woehl, Bismarck Shop, was recently presented with the North Dakota Highway Patrol’s Colonel’s Award of Excellence. Woehl was nominated by Trooper Steven Mayer. The award is presented to state employees and private citizens as a token of the colonel’s appreciation for efforts and activities that benefit the North Dakota Highway Patrol and the state of North Dakota.

Melia Shaw, Driver License Division (Minot) was named as the 2019 American Association of Motor Vehicle Administrators (AAMVA) Certified Driver Examiner of the Year for North Dakota. Shaw was nominated for her leadership and her excellence in customer service. Congratulations to Shaw for her efforts!

North Dakota’s highway system ranks first in the nation in overall cost-effectiveness and condition for the second straight year, according to the Annual Highway Report published by Reason Foundation. In highway safety and performance categories, North Dakota ranks 4th in traffic congestion, 1st in urban interstate pavement condition and 9th in rural interstate pavement condition, and 43rd in structurally deficient bridges.

The Broadway Bridge replacement project was recently named the 2019 Gold Star winner for excellence in concrete in the bridge category at the Ready Mix & Concrete Products Association’s annual convention.

The City of Minot, in conjunction with the North Dakota Department of Transportation, replaced the aging bridge structure, which was built in 1962, and expanded the bridge to two lanes of northbound and two lanes of southbound traffic in 1971.

Awards received in 2020

The North Dakota Department of Transportation’s (NDDOT) Pop-Up Demonstration Projects won a regional award in the “Quality of Life/Community Development, Small Project” category in the 2019 America’s Transportation Awards competition.

Troy Gilbertson, Fargo District Maintenance Coordinator, received the 2019 Governors Award for Excellence in Innovation. Gilbertson was selected for his innovative vision using existing equipment for new solutions.

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The Sheyenne Street/I-94 Interchange Reconstruction Project was recognized by the North Dakota Society of Professional Engineers (NDSPE) as the 2019 Outstanding Project Design Award.

The North Dakota Department of Transportation worked closely with the city of West Fargo and the prime consultant, KLJ, to complete a Modified Single Point Urban Interchange (MSPUI) design which addressed the unique travel patterns of Sheyenne Street.

For the ninth year in a row, Robin Stephens (State Fleet) has won the Outstanding Safety Instructor Award for her excellence in teaching our state employees safe driving skills.

The American Association of Motor Vehicle Administrators (AAMVA) announced the NDDOT Safety Division as the recipient of the 2020 Public Affairs and Consumer Education (PACE) Overall Campaign Award (budget under $50k) for their Nelson Rural Roads campaign.

Team member Jen Blumhagen, Assistant Motor Vehicle Director, was named recipient of the 2020 Governor’s Heritage Award for Excellence in Citizen Focus.

Eric O’Toole was recognized as 2020 American Association of Motor Vehicle Administrators (AAMVA) Certified Driver Examiner of the Year for the state of North Dakota.

Awards received in 2021

The NDDOT was recently presented with the 2020 Transportation Achievement Award by the North Central Section of the Institute of Transportation Engineers (NCITE) for our role in the Fargo Main Avenue Reconstruction Project.

The American Association of Motor Vehicle Administrators (AAMVA) has announced the NDDOT Safety Division as the recipient of the 2021 Public Affairs and Consumer Education (PACE) Overall Campaign Award (budget under $50k) for their Melanie Johnson Distracted Driving campaign.

The Asphalt Pavement Alliance (APA) recently honored the NDDOT with a National Award for Perpetual Pavement for ND Highway 5, an 11.3 mile section of highway in Pembina County. This honor was given in 2019, but due to the recent pandemic, the presentation was made at this year’s asphalt conference.

NDDOT recently received three American Council of Engineering Companies Engineering Excellence Awards. The projects that won awards were ND Hwy 73 Landslide Repair – Barr Engineering, US Hwy 85 Environmental Impact Statement, and I-29 Pembina Border Crossing.

The I-94 pedestrian bridge project received a 2020 North Dakota Ready-Mix & Concrete Products Association Gold Star Award in the Multi-Use Path category.
Cover Photos

Front

Back
Top left: Motor Vehicle & Driver License books were installed throughout the state. Top right: New welcome signs were installed. Bottom left: NDDOT staff training on drone usage. Bottom right: Snowplow following an Oshkosh snowblower clearing drifts on I-94.